

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

LAB CHRONICLE

OrderID:	Q3468	OrderDate:	10/27/2025 11:00:00 AM
Client:	LiRo Engineers, Inc.	Project:	RFK Bridge RMB-Randall Island
Contact:	Martin Wesolowski	Location:	D41,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3468-01	MW-06	Water	VOCMS Group1	8260-Low	10/23/25		10/29/25	10/24/25
Q3468-02	MW-08	Water	VOCMS Group1	8260-Low	10/23/25		10/28/25	10/24/25
Q3468-02DL	MW-08DL	Water	VOCMS Group1	8260-Low	10/23/25		10/29/25	10/24/25
Q3468-03	MW-10	Water	VOCMS Group1	8260-Low	10/23/25		10/28/25	10/24/25
Q3468-04	MW-11	Water	VOCMS Group1	8260-Low	10/23/25		10/27/25	10/24/25
Q3468-05	MW-13	Water	VOCMS Group1	8260-Low	10/23/25		10/29/25	10/24/25
Q3468-06	MW-12	Water	VOCMS Group1	8260-Low	10/23/25		10/28/25	10/24/25
Q3468-06DL	MW-12DL	Water	VOCMS Group1	8260-Low	10/23/25		10/29/25	10/24/25

Hit Summary Sheet
SW-846

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	MW-06							
Q3468-01	MW-06	Water	Benzene	6.30		0.15	1.00	ug/L
Q3468-01	MW-06	Water	Toluene	1.20		0.14	1.00	ug/L
Q3468-01	MW-06	Water	Ethyl Benzene	4.80		0.13	1.00	ug/L
Q3468-01	MW-06	Water	Total Xylenes	8.60		0.36	3.00	ug/L
Q3468-01	MW-06	Water	m/p-Xylenes	4.80		0.24	2.00	ug/L
Q3468-01	MW-06	Water	o-Xylene	3.80		0.12	1.00	ug/L
Q3468-01	MW-06	Water	Isopropylbenzene	20.1		0.12	1.00	ug/L
Q3468-01	MW-06	Water	n-propylbenzene	46.8		0.13	1.00	ug/L
Q3468-01	MW-06	Water	1,3,5-Trimethylbenzene	0.87	J	0.15	1.00	ug/L
Q3468-01	MW-06	Water	tert-Butylbenzene	0.46	JQ	0.14	1.00	ug/L
Q3468-01	MW-06	Water	1,2,4-Trimethylbenzene	5.70		0.14	1.00	ug/L
Q3468-01	MW-06	Water	sec-Butylbenzene	4.00		0.13	1.00	ug/L
Q3468-01	MW-06	Water	n-Butylbenzene	4.50		0.15	1.00	ug/L
Q3468-01	MW-06	Water	Naphthalene	48.5		0.20	1.00	ug/L
Total Voc :				152				
Total Concentration:				152				
Client ID:	MW-08							
Q3468-02	MW-08	Water	Benzene	120		0.15	1.00	ug/L
Q3468-02	MW-08	Water	Toluene	9.50		0.14	1.00	ug/L
Q3468-02	MW-08	Water	Ethyl Benzene	100	Q	0.13	1.00	ug/L
Q3468-02	MW-08	Water	Total Xylenes	550		0.36	3.00	ug/L
Q3468-02	MW-08	Water	m/p-Xylenes	310	E	0.24	2.00	ug/L
Q3468-02	MW-08	Water	o-Xylene	240	EQ	0.12	1.00	ug/L
Q3468-02	MW-08	Water	Isopropylbenzene	10.6		0.12	1.00	ug/L
Q3468-02	MW-08	Water	n-propylbenzene	16.9		0.13	1.00	ug/L
Q3468-02	MW-08	Water	1,3,5-Trimethylbenzene	15.4		0.15	1.00	ug/L
Q3468-02	MW-08	Water	1,2,4-Trimethylbenzene	350	E	0.14	1.00	ug/L
Q3468-02	MW-08	Water	sec-Butylbenzene	1.80		0.13	1.00	ug/L
Q3468-02	MW-08	Water	p-Isopropyltoluene	1.40		0.13	1.00	ug/L
Q3468-02	MW-08	Water	n-Butylbenzene	2.50		0.15	1.00	ug/L
Q3468-02	MW-08	Water	Naphthalene	210	E	0.20	1.00	ug/L
Total Voc :				1390				
Total Concentration:				1390				
Client ID:	MW-08DL							
Q3468-02DL	MW-08DL	Water	Benzene	190	D	0.75	5.00	ug/L
Q3468-02DL	MW-08DL	Water	Toluene	14.2	D	0.70	5.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q3468-02DL	MW-08DL	Water	Ethyl Benzene	150	D	0.65	5.00	ug/L
Q3468-02DL	MW-08DL	Water	Total Xylenes	900	D	1.80	15.0	ug/L
Q3468-02DL	MW-08DL	Water	m/p-Xylenes	500	D	1.20	10.0	ug/L
Q3468-02DL	MW-08DL	Water	o-Xylene	400	D	0.60	5.00	ug/L
Q3468-02DL	MW-08DL	Water	Isopropylbenzene	15.0	D	0.60	5.00	ug/L
Q3468-02DL	MW-08DL	Water	n-propylbenzene	25.5	D	0.65	5.00	ug/L
Q3468-02DL	MW-08DL	Water	1,3,5-Trimethylbenzene	27.5	D	0.75	5.00	ug/L
Q3468-02DL	MW-08DL	Water	1,2,4-Trimethylbenzene	580	D	0.70	5.00	ug/L
Q3468-02DL	MW-08DL	Water	p-Isopropyltoluene	2.40	JD	0.65	5.00	ug/L
Q3468-02DL	MW-08DL	Water	Naphthalene	350	D	1.00	5.00	ug/L
Total Voc :				2250				
Total Concentration:				2250				
Client ID:	MW-10							
Q3468-03	MW-10	Water	Toluene	0.21	J	0.14	1.00	ug/L
Q3468-03	MW-10	Water	Total Xylenes	1.20	J	0.36	3.00	ug/L
Q3468-03	MW-10	Water	m/p-Xylenes	1.20	J	0.24	2.00	ug/L
Q3468-03	MW-10	Water	Isopropylbenzene	2.90		0.12	1.00	ug/L
Q3468-03	MW-10	Water	n-propylbenzene	2.00		0.13	1.00	ug/L
Q3468-03	MW-10	Water	1,3,5-Trimethylbenzene	0.34	J	0.15	1.00	ug/L
Q3468-03	MW-10	Water	1,2,4-Trimethylbenzene	0.39	J	0.14	1.00	ug/L
Q3468-03	MW-10	Water	sec-Butylbenzene	1.40		0.13	1.00	ug/L
Q3468-03	MW-10	Water	p-Isopropyltoluene	0.29	J	0.13	1.00	ug/L
Q3468-03	MW-10	Water	n-Butylbenzene	1.50		0.15	1.00	ug/L
Q3468-03	MW-10	Water	Naphthalene	1.80		0.20	1.00	ug/L
Total Voc :				12.0				
Total Concentration:				12.0				
Client ID:	MW-11							
Q3468-04	MW-11	Water	Total Xylenes	0.75	J	0.36	3.00	ug/L
Q3468-04	MW-11	Water	m/p-Xylenes	0.75	J	0.24	2.00	ug/L
Total Voc :				0.75				
Total Concentration:				0.75				
Client ID:	MW-13							
Q3468-05	MW-13	Water	Benzene	1.20		0.15	1.00	ug/L
Q3468-05	MW-13	Water	Ethyl Benzene	1.30		0.13	1.00	ug/L
Q3468-05	MW-13	Water	Total Xylenes	2.65	J	0.36	3.00	ug/L
Q3468-05	MW-13	Water	m/p-Xylenes	0.95	J	0.24	2.00	ug/L
Q3468-05	MW-13	Water	o-Xylene	1.70		0.12	1.00	ug/L
Q3468-05	MW-13	Water	Isopropylbenzene	0.37	J	0.12	1.00	ug/L

Hit Summary Sheet
SW-846

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Q3468-05	MW-13	Water	n-propylbenzene	0.48	J	0.13	1.00	ug/L
			Total Voc :	6.00				
			Total Concentration:	6.00				
Client ID:	MW-12							
Q3468-06	MW-12	Water	Benzene	180	E	0.15	1.00	ug/L
Q3468-06	MW-12	Water	Toluene	140		0.14	1.00	ug/L
Q3468-06	MW-12	Water	Ethyl Benzene	600	EQ	0.13	1.00	ug/L
Q3468-06	MW-12	Water	Total Xylenes	770		0.36	3.00	ug/L
Q3468-06	MW-12	Water	m/p-Xylenes	330	E	0.24	2.00	ug/L
Q3468-06	MW-12	Water	o-Xylene	440	EQ	0.12	1.00	ug/L
Q3468-06	MW-12	Water	Isopropylbenzene	16.0		0.12	1.00	ug/L
Q3468-06	MW-12	Water	n-propylbenzene	31.0		0.13	1.00	ug/L
Q3468-06	MW-12	Water	1,3,5-Trimethylbenzene	4.90		0.15	1.00	ug/L
Q3468-06	MW-12	Water	1,2,4-Trimethylbenzene	390	E	0.14	1.00	ug/L
Q3468-06	MW-12	Water	p-Isopropyltoluene	1.50		0.13	1.00	ug/L
Q3468-06	MW-12	Water	n-Butylbenzene	2.20		0.15	1.00	ug/L
Q3468-06	MW-12	Water	Naphthalene	180	E	0.20	1.00	ug/L
			Total Voc :	2320				
			Total Concentration:	2320				
Client ID:	MW-12DL							
Q3468-06DL	MW-12DL	Water	Benzene	210	D	1.50	10.0	ug/L
Q3468-06DL	MW-12DL	Water	Toluene	160	D	1.40	10.0	ug/L
Q3468-06DL	MW-12DL	Water	Ethyl Benzene	710	D	1.30	10.0	ug/L
Q3468-06DL	MW-12DL	Water	Total Xylenes	900	D	3.60	30.0	ug/L
Q3468-06DL	MW-12DL	Water	m/p-Xylenes	390	D	2.40	20.0	ug/L
Q3468-06DL	MW-12DL	Water	o-Xylene	510	D	1.20	10.0	ug/L
Q3468-06DL	MW-12DL	Water	Isopropylbenzene	17.2	D	1.20	10.0	ug/L
Q3468-06DL	MW-12DL	Water	n-propylbenzene	34.4	D	1.30	10.0	ug/L
Q3468-06DL	MW-12DL	Water	1,2,4-Trimethylbenzene	440	D	1.40	10.0	ug/L
Q3468-06DL	MW-12DL	Water	Naphthalene	190	D	2.00	10.0	ug/L
			Total Voc :	2660				
			Total Concentration:	2660				



QC SUMMARY

Surrogate Summary

SDG No.: **Q3468**

Client: **LiRo Engineers, Inc.**

Analytical Method: **SW8260-Low**

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
Q3468-01	MW-06	1,2-Dichloroethane-d4	50	60.3	121		74	125
		Dibromofluoromethane	50	48.9	98		75	124
		Toluene-d8	50	46.9	94		86	113
		4-Bromofluorobenzene	50	55.0	110		77	121
Q3468-02	MW-08	1,2-Dichloroethane-d4	50	60.4	121		74	125
		Dibromofluoromethane	50	48.3	97		75	124
		Toluene-d8	50	46.7	93		86	113
		4-Bromofluorobenzene	50	55.4	111		77	121
Q3468-02DL	MW-08DL	1,2-Dichloroethane-d4	50	54.8	110		74	125
		Dibromofluoromethane	50	47.6	95		75	124
		Toluene-d8	50	45.3	90		86	113
		4-Bromofluorobenzene	50	51.1	102		77	121
Q3468-03	MW-10	1,2-Dichloroethane-d4	50	52.5	105		74	125
		Dibromofluoromethane	50	46.5	93		75	124
		Toluene-d8	50	44.6	89		86	113
		4-Bromofluorobenzene	50	50.9	102		77	121
Q3468-04	MW-11	1,2-Dichloroethane-d4	50	52.6	105		74	125
		Dibromofluoromethane	50	45.4	91		75	124
		Toluene-d8	50	44.5	89		86	113
		4-Bromofluorobenzene	50	50.1	100		77	121
Q3468-05	MW-13	1,2-Dichloroethane-d4	50	54.5	109		74	125
		Dibromofluoromethane	50	44.8	90		75	124
		Toluene-d8	50	45.0	90		86	113
		4-Bromofluorobenzene	50	51.7	103		77	121
Q3468-06	MW-12	1,2-Dichloroethane-d4	50	54.2	108		74	125
		Dibromofluoromethane	50	46.0	92		75	124
		Toluene-d8	50	44.7	89		86	113
		4-Bromofluorobenzene	50	51.6	103		77	121
Q3468-06DL	MW-12DL	1,2-Dichloroethane-d4	50	57.2	114		74	125
		Dibromofluoromethane	50	48.3	97		75	124
		Toluene-d8	50	46.5	93		86	113
		4-Bromofluorobenzene	50	52.1	104		77	121
VN1027WBL01	VN1027WBL01	1,2-Dichloroethane-d4	50	61.1	122		74	125
		Dibromofluoromethane	50	52.8	106		75	124
		Toluene-d8	50	49.9	100		86	113
		4-Bromofluorobenzene	50	52.0	104		77	121
VN1027WBS01	VN1027WBS01	1,2-Dichloroethane-d4	50	56.2	112		74	125
		Dibromofluoromethane	50	53.2	106		75	124
		Toluene-d8	50	51.1	102		86	113
		4-Bromofluorobenzene	50	52.6	105		77	121
VN1027WBSD0	VN1027WBSD01	1,2-Dichloroethane-d4	50	56.4	113		74	125
		Dibromofluoromethane	50	53.0	106		75	124
		Toluene-d8	50	51.0	102		86	113
		4-Bromofluorobenzene	50	52.9	106		77	121
VN1028WBL01	VN1028WBL01	1,2-Dichloroethane-d4	50	54.8	110		74	125
		Dibromofluoromethane	50	46.8	94		75	124
		Toluene-d8	50	44.8	90		86	113
		4-Bromofluorobenzene	50	48.3	97		77	121
VN1028WBS02	VN1028WBS02	1,2-Dichloroethane-d4	50	48.6	97		74	125
		Dibromofluoromethane	50	47.6	95		75	124

Surrogate Summary

SDG No.: Q3468

Client: LiRo Engineers, Inc.

Analytical Method: SW8260-Low

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
VN1028WBS02	VN1028WBS02	Toluene-d8	50	46.6	93		86	113
		4-Bromofluorobenzene	50	47.9	96		77	121
VN1029WBL01	VN1029WBL01	1,2-Dichloroethane-d4	50	54.5	109		74	125
		Dibromofluoromethane	50	46.6	93		75	124
		Toluene-d8	50	44.5	89		86	113
		4-Bromofluorobenzene	50	48.1	96		77	121
VN1029WBS01	VN1029WBS01	1,2-Dichloroethane-d4	50	50.6	101		74	125
		Dibromofluoromethane	50	45.9	92		75	124
		Toluene-d8	50	44.0	88		86	113
		4-Bromofluorobenzene	50	44.4	89		77	121

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3468</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>LiRo Engineers, Inc.</u>	Datafile :	<u>VN088105.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN1027WBS01	Methyl tert-butyl Ether	20	21.8	ug/L	109			78	114	
	Benzene	20	21.8	ug/L	109			82	109	
	Toluene	20	21.5	ug/L	108			82	110	
	Ethyl Benzene	20	20.9	ug/L	104			83	109	
	m/p-Xylenes	40	42.1	ug/L	105			82	110	
	o-Xylene	20	21.2	ug/L	106			83	109	
	Isopropylbenzene	20	20.1	ug/L	101			83	112	
	N-propylbenzene	20	20.4	ug/L	102			83	112	
	1,3,5-Trimethylbenzene	20	20.3	ug/L	102			85	112	
	tert-Butylbenzene	20	19.5	ug/L	98			83	112	
	1,2,4-Trimethylbenzene	20	20.6	ug/L	103			85	111	
	Sec-butylbenzene	20	19.9	ug/L	100			81	114	
	p-Isopropyltoluene	20	20.5	ug/L	103			78	116	
	n-Butylbenzene	20	20.1	ug/L	101			75	115	
	Naphthalene	20	19.9	ug/L	100			78	119	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3468</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>LiRo Engineers, Inc.</u>	Datafile :	<u>VN088106.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN1027WBSD01	Methyl tert-butyl Ether	20	21.8	ug/L	109	0		78	114	20
	Benzene	20	21.8	ug/L	109	0		82	109	15
	Toluene	20	21.6	ug/L	108	0		82	110	16
	Ethyl Benzene	20	21.4	ug/L	107	3		83	109	16
	m/p-Xylenes	40	42.3	ug/L	106	1		82	110	15
	o-Xylene	20	21.4	ug/L	107	1		83	109	20
	Isopropylbenzene	20	20.6	ug/L	103	2		83	112	29
	N-propylbenzene	20	21.0	ug/L	105	3		83	112	20
	1,3,5-Trimethylbenzene	20	21.3	ug/L	106	4		85	112	20
	tert-Butylbenzene	20	20.1	ug/L	101	3		83	112	20
	1,2,4-Trimethylbenzene	20	21.2	ug/L	106	3		85	111	20
	Sec-butylbenzene	20	20.5	ug/L	103	3		81	114	20
	p-Isopropyltoluene	20	21.0	ug/L	105	2		78	116	20
	n-Butylbenzene	20	20.9	ug/L	104	3		75	115	20
	Naphthalene	20	21.1	ug/L	106	6		78	119	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3468</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>LiRo Engineers, Inc.</u>	Datafile :	<u>VN088131.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN1028WBS02	Methyl tert-butyl Ether	20	21.2	ug/L	106			78	114	
	Benzene	20	21.7	ug/L	109			82	109	
	Toluene	20	21.5	ug/L	108			82	110	
	Ethyl Benzene	20	22.0	ug/L	110		*	83	109	
	m/p-Xylenes	40	43.2	ug/L	108			82	110	
	o-Xylene	20	22.1	ug/L	111		*	83	109	
	Isopropylbenzene	20	21.3	ug/L	106			83	112	
	N-propylbenzene	20	21.7	ug/L	109			83	112	
	1,3,5-Trimethylbenzene	20	21.9	ug/L	110			85	112	
	tert-Butylbenzene	20	21.1	ug/L	106			83	112	
	1,2,4-Trimethylbenzene	20	22.0	ug/L	110			85	111	
	Sec-butylbenzene	20	21.6	ug/L	108			81	114	
	p-Isopropyltoluene	20	22.5	ug/L	113			78	116	
	n-Butylbenzene	20	21.5	ug/L	108			75	115	
	Naphthalene	20	20.8	ug/L	104			78	119	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3468</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>LiRo Engineers, Inc.</u>	Datafile :	<u>VN088150.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VN1029WBS01	Methyl tert-butyl Ether	20	19.6	ug/L	98			78	114	
	Benzene	20	19.2	ug/L	96			82	109	
	Toluene	20	18.6	ug/L	93			82	110	
	Ethyl Benzene	20	18.2	ug/L	91			83	109	
	m/p-Xylenes	40	35.7	ug/L	89			82	110	
	o-Xylene	20	18.3	ug/L	92			83	109	
	Isopropylbenzene	20	17.1	ug/L	86			83	112	
	N-propylbenzene	20	17.0	ug/L	85			83	112	
	1,3,5-Trimethylbenzene	20	17.8	ug/L	89			85	112	
	tert-Butylbenzene	20	16.2	ug/L	81		*	83	112	
	1,2,4-Trimethylbenzene	20	17.8	ug/L	89			85	111	
	Sec-butylbenzene	20	16.3	ug/L	81			81	114	
	p-Isopropyltoluene	20	17.2	ug/L	86			78	116	
	n-Butylbenzene	20	16.6	ug/L	83			75	115	
	Naphthalene	20	17.3	ug/L	86			78	119	

VOLATILE METHOD BLANK SUMMARY

Client ID

VN1027WBL01

Lab Name: Alliance

Contract: LIRO01

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088104.D

Lab Sample ID: VN1027WBL01

Date Analyzed: 10/27/2025

Time Analyzed: 11:34

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

Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN1027WBS01	VN1027WBS01	VN088105.D	10/27/2025
VN1027WBSD01	VN1027WBSD01	VN088106.D	10/27/2025
MW-11	Q3468-04	VN088124.D	10/27/2025

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

Client ID

VN1028WBL01

Lab Name: Alliance

Contract: LIRO01

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088129.D

Lab Sample ID: VN1028WBL01

Date Analyzed: 10/28/2025

Time Analyzed: 11:17

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

Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN1028WBS02	VN1028WBS02	VN088131.D	10/28/2025
MW-10	Q3468-03	VN088135.D	10/28/2025
MW-12	Q3468-06	VN088136.D	10/28/2025
MW-08	Q3468-02	VN088138.D	10/28/2025

COMMENTS: _____

VOLATILE METHOD BLANK SUMMARY

Client ID

VN1029WBL01

Lab Name: Alliance

Contract: LIRO01

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088149.D

Lab Sample ID: VN1029WBL01

Date Analyzed: 10/29/2025

Time Analyzed: 11:06

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

Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN1029WBS01	VN1029WBS01	VN088150.D	10/29/2025
MW-08DL	Q3468-02DL	VN088152.D	10/29/2025
MW-12DL	Q3468-06DL	VN088153.D	10/29/2025
MW-06	Q3468-01	VN088154.D	10/29/2025
MW-13	Q3468-05	VN088170.D	10/29/2025

COMMENTS: _____



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: LIR001

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088077.D

BFB Injection Date: 10/23/2025

Instrument ID: MSVOA_N

BFB Injection Time: 09:09

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.7
75	30.0 - 60.0% of mass 95	56
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	0.4 (0.6) 1
174	50.0 - 100.0% of mass 95	64.7
175	5.0 - 9.0% of mass 174	5.8 (8.9) 1
176	95.0 - 101.0% of mass 174	62.6 (96.8) 1
177	5.0 - 9.0% of mass 176	4.5 (7.2) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC001	VSTDIC001	VN088078.D	10/23/2025	09:42
VSTDIC005	VSTDIC005	VN088079.D	10/23/2025	10:38
VSTDIC020	VSTDIC020	VN088080.D	10/23/2025	10:59
VSTDIC050	VSTDIC050	VN088081.D	10/23/2025	11:20
VSTDIC100	VSTDIC100	VN088082.D	10/23/2025	11:41
VSTDIC150	VSTDIC150	VN088083.D	10/23/2025	12:02



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: LIR001

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088101.D

BFB Injection Date: 10/27/2025

Instrument ID: MSVOA_N

BFB Injection Time: 09:58

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.7
75	30.0 - 60.0% of mass 95	57.1
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7.1
173	Less than 2.0% of mass 174	0.4 (0.6) 1
174	50.0 - 100.0% of mass 95	68.6
175	5.0 - 9.0% of mass 174	5.1 (7.4) 1
176	95.0 - 101.0% of mass 174	65.3 (95.2) 1
177	5.0 - 9.0% of mass 176	4.2 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VN088102.D	10/27/2025	10:40
VN1027WBL01	VN1027WBL01	VN088104.D	10/27/2025	11:34
VN1027WBS01	VN1027WBS01	VN088105.D	10/27/2025	11:55
VN1027WBSD01	VN1027WBSD01	VN088106.D	10/27/2025	12:29
MW-11	Q3468-04	VN088124.D	10/27/2025	18:41



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: LIR001

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088126.D

BFB Injection Date: 10/28/2025

Instrument ID: MSVOA_N

BFB Injection Time: 09:26

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.1
75	30.0 - 60.0% of mass 95	57.4
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.7 (1.1) 1
174	50.0 - 100.0% of mass 95	66.3
175	5.0 - 9.0% of mass 174	5 (7.6) 1
176	95.0 - 101.0% of mass 174	65 (98) 1
177	5.0 - 9.0% of mass 176	4.2 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VN088127.D	10/28/2025	10:23
VN1028WBL01	VN1028WBL01	VN088129.D	10/28/2025	11:17
VN1028WBS02	VN1028WBS02	VN088131.D	10/28/2025	12:14
MW-10	Q3468-03	VN088135.D	10/28/2025	13:38
MW-12	Q3468-06	VN088136.D	10/28/2025	13:59
MW-08	Q3468-02	VN088138.D	10/28/2025	14:40



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: LIR001

Lab Code: ACE

SDG NO.: Q3468

Lab File ID: VN088146.D

BFB Injection Date: 10/29/2025

Instrument ID: MSVOA_N

BFB Injection Time: 09:07

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

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	24.7
75	30.0 - 60.0% of mass 95	59.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.8 (1.2) 1
174	50.0 - 100.0% of mass 95	67.6
175	5.0 - 9.0% of mass 174	5 (7.4) 1
176	95.0 - 101.0% of mass 174	66.9 (99) 1
177	5.0 - 9.0% of mass 176	4.6 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VN088147.D	10/29/2025	10:24
VN1029WBL01	VN1029WBL01	VN088149.D	10/29/2025	11:06
VN1029WBS01	VN1029WBS01	VN088150.D	10/29/2025	11:27
MW-08DL	Q3468-02DL	VN088152.D	10/29/2025	12:21
MW-12DL	Q3468-06DL	VN088153.D	10/29/2025	12:42
MW-06	Q3468-01	VN088154.D	10/29/2025	13:03
MW-13	Q3468-05	VN088170.D	10/29/2025	18:33

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: LIRO01
Lab Code: ACE SDG NO.: Q3468
Lab File ID: VN088102.D Date Analyzed: 10/27/2025
Instrument ID: MSVOA_N Time Analyzed: 10:40
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	321965	8.21	587119	9.08	522069	11.84
UPPER LIMIT	643930	8.706	1174240	9.582	1044140	12.341
LOWER LIMIT	160983	7.706	293560	8.582	261035	11.341
EPA SAMPLE NO.						
MW-11	263533	8.21	588016	9.08	556110	11.84
VN1027WBL01	198801	8.21	446179	9.08	422679	11.84
VN1027WBS01	300941	8.21	563874	9.08	505093	11.85
VN1027WBSD01	293635	8.21	537984	9.08	482887	11.85

IS1 = Pentafluorobenzene

IS2 = 1,4-Difluorobenzene

IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

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

* Values outside of QC limits.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: LIRO01
 Lab Code: ACE SDG NO.: Q3468
 Lab File ID: VN088102.D Date Analyzed: 10/27/2025
 Instrument ID: MSVOA_N Time Analyzed: 10:40
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	267876	13.77				
UPPER LIMIT	535752	14.27				
LOWER LIMIT	133938	13.27				
EPA SAMPLE NO.						
MW-11	269618	13.77				
VN1027WBL01	199580	13.77				
VN1027WBS01	256562	13.77				
VN1027WBSD01	241641	13.77				

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.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	<u>Alliance</u>	Contract:	<u>LIRO01</u>
Lab Code:	<u>ACE</u>	SDG NO.:	<u>Q3468</u>
Lab File ID:	<u>VN088127.D</u>	Date Analyzed:	<u>10/28/2025</u>
Instrument ID:	<u>MSVOA_N</u>	Time Analyzed:	<u>10:23</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)
		Heated Purge:	(Y/N) <u>N</u>

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	299407	8.21	575460	9.08	507990	11.85
UPPER LIMIT	598814	8.706	1150920	9.582	1015980	12.347
LOWER LIMIT	149704	7.706	287730	8.582	253995	11.347
EPA SAMPLE NO.						
MW-08	280779	8.21	636841	9.08	622260	11.85
MW-10	236497	8.21	529671	9.08	500860	11.85
MW-12	238860	8.21	531874	9.08	512440	11.85
VN1028WBL01	231261	8.21	516618	9.08	484454	11.85
VN1028WBS02	325166	8.21	590689	9.08	518318	11.85

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

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

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

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: LIRO01
 Lab Code: ACE SDG NO.: Q3468
 Lab File ID: VN088127.D Date Analyzed: 10/28/2025
 Instrument ID: MSVOA_N Time Analyzed: 10:23
 GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	256667	13.77				
UPPER LIMIT	513334	14.27				
LOWER LIMIT	128334	13.27				
EPA SAMPLE NO.						
MW-08	313348	13.77				
MW-10	243219	13.77				
MW-12	250379	13.77				
VN1028WBL01	238378	13.77				
VN1028WBS02	257534	13.77				

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.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: LIRO01
Lab Code: ACE SDG NO.: Q3468
Lab File ID: VN088147.D Date Analyzed: 10/29/2025
Instrument ID: MSVOA_N Time Analyzed: 10:24
GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	276791	8.21	513941	9.08	450607	11.85
UPPER LIMIT	553582	8.706	1027880	9.583	901214	12.347
LOWER LIMIT	138396	7.706	256971	8.583	225304	11.347
EPA SAMPLE NO.						
MW-06	239807	8.21	555035	9.08	540568	11.85
MW-08DL	214217	8.21	486300	9.08	458325	11.85
MW-13	328066	8.21	750626	9.08	708184	11.85
MW-12DL	208467	8.21	468936	9.08	447110	11.85
VN1029WBL01	220088	8.21	494622	9.08	463889	11.85
VN1029WBS01	234631	8.21	449642	9.08	401244	11.85

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:	<u>Alliance</u>	Contract:	<u>LIRO01</u>
Lab Code:	<u>ACE</u>	SDG NO.:	<u>Q3468</u>
Lab File ID:	<u>VN088147.D</u>	Date Analyzed:	<u>10/29/2025</u>
Instrument ID:	<u>MSVOA_N</u>	Time Analyzed:	<u>10:24</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)
		Heated Purge:	(Y/N) <u>N</u>

	IS4 AREA #	RT #				
12 HOUR STD	235546	13.77				
UPPER LIMIT	471092	14.27				
LOWER LIMIT	117773	13.27				
EPA SAMPLE NO.						
MW-06	270083	13.77				
MW-08DL	232108	13.77				
MW-13	354853	13.77				
MW-12DL	226296	13.77				
VN1029WBL01	222427	13.77				
VN1029WBS01	206462	13.77				

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



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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-06	SDG No.:	Q3468
Lab Sample ID:	Q3468-01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/29/25 13:03	VN102925
71-43-2	Benzene	6.30		1	0.15	1.00	ug/L	10/29/25 13:03	VN102925
108-88-3	Toluene	1.20		1	0.14	1.00	ug/L	10/29/25 13:03	VN102925
100-41-4	Ethyl Benzene	4.80		1	0.13	1.00	ug/L	10/29/25 13:03	VN102925
179601-23-1	m/p-Xylenes	4.80		1	0.24	2.00	ug/L	10/29/25 13:03	VN102925
1330-20-7	Total Xylenes	8.60		1	0.36	3.00	ug/L	10/29/25 13:03	VN102925
95-47-6	o-Xylene	3.80		1	0.12	1.00	ug/L	10/29/25 13:03	VN102925
98-82-8	Isopropylbenzene	20.1		1	0.12	1.00	ug/L	10/29/25 13:03	VN102925
103-65-1	n-propylbenzene	46.8		1	0.13	1.00	ug/L	10/29/25 13:03	VN102925
108-67-8	1,3,5-Trimethylbenzene	0.87	J	1	0.15	1.00	ug/L	10/29/25 13:03	VN102925
98-06-6	tert-Butylbenzene	0.46	JQ	1	0.14	1.00	ug/L	10/29/25 13:03	VN102925
95-63-6	1,2,4-Trimethylbenzene	5.70		1	0.14	1.00	ug/L	10/29/25 13:03	VN102925
135-98-8	sec-Butylbenzene	4.00		1	0.13	1.00	ug/L	10/29/25 13:03	VN102925
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/29/25 13:03	VN102925
104-51-8	n-Butylbenzene	4.50		1	0.15	1.00	ug/L	10/29/25 13:03	VN102925
91-20-3	Naphthalene	48.5		1	0.20	1.00	ug/L	10/29/25 13:03	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	60.3			74 - 125	121%	SPK: 50		
1868-53-7	Dibromofluoromethane	48.9			75 - 124	98%	SPK: 50		
2037-26-5	Toluene-d8	46.9			86 - 113	94%	SPK: 50		
460-00-4	4-Bromofluorobenzene	55.0			77 - 121	110%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	240000							
540-36-3	1,4-Difluorobenzene	555000							
3114-55-4	Chlorobenzene-d5	541000							
3855-82-1	1,4-Dichlorobenzene-d4	270000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088154.D
 Acq On : 29 Oct 2025 13:03
 Operator : JC\MD
 Sample : Q3468-01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-06

Quant Time: Oct 30 04:05:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

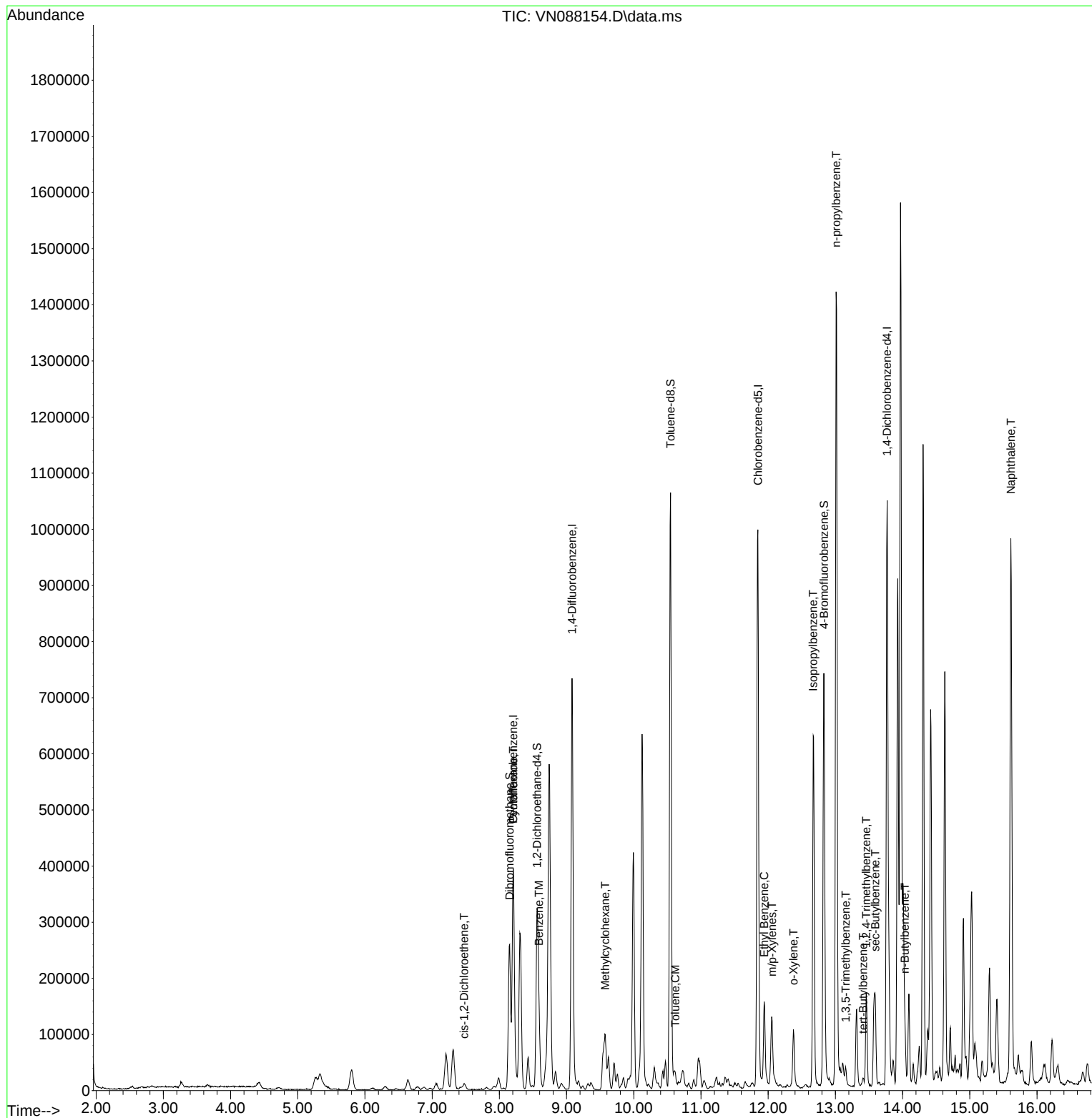
Internal Standards						
1) Pentafluorobenzene	8.206	168	239807	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	555035	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	540568	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	270083	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	249897	60.263	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 120.520%			
35) Dibromofluoromethane	8.153	113	182386	48.913	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 97.820%			
50) Toluene-d8	10.547	98	674436	46.942	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 93.880%			
62) 4-Bromofluorobenzene	12.829	95	278818	54.950	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 109.900%			
Target Compounds					Qvalue	
27) cis-1,2-Dichloroethene	7.477	96	1363	0.358	ug/l	60
31) Cyclohexane	8.206	56	24066m	4.146	ug/l	
39) Methylcyclohexane	9.577	83	27550	3.937	ug/l #	85
40) Benzene	8.588	78	105170	6.343	ug/l	99
52) Toluene	10.618	92	11927	1.167	ug/l	98
67) Ethyl Benzene	11.941	91	104057	4.830	ug/l	97
68) m/p-Xylenes	12.059	106	39145	4.849	ug/l	96
69) o-Xylene	12.376	106	28759	3.758	ug/l	96
73) Isopropylbenzene	12.671	105	419665	20.146	ug/l	99
78) n-propylbenzene	13.012	91	1189938	46.810	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	15026m	0.869	ug/l	
83) tert-Butylbenzene	13.412	119	7116	0.460	ug/l	98
84) 1,2,4-Trimethylbenzene	13.459	105	98069	5.666	ug/l	99
85) sec-Butylbenzene	13.594	105	91716	4.039	ug/l #	60
89) n-Butylbenzene	14.035	91	80547	4.464	ug/l #	71
95) Naphthalene	15.611	128	869407	48.479	ug/l	100

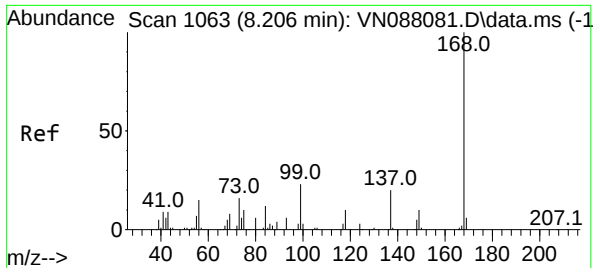
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088154.D
Acq On : 29 Oct 2025 13:03
Operator : JC\MD
Sample : Q3468-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
MW-06

Quant Time: Oct 30 04:05:07 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

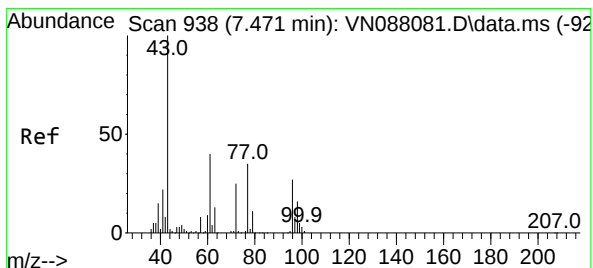
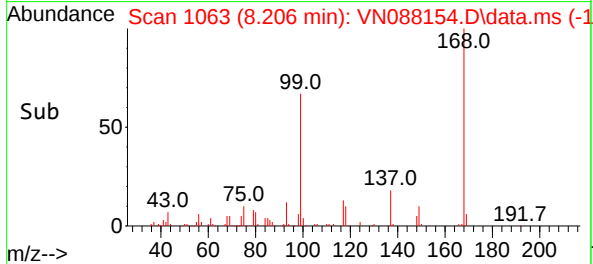
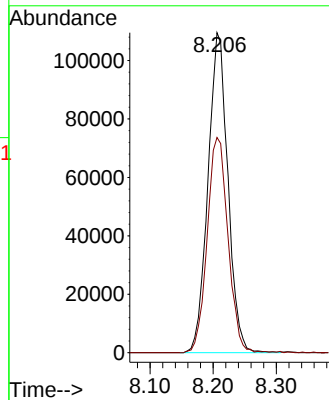
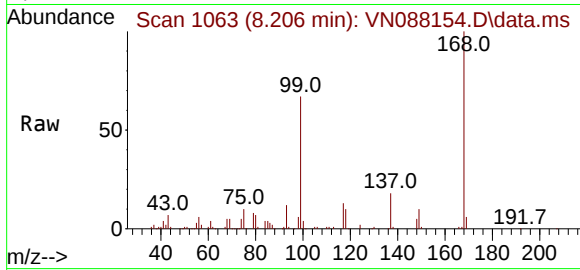




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

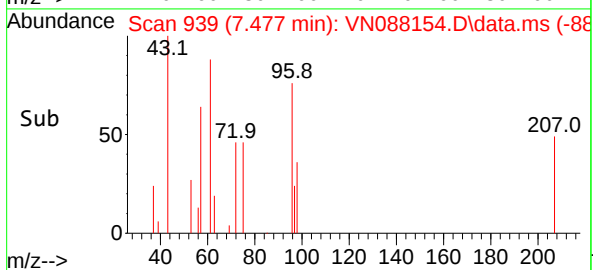
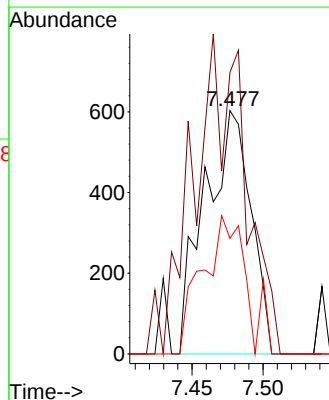
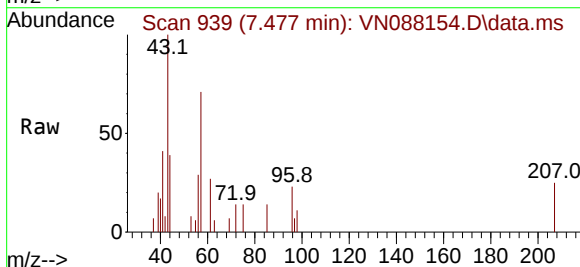
Instrument :
MSVOA_N
ClientSampleId :
MW-06

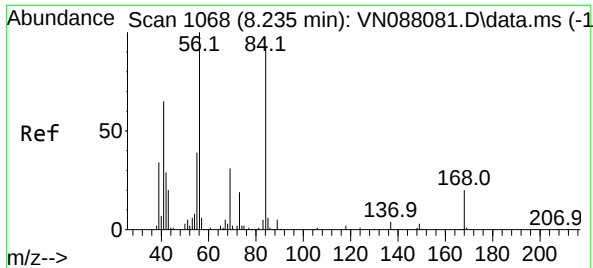
Tgt Ion:168 Resp: 239807
Ion Ratio Lower Upper
168 100
99 67.3 57.2 85.8



#27
cis-1,2-Dichloroethene
Concen: 0.358 ug/l
RT: 7.477 min Scan# 939
Delta R.T. 0.012 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion: 96 Resp: 1363
Ion Ratio Lower Upper
96 100
61 85.5 0.0 301.8
98 54.1 0.0 126.2





#31

Cyclohexane

Concen: 4.146 ug/l m

RT: 8.206 min Scan# 1063

Delta R.T. -0.029 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

Instrument :

MSVOA_N

ClientSampleId :

MW-06

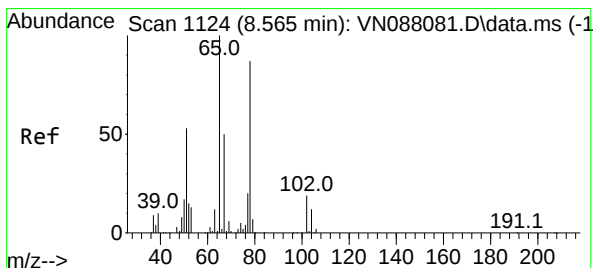
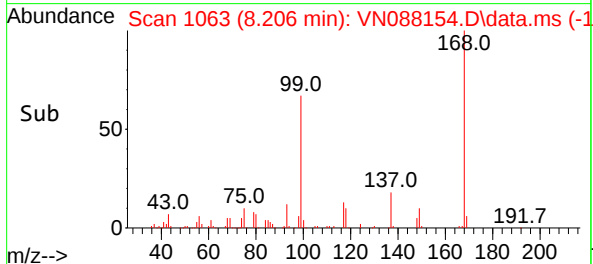
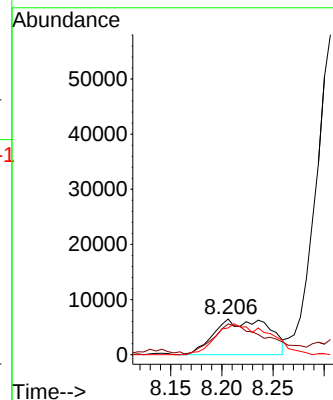
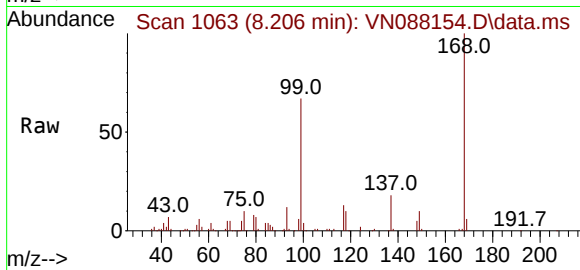
Tgt Ion: 56 Resp: 24066

Ion Ratio Lower Upper

56 100

69 86.0 23.7 35.5#

84 74.8 64.7 97.1



#33

1,2-Dichloroethane-d4

Concen: 60.263 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088154.D

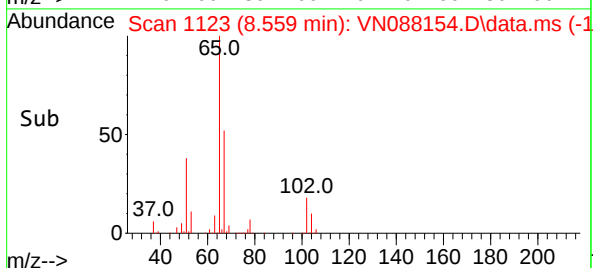
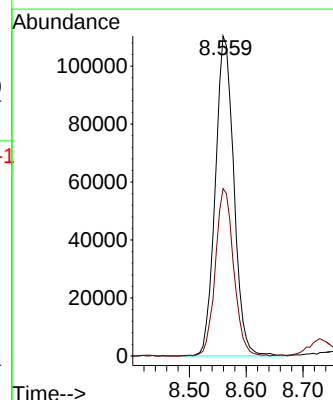
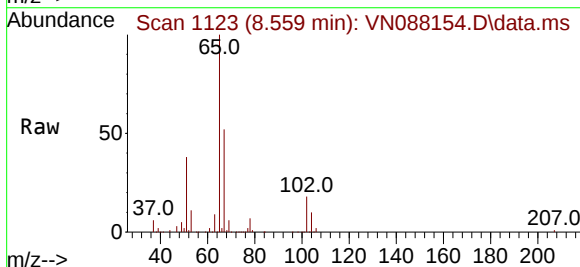
Acq: 29 Oct 2025 13:03

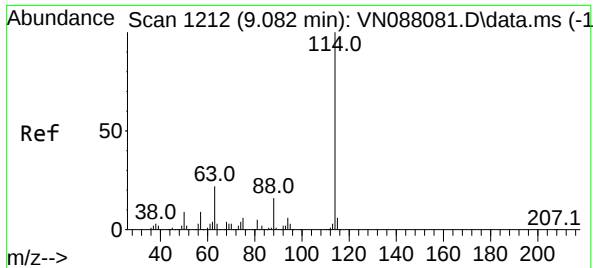
Tgt Ion: 65 Resp: 249897

Ion Ratio Lower Upper

65 100

67 51.9 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1

Delta R.T. -0.000 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

Instrument :

MSVOA_N

ClientSampleId :

MW-06

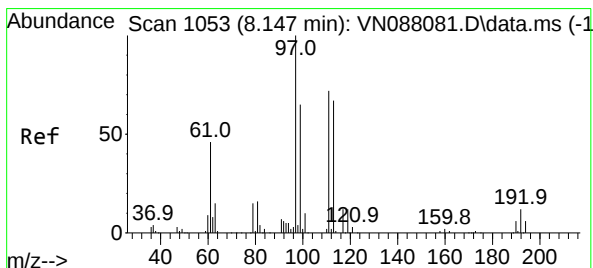
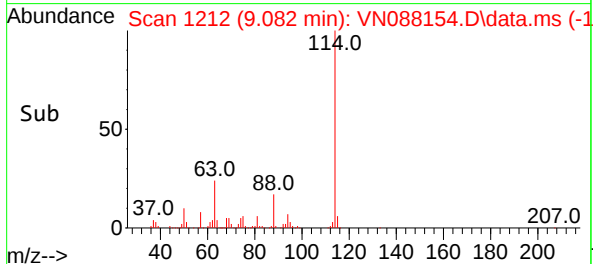
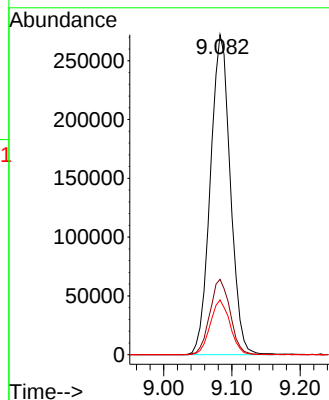
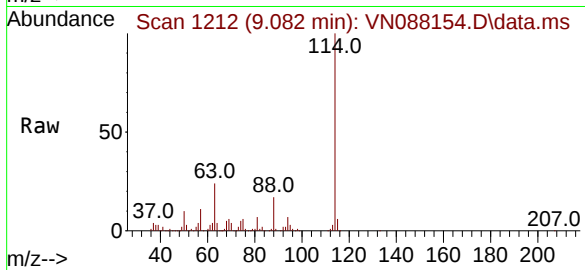
Tgt Ion:114 Resp: 555035

Ion Ratio Lower Upper

114 100

63 23.6 0.0 45.2

88 17.1 0.0 33.4



#35

Dibromofluoromethane

Concen: 48.913 ug/l

RT: 8.153 min Scan# 1054

Delta R.T. -0.000 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

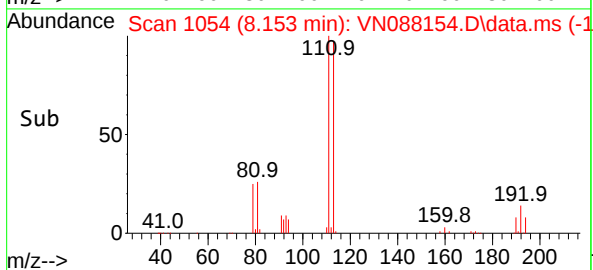
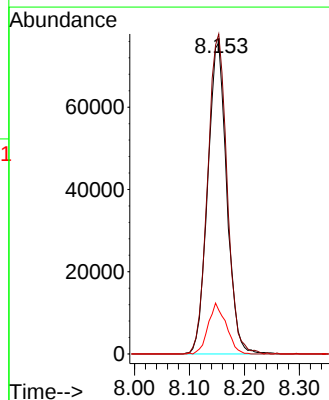
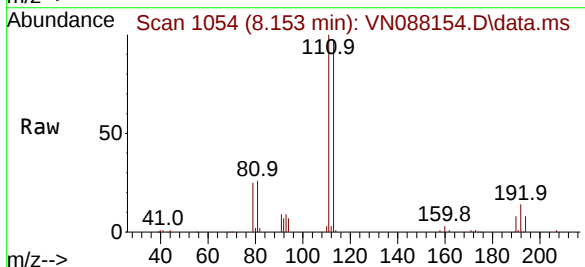
Tgt Ion:113 Resp: 182386

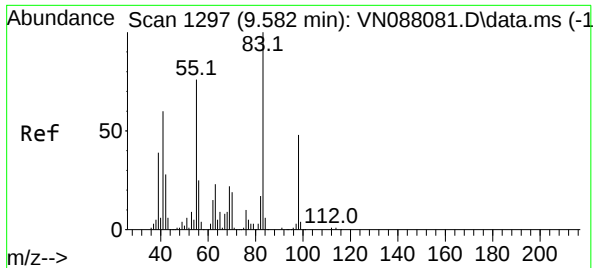
Ion Ratio Lower Upper

113 100

111 104.6 82.8 124.2

192 15.5 12.8 19.2

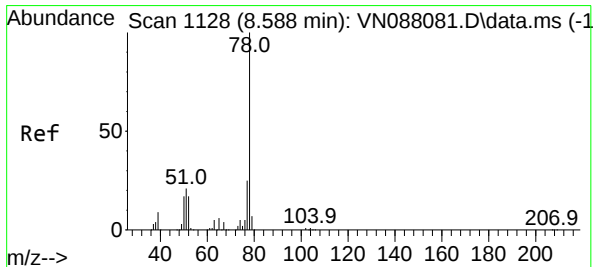
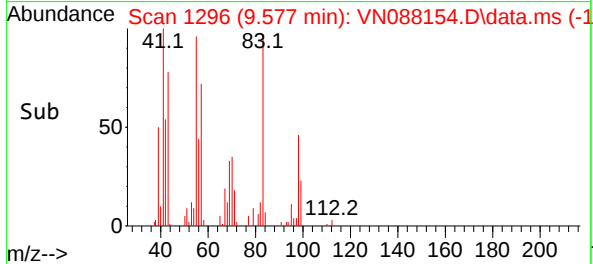
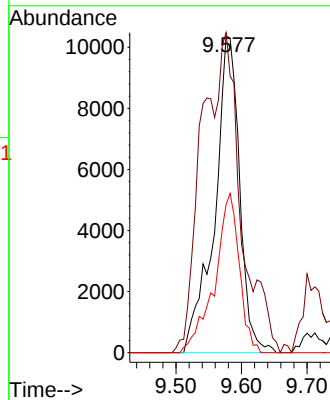
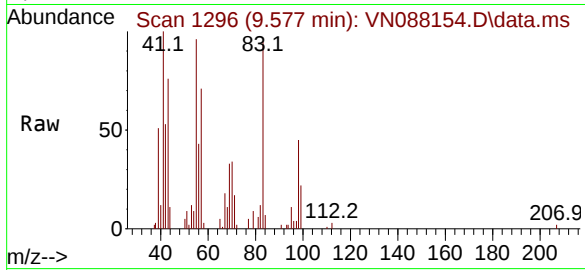




#39
Methylcyclohexane
Concen: 3.937 ug/l
RT: 9.577 min Scan# 1296
Delta R.T. -0.006 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

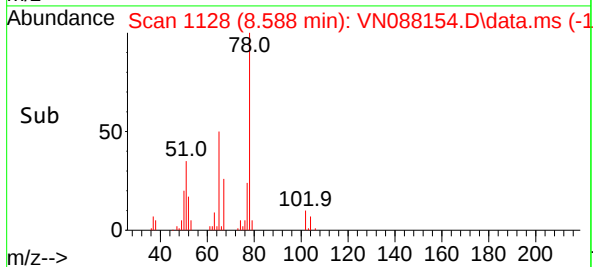
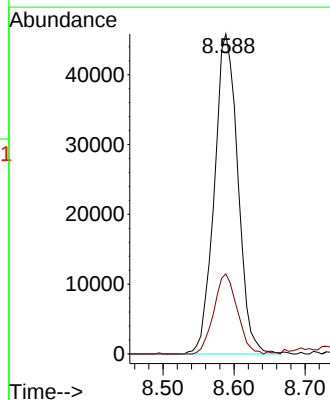
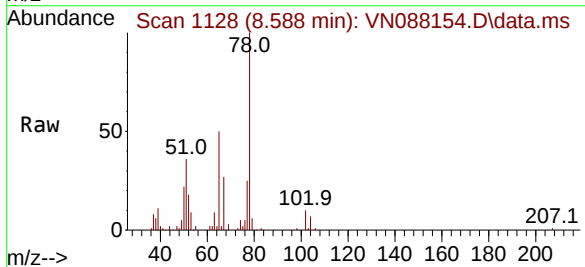
Instrument :
MSVOA_N
ClientSampleId :
MW-06

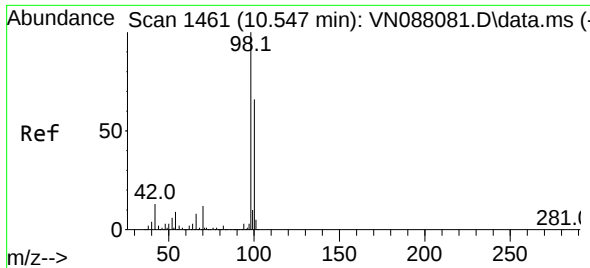
Tgt Ion	Ratio	Lower	Upper
83	100		
55	101.0	64.6	96.8#
98	46.8	38.4	57.6



#40
Benzene
Concen: 6.343 ug/l
RT: 8.588 min Scan# 1128
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion	Ratio	Lower	Upper
78	100		
77	25.0	19.7	29.5

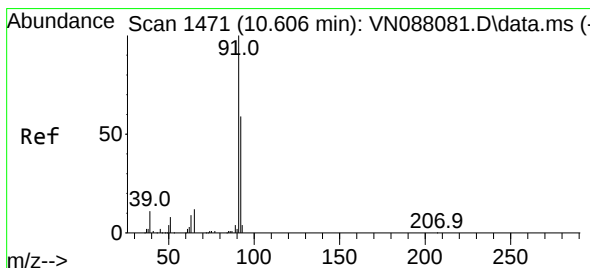
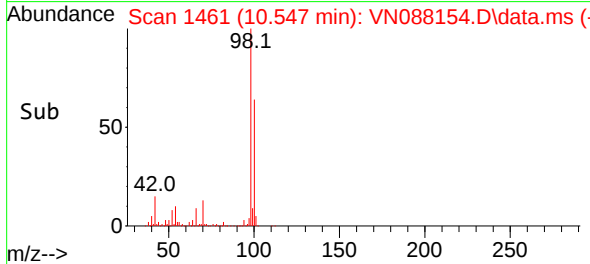
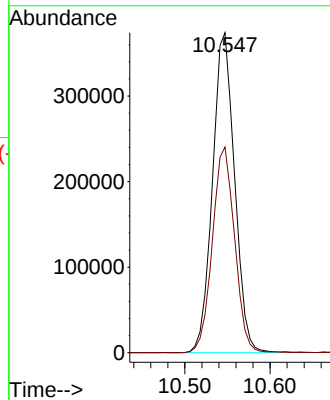
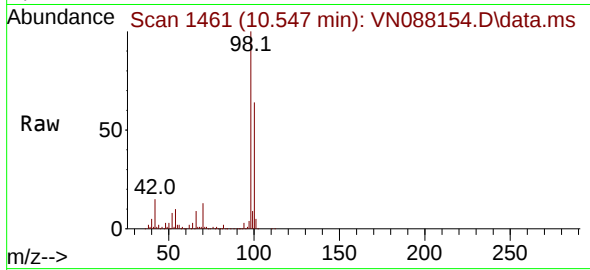




#50
Toluene-d8
Concen: 46.942 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

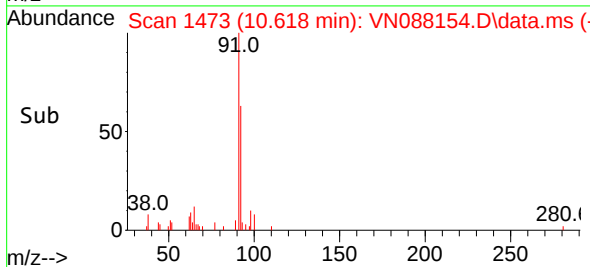
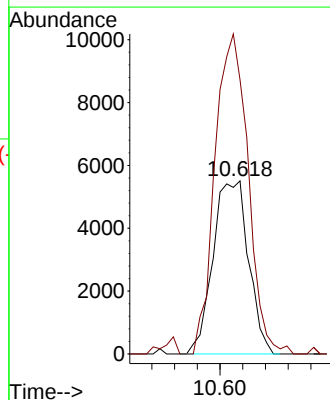
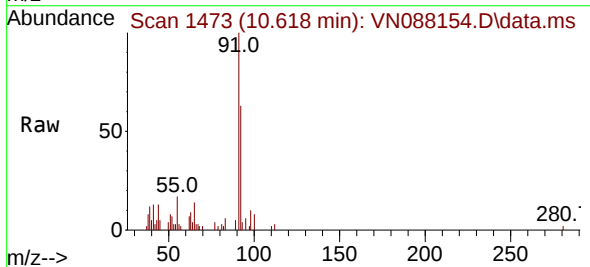
Instrument :
MSVOA_N
ClientSampleId :
MW-06

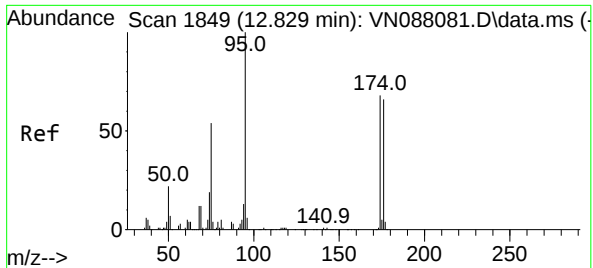
Tgt Ion: 98 Resp: 674436
Ion Ratio Lower Upper
98 100
100 64.7 52.8 79.2



#52
Toluene
Concen: 1.167 ug/l
RT: 10.618 min Scan# 1473
Delta R.T. 0.012 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion: 92 Resp: 11927
Ion Ratio Lower Upper
92 100
91 173.0 140.4 210.6

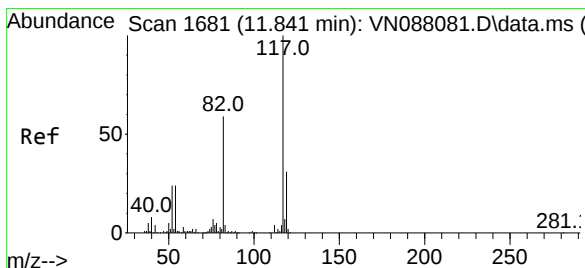
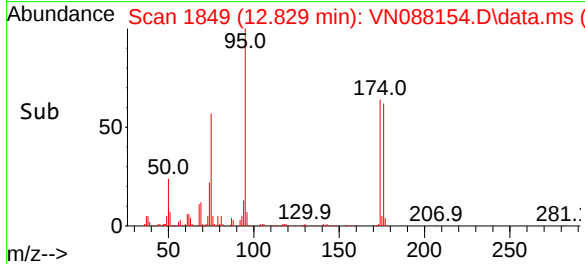
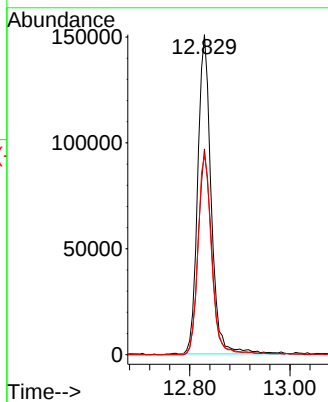
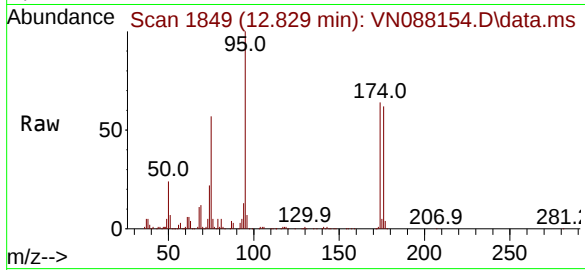




#62
4-Bromofluorobenzene
Concen: 54.950 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

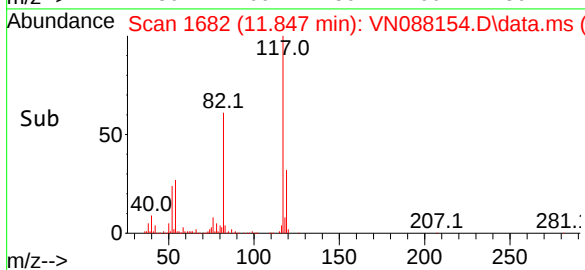
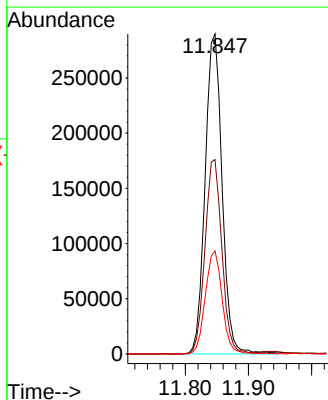
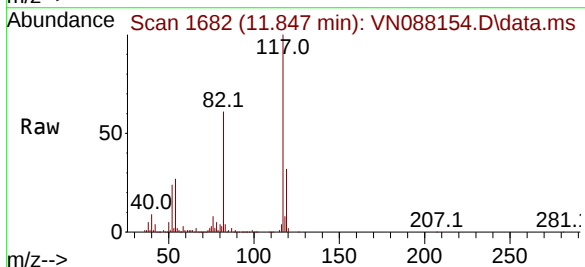
Instrument :
MSVOA_N
ClientSampleId :
MW-06

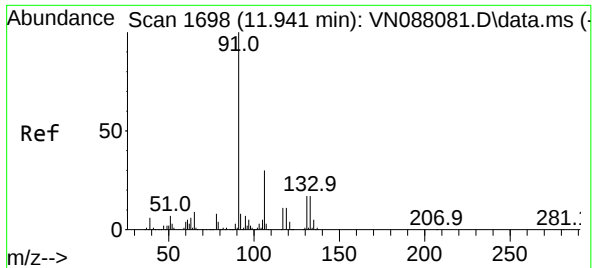
Tgt Ion: 95 Resp: 278818
Ion Ratio Lower Upper
95 100
174 63.7 0.0 138.4
176 64.2 0.0 132.6



#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion: 117 Resp: 540568
Ion Ratio Lower Upper
117 100
82 60.8 47.4 71.2
119 32.2 24.3 36.5





#67

Ethyl Benzene

Concen: 4.830 ug/l

RT: 11.941 min Scan# 1698

Delta R.T. -0.000 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

Instrument :

MSVOA_N

ClientSampleId :

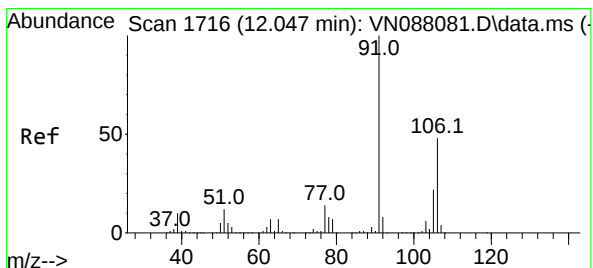
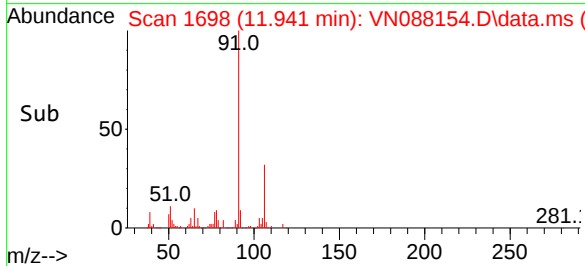
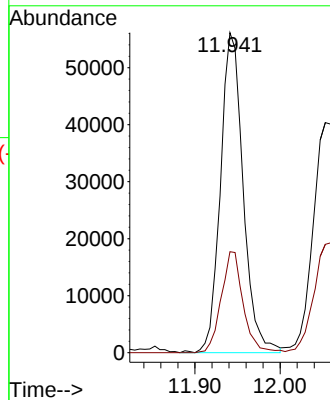
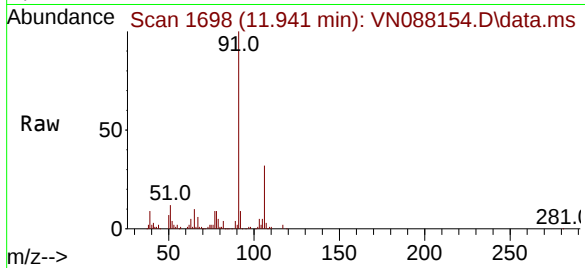
MW-06

Tgt Ion: 91 Resp: 104057

Ion Ratio Lower Upper

91 100

106 31.5 24.1 36.1



#68

m/p-Xylenes

Concen: 4.849 ug/l

RT: 12.059 min Scan# 1718

Delta R.T. 0.012 min

Lab File: VN088154.D

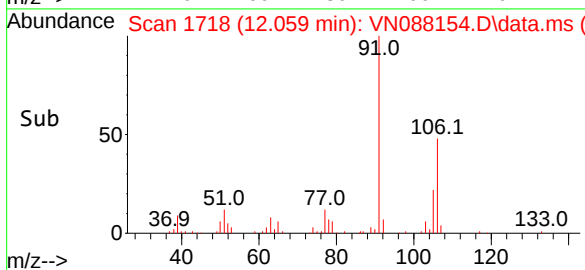
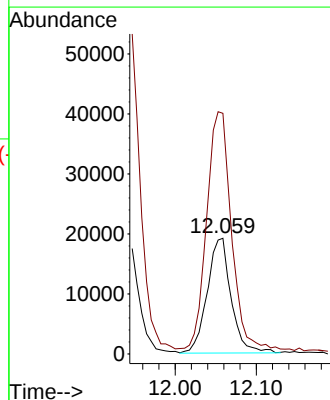
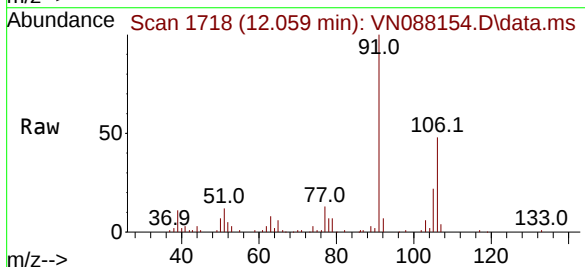
Acq: 29 Oct 2025 13:03

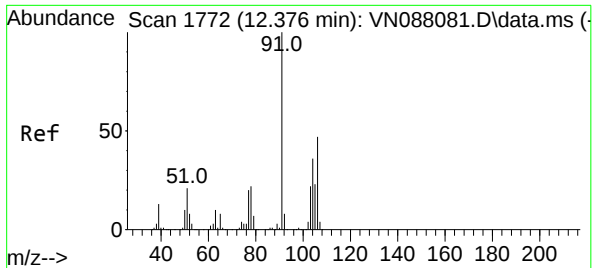
Tgt Ion:106 Resp: 39145

Ion Ratio Lower Upper

106 100

91 218.6 169.3 253.9

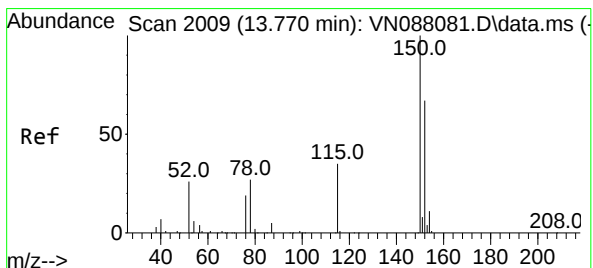
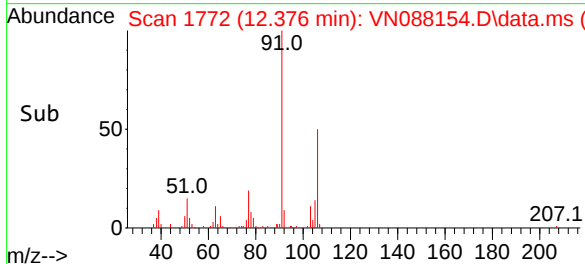
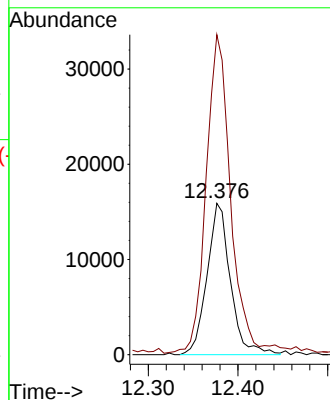
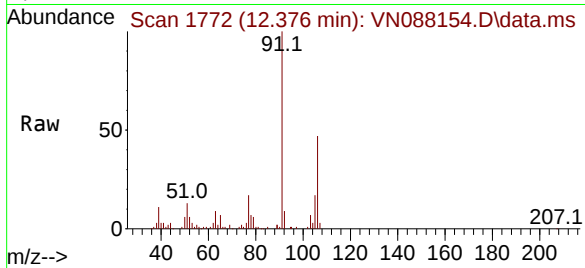




#69
o-Xylene
Concen: 3.758 ug/l
RT: 12.376 min Scan# 1772
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

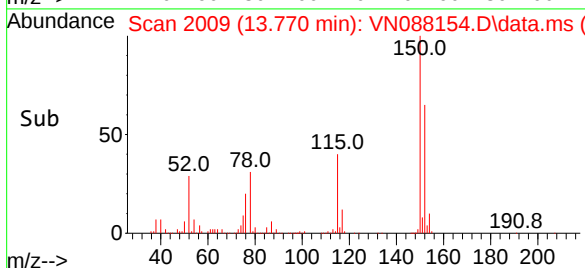
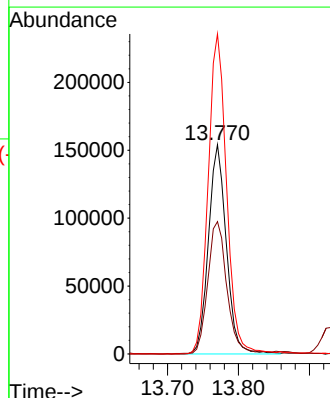
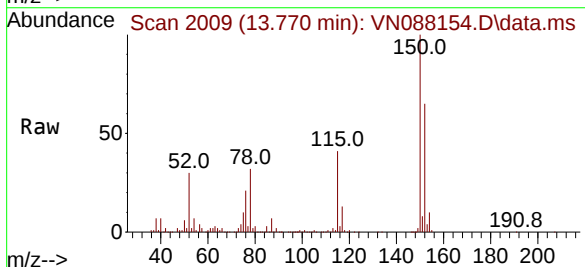
Instrument :
MSVOA_N
ClientSampleId :
MW-06

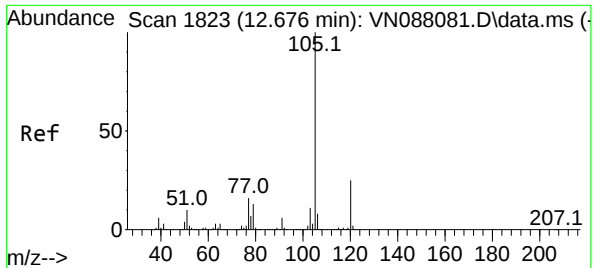
Tgt Ion:106 Resp: 28759
Ion Ratio Lower Upper
106 100
91 216.6 111.4 334.2



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion:152 Resp: 270083
Ion Ratio Lower Upper
152 100
115 67.6 32.3 96.8
150 156.8 0.0 351.0

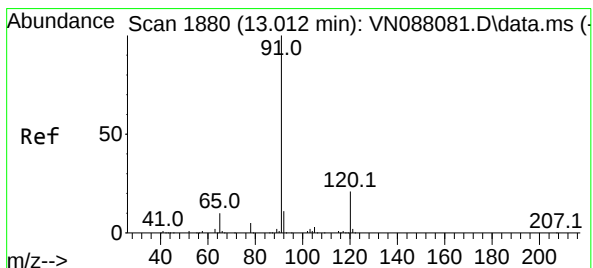
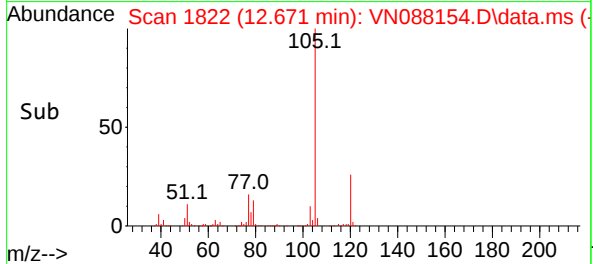
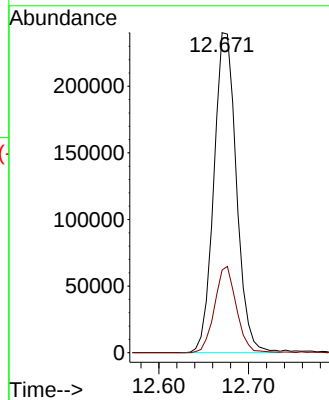
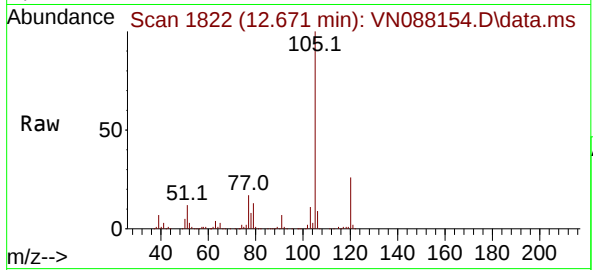




#73
Isopropylbenzene
Concen: 20.146 ug/l
RT: 12.671 min Scan# 1822
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

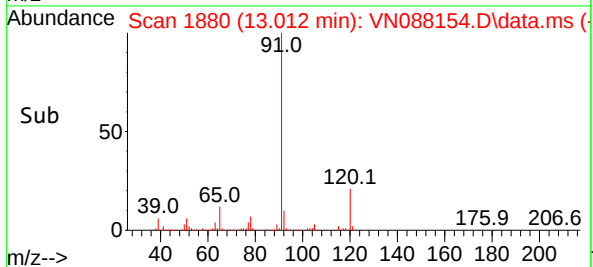
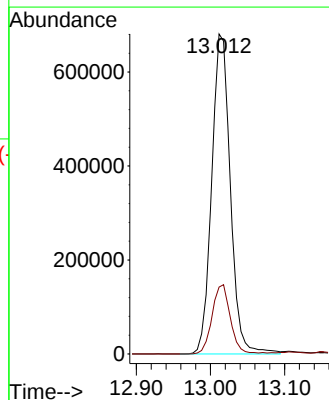
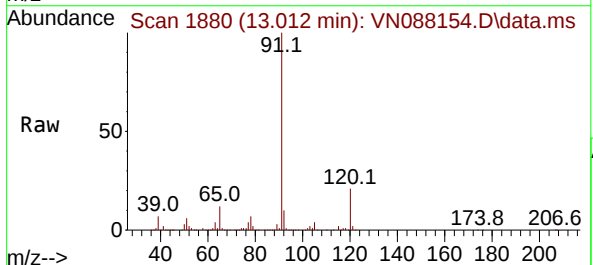
Instrument :
MSVOA_N
ClientSampleId :
MW-06

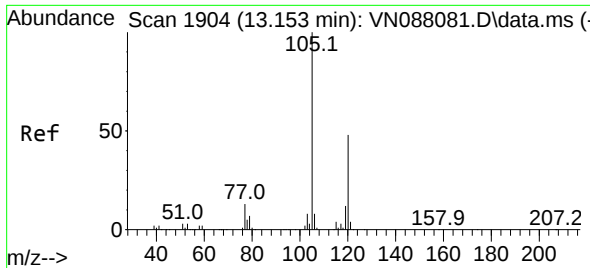
Tgt Ion:105 Resp: 419665
Ion Ratio Lower Upper
105 100
120 26.0 12.8 38.3



#78
n-propylbenzene
Concen: 46.810 ug/l
RT: 13.012 min Scan# 1880
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion: 91 Resp: 1189938
Ion Ratio Lower Upper
91 100
120 21.1 10.7 32.1

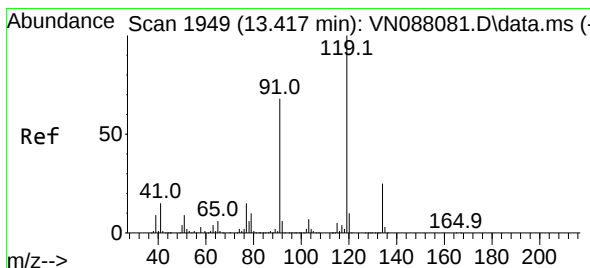
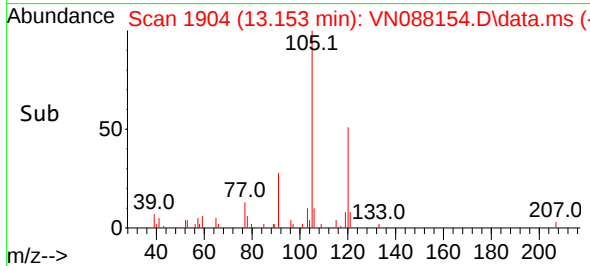
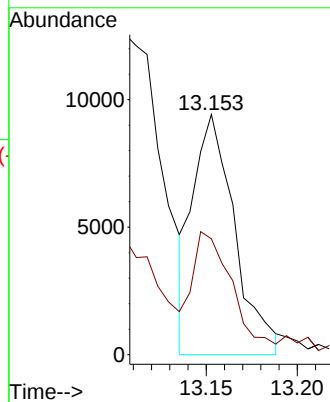
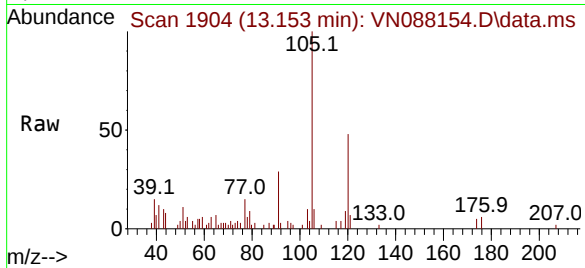




#80
1,3,5-Trimethylbenzene
Concen: 0.869 ug/l m
RT: 13.153 min Scan# 1904
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

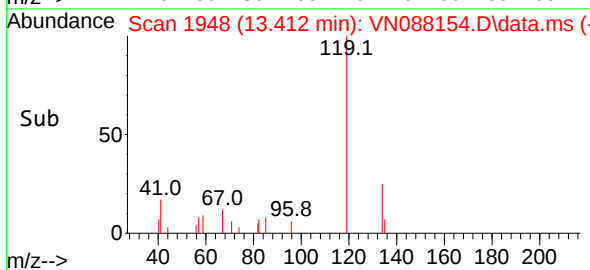
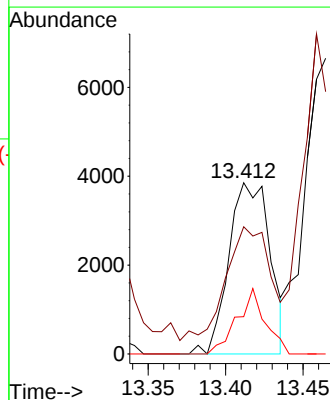
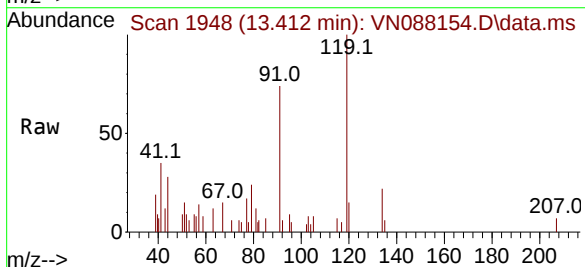
Instrument :
MSVOA_N
ClientSampleId :
MW-06

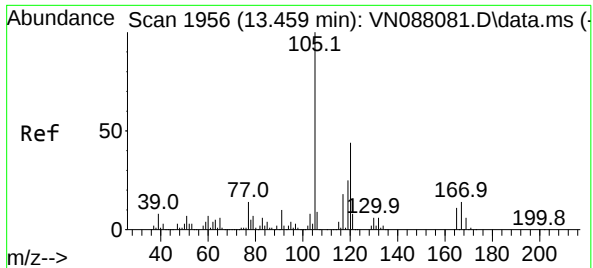
Tgt Ion:105 Resp: 15026
Ion Ratio Lower Upper
105 100
120 188.5 23.2 69.6#



#83
tert-Butylbenzene
Concen: 0.460 ug/l
RT: 13.412 min Scan# 1948
Delta R.T. -0.006 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion:119 Resp: 7116
Ion Ratio Lower Upper
119 100
91 68.9 35.0 105.0
134 26.2 12.6 37.8

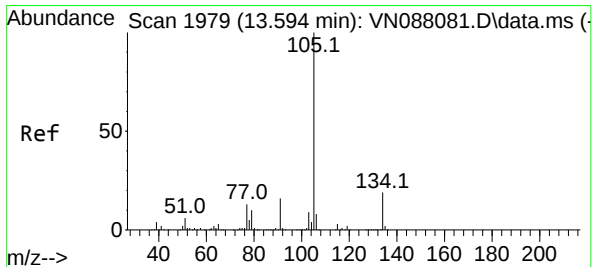
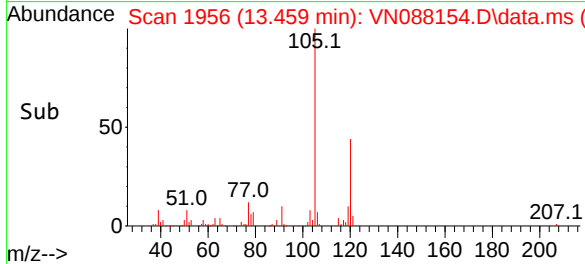
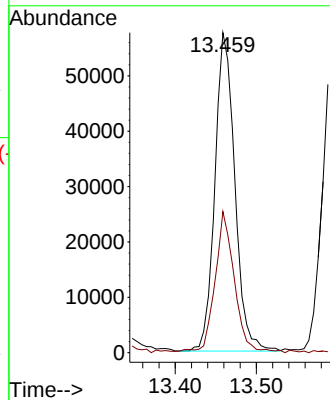
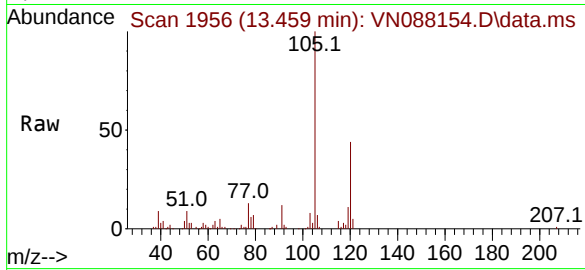




#84
1,2,4-Trimethylbenzene
Concen: 5.666 ug/l
RT: 13.459 min Scan# 1956
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

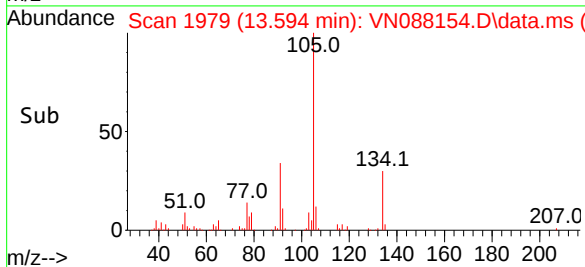
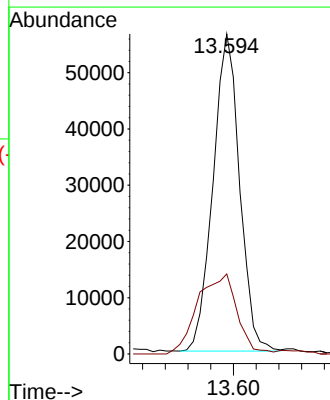
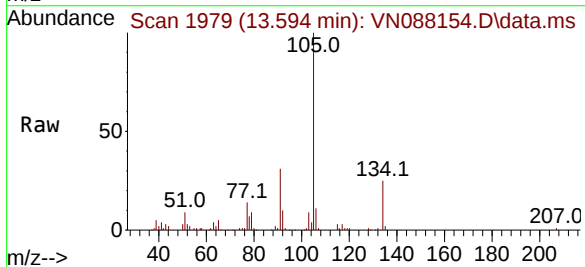
Instrument :
MSVOA_N
ClientSampleId :
MW-06

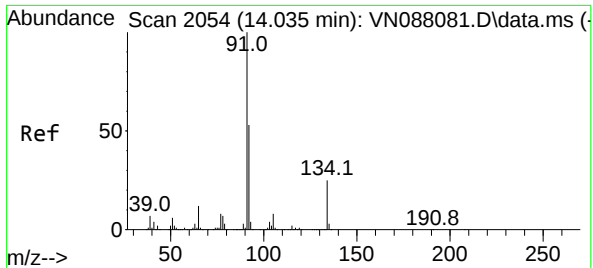
Tgt Ion:105 Resp: 98069
Ion Ratio Lower Upper
105 100
120 43.5 22.0 66.0



#85
sec-Butylbenzene
Concen: 4.039 ug/l
RT: 13.594 min Scan# 1979
Delta R.T. -0.000 min
Lab File: VN088154.D
Acq: 29 Oct 2025 13:03

Tgt Ion:105 Resp: 91716
Ion Ratio Lower Upper
105 100
134 37.2 9.6 28.6#





#89

n-Butylbenzene

Concen: 4.464 ug/l

RT: 14.035 min Scan# 2054

Delta R.T. 0.006 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

Instrument :

MSVOA_N

ClientSampleId :

MW-06

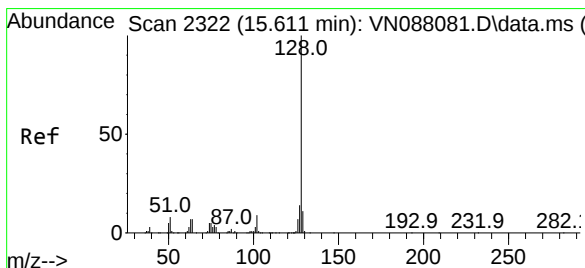
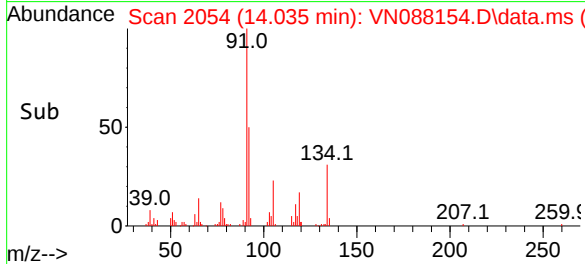
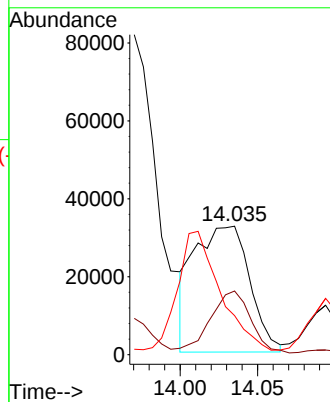
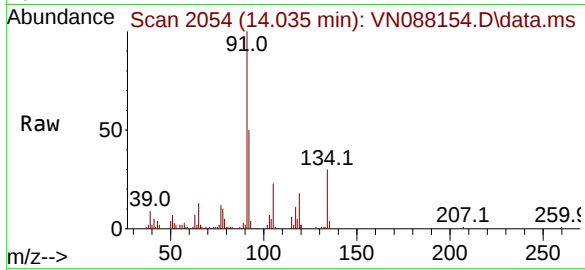
Tgt Ion: 91 Resp: 80547

Ion Ratio Lower Upper

91 100

92 37.6 25.9 77.8

134 0.0 11.7 35.0#



#95

Naphthalene

Concen: 48.479 ug/l

RT: 15.611 min Scan# 2322

Delta R.T. -0.000 min

Lab File: VN088154.D

Acq: 29 Oct 2025 13:03

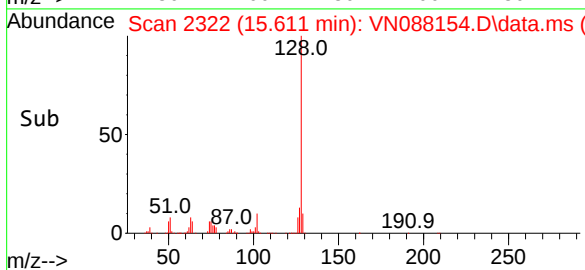
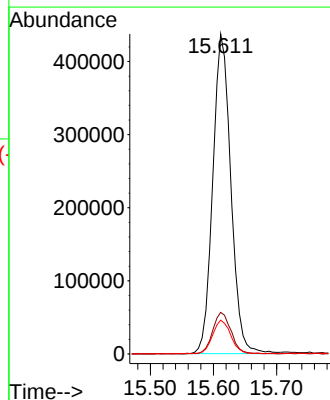
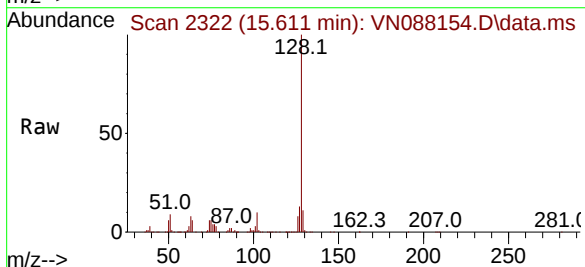
Tgt Ion:128 Resp: 869407

Ion Ratio Lower Upper

128 100

127 13.3 10.6 15.8

129 10.7 8.6 12.8





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-08	SDG No.:	Q3468
Lab Sample ID:	Q3468-02	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/28/25 14:40	VN102825
71-43-2	Benzene	120		1	0.15	1.00	ug/L	10/28/25 14:40	VN102825
108-88-3	Toluene	9.50		1	0.14	1.00	ug/L	10/28/25 14:40	VN102825
100-41-4	Ethyl Benzene	100	Q	1	0.13	1.00	ug/L	10/28/25 14:40	VN102825
179601-23-1	m/p-Xylenes	310	E	1	0.24	2.00	ug/L	10/28/25 14:40	VN102825
1330-20-7	Total Xylenes	550		1	0.36	3.00	ug/L	10/28/25 14:40	VN102825
95-47-6	o-Xylene	240	EQ	1	0.12	1.00	ug/L	10/28/25 14:40	VN102825
98-82-8	Isopropylbenzene	10.6		1	0.12	1.00	ug/L	10/28/25 14:40	VN102825
103-65-1	n-propylbenzene	16.9		1	0.13	1.00	ug/L	10/28/25 14:40	VN102825
108-67-8	1,3,5-Trimethylbenzene	15.4		1	0.15	1.00	ug/L	10/28/25 14:40	VN102825
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/28/25 14:40	VN102825
95-63-6	1,2,4-Trimethylbenzene	350	E	1	0.14	1.00	ug/L	10/28/25 14:40	VN102825
135-98-8	sec-Butylbenzene	1.80		1	0.13	1.00	ug/L	10/28/25 14:40	VN102825
99-87-6	p-Isopropyltoluene	1.40		1	0.13	1.00	ug/L	10/28/25 14:40	VN102825
104-51-8	n-Butylbenzene	2.50		1	0.15	1.00	ug/L	10/28/25 14:40	VN102825
91-20-3	Naphthalene	210	E	1	0.20	1.00	ug/L	10/28/25 14:40	VN102825
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	60.4			74 - 125	121%	SPK: 50		
1868-53-7	Dibromofluoromethane	48.3			75 - 124	97%	SPK: 50		
2037-26-5	Toluene-d8	46.7			86 - 113	93%	SPK: 50		
460-00-4	4-Bromofluorobenzene	55.4			77 - 121	111%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	281000							
540-36-3	1,4-Difluorobenzene	637000							
3114-55-4	Chlorobenzene-d5	622000							
3855-82-1	1,4-Dichlorobenzene-d4	313000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088138.D
 Acq On : 28 Oct 2025 14:40
 Operator : JC\MD
 Sample : Q3468-02
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 14 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-08

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:25:27 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	280779	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	636841	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	622260	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	313348	50.000	ug/l	# 0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	293459	60.441	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 120.880%			
35) Dibromofluoromethane	8.147	113	206787	48.334	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 96.660%			
50) Toluene-d8	10.547	98	770105	46.715	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 93.440%			
62) 4-Bromofluorobenzene	12.829	95	322452	55.386	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 110.780%			
Target Compounds						Qvalue
11) Tert butyl alcohol	5.536	59	43062	51.482	ug/l	97
16) Acetone	4.418	43	64476	26.433	ug/l	# 83
25) 2-Butanone	7.477	43	33085	10.292	ug/l	91
31) Cyclohexane	8.236	56	269553	39.662	ug/l	94
39) Methylcyclohexane	9.582	83	168825	21.025	ug/l	97
40) Benzene	8.588	78	2340324	123.016	ug/l	98
52) Toluene	10.612	92	111950	9.544	ug/l	97
67) Ethyl Benzene	11.941	91	2499788	100.790	ug/l	100
68) m/p-Xylenes	12.053	106	2876708	309.563	ug/l	100
69) o-Xylene	12.376	106	2138954	242.808	ug/l	98
73) Isopropylbenzene	12.676	105	256674	10.621	ug/l	100
78) n-propylbenzene	13.012	91	497843	16.880	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	309175	15.404	ug/l	100
84) 1,2,4-Trimethylbenzene	13.459	105	6997704	348.461	ug/l	99
85) sec-Butylbenzene	13.594	105	46826m	1.778	ug/l	
86) p-Isopropyltoluene	13.706	119	28773m	1.362	ug/l	
89) n-Butylbenzene	14.012	91	51740m	2.472	ug/l	
95) Naphthalene	15.611	128	4365299m	209.807	ug/l	

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

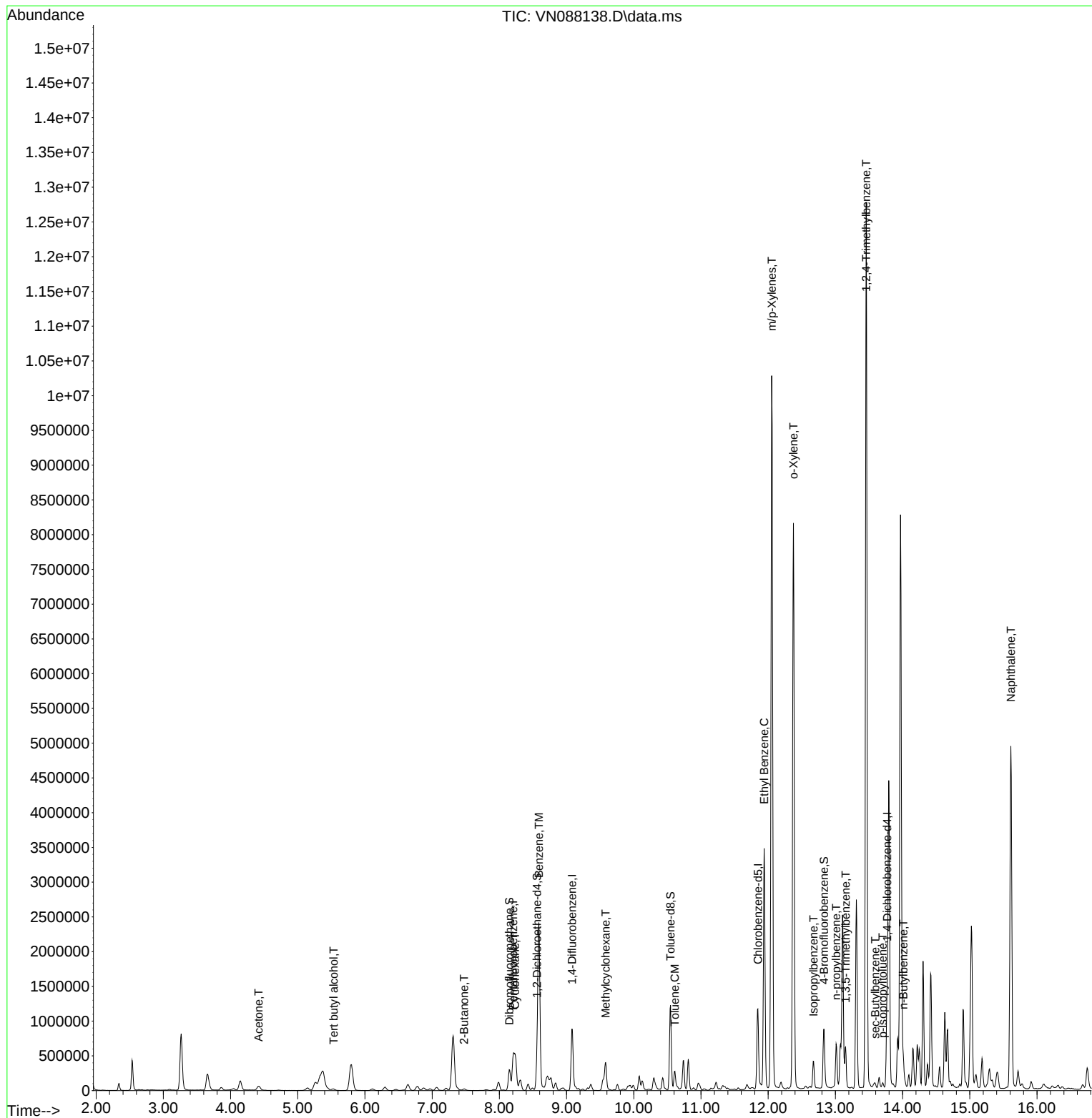
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Data File : VN088138.D
Acq On : 28 Oct 2025 14:40
Operator : JC\MD
Sample : Q3468-02
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 14 Sample Multiplier: 1

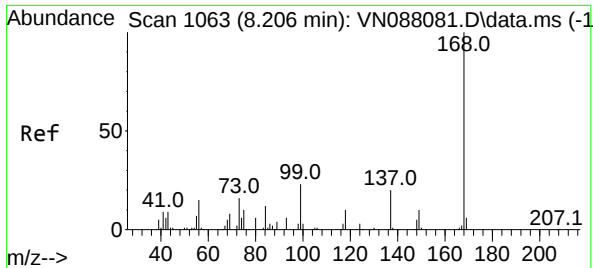
Instrument :
MSVOA_N
ClientSampleId :
MW-08

Manual Integrations
APPROVED

Reviewed By : John Carlone 10/29/2025
Supervised By : Semsettin Yesilyurt 10/29/2025

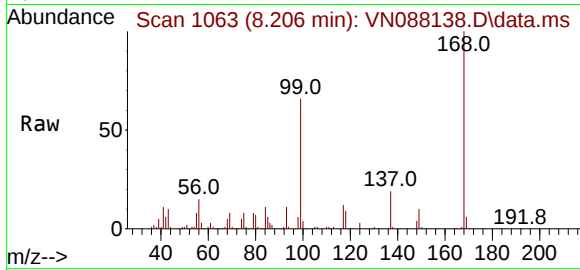
Quant Time: Oct 29 02:25:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

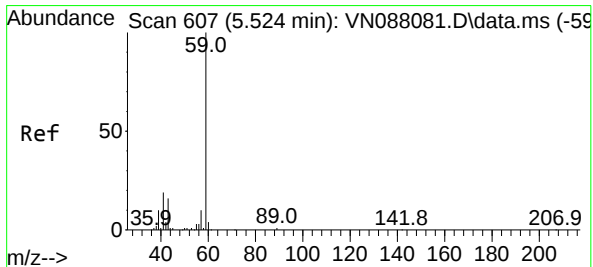
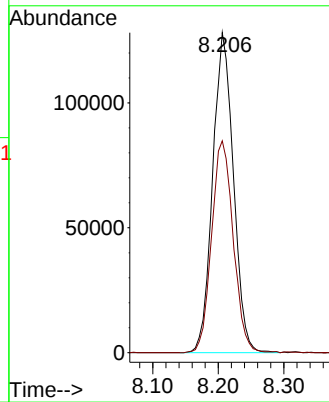
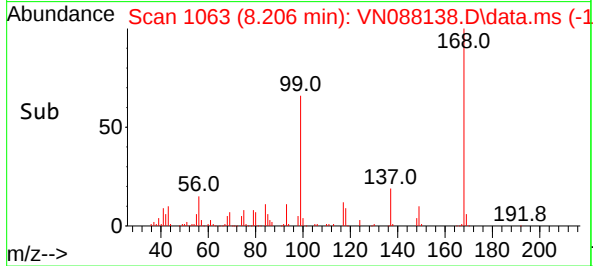
Instrument :
MSVOA_N
ClientSampleId :
MW-08



Tgt Ion:168 Resp: 280779
Ion Ratio Lower Upper
168 100
99 66.2 57.2 85.8

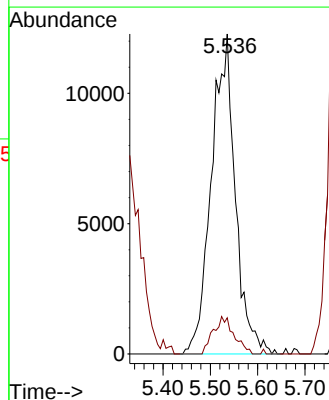
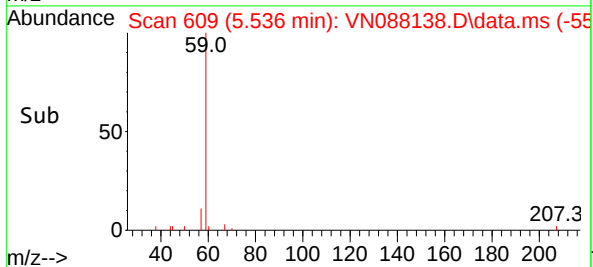
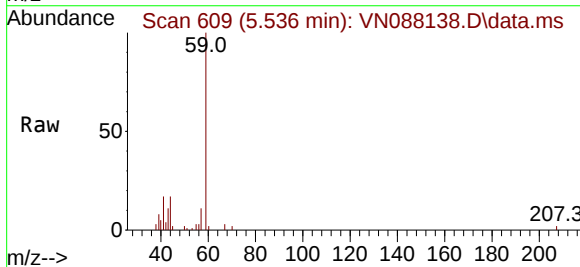
Manual Integrations
APPROVED

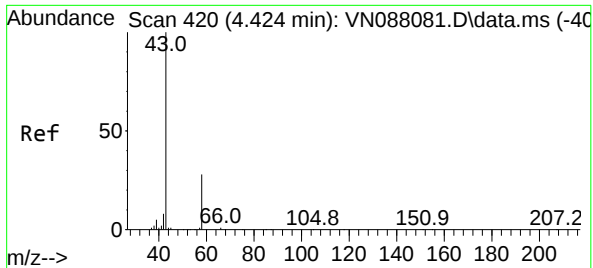
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#11
Tert butyl alcohol
Concen: 51.482 ug/l
RT: 5.536 min Scan# 609
Delta R.T. 0.018 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

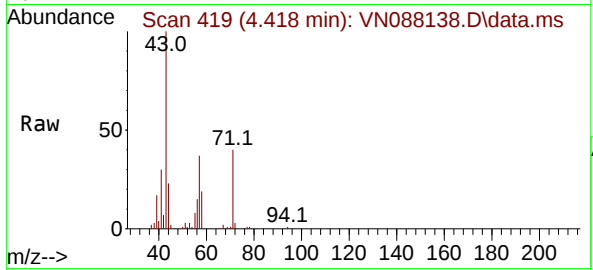
Tgt Ion: 59 Resp: 43062
Ion Ratio Lower Upper
59 100
57 10.1 9.0 13.4





#16
Acetone
Concen: 26.433 ug/l
RT: 4.418 min Scan# 419
Delta R.T. -0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

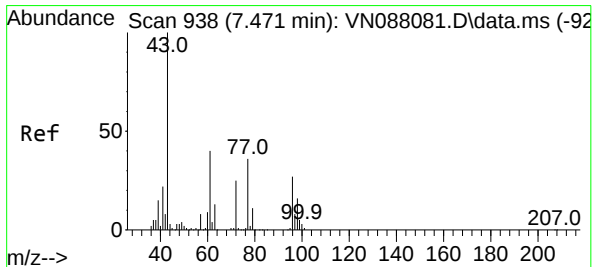
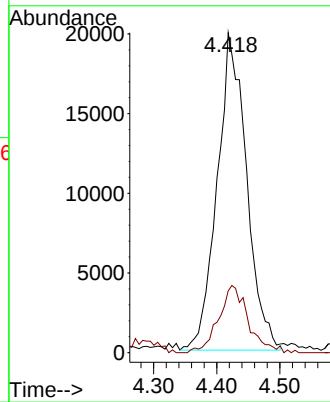
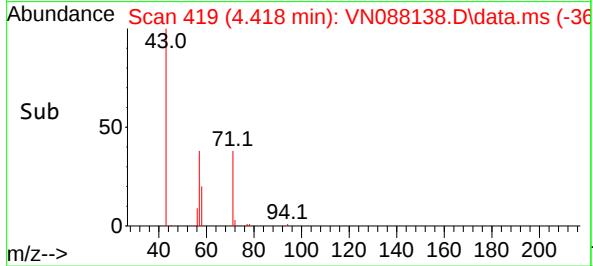
Instrument :
MSVOA_N
ClientSampleId :
MW-08



Tgt Ion: 43 Resp: 64470
Ion Ratio Lower Upper
43 100
58 19.5 22.6 33.8

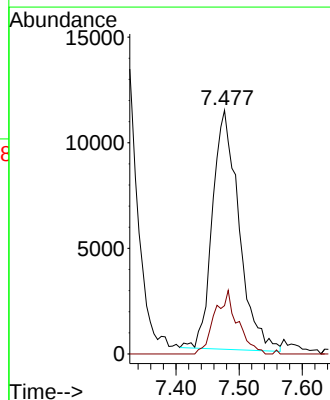
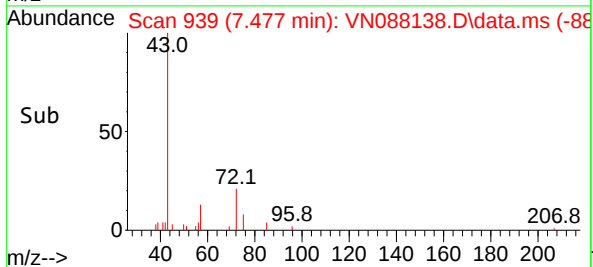
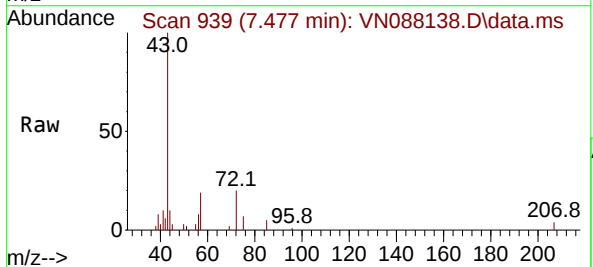
Manual Integrations
APPROVED

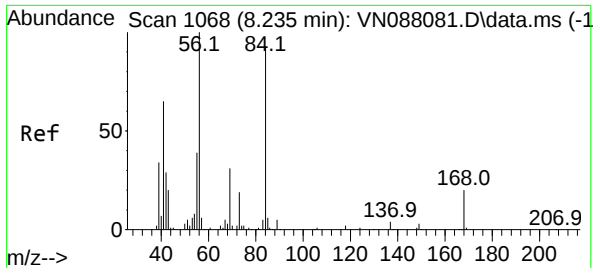
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#25
2-Butanone
Concen: 10.292 ug/l
RT: 7.477 min Scan# 939
Delta R.T. 0.012 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

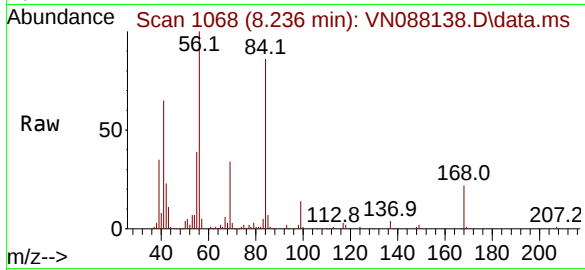
Tgt Ion: 43 Resp: 33085
Ion Ratio Lower Upper
43 100
72 20.4 19.9 29.9





#31
Cyclohexane
Concen: 39.662 ug/l
RT: 8.236 min Scan# 1068
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

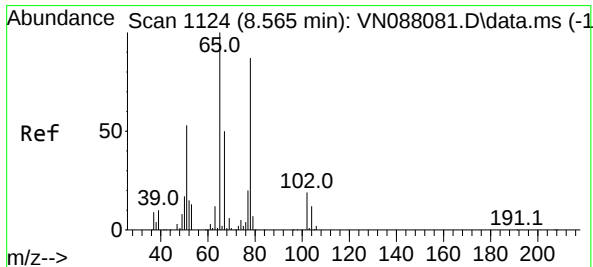
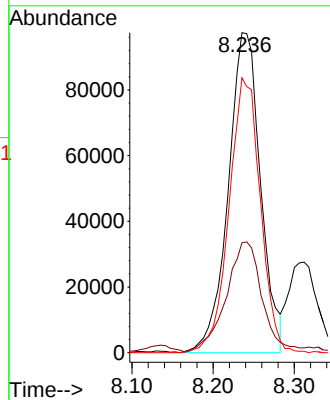
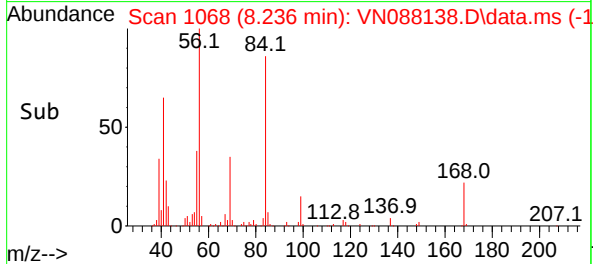
Instrument :
MSVOA_N
ClientSampleId :
MW-08



Tgt Ion: 56 Resp: 26955
Ion Ratio Lower Upper
56 100
69 33.5 23.7 35.5
84 85.9 64.7 97.1

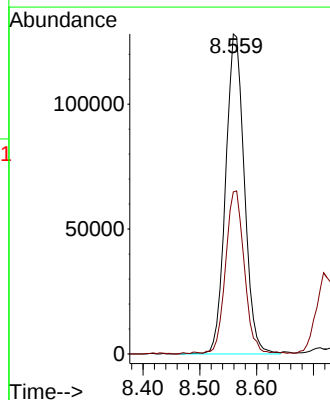
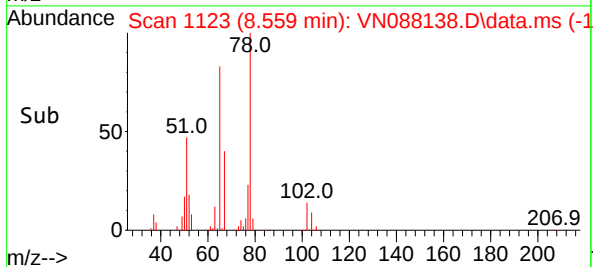
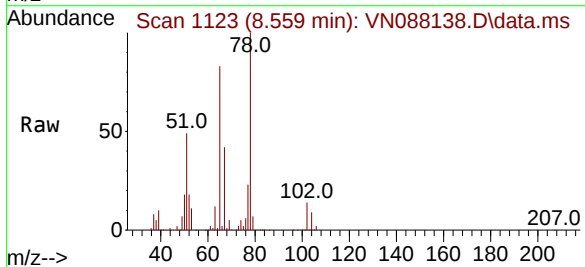
Manual Integrations
APPROVED

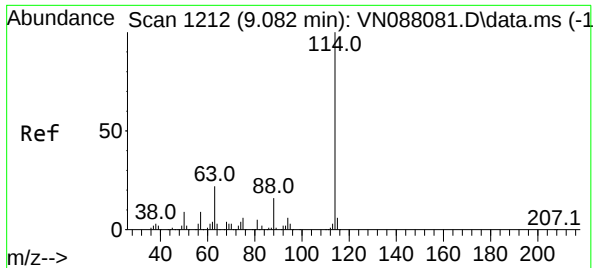
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#33
1,2-Dichloroethane-d4
Concen: 60.441 ug/l
RT: 8.559 min Scan# 1123
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

Tgt Ion: 65 Resp: 293459
Ion Ratio Lower Upper
65 100
67 50.4 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1

Delta R.T. -0.000 min

Lab File: VN088138.D

Acq: 28 Oct 2025 14:40

Instrument :

MSVOA_N

ClientSampleId :

MW-08

Tgt Ion:114 Resp: 63684

Ion Ratio Lower Upper

114 100

63 24.1 0.0 45.2

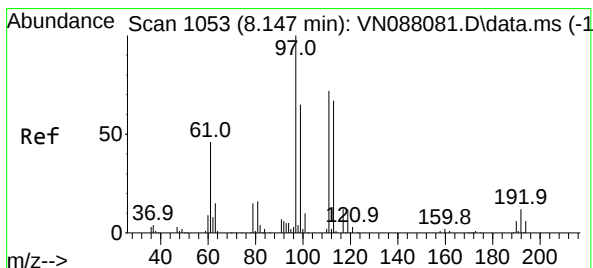
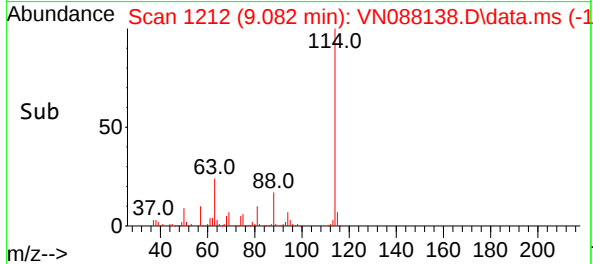
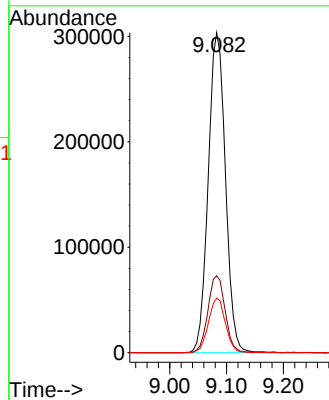
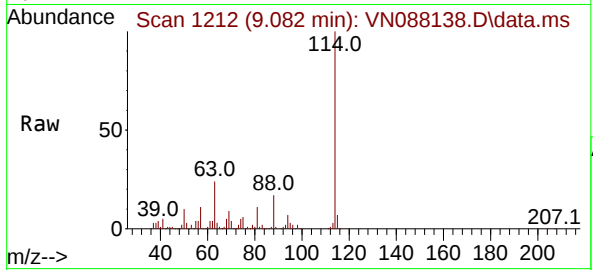
88 17.0 0.0 33.4

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#35

Dibromofluoromethane

Concen: 48.334 ug/l

RT: 8.147 min Scan# 1053

Delta R.T. -0.006 min

Lab File: VN088138.D

Acq: 28 Oct 2025 14:40

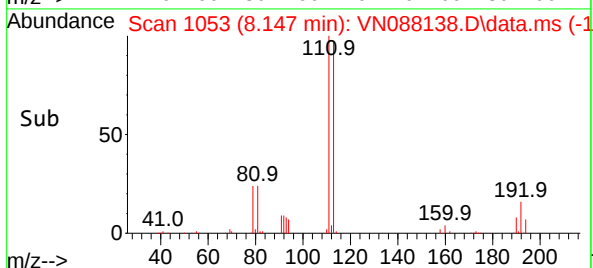
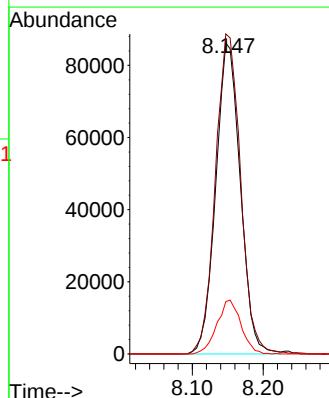
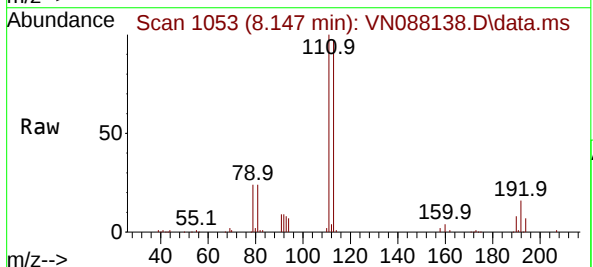
Tgt Ion:113 Resp: 206787

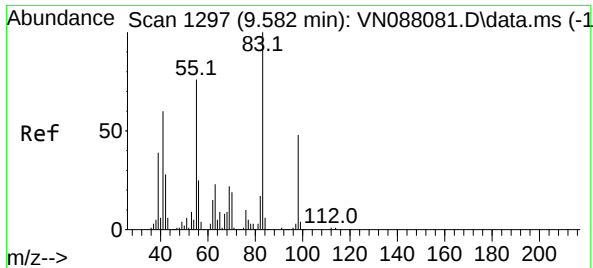
Ion Ratio Lower Upper

113 100

111 105.1 82.8 124.2

192 17.0 12.8 19.2





#39

Methylcyclohexane

Concen: 21.025 ug/l

RT: 9.582 min Scan# 1297

Delta R.T. -0.000 min

Lab File: VN088138.D

Acq: 28 Oct 2025 14:40

Instrument :

MSVOA_N

ClientSampleId :

MW-08

Tgt Ion: 83 Resp: 168824

Ion Ratio Lower Upper

83 100

55 83.5 64.6 96.8

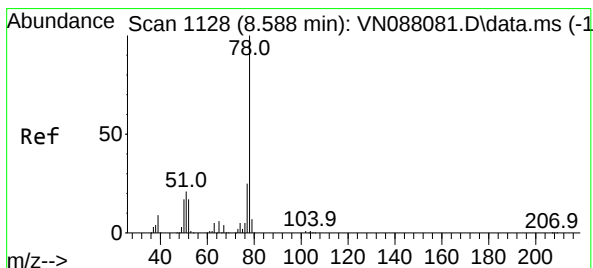
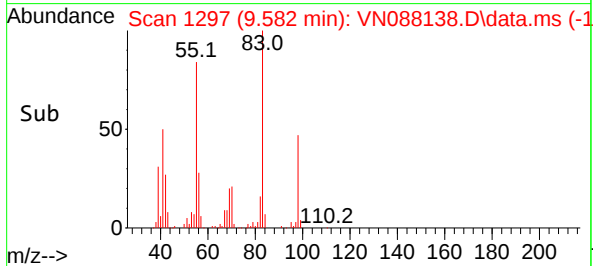
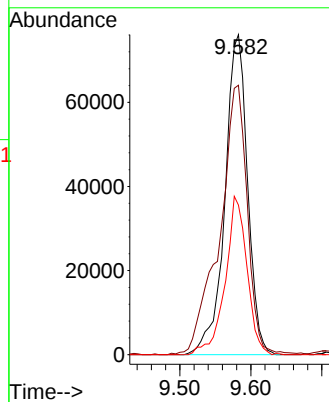
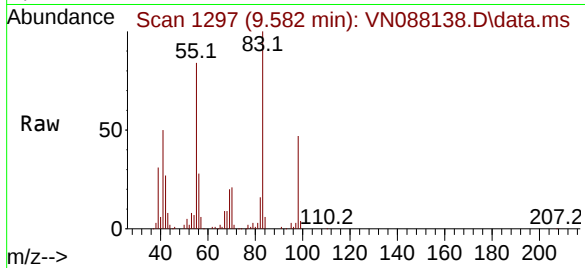
98 46.7 38.4 57.6

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#40

Benzene

Concen: 123.016 ug/l

RT: 8.588 min Scan# 1128

Delta R.T. -0.000 min

Lab File: VN088138.D

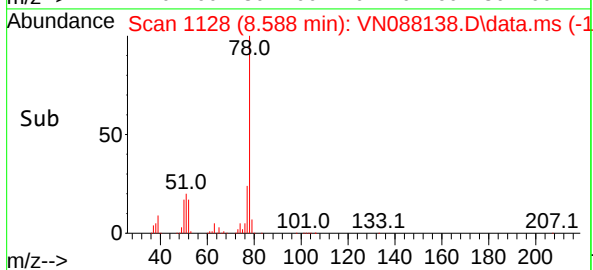
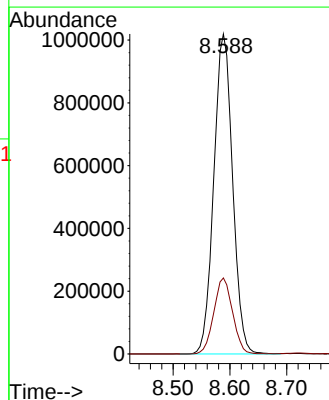
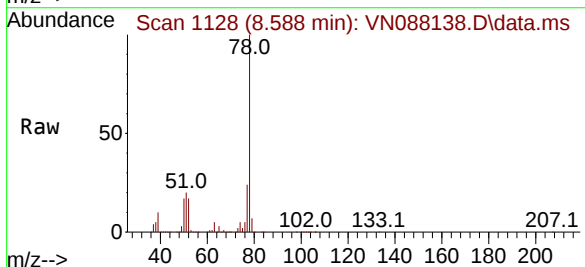
Acq: 28 Oct 2025 14:40

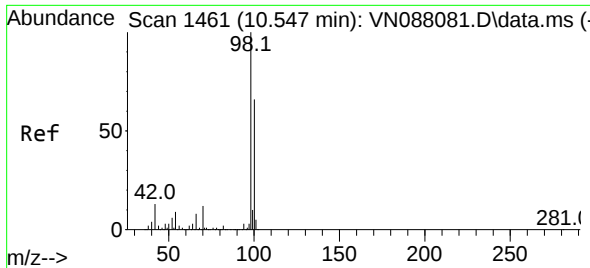
Tgt Ion: 78 Resp: 2340324

Ion Ratio Lower Upper

78 100

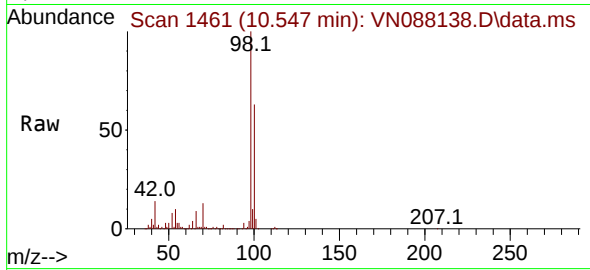
77 23.7 19.7 29.5





#50
Toluene-d8
Concen: 46.715 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

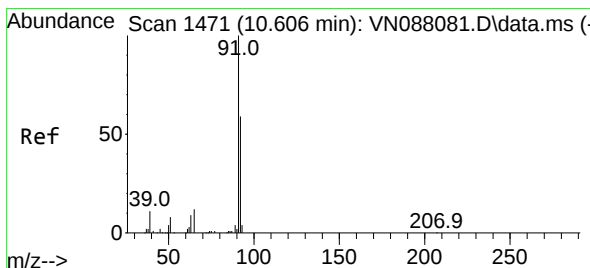
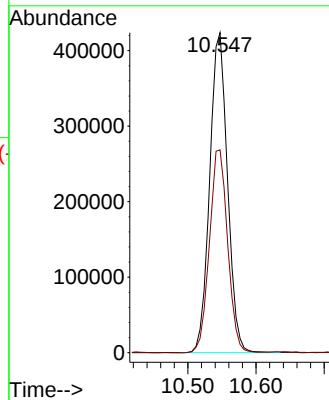
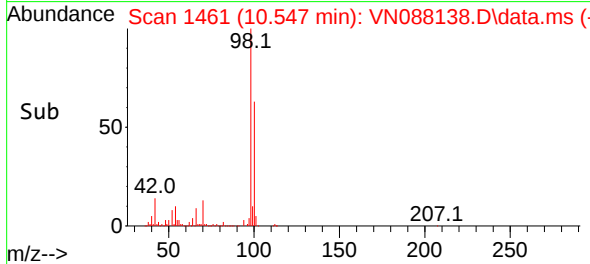
Instrument :
MSVOA_N
ClientSampleId :
MW-08



Tgt Ion: 98 Resp: 77010
Ion Ratio Lower Upper
98 100
100 64.9 52.8 79.2

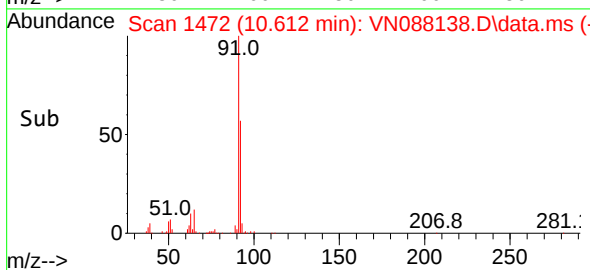
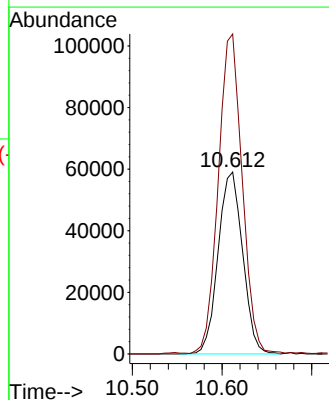
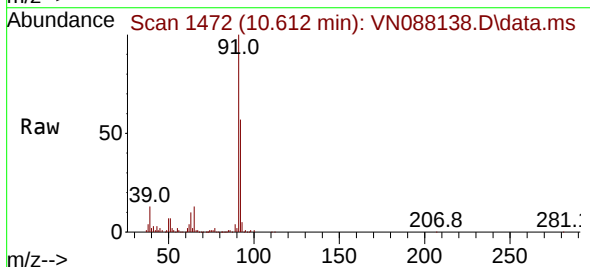
Manual Integrations
APPROVED

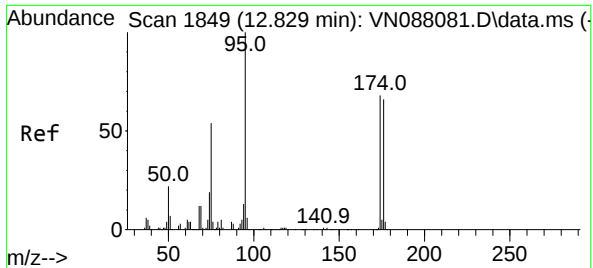
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#52
Toluene
Concen: 9.544 ug/l
RT: 10.612 min Scan# 1472
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

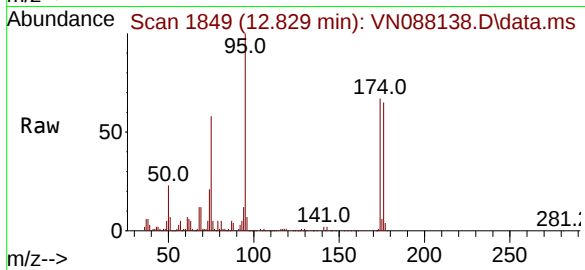
Tgt Ion: 92 Resp: 111950
Ion Ratio Lower Upper
92 100
91 171.2 140.4 210.6





#62
4-Bromofluorobenzene
Concen: 55.386 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

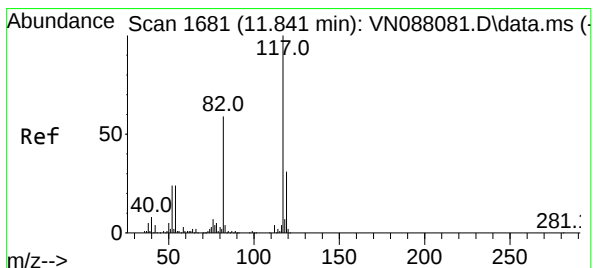
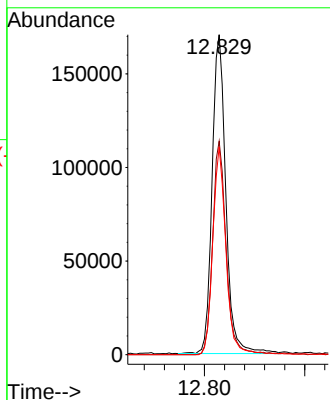
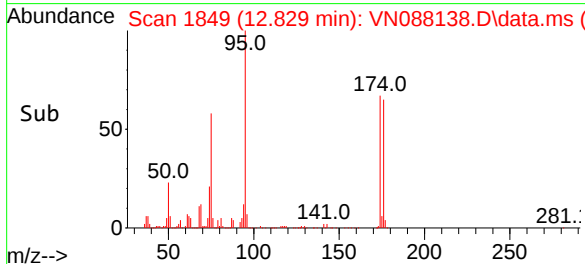
Instrument :
MSVOA_N
ClientSampleId :
MW-08



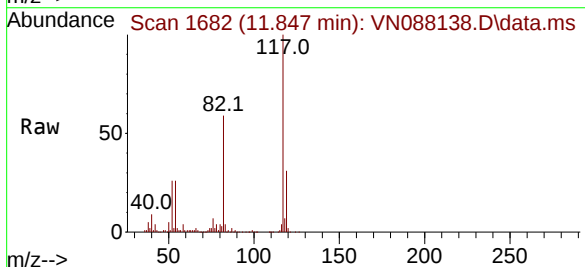
Tgt Ion: 95 Resp: 322452
Ion Ratio Lower Upper
95 100
174 66.2 0.0 138.4
176 62.6 0.0 132.6

Manual Integrations
APPROVED

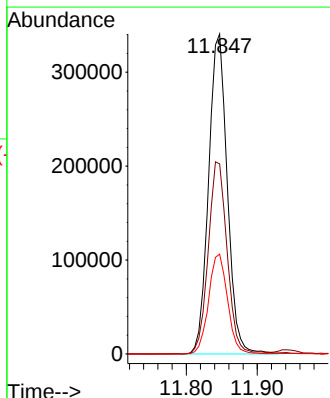
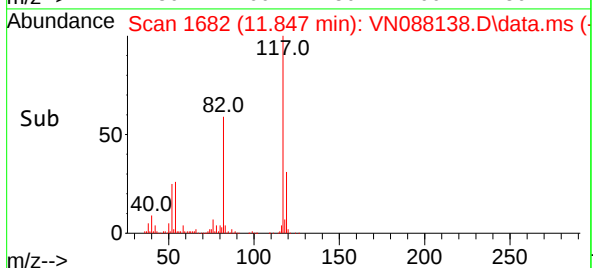
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

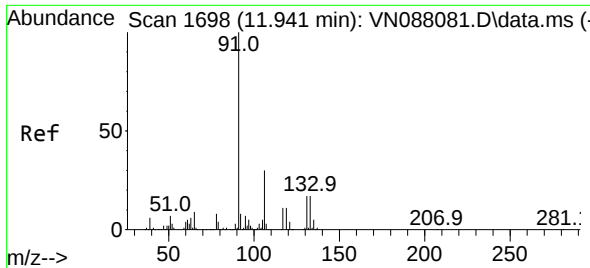


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40



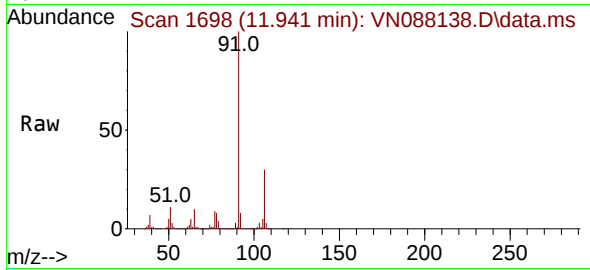
Tgt Ion:117 Resp: 622260
Ion Ratio Lower Upper
117 100
82 59.3 47.4 71.2
119 31.2 24.3 36.5





#67
Ethyl Benzene
Concen: 100.790 ug/l
RT: 11.941 min Scan# 1698
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

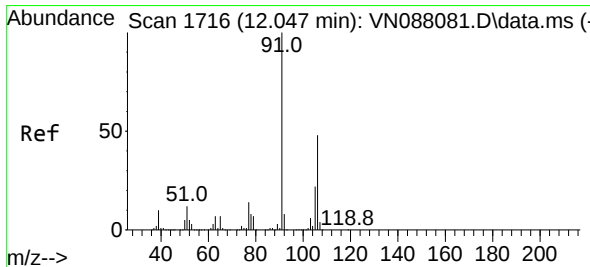
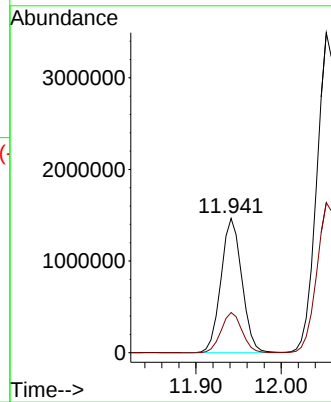
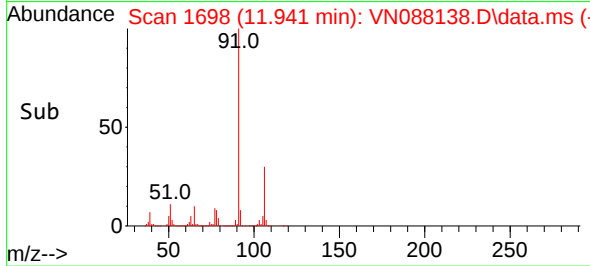
Instrument :
MSVOA_N
ClientSampleId :
MW-08



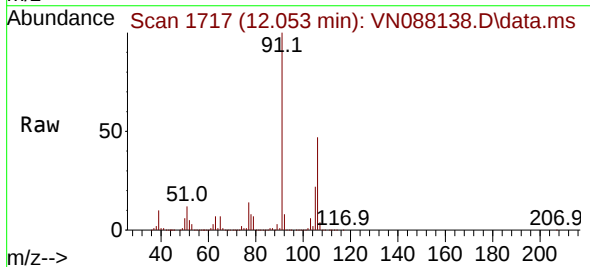
Tgt Ion: 91 Resp: 2499788
Ion Ratio Lower Upper
91 100
106 30.0 24.1 36.1

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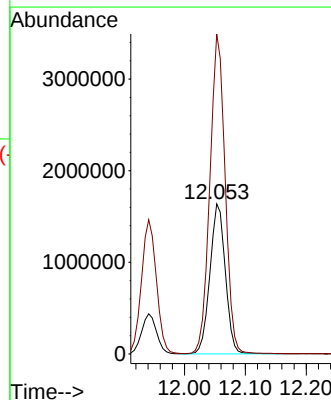
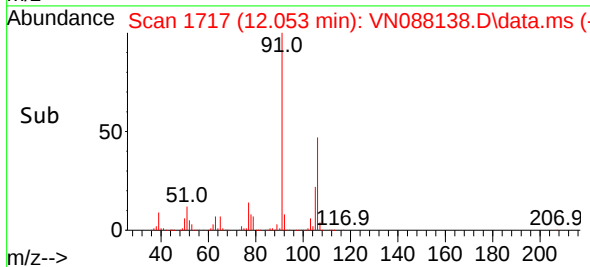
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

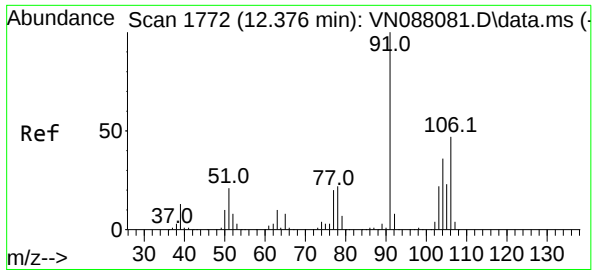


#68
m/p-Xylenes
Concen: 309.563 ug/l
RT: 12.053 min Scan# 1717
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40



Tgt Ion:106 Resp: 2876708
Ion Ratio Lower Upper
106 100
91 211.1 169.3 253.9





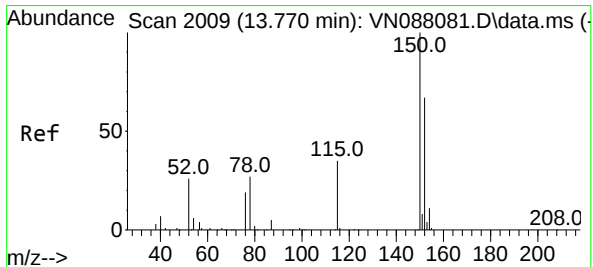
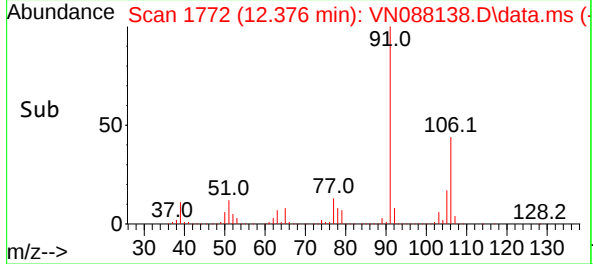
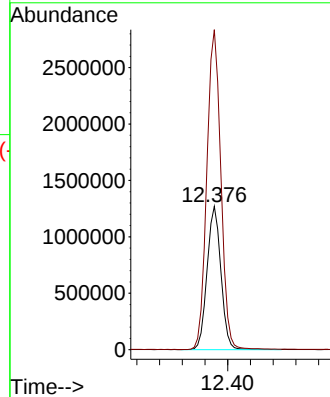
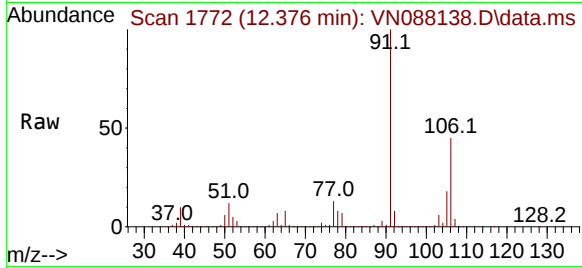
#69
o-Xylene
Concen: 242.808 ug/l
RT: 12.376 min Scan# 11
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

Instrument :
MSVOA_N
ClientSampleId :
MW-08

Tgt Ion:106 Resp: 2138954
Ion Ratio Lower Upper
106 100
91 226.6 111.4 334.2

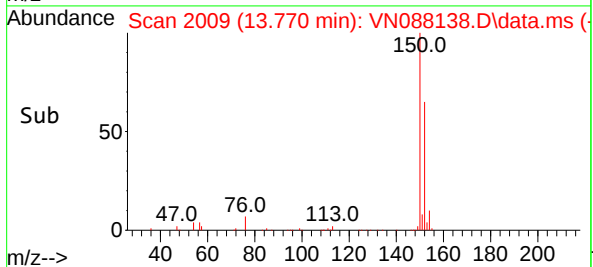
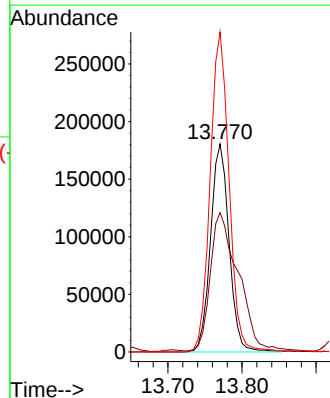
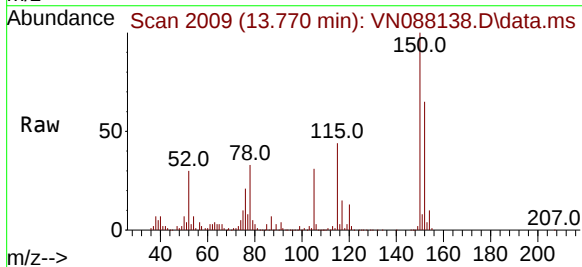
Manual Integrations
APPROVED

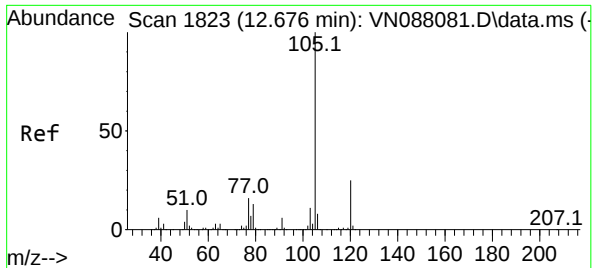
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

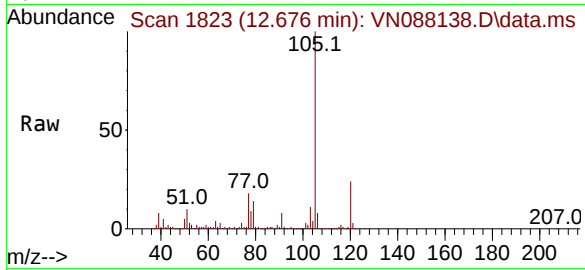
Tgt Ion:152 Resp: 313348
Ion Ratio Lower Upper
152 100
115 100.4 32.3 96.8#
150 156.8 0.0 351.0





#73
Isopropylbenzene
Concen: 10.621 ug/l
RT: 12.676 min Scan# 1823
Delta R.T. 0.006 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

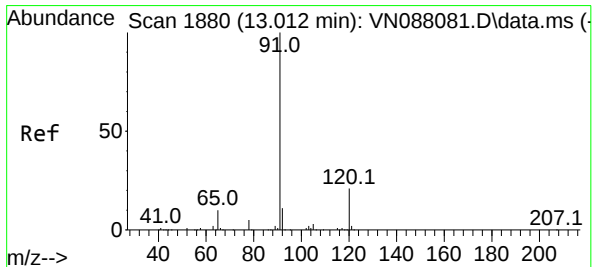
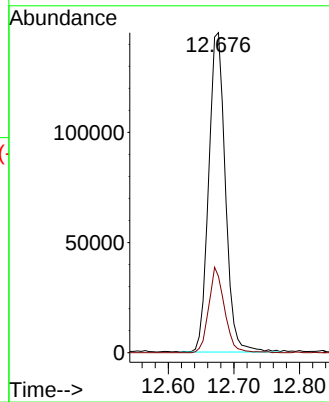
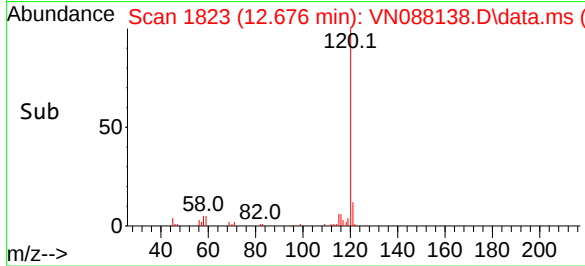
Instrument :
MSVOA_N
ClientSampleId :
MW-08



Tgt Ion:105 Resp: 256674
Ion Ratio Lower Upper
105 100
120 25.5 12.8 38.3

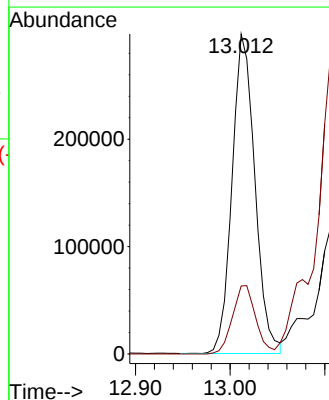
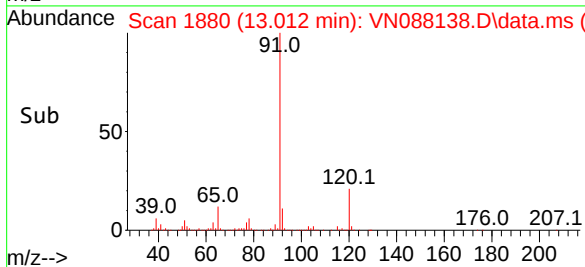
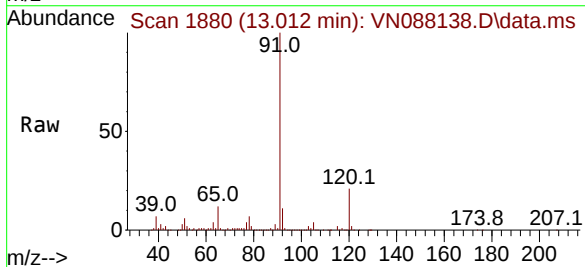
Manual Integrations
APPROVED

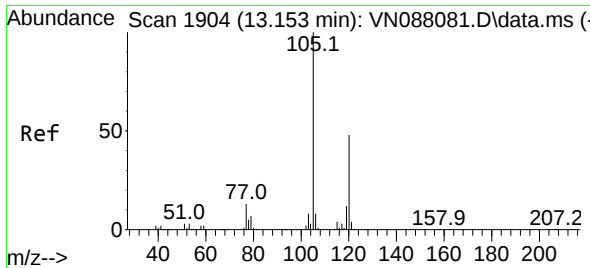
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#78
n-propylbenzene
Concen: 16.880 ug/l
RT: 13.012 min Scan# 1880
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

Tgt Ion: 91 Resp: 497843
Ion Ratio Lower Upper
91 100
120 21.8 10.7 32.1





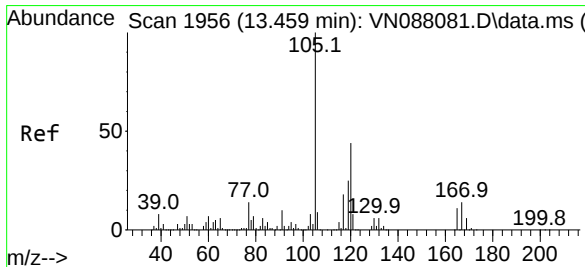
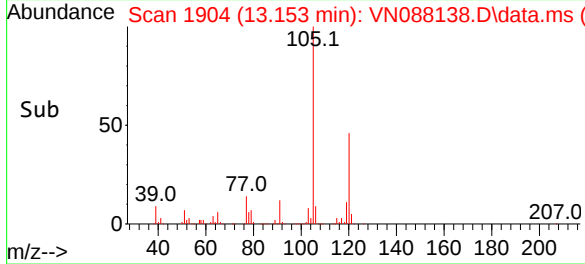
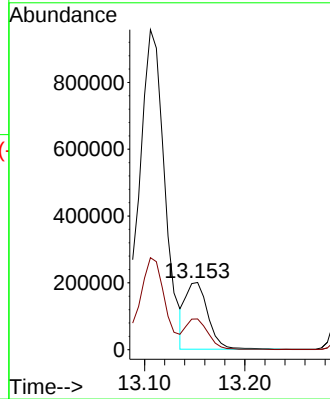
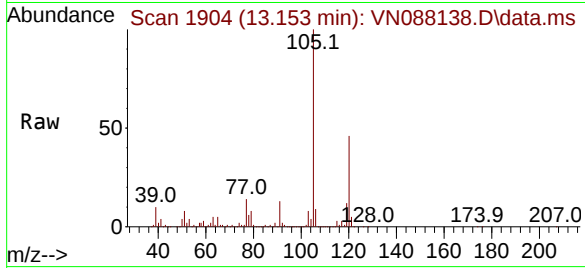
#80
1,3,5-Trimethylbenzene
Concen: 15.404 ug/l
RT: 13.153 min Scan# 1904
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

Instrument :
MSVOA_N
ClientSampleId :
MW-08

Tgt Ion:105 Resp: 309175
Ion Ratio Lower Upper
105 100
120 46.5 23.2 69.6

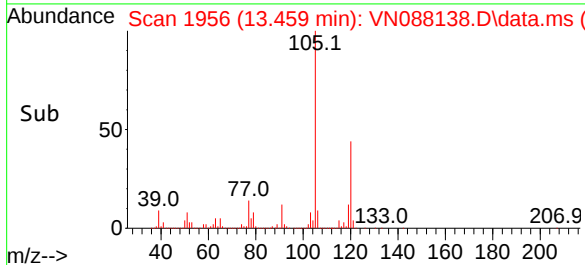
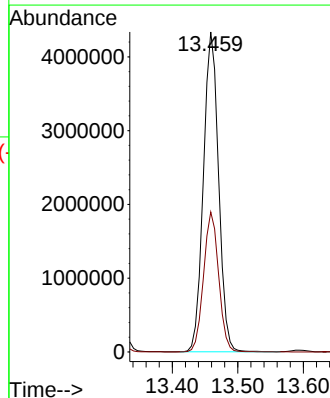
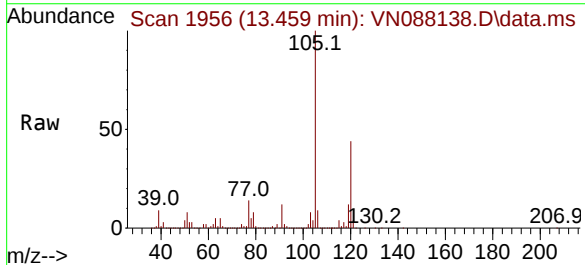
Manual Integrations
APPROVED

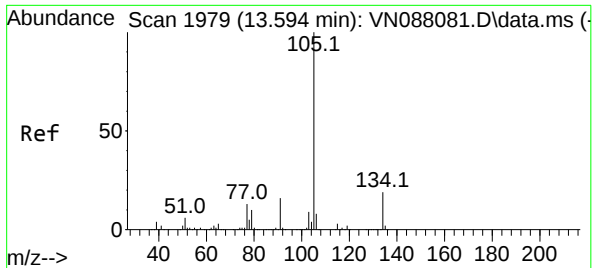
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#84
1,2,4-Trimethylbenzene
Concen: 348.461 ug/l
RT: 13.459 min Scan# 1956
Delta R.T. -0.000 min
Lab File: VN088138.D
Acq: 28 Oct 2025 14:40

Tgt Ion:105 Resp: 6997704
Ion Ratio Lower Upper
105 100
120 43.4 22.0 66.0





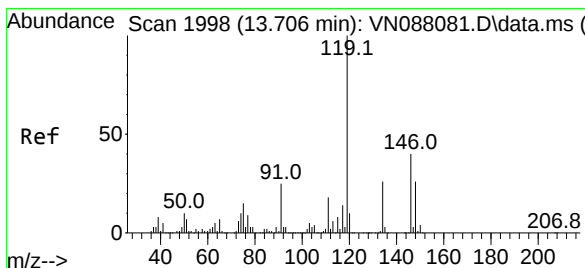
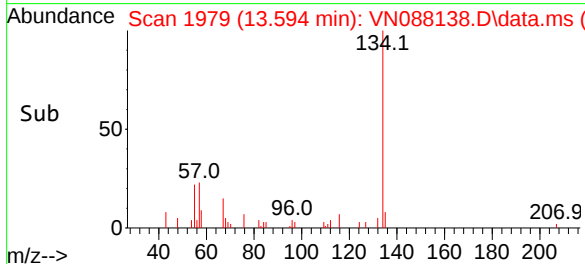
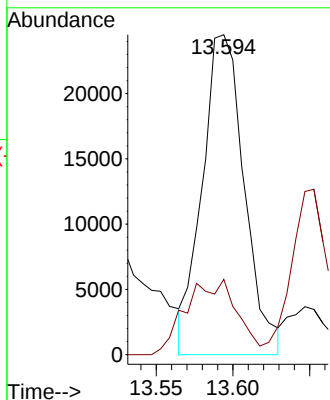
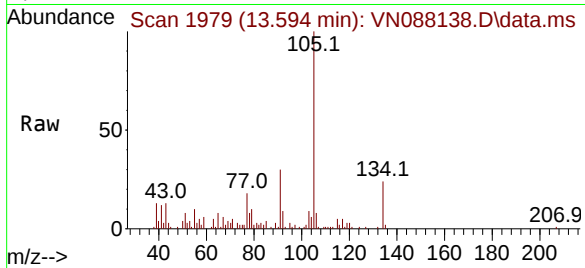
#85
 sec-Butylbenzene
 Concen: 1.778 ug/l m
 RT: 13.594 min Scan# 1979
 Delta R.T. -0.000 min
 Lab File: VN088138.D
 Acq: 28 Oct 2025 14:40

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-08

Tgt Ion:105 Resp: 46820
 Ion Ratio Lower Upper
 105 100
 134 0.0 9.6 28.6

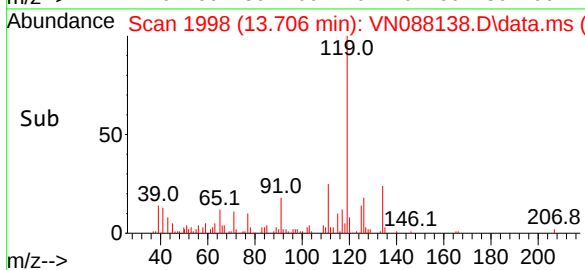
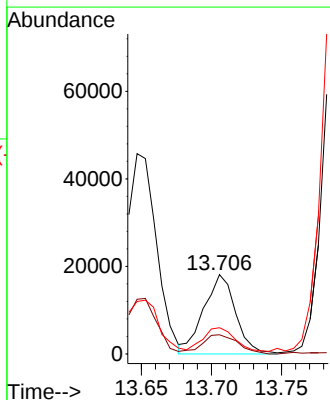
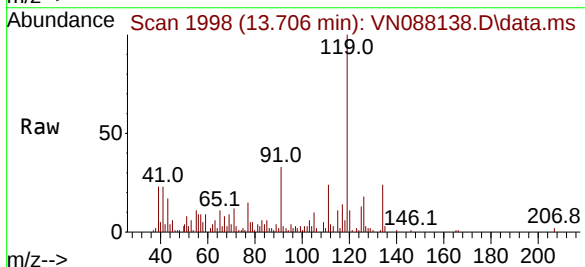
Manual Integrations
 APPROVED

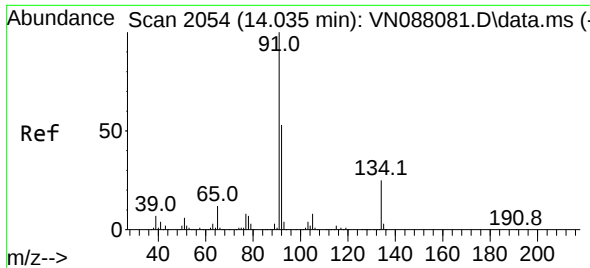
Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025



#86
 p-Isopropyltoluene
 Concen: 1.362 ug/l m
 RT: 13.706 min Scan# 1998
 Delta R.T. -0.000 min
 Lab File: VN088138.D
 Acq: 28 Oct 2025 14:40

Tgt Ion:119 Resp: 28773
 Ion Ratio Lower Upper
 119 100
 134 0.0 12.7 38.0#
 91 0.0 12.5 37.5#





#89

n-Butylbenzene

Concen: 2.472 ug/l m

RT: 14.012 min Scan# 2050

Delta R.T. -0.018 min

Lab File: VN088138.D

Acq: 28 Oct 2025 14:40

Instrument :

MSVOA_N

ClientSampleId :

MW-08

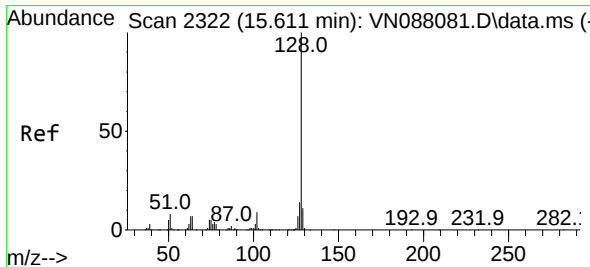
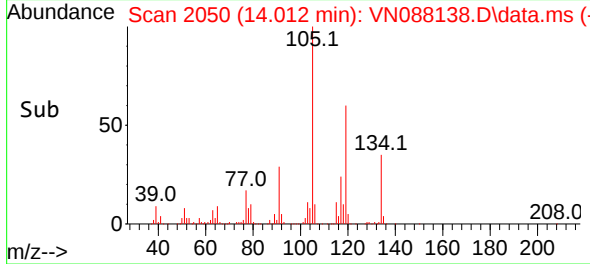
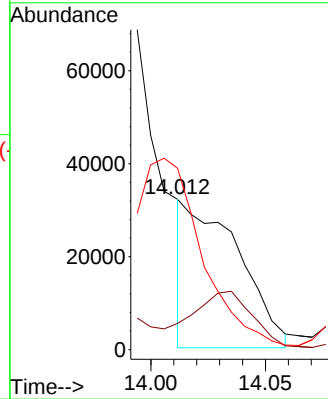
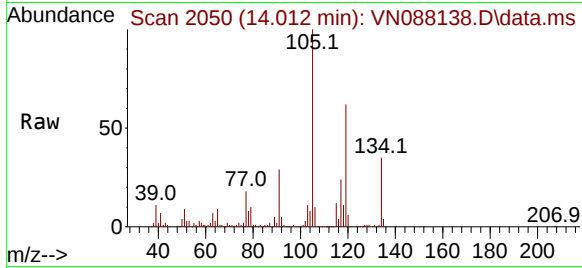
Tgt Ion:	91	Resp:	51740
Ion Ratio	Lower	Upper	
91	100		
92	176.4	25.9	77.8
134	0.0	11.7	35.0

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#95

Naphthalene

Concen: 209.807 ug/l m

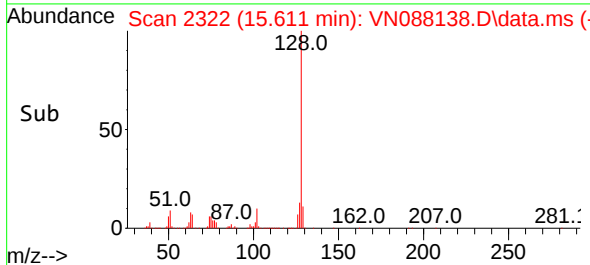
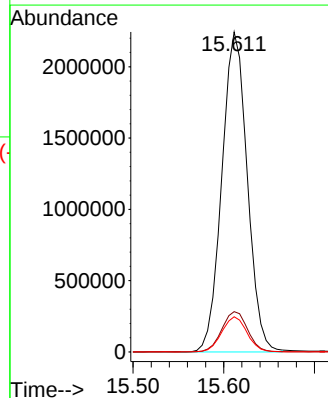
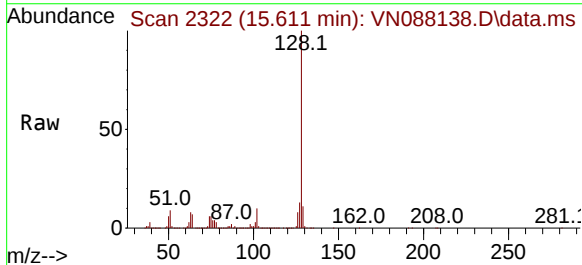
RT: 15.611 min Scan# 2322

Delta R.T. -0.000 min

Lab File: VN088138.D

Acq: 28 Oct 2025 14:40

Tgt Ion:	128	Resp:	4365299
Ion Ratio	Lower	Upper	
128	100		
127	0.0	10.6	15.8
129	0.0	8.6	12.8



Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-08DL	SDG No.:	Q3468
Lab Sample ID:	Q3468-02DL	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	5.00	UD	5	0.80	5.00	ug/L	10/29/25 12:21	VN102925
71-43-2	Benzene	190	D	5	0.75	5.00	ug/L	10/29/25 12:21	VN102925
108-88-3	Toluene	14.2	D	5	0.70	5.00	ug/L	10/29/25 12:21	VN102925
100-41-4	Ethyl Benzene	150	D	5	0.65	5.00	ug/L	10/29/25 12:21	VN102925
179601-23-1	m/p-Xylenes	500	D	5	1.20	10.0	ug/L	10/29/25 12:21	VN102925
1330-20-7	Total Xylenes	900	D	5	1.80	15.0	ug/L	10/29/25 12:21	VN102925
95-47-6	o-Xylene	400	D	5	0.60	5.00	ug/L	10/29/25 12:21	VN102925
98-82-8	Isopropylbenzene	15.0	D	5	0.60	5.00	ug/L	10/29/25 12:21	VN102925
103-65-1	n-propylbenzene	25.5	D	5	0.65	5.00	ug/L	10/29/25 12:21	VN102925
108-67-8	1,3,5-Trimethylbenzene	27.5	D	5	0.75	5.00	ug/L	10/29/25 12:21	VN102925
98-06-6	tert-Butylbenzene	5.00	UDQ5		0.70	5.00	ug/L	10/29/25 12:21	VN102925
95-63-6	1,2,4-Trimethylbenzene	580	D	5	0.70	5.00	ug/L	10/29/25 12:21	VN102925
135-98-8	sec-Butylbenzene	5.00	UD	5	0.65	5.00	ug/L	10/29/25 12:21	VN102925
99-87-6	p-Isopropyltoluene	2.40	JD	5	0.65	5.00	ug/L	10/29/25 12:21	VN102925
104-51-8	n-Butylbenzene	5.00	UD	5	0.75	5.00	ug/L	10/29/25 12:21	VN102925
91-20-3	Naphthalene	350	D	5	1.00	5.00	ug/L	10/29/25 12:21	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	54.8			74 - 125	110%	SPK: 50		
1868-53-7	Dibromofluoromethane	47.6			75 - 124	95%	SPK: 50		
2037-26-5	Toluene-d8	45.2			86 - 113	90%	SPK: 50		
460-00-4	4-Bromofluorobenzene	51.1			77 - 121	102%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	214000							
540-36-3	1,4-Difluorobenzene	486000							
3114-55-4	Chlorobenzene-d5	458000							
3855-82-1	1,4-Dichlorobenzene-d4	232000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088152.D
 Acq On : 29 Oct 2025 12:21
 Operator : JC\MD
 Sample : Q3468-02DL 5X
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-08DL

Quant Time: Oct 30 04:04:10 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

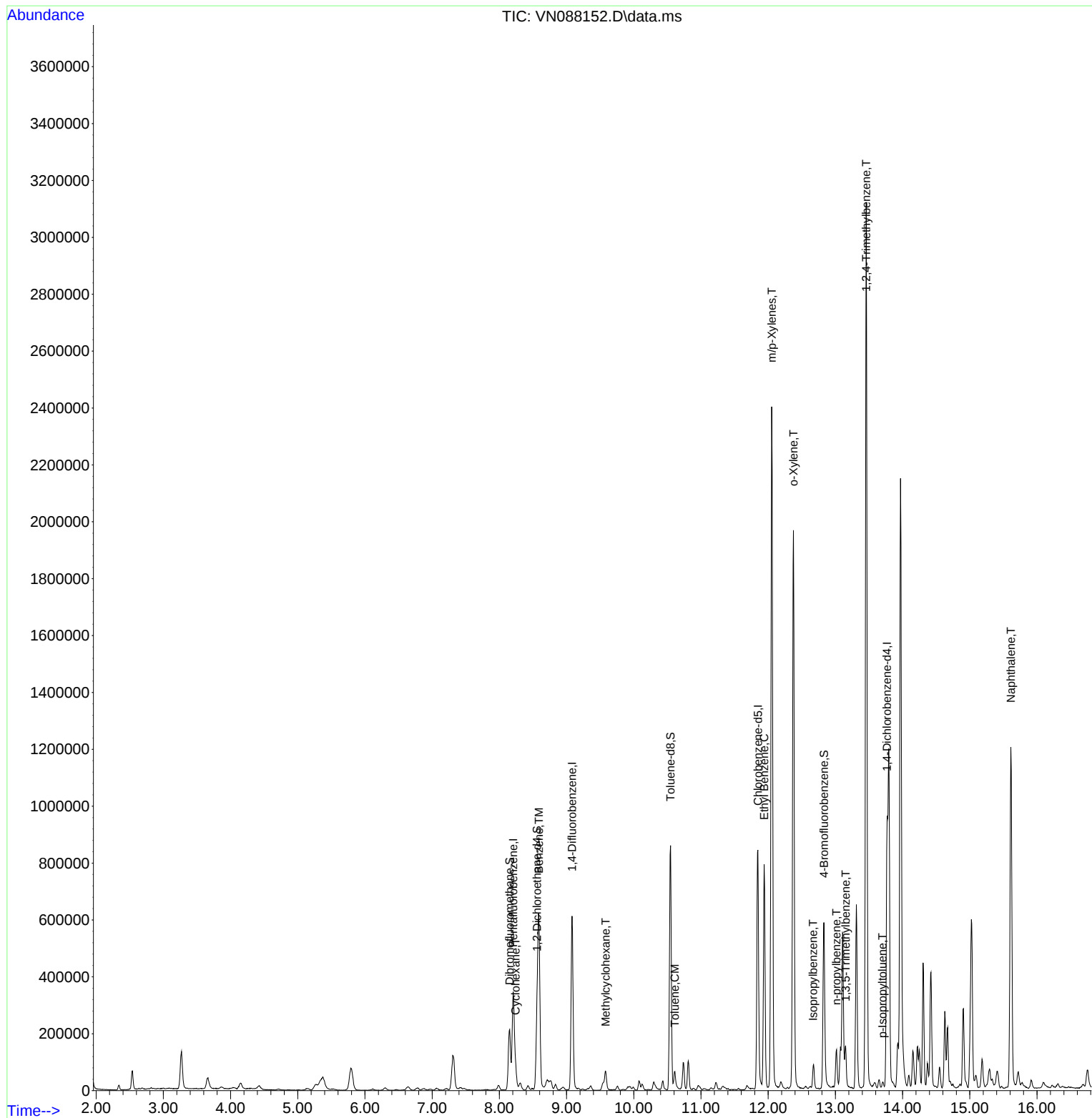
Internal Standards						
1) Pentafluorobenzene	8.206	168	214217	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	486300	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	458325	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	232108	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	202995	54.800	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 109.600%	
35) Dibromofluoromethane	8.153	113	155367	47.557	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 95.120%	
50) Toluene-d8	10.547	98	569581	45.247	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 90.500%	
62) 4-Bromofluorobenzene	12.829	95	227206	51.107	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 102.220%	
Target Compounds						
					Qvalue	
31) Cyclohexane	8.241	56	47366	9.135	ug/l	94
39) Methylcyclohexane	9.582	83	26693	4.353	ug/l	96
40) Benzene	8.588	78	555580	38.244	ug/l	98
52) Toluene	10.612	92	25383	2.834	ug/l	96
67) Ethyl Benzene	11.941	91	558460	30.571	ug/l	99
68) m/p-Xylenes	12.053	106	681526	99.571	ug/l	98
69) o-Xylene	12.376	106	520688	80.248	ug/l	98
73) Isopropylbenzene	12.670	105	53716	3.001	ug/l	98
78) n-propylbenzene	13.018	91	111420	5.100	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	81874	5.507	ug/l	92
84) 1,2,4-Trimethylbenzene	13.459	105	1734065	116.574	ug/l	99
86) p-Isopropyltoluene	13.700	119	7507	0.480	ug/l #	70
95) Naphthalene	15.611	128	1063636	69.014	ug/l	100

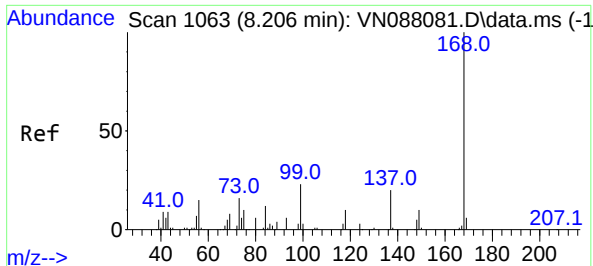
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088152.D
Acq On : 29 Oct 2025 12:21
Operator : JC\MD
Sample : Q3468-02DL 5X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

Quant Time: Oct 30 04:04:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

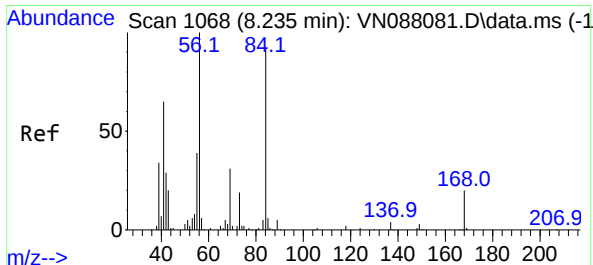
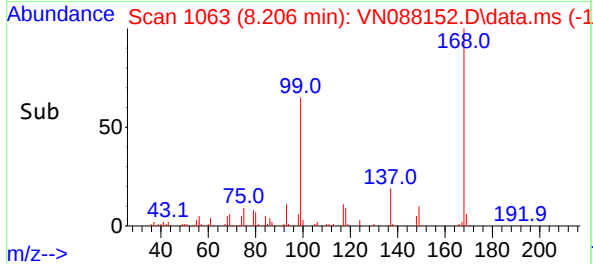
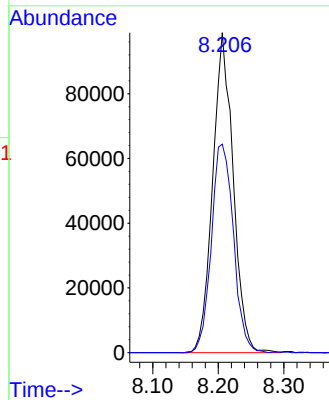
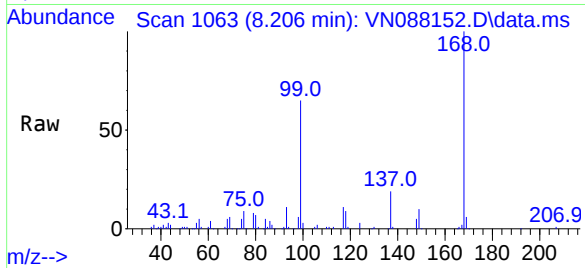




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

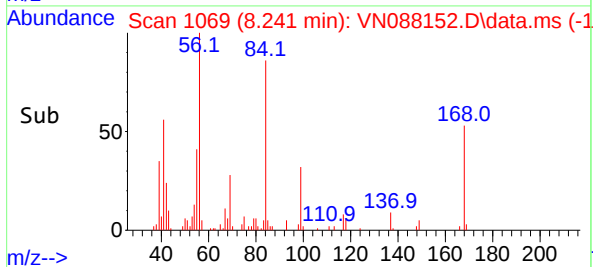
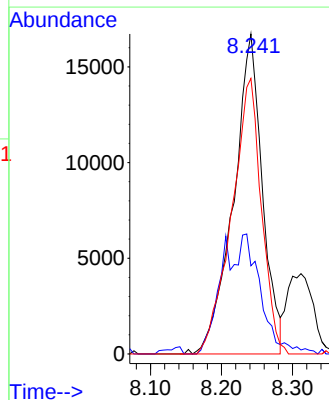
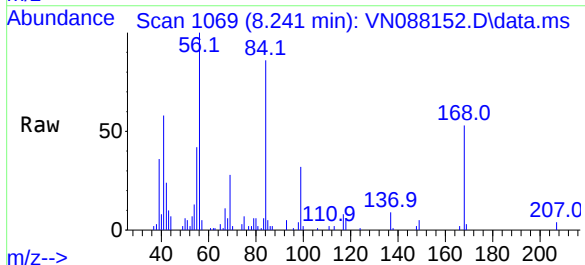
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

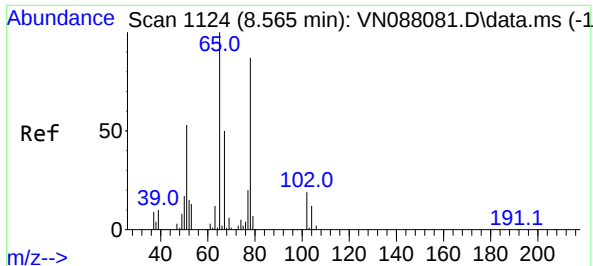
Tgt Ion:168 Resp: 214217
Ion Ratio Lower Upper
168 100
99 65.2 57.2 85.8



#31
Cyclohexane
Concen: 9.135 ug/l
RT: 8.241 min Scan# 1069
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 56 Resp: 47366
Ion Ratio Lower Upper
56 100
69 25.3 23.7 35.5
84 86.1 64.7 97.1





#33

1,2-Dichloroethane-d4

Concen: 54.800 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088152.D

Acq: 29 Oct 2025 12:21

Instrument :

MSVOA_N

ClientSampleId :

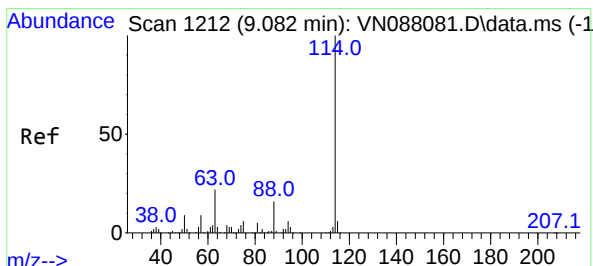
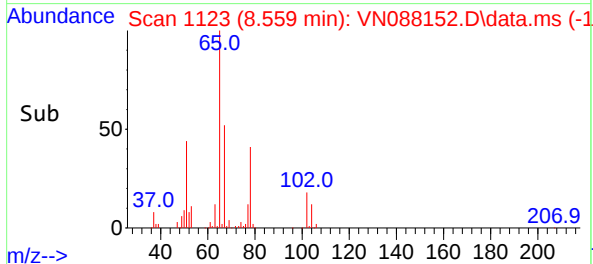
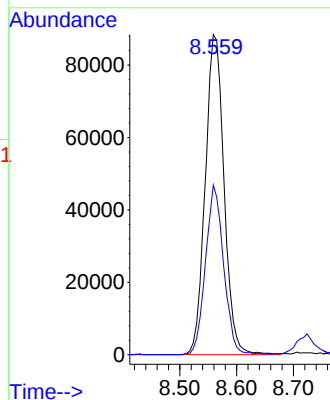
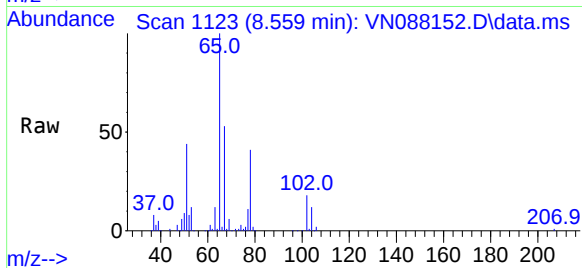
MW-08DL

Tgt Ion: 65 Resp: 202995

Ion Ratio Lower Upper

65 100

67 51.1 0.0 100.0



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1212

Delta R.T. -0.000 min

Lab File: VN088152.D

Acq: 29 Oct 2025 12:21

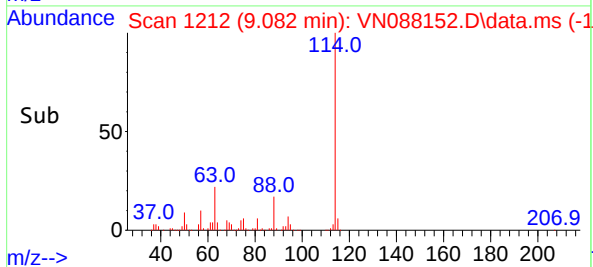
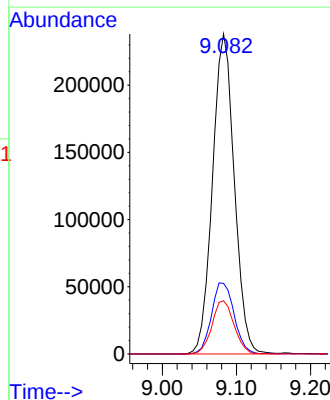
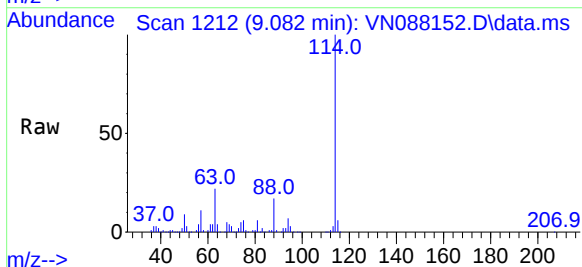
Tgt Ion: 114 Resp: 486300

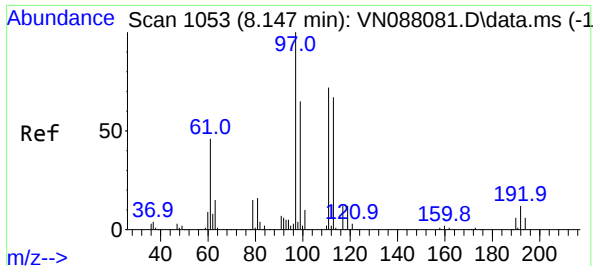
Ion Ratio Lower Upper

114 100

63 22.1 0.0 45.2

88 16.6 0.0 33.4

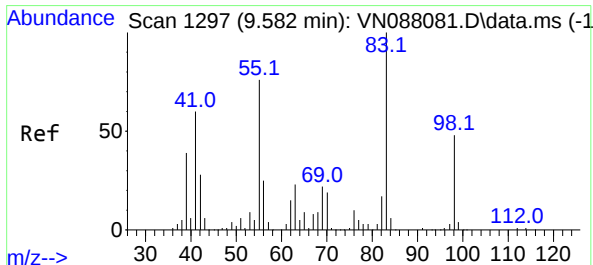
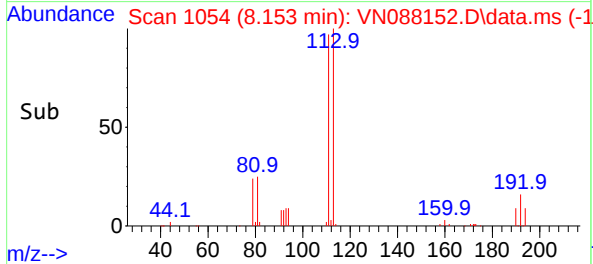
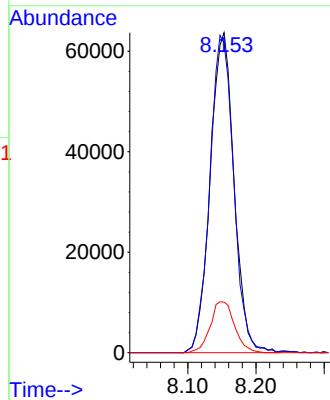
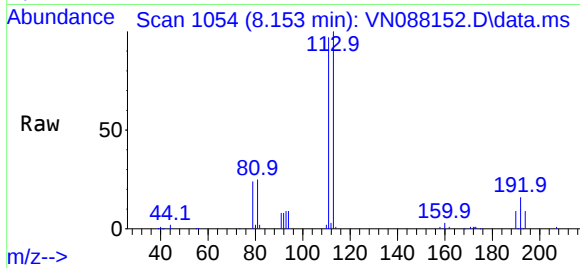




#35
Dibromofluoromethane
Concen: 47.557 ug/l
RT: 8.153 min Scan# 1054
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

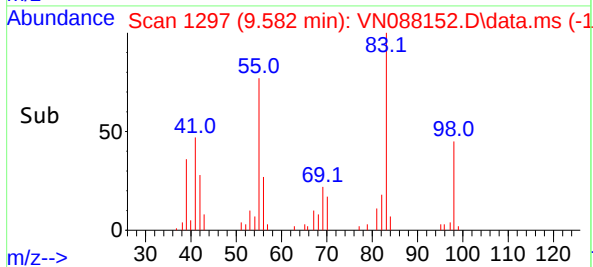
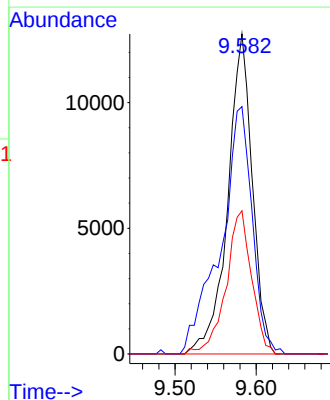
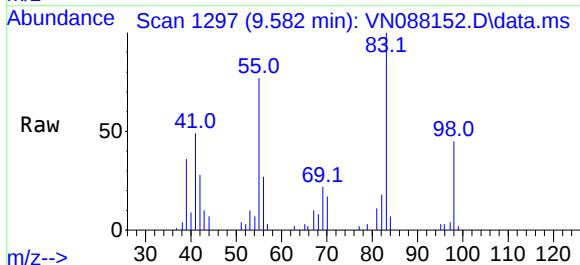
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

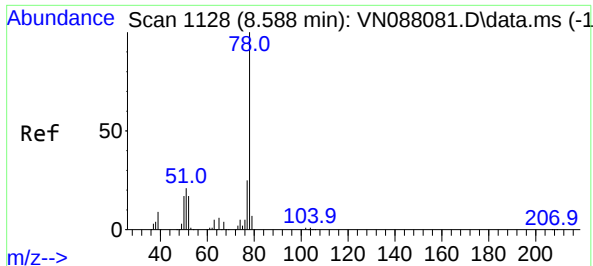
Tgt Ion:113 Resp: 155367
Ion Ratio Lower Upper
113 100
111 99.1 82.8 124.2
192 16.2 12.8 19.2



#39
Methylcyclohexane
Concen: 4.353 ug/l
RT: 9.582 min Scan# 1297
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 83 Resp: 26693
Ion Ratio Lower Upper
83 100
55 77.3 64.6 96.8
98 44.7 38.4 57.6

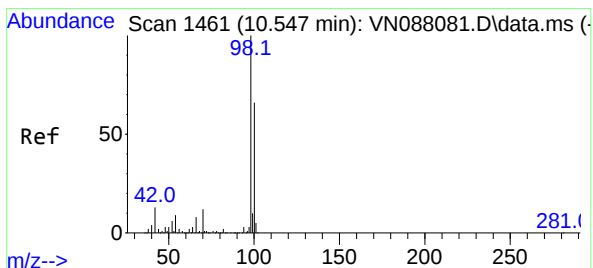
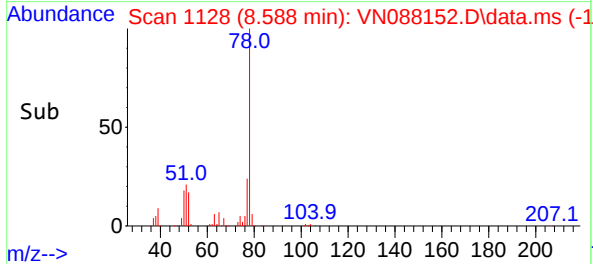
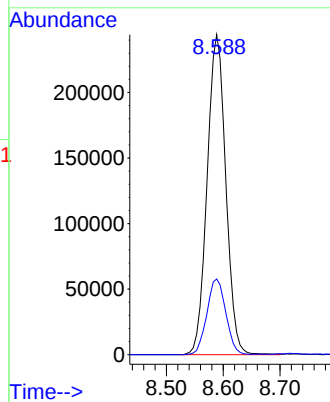
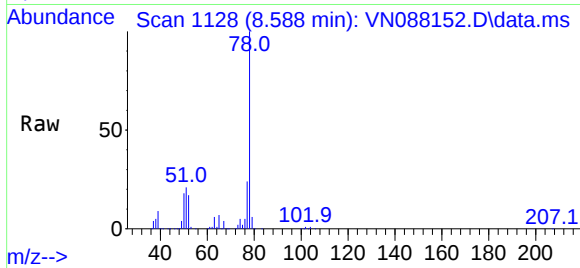




#40
Benzene
Concen: 38.244 ug/l
RT: 8.588 min Scan# 1128
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

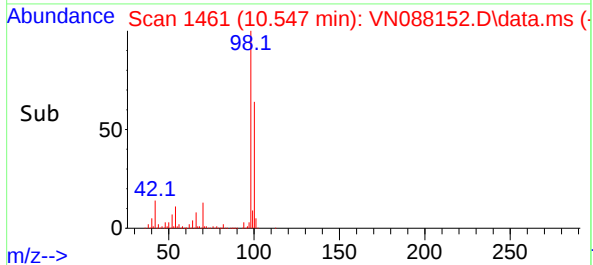
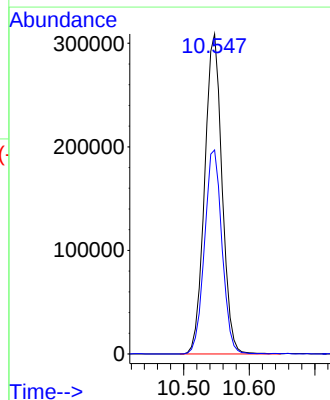
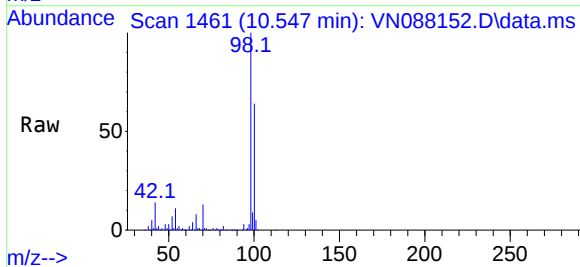
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

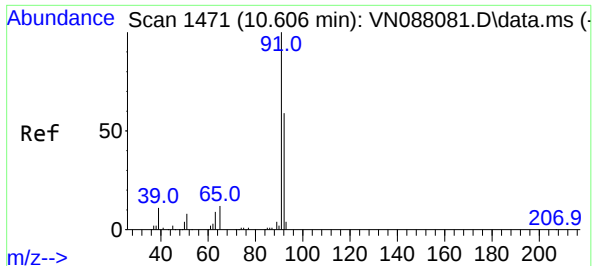
Tgt Ion: 78 Resp: 555580
Ion Ratio Lower Upper
78 100
77 23.7 19.7 29.5



#50
Toluene-d8
Concen: 45.247 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 98 Resp: 569581
Ion Ratio Lower Upper
98 100
100 64.1 52.8 79.2

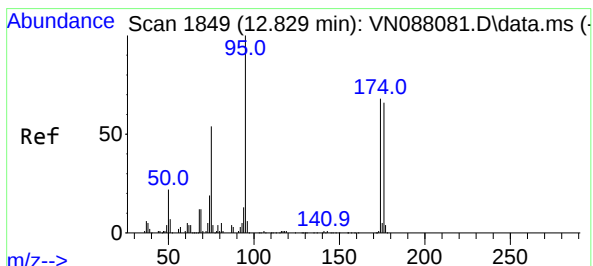
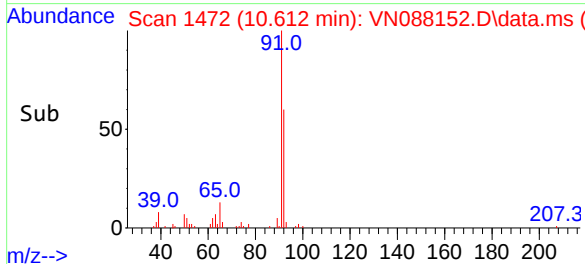
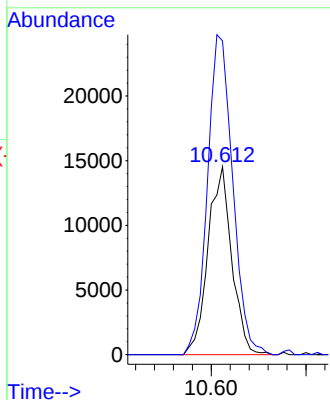
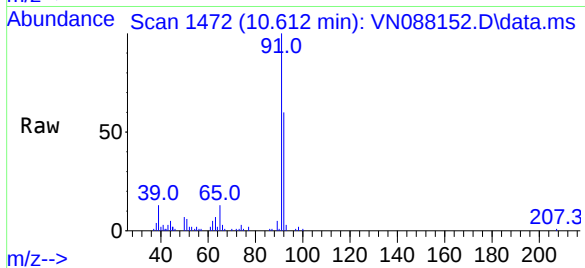




#52
Toluene
Concen: 2.834 ug/l
RT: 10.612 min Scan# 1471
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

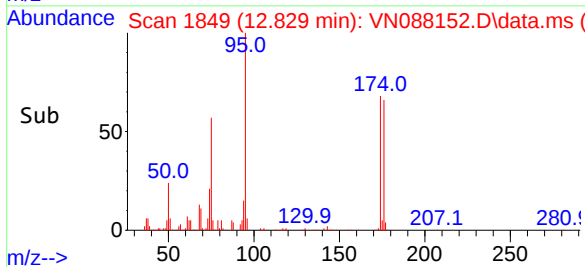
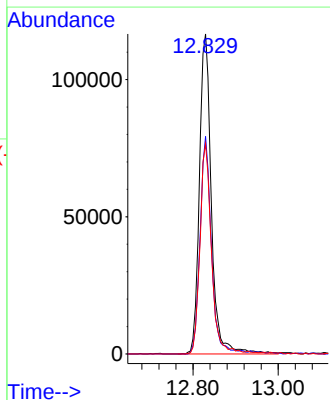
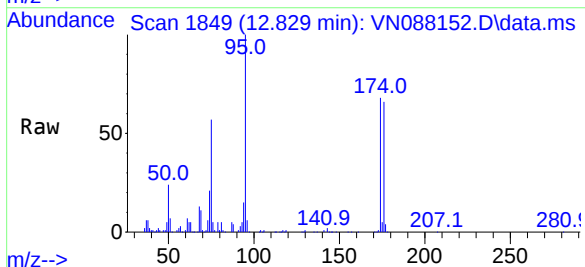
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

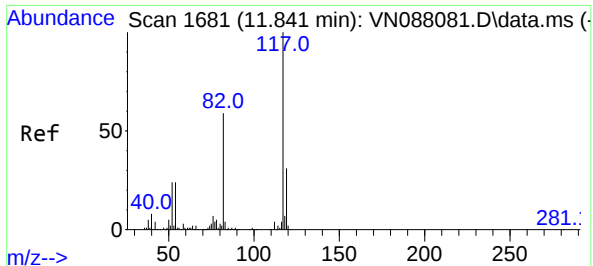
Tgt Ion: 92 Resp: 25383
Ion Ratio Lower Upper
92 100
91 180.5 140.4 210.6



#62
4-Bromofluorobenzene
Concen: 51.107 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 95 Resp: 227206
Ion Ratio Lower Upper
95 100
174 64.8 0.0 138.4
176 62.9 0.0 132.6

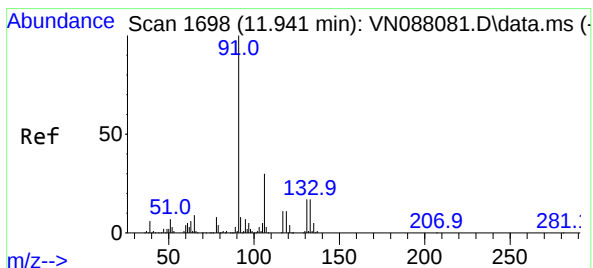
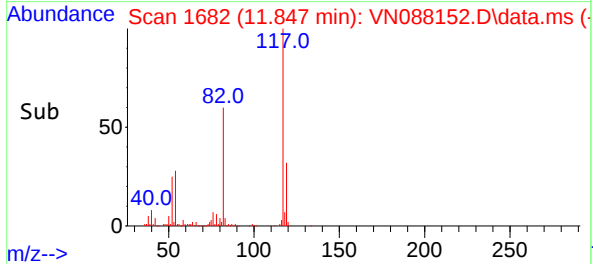
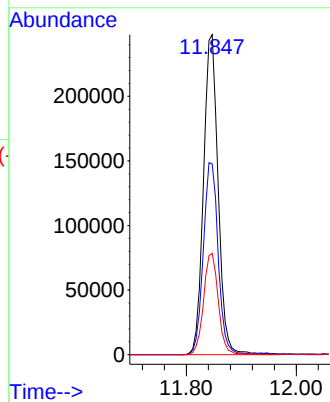
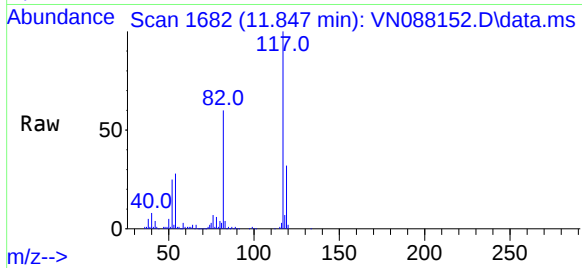




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1681
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

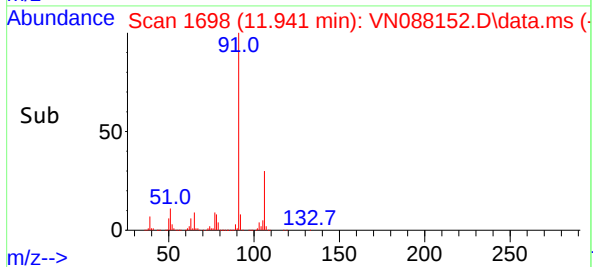
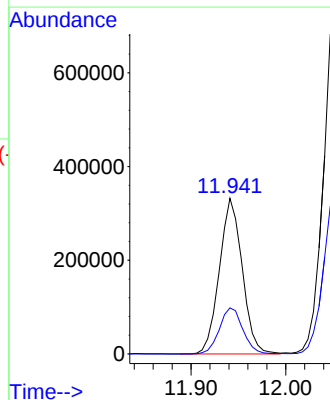
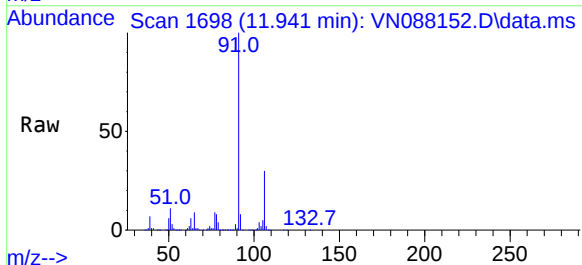
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

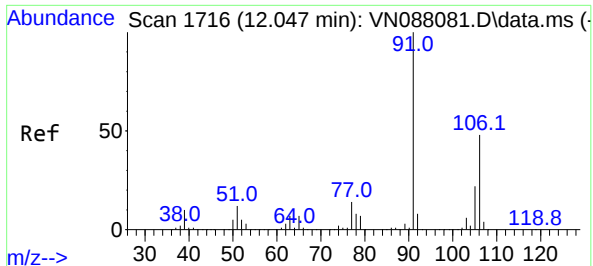
Tgt Ion:117 Resp: 458325
Ion Ratio Lower Upper
117 100
82 59.6 47.4 71.2
119 31.6 24.3 36.5



#67
Ethyl Benzene
Concen: 30.571 ug/l
RT: 11.941 min Scan# 1698
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 91 Resp: 558460
Ion Ratio Lower Upper
91 100
106 29.6 24.1 36.1





#68

m/p-Xylenes

Concen: 99.571 ug/l

RT: 12.053 min Scan# 1717

Delta R.T. 0.006 min

Lab File: VN088152.D

Acq: 29 Oct 2025 12:21

Instrument :

MSVOA_N

ClientSampleId :

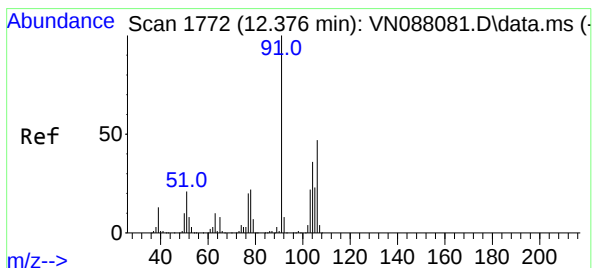
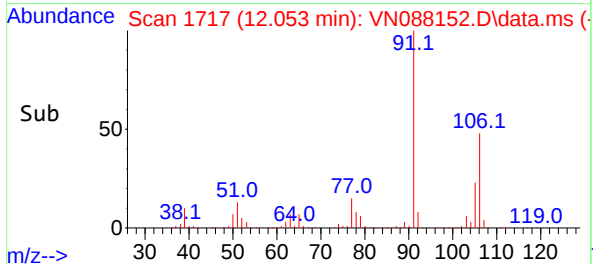
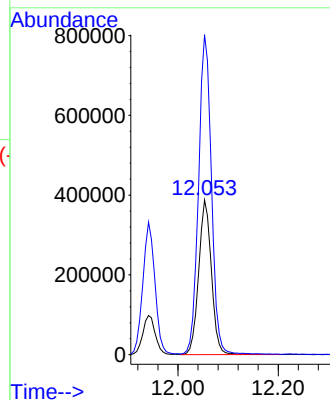
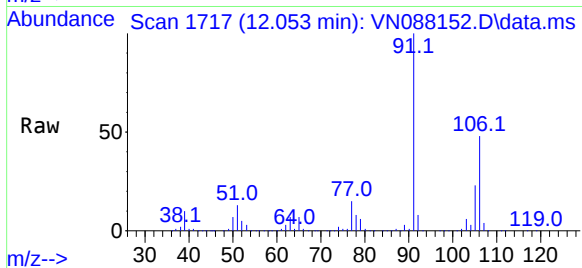
MW-08DL

Tgt Ion:106 Resp: 681526

Ion Ratio Lower Upper

106 100

91 208.6 169.3 253.9



#69

o-Xylene

Concen: 80.248 ug/l

RT: 12.376 min Scan# 1772

Delta R.T. -0.000 min

Lab File: VN088152.D

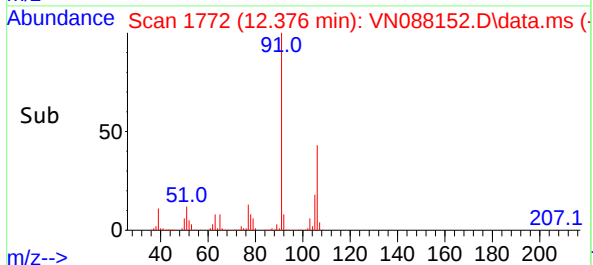
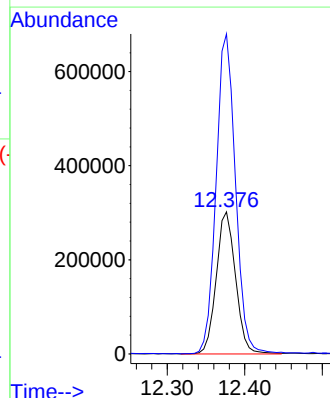
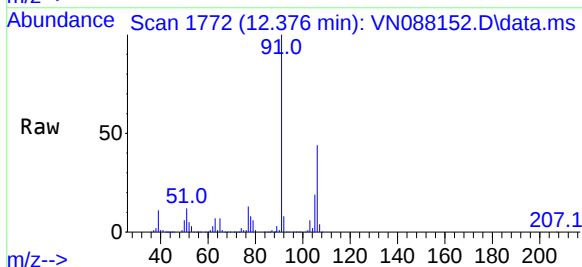
Acq: 29 Oct 2025 12:21

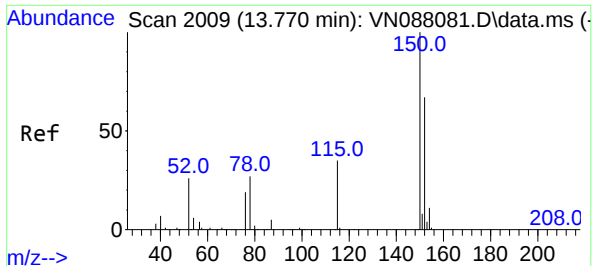
Tgt Ion:106 Resp: 520688

Ion Ratio Lower Upper

106 100

91 226.2 111.4 334.2

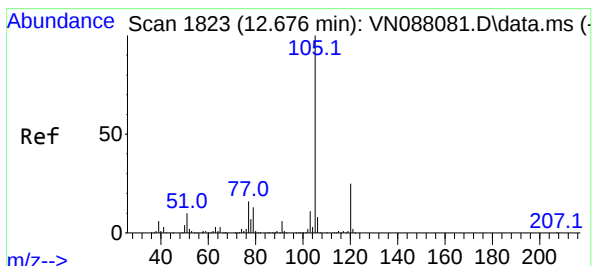
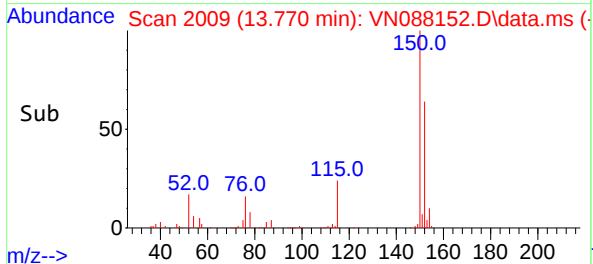
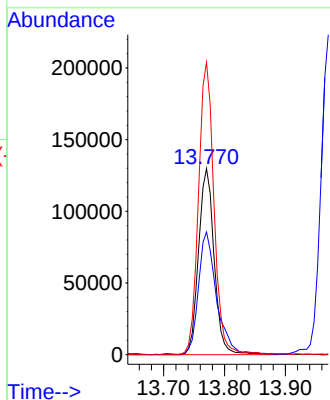
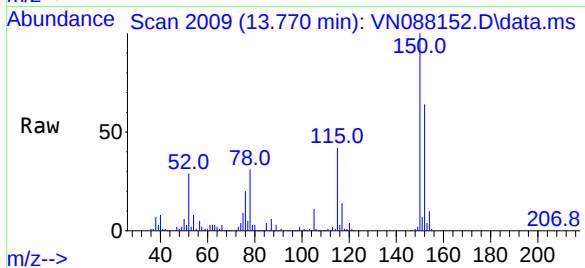




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

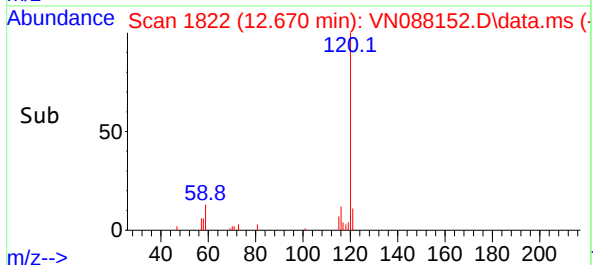
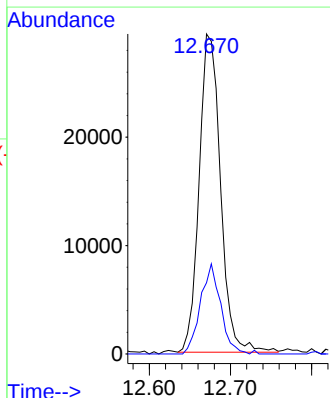
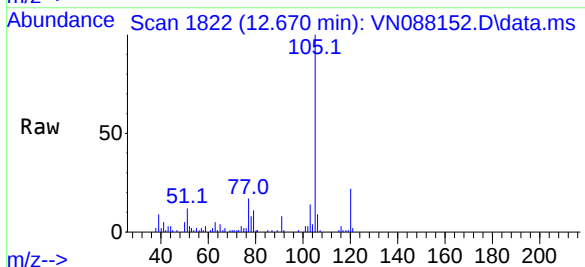
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

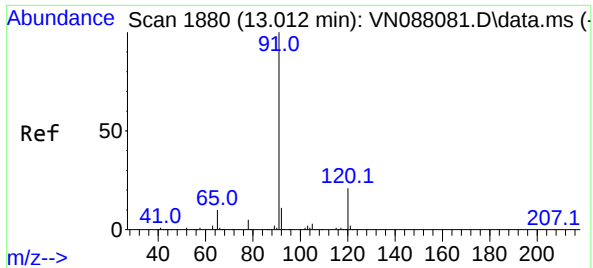
Tgt Ion:152 Resp: 232108
Ion Ratio Lower Upper
152 100
115 75.9 32.3 96.8
150 155.7 0.0 351.0



#73
Isopropylbenzene
Concen: 3.001 ug/l
RT: 12.670 min Scan# 1822
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion:105 Resp: 53716
Ion Ratio Lower Upper
105 100
120 26.7 12.8 38.3

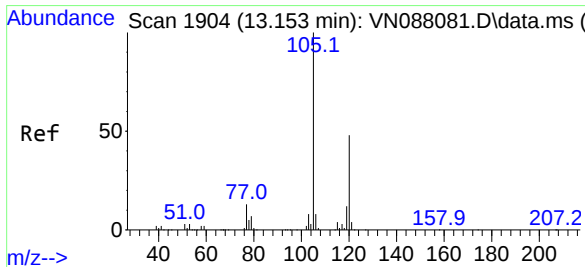
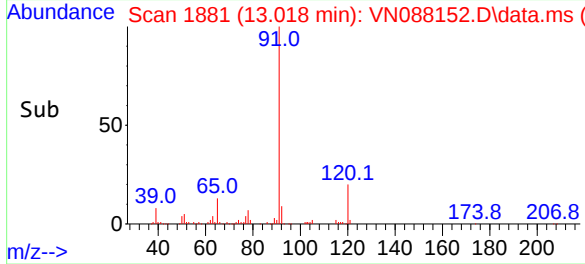
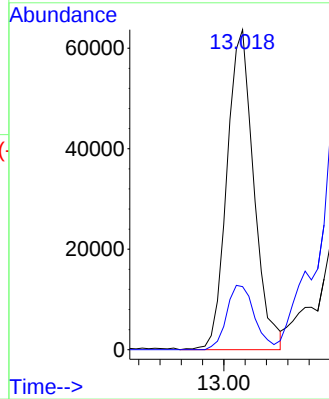
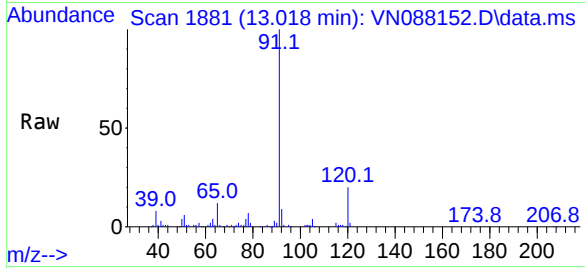




#78
n-propylbenzene
Concen: 5.100 ug/l
RT: 13.018 min Scan# 1880
Delta R.T. 0.006 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

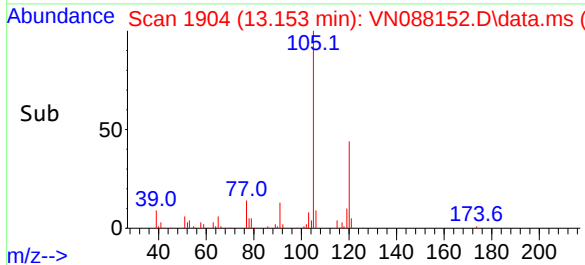
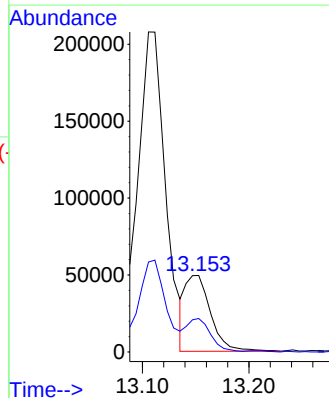
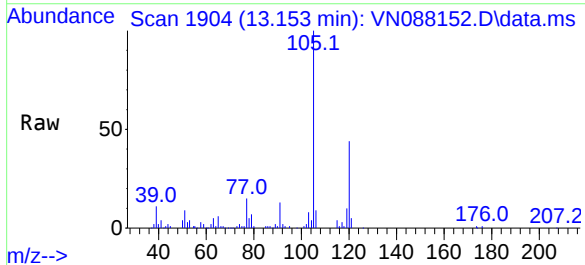
Instrument :
MSVOA_N
ClientSampleId :
MW-08DL

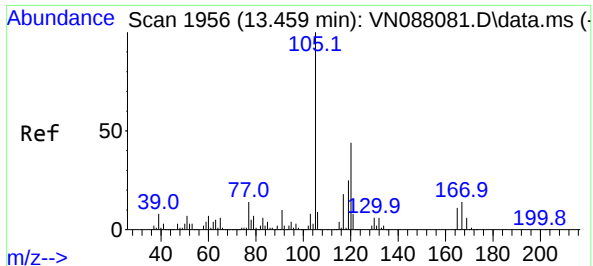
Tgt Ion: 91 Resp: 111420
Ion Ratio Lower Upper
91 100
120 20.8 10.7 32.1



#80
1,3,5-Trimethylbenzene
Concen: 5.507 ug/l
RT: 13.153 min Scan# 1904
Delta R.T. -0.000 min
Lab File: VN088152.D
Acq: 29 Oct 2025 12:21

Tgt Ion: 105 Resp: 81874
Ion Ratio Lower Upper
105 100
120 40.8 23.2 69.6





#84

1,2,4-Trimethylbenzene

Concen: 116.574 ug/l

RT: 13.459 min Scan# 1956

Delta R.T. -0.000 min

Lab File: VN088152.D

Acq: 29 Oct 2025 12:21

Instrument :

MSVOA_N

ClientSampleId :

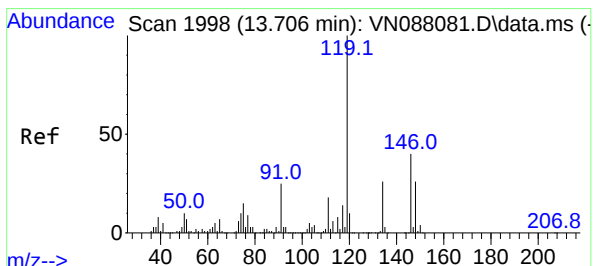
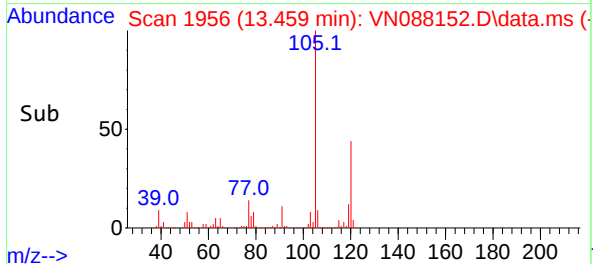
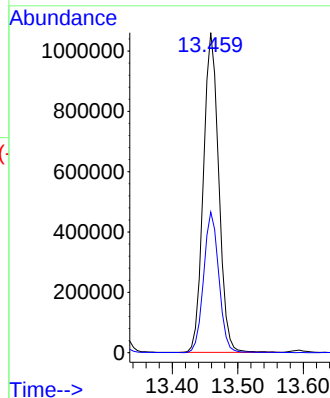
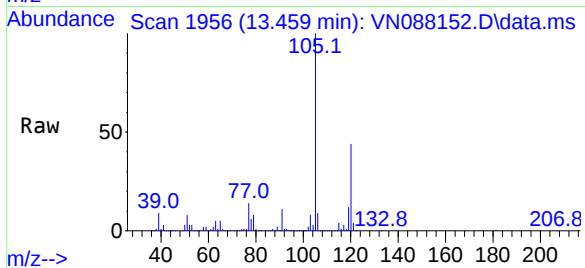
MW-08DL

Tgt Ion:105 Resp: 1734065

Ion Ratio Lower Upper

105 100

120 43.5 22.0 66.0



#86

p-Isopropyltoluene

Concen: 0.480 ug/l

RT: 13.700 min Scan# 1997

Delta R.T. -0.006 min

Lab File: VN088152.D

Acq: 29 Oct 2025 12:21

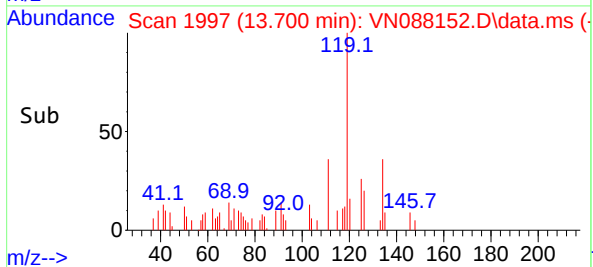
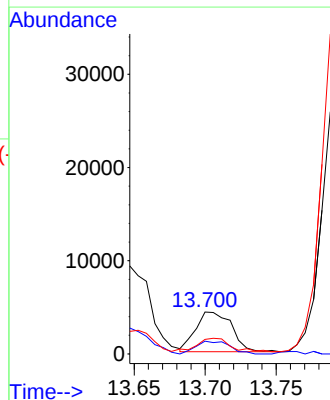
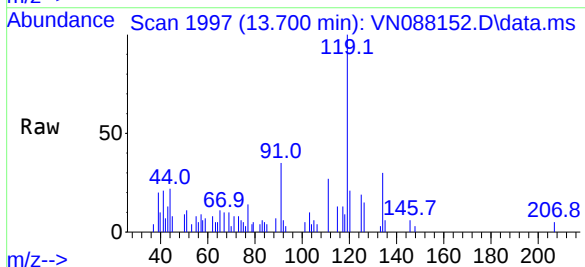
Tgt Ion:119 Resp: 7507

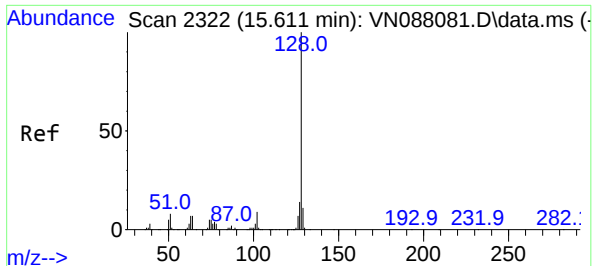
Ion Ratio Lower Upper

119 100

134 30.2 12.7 38.0

91 0.0 12.5 37.5#





#95

Naphthalene

Concen: 69.014 ug/l

RT: 15.611 min Scan# 21

Delta R.T. -0.000 min

Lab File: VN088152.D

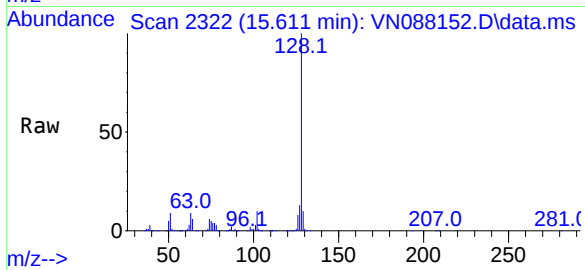
Acq: 29 Oct 2025 12:21

Instrument :

MSVOA_N

ClientSampleId :

MW-08DL



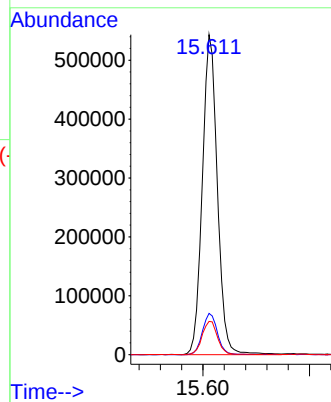
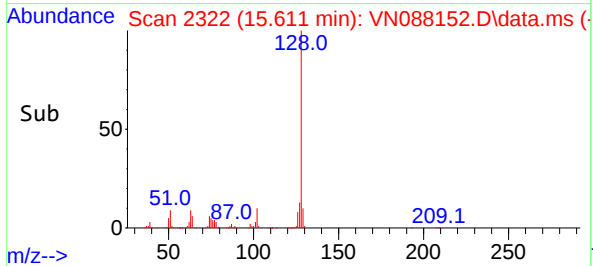
Tgt Ion:128 Resp: 1063636

Ion Ratio Lower Upper

128 100

127 12.9 10.6 15.8

129 10.7 8.6 12.8





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-10	SDG No.:	Q3468
Lab Sample ID:	Q3468-03	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/28/25 13:38	VN102825
71-43-2	Benzene	1.00	U	1	0.15	1.00	ug/L	10/28/25 13:38	VN102825
108-88-3	Toluene	0.21	J	1	0.14	1.00	ug/L	10/28/25 13:38	VN102825
100-41-4	Ethyl Benzene	1.00	UQ	1	0.13	1.00	ug/L	10/28/25 13:38	VN102825
179601-23-1	m/p-Xylenes	1.20	J	1	0.24	2.00	ug/L	10/28/25 13:38	VN102825
1330-20-7	Total Xylenes	1.20	J	1	0.36	3.00	ug/L	10/28/25 13:38	VN102825
95-47-6	o-Xylene	1.00	UQ	1	0.12	1.00	ug/L	10/28/25 13:38	VN102825
98-82-8	Isopropylbenzene	2.90		1	0.12	1.00	ug/L	10/28/25 13:38	VN102825
103-65-1	n-propylbenzene	2.00		1	0.13	1.00	ug/L	10/28/25 13:38	VN102825
108-67-8	1,3,5-Trimethylbenzene	0.34	J	1	0.15	1.00	ug/L	10/28/25 13:38	VN102825
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/28/25 13:38	VN102825
95-63-6	1,2,4-Trimethylbenzene	0.39	J	1	0.14	1.00	ug/L	10/28/25 13:38	VN102825
135-98-8	sec-Butylbenzene	1.40		1	0.13	1.00	ug/L	10/28/25 13:38	VN102825
99-87-6	p-Isopropyltoluene	0.29	J	1	0.13	1.00	ug/L	10/28/25 13:38	VN102825
104-51-8	n-Butylbenzene	1.50		1	0.15	1.00	ug/L	10/28/25 13:38	VN102825
91-20-3	Naphthalene	1.80		1	0.20	1.00	ug/L	10/28/25 13:38	VN102825
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	52.5			74 - 125	105%	SPK: 50		
1868-53-7	Dibromofluoromethane	46.5			75 - 124	93%	SPK: 50		
2037-26-5	Toluene-d8	44.6			86 - 113	89%	SPK: 50		
460-00-4	4-Bromofluorobenzene	50.9			77 - 121	102%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	236000							
540-36-3	1,4-Difluorobenzene	530000							
3114-55-4	Chlorobenzene-d5	501000							
3855-82-1	1,4-Dichlorobenzene-d4	243000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088135.D
 Acq On : 28 Oct 2025 13:38
 Operator : JC\MD
 Sample : Q3468-03
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-10

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:23:15 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	236497	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	529671	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	500860	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	243219	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	214622	52.481	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 104.960%			
35) Dibromofluoromethane	8.153	113	165571	46.530	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 93.060%			
50) Toluene-d8	10.547	98	611488	44.598	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 89.200%			
62) 4-Bromofluorobenzene	12.829	95	246411	50.888	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 101.780%			
Target Compounds					Qvalue	
31) Cyclohexane	8.241	56	40348	7.048	ug/l	98
39) Methylcyclohexane	9.582	83	16088m	2.409	ug/l	
52) Toluene	10.612	92	2071	0.212	ug/l	94
68) m/p-Xylenes	12.053	106	9292	1.242	ug/l	94
73) Isopropylbenzene	12.676	105	55162	2.941	ug/l	96
78) n-propylbenzene	13.017	91	45705	1.997	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	5344m	0.343	ug/l	
84) 1,2,4-Trimethylbenzene	13.459	105	6040	0.387	ug/l	97
85) sec-Butylbenzene	13.594	105	28067	1.373	ug/l #	45
86) p-Isopropyltoluene	13.712	119	4717m	0.288	ug/l	
89) n-Butylbenzene	14.006	91	24163m	1.487	ug/l	
95) Naphthalene	15.611	128	29122m	1.803	ug/l	

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

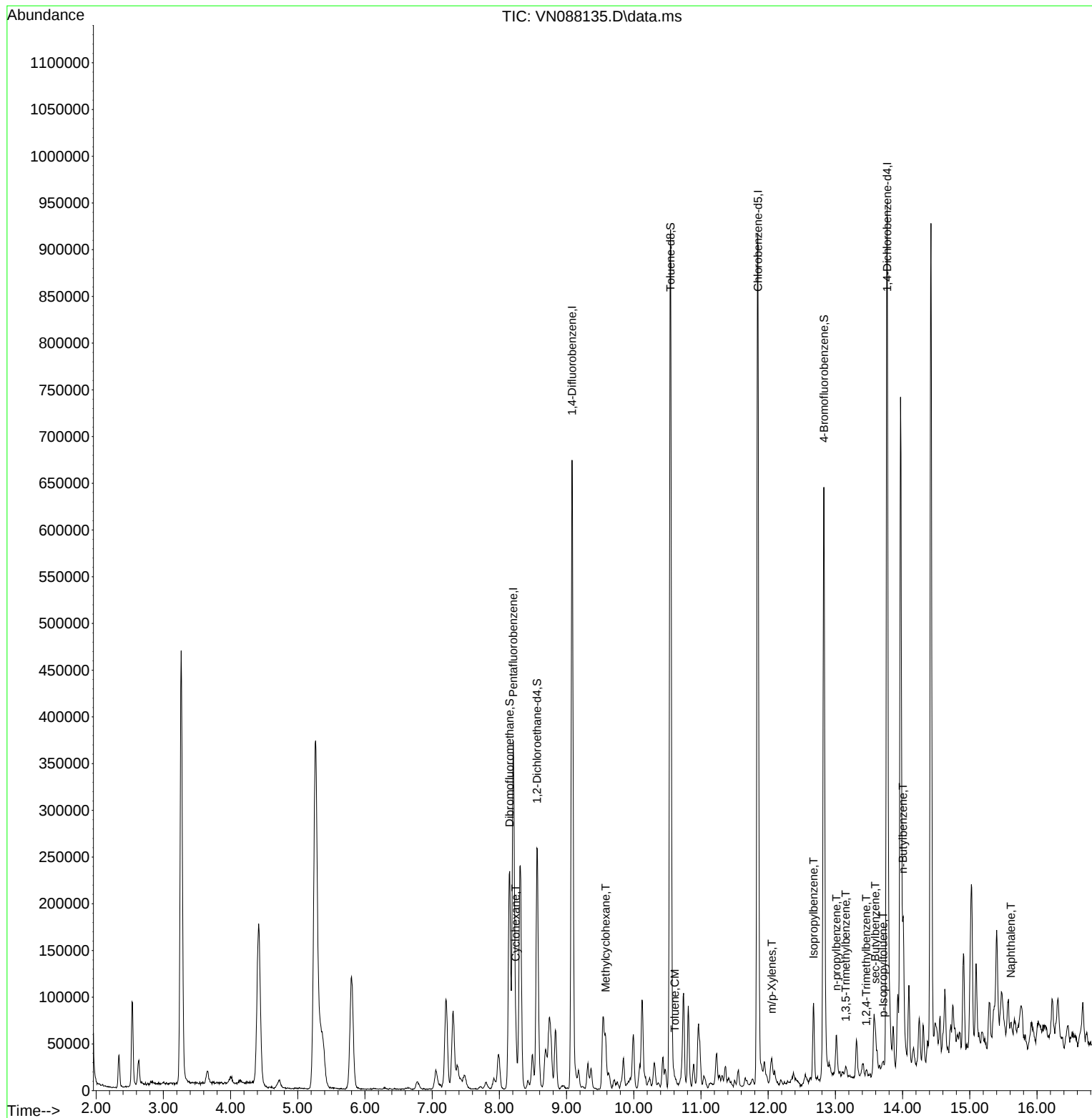
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088135.D
Acq On : 28 Oct 2025 13:38
Operator : JC\MD
Sample : Q3468-03
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 11 Sample Multiplier: 1

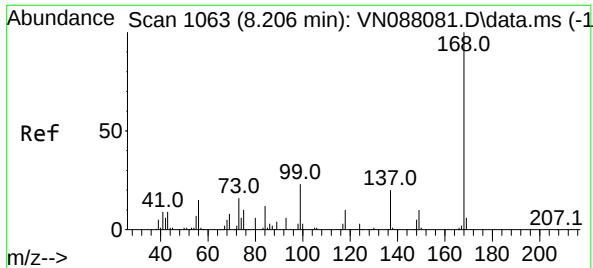
Instrument :
MSVOA_N
ClientSampleId :
MW-10

Manual Integrations
APPROVED

Reviewed By : John Carlone 10/29/2025
Supervised By : Semsettin Yesilyurt 10/29/2025

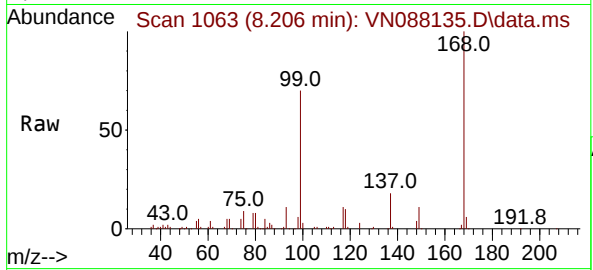
Quant Time: Oct 29 02:23:15 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

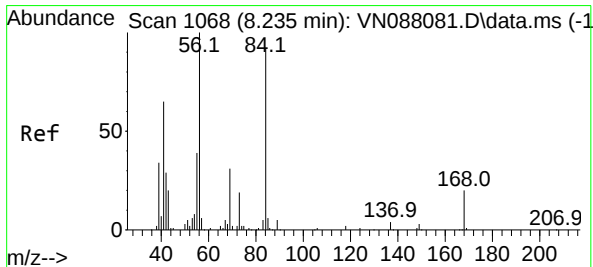
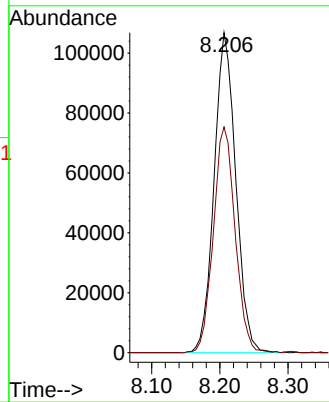
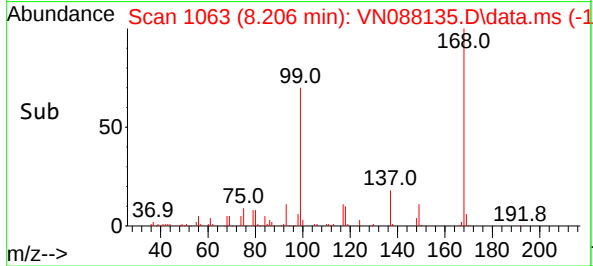
Instrument :
MSVOA_N
ClientSampleId :
MW-10



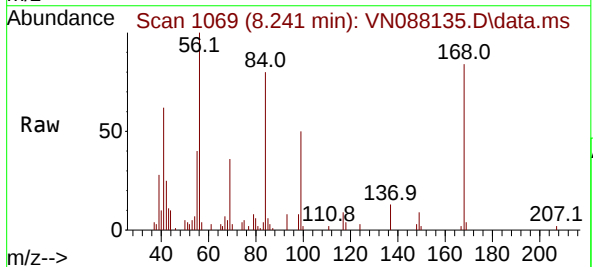
Tgt Ion:168 Resp: 23649
Ion Ratio Lower Upper
168 100
99 70.5 57.2 85.8

Manual Integrations
APPROVED

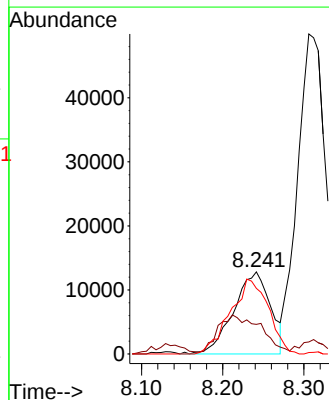
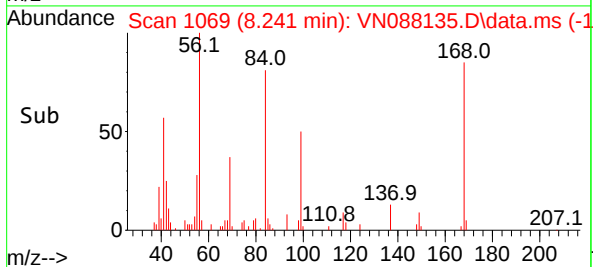
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

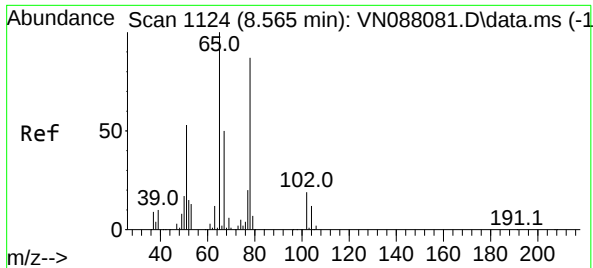


#31
Cyclohexane
Concen: 7.048 ug/l
RT: 8.241 min Scan# 1069
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38



Tgt Ion: 56 Resp: 40348
Ion Ratio Lower Upper
56 100
69 27.7 23.7 35.5
84 79.9 64.7 97.1





#33

1,2-Dichloroethane-d4

Concen: 52.481 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

Instrument :

MSVOA_N

ClientSampleId :

MW-10

Tgt Ion: 65 Resp: 21462

Ion Ratio Lower Upper

65 100

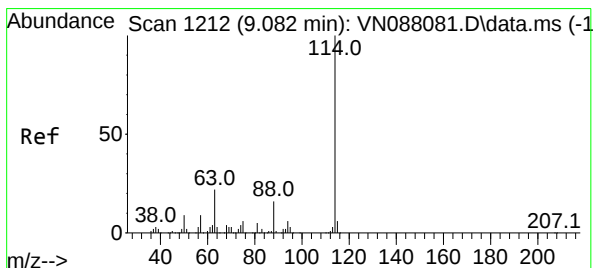
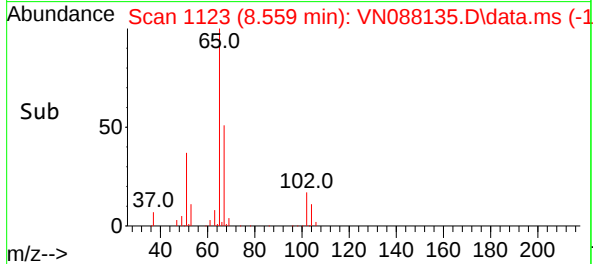
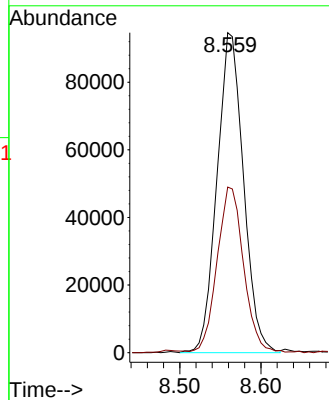
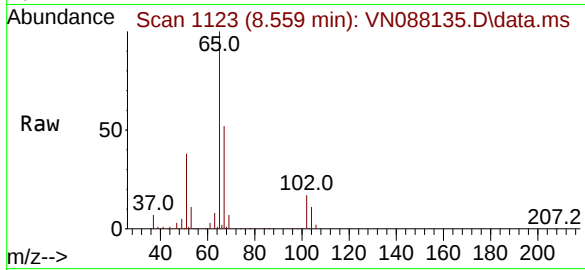
67 51.3 0.0 100.0

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1212

Delta R.T. -0.000 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

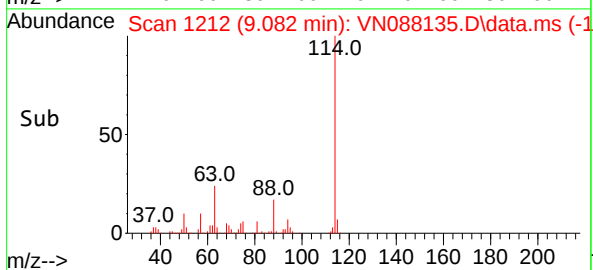
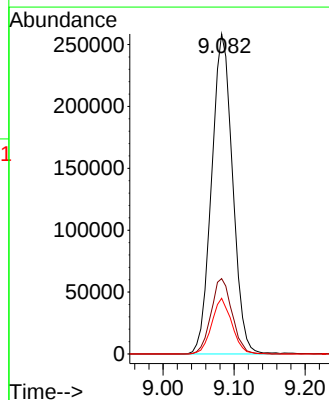
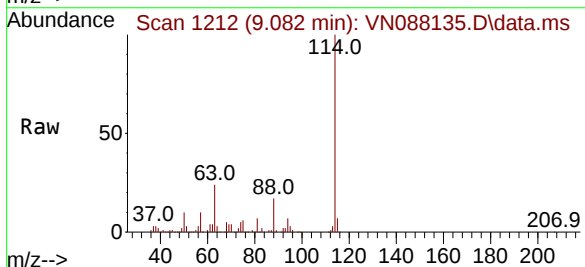
Tgt Ion:114 Resp: 529671

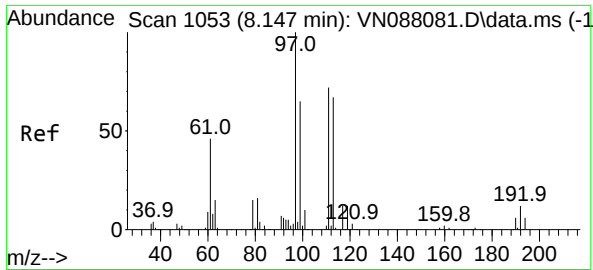
Ion Ratio Lower Upper

114 100

63 23.5 0.0 45.2

88 17.4 0.0 33.4





#35

Dibromofluoromethane

Concen: 46.530 ug/l

RT: 8.153 min Scan# 1054

Delta R.T. -0.000 min

Lab File: VN088135.D

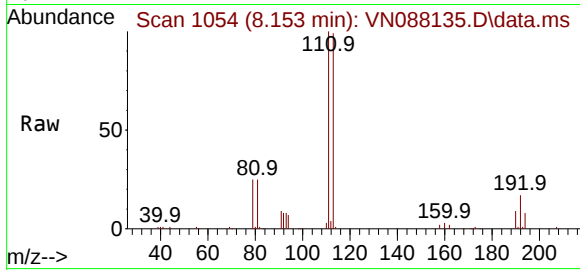
Acq: 28 Oct 2025 13:38

Instrument :

MSVOA_N

ClientSampleId :

MW-10



Tgt Ion: 113 Resp: 16557

Ion Ratio Lower Upper

113 100

111 103.2 82.8 124.2

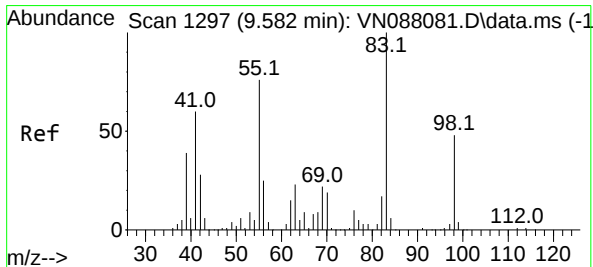
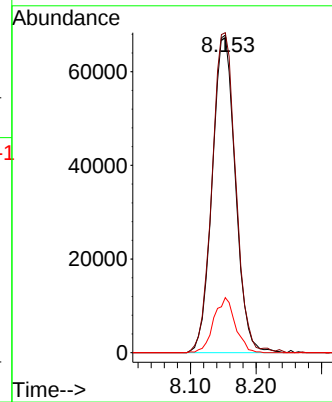
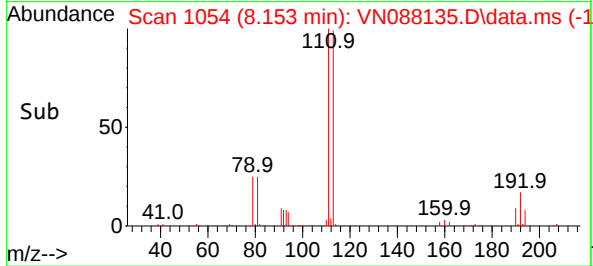
192 16.2 12.8 19.2

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#39

Methylcyclohexane

Concen: 2.409 ug/l m

RT: 9.582 min Scan# 1297

Delta R.T. -0.000 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

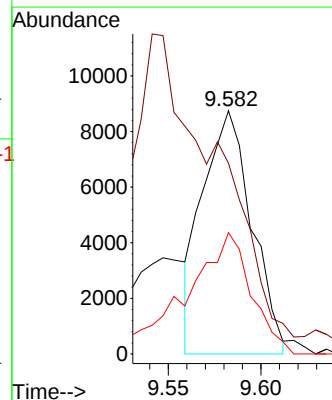
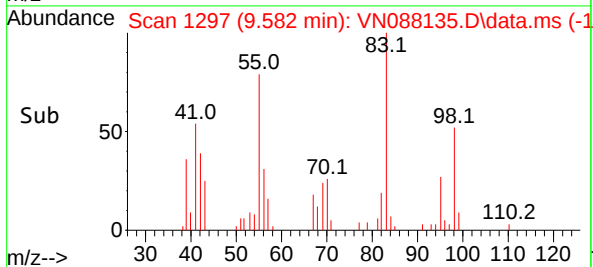
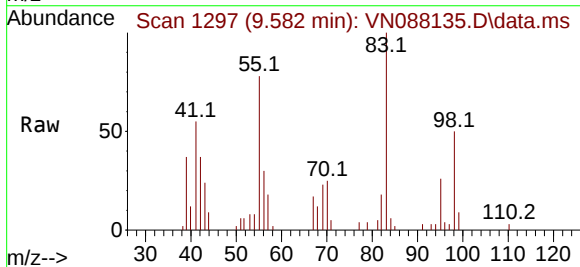
Tgt Ion: 83 Resp: 16088

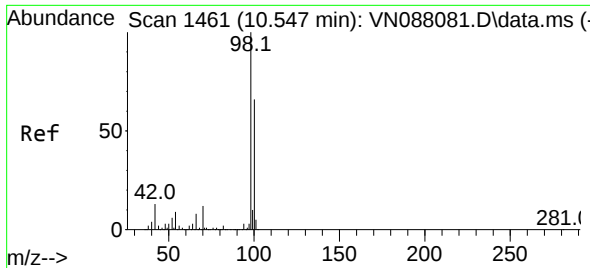
Ion Ratio Lower Upper

83 100

55 78.4 64.6 96.8

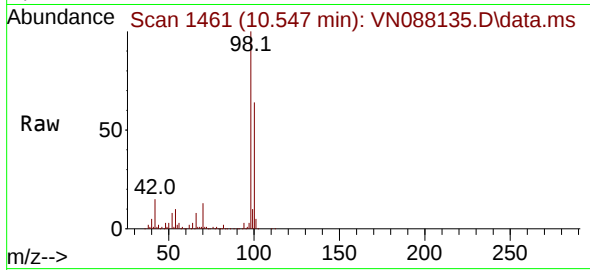
98 49.9 38.4 57.6





#50
Toluene-d8
Concen: 44.598 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

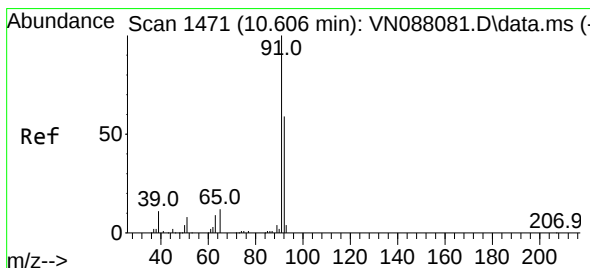
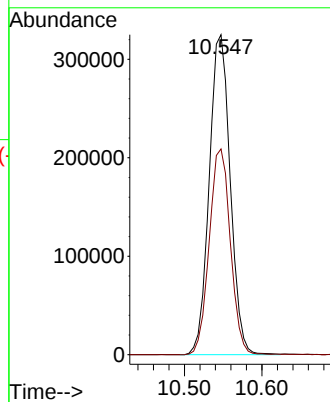
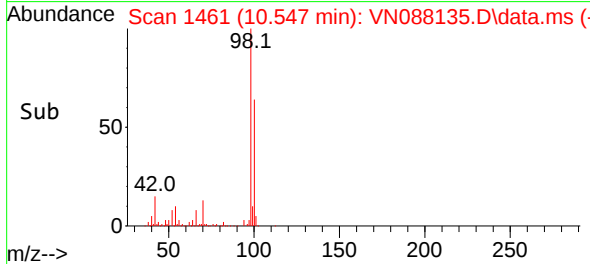
Instrument :
MSVOA_N
ClientSampleId :
MW-10



Tgt Ion: 98 Resp: 611488
Ion Ratio Lower Upper
98 100
100 64.8 52.8 79.2

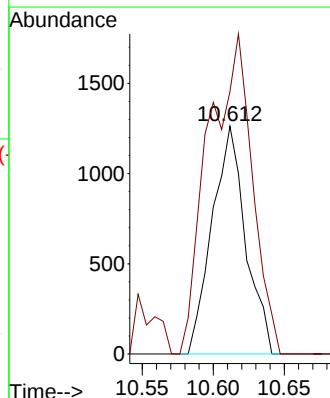
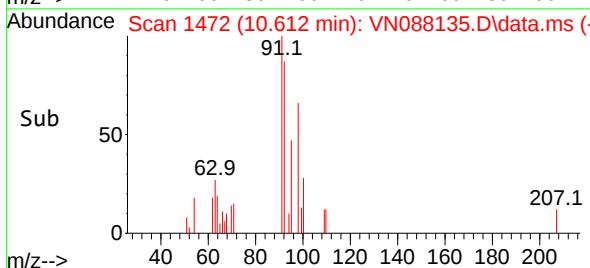
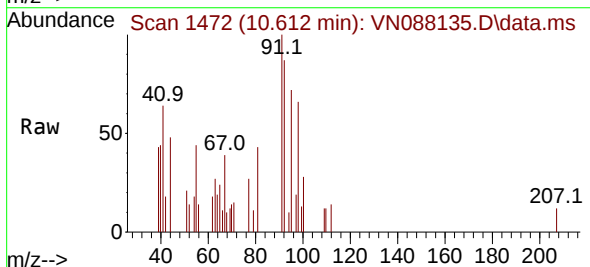
Manual Integrations
APPROVED

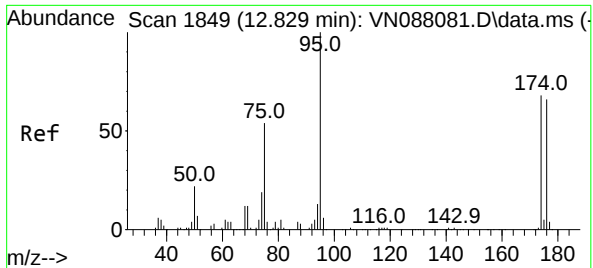
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#52
Toluene
Concen: 0.212 ug/l
RT: 10.612 min Scan# 1472
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

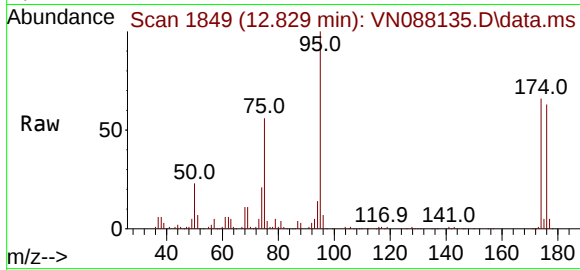
Tgt Ion: 92 Resp: 2071
Ion Ratio Lower Upper
92 100
91 184.0 140.4 210.6





#62
4-Bromofluorobenzene
Concen: 50.888 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

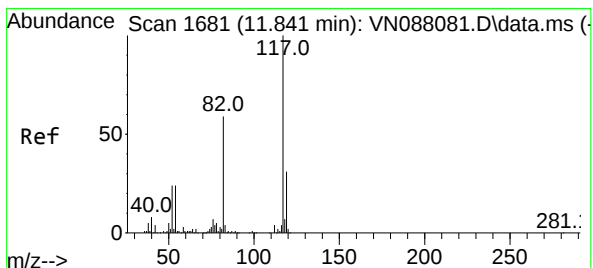
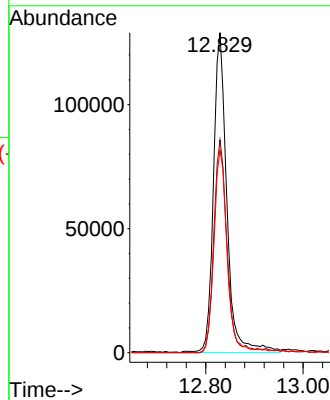
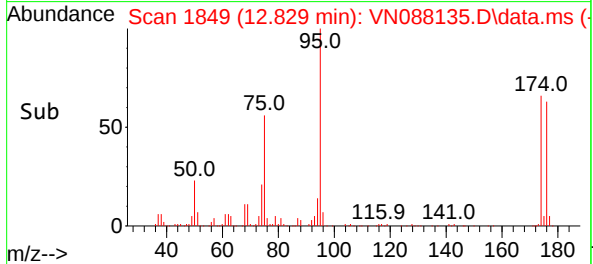
Instrument :
MSVOA_N
ClientSampleId :
MW-10



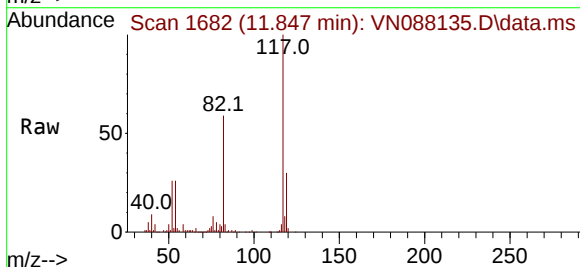
Tgt Ion: 95 Resp: 24641
Ion Ratio Lower Upper
95 100
174 65.0 0.0 138.4
176 61.3 0.0 132.6

Manual Integrations
APPROVED

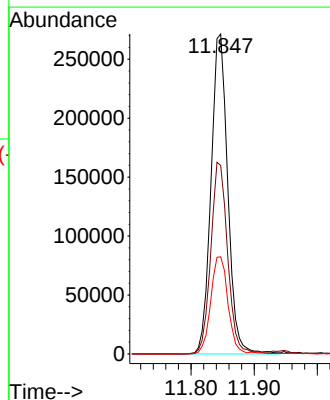
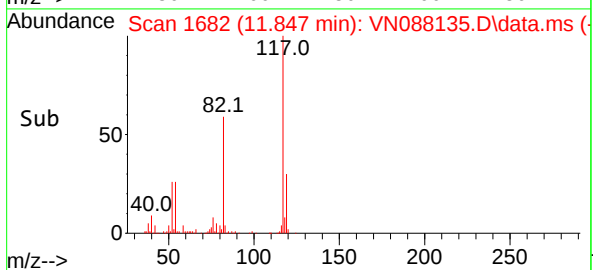
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

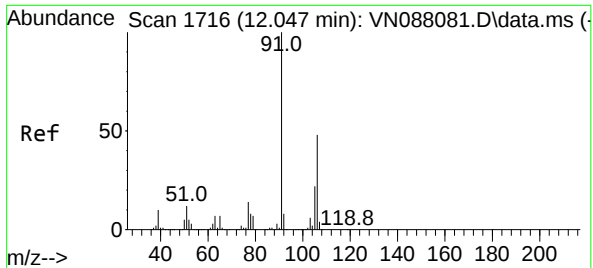


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38



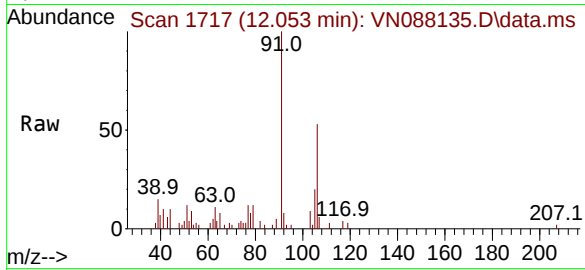
Tgt Ion:117 Resp: 500860
Ion Ratio Lower Upper
117 100
82 58.9 47.4 71.2
119 30.3 24.3 36.5





#68
m/p-Xylenes
Concen: 1.242 ug/l
RT: 12.053 min Scan# 1716
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

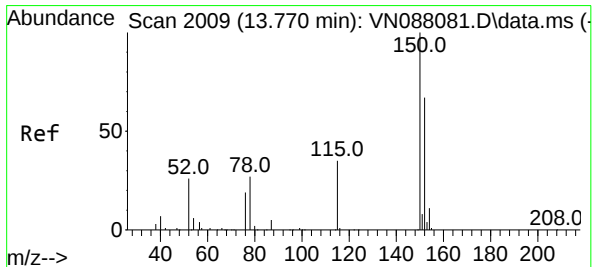
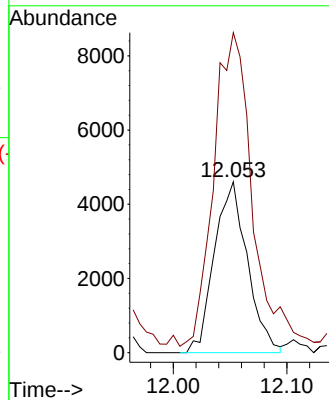
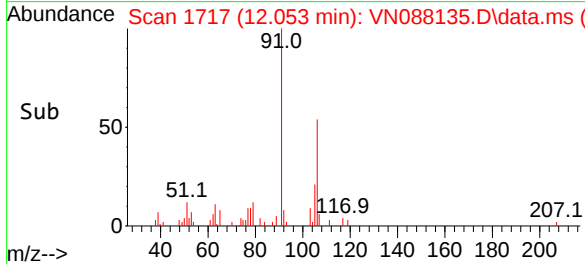
Instrument :
MSVOA_N
ClientSampleId :
MW-10



Tgt Ion:106 Resp: 9292
Ion Ratio Lower Upper
106 100
91 220.7 169.3 253.9

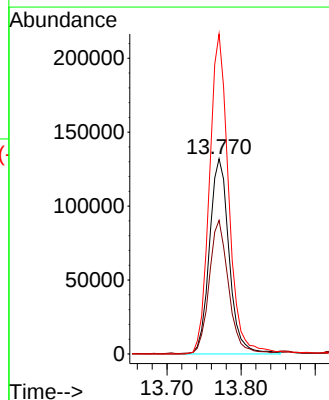
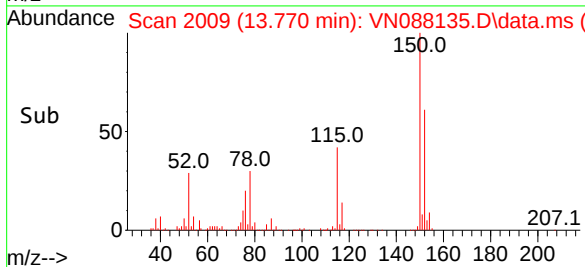
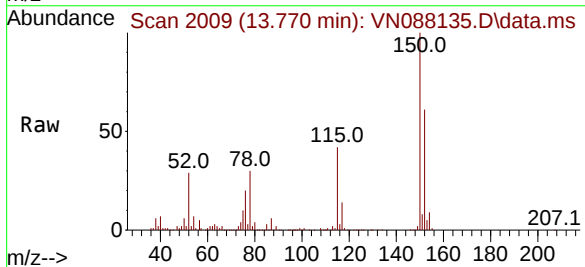
Manual Integrations
APPROVED

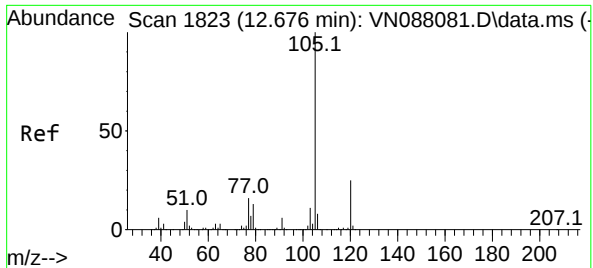
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

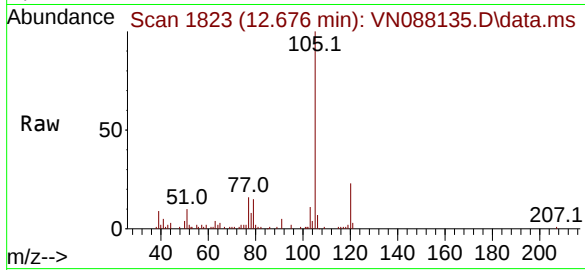
Tgt Ion:152 Resp: 243219
Ion Ratio Lower Upper
152 100
115 66.9 32.3 96.8
150 161.1 0.0 351.0





#73
Isopropylbenzene
Concen: 2.941 ug/l
RT: 12.676 min Scan# 1823
Delta R.T. 0.006 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

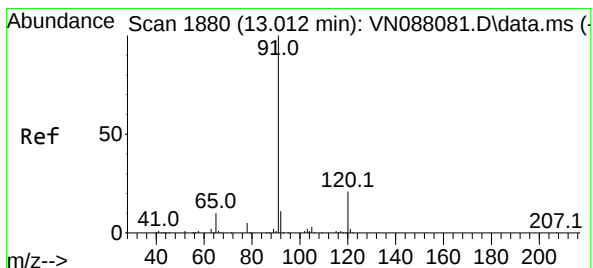
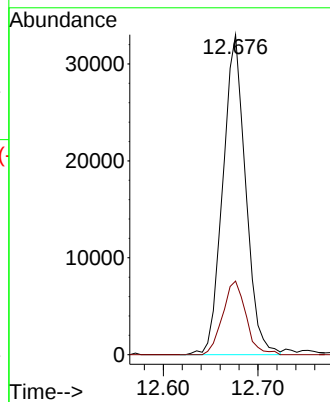
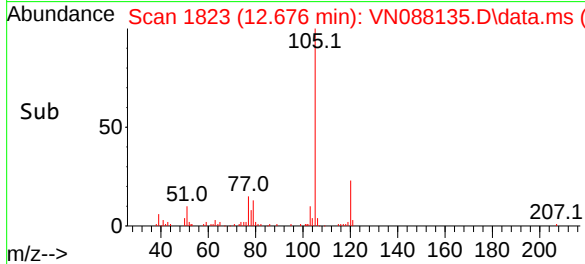
Instrument :
MSVOA_N
ClientSampleId :
MW-10



Tgt Ion: 105 Resp: 55162
Ion Ratio Lower Upper
105 100
120 23.5 12.8 38.3

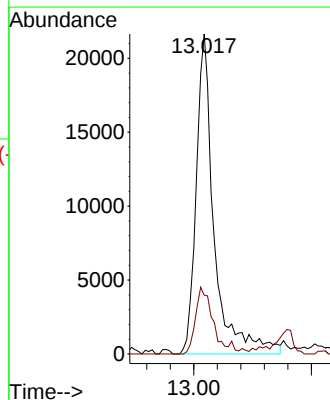
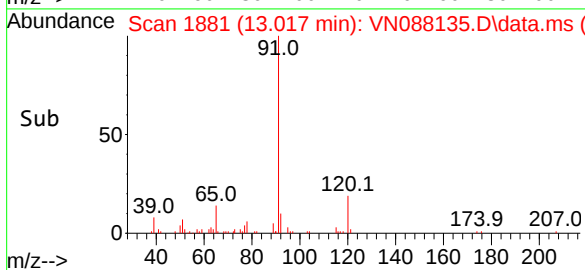
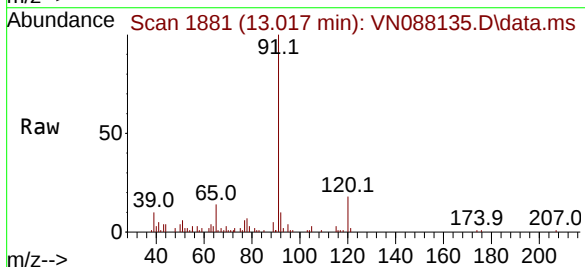
Manual Integrations
APPROVED

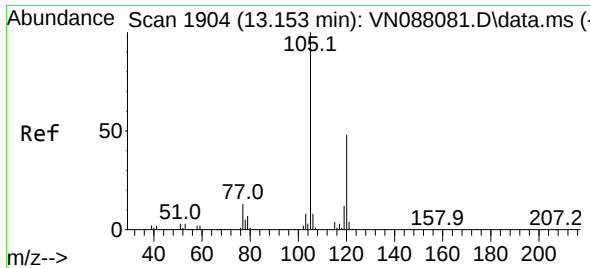
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#78
n-propylbenzene
Concen: 1.997 ug/l
RT: 13.017 min Scan# 1881
Delta R.T. 0.005 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

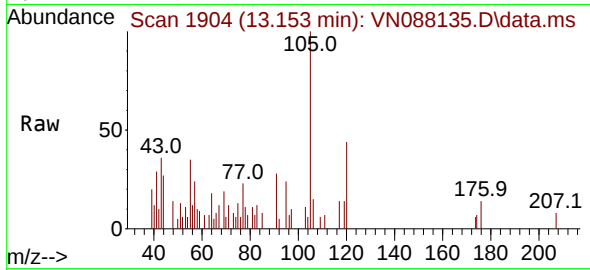
Tgt Ion: 91 Resp: 45705
Ion Ratio Lower Upper
91 100
120 20.7 10.7 32.1





#80
1,3,5-Trimethylbenzene
Concen: 0.343 ug/l m
RT: 13.153 min Scan# 1904
Delta R.T. -0.000 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

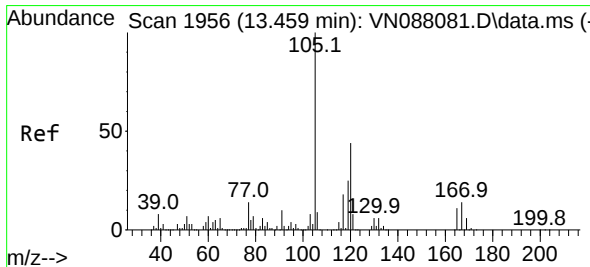
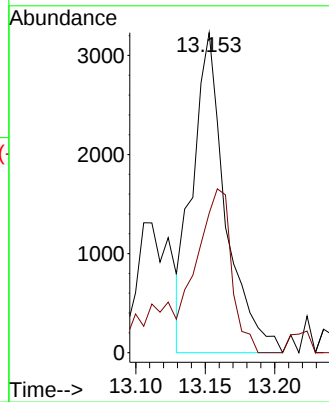
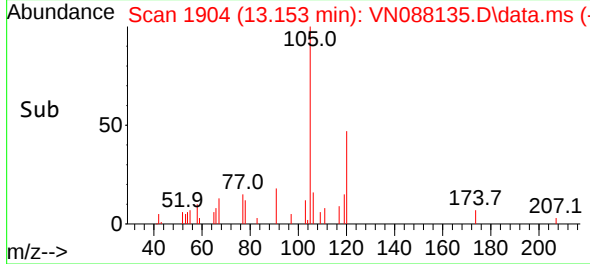
Instrument :
MSVOA_N
ClientSampleId :
MW-10



Tgt Ion:105 Resp: 5344
Ion Ratio Lower Upper
105 100
120 145.3 23.2 69.6

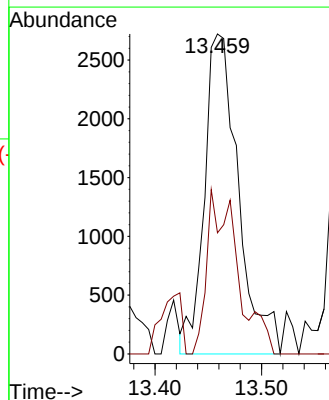
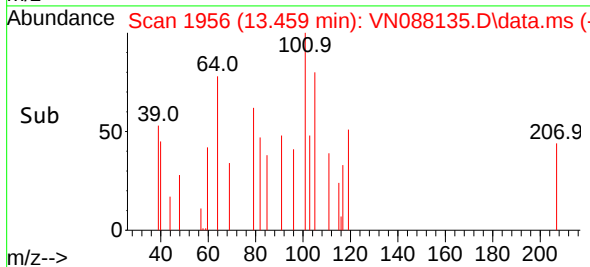
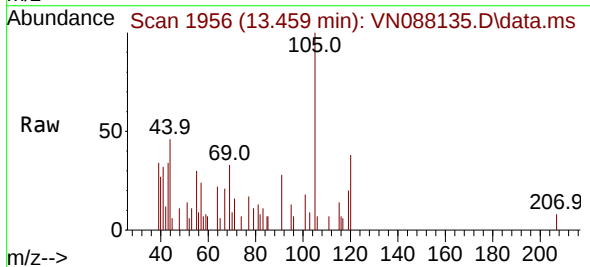
Manual Integrations
APPROVED

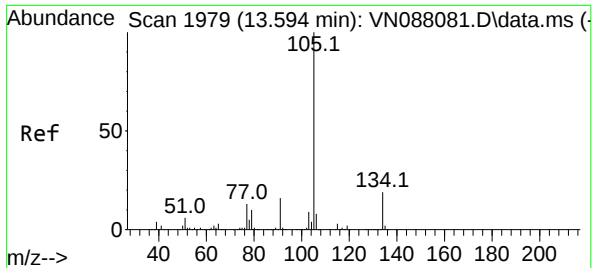
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#84
1,2,4-Trimethylbenzene
Concen: 0.387 ug/l
RT: 13.459 min Scan# 1956
Delta R.T. -0.000 min
Lab File: VN088135.D
Acq: 28 Oct 2025 13:38

Tgt Ion:105 Resp: 6040
Ion Ratio Lower Upper
105 100
120 45.8 22.0 66.0





#85

sec-Butylbenzene

Concen: 1.373 ug/l

RT: 13.594 min Scan# 1979

Delta R.T. -0.000 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

Instrument :

MSVOA_N

ClientSampleId :

MW-10

Tgt Ion:105 Resp: 2806

Ion Ratio Lower Upper

105 100

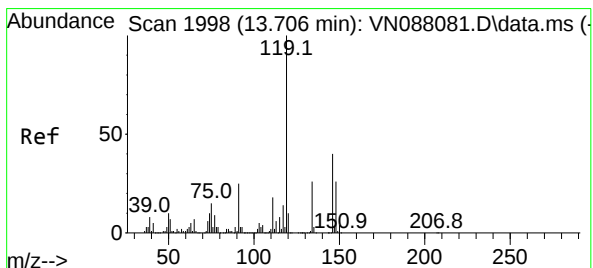
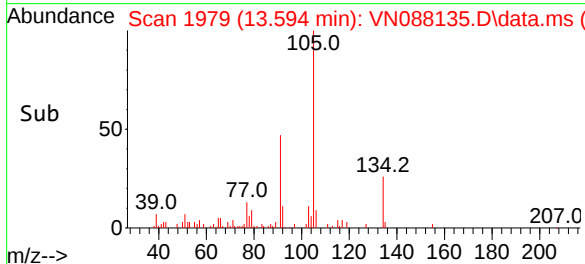
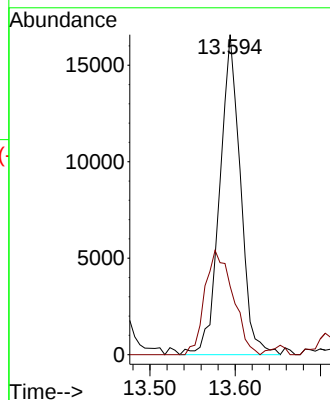
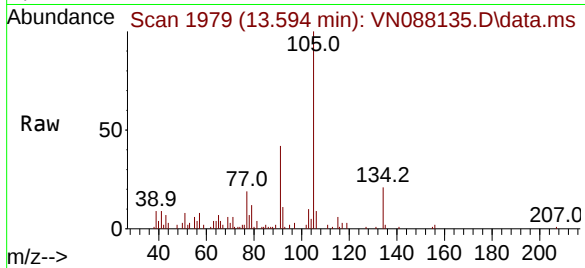
134 44.1 9.6 28.6

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#86

p-Isopropyltoluene

Concen: 0.288 ug/l m

RT: 13.712 min Scan# 1999

Delta R.T. 0.006 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

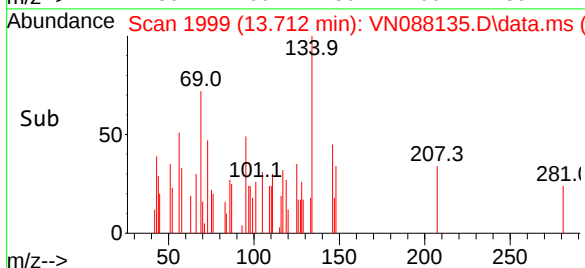
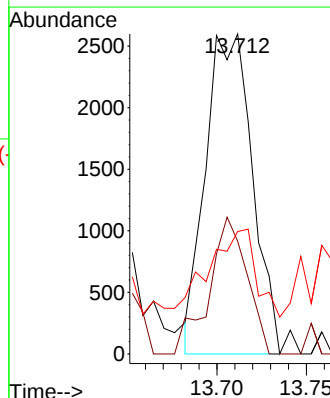
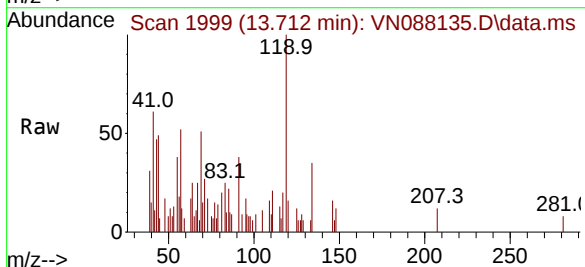
Tgt Ion:119 Resp: 4717

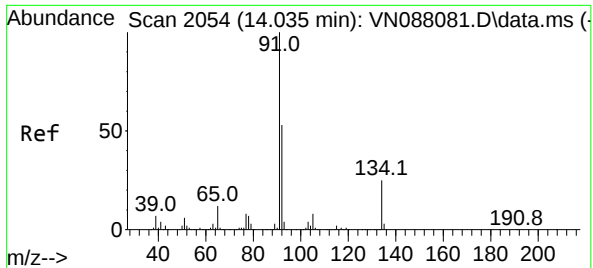
Ion Ratio Lower Upper

119 100

134 118.3 12.7 38.0#

91 120.5 12.5 37.5#





#89

n-Butylbenzene

Concen: 1.487 ug/l m

RT: 14.006 min Scan# 2054

Delta R.T. -0.024 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

Instrument :

MSVOA_N

ClientSampleId :

MW-10

Tgt Ion: 91 Resp: 2416

Ion Ratio Lower Upper

91 100

92 32.4 25.9 77.8

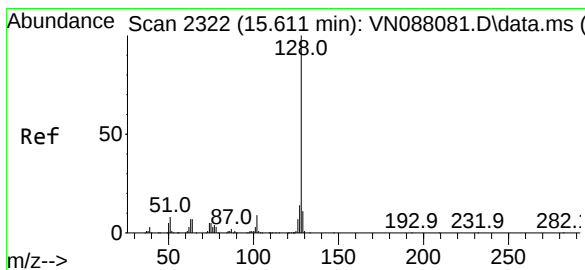
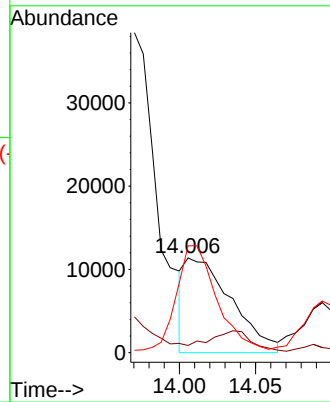
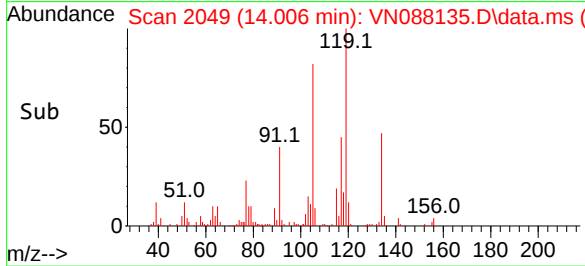
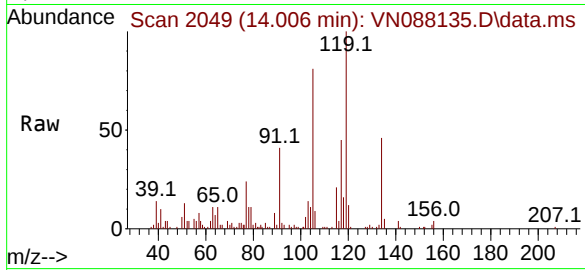
134 0.0 11.7 35.0

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#95

Naphthalene

Concen: 1.803 ug/l m

RT: 15.611 min Scan# 2322

Delta R.T. -0.000 min

Lab File: VN088135.D

Acq: 28 Oct 2025 13:38

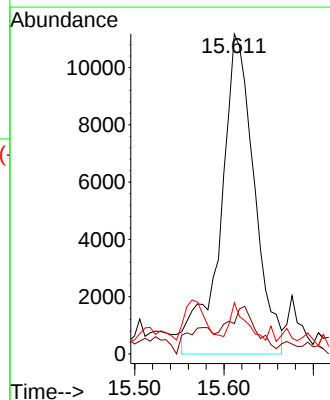
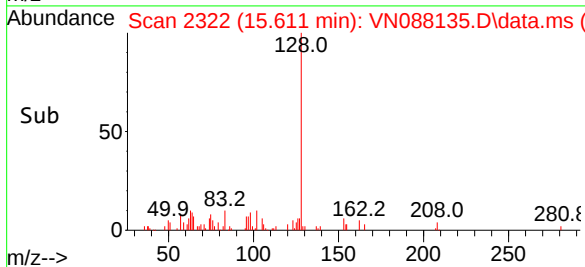
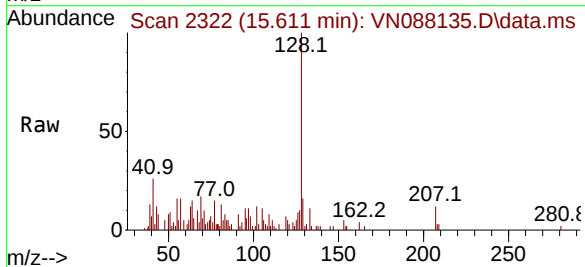
Tgt Ion:128 Resp: 29122

Ion Ratio Lower Upper

128 100

127 0.0 10.6 15.8#

129 0.0 8.6 12.8#



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected: 10/23/25	
Project: RFK Bridge RMB-Randall Island	Date Received: 10/24/25	
Client Sample ID: MW-11	SDG No.: Q3468	
Lab Sample ID: Q3468-04	Matrix: Water	
Analytical Method: 8260D	% Solid: 0	
Sample Wt/Vol: 5 mL	Test: VOCMS Group1	
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/27/25 18:41	VN102725
71-43-2	Benzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 18:41	VN102725
108-88-3	Toluene	1.00	U	1	0.14	1.00	ug/L	10/27/25 18:41	VN102725
100-41-4	Ethyl Benzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 18:41	VN102725
179601-23-1	m/p-Xylenes	0.75	J	1	0.24	2.00	ug/L	10/27/25 18:41	VN102725
1330-20-7	Total Xylenes	0.75	J	1	0.36	3.00	ug/L	10/27/25 18:41	VN102725
95-47-6	o-Xylene	1.00	U	1	0.12	1.00	ug/L	10/27/25 18:41	VN102725
98-82-8	Isopropylbenzene	1.00	U	1	0.12	1.00	ug/L	10/27/25 18:41	VN102725
103-65-1	n-propylbenzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 18:41	VN102725
108-67-8	1,3,5-Trimethylbenzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 18:41	VN102725
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/27/25 18:41	VN102725
95-63-6	1,2,4-Trimethylbenzene	1.00	U	1	0.14	1.00	ug/L	10/27/25 18:41	VN102725
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 18:41	VN102725
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/27/25 18:41	VN102725
104-51-8	n-Butylbenzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 18:41	VN102725
91-20-3	Naphthalene	1.00	U	1	0.20	1.00	ug/L	10/27/25 18:41	VN102725
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	52.6			74 - 125	105%	SPK: 50		
1868-53-7	Dibromofluoromethane	45.4			75 - 124	91%	SPK: 50		
2037-26-5	Toluene-d8	44.5			86 - 113	89%	SPK: 50		
460-00-4	4-Bromofluorobenzene	50.1			77 - 121	100%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	264000							
540-36-3	1,4-Difluorobenzene	588000							
3114-55-4	Chlorobenzene-d5	556000							
3855-82-1	1,4-Dichlorobenzene-d4	270000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088124.D
 Acq On : 27 Oct 2025 18:41
 Operator : JC\MD
 Sample : Q3468-04
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-11

Quant Time: Oct 28 01:34:19 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

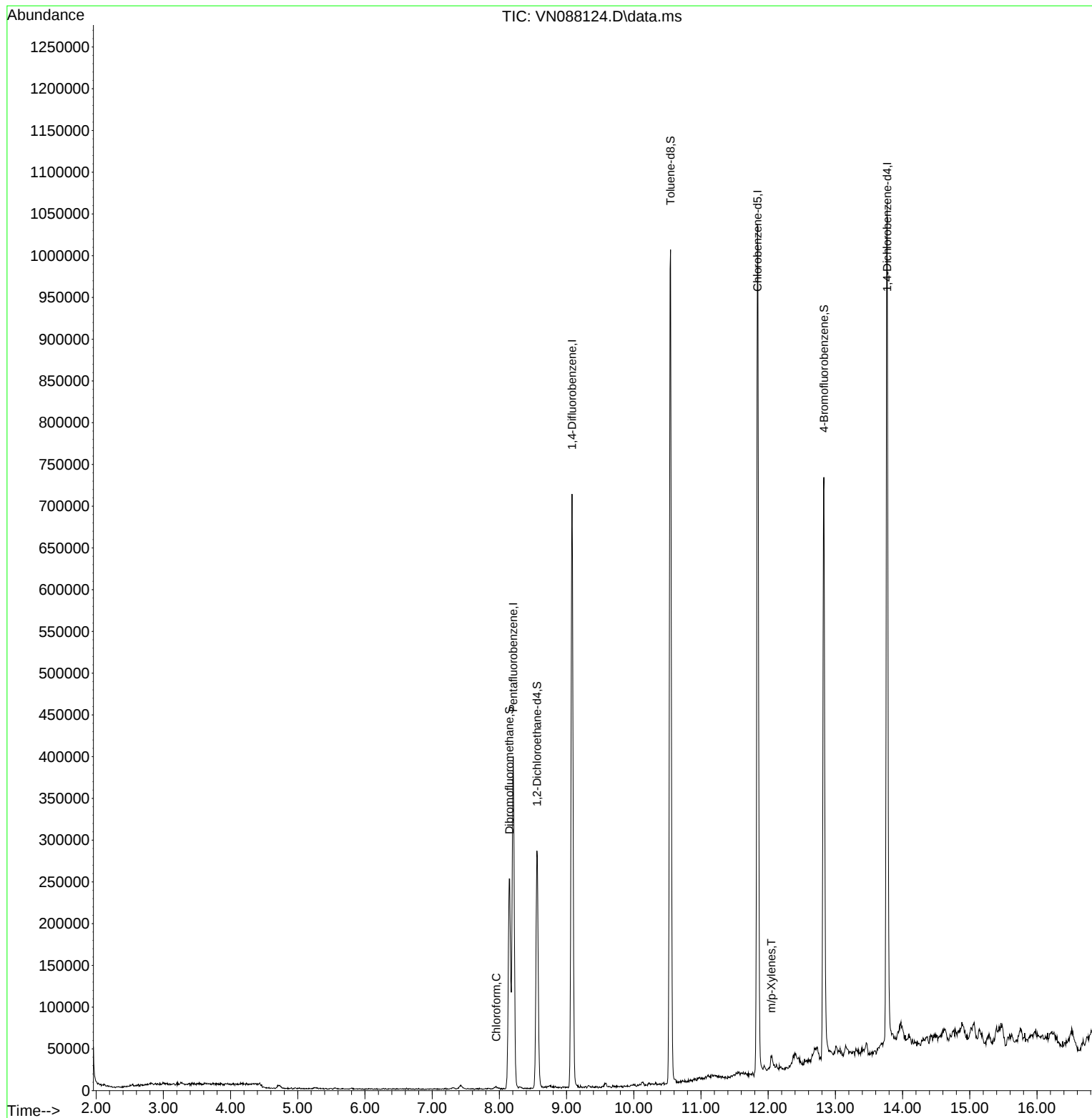
Internal Standards							
1) Pentafluorobenzene		8.206	168	263533	50.000	ug/l	0.00
34) 1,4-Difluorobenzene		9.082	114	588016	50.000	ug/l	0.00
63) Chlorobenzene-d5		11.841	117	556110	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4		13.770	152	269618	50.000	ug/l	0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4		8.559	65	239685	52.597	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	=	105.200%	
35) Dibromofluoromethane		8.147	113	179378	45.408	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	90.820%	
50) Toluene-d8		10.547	98	677929	44.538	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	=	89.080%	
62) 4-Bromofluorobenzene		12.829	95	269183	50.075	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	=	100.160%	
Target Compounds							
							Qvalue
30) Chloroform		7.953	83	3086	0.457	ug/l	# 67
68) m/p-Xylenes		12.047	106	6195	0.746	ug/l	76

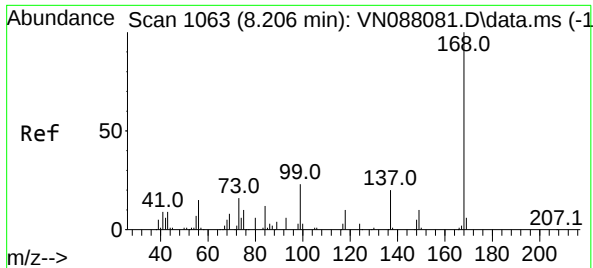
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088124.D
Acq On : 27 Oct 2025 18:41
Operator : JC\MD
Sample : Q3468-04
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
MW-11

Quant Time: Oct 28 01:34:19 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

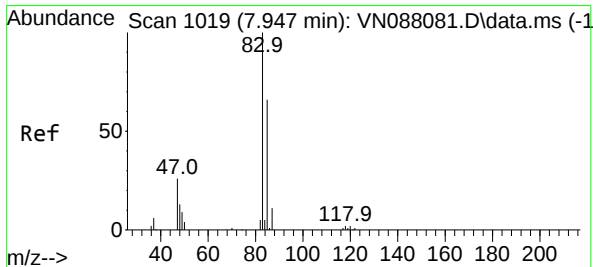
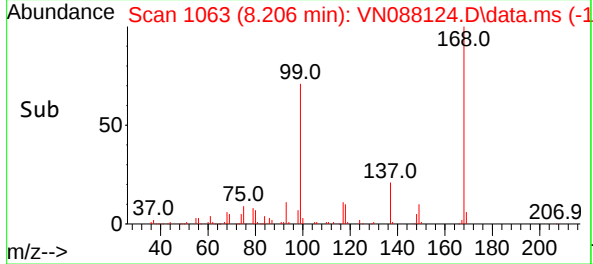
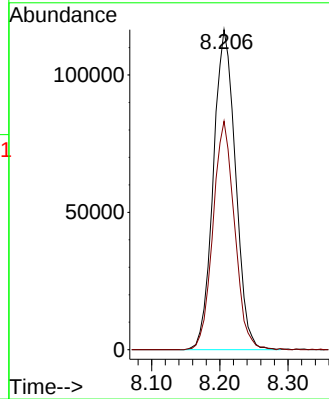
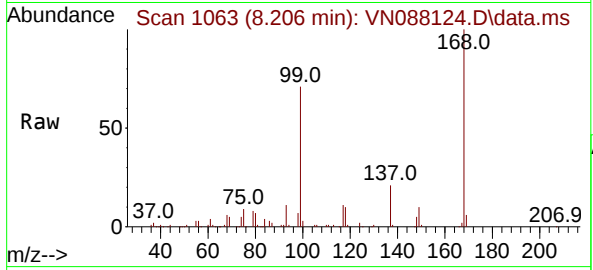




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

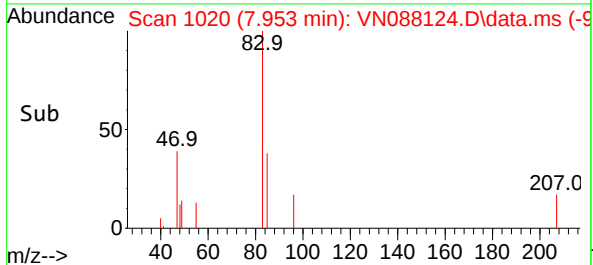
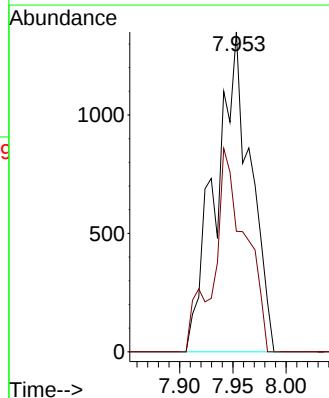
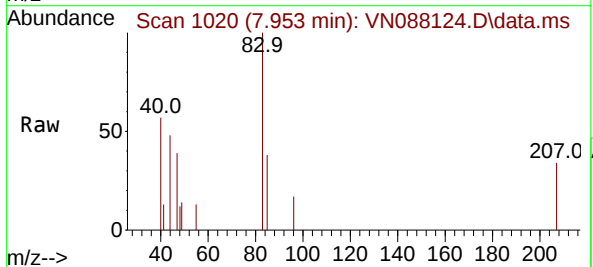
Instrument :
MSVOA_N
ClientSampleId :
MW-11

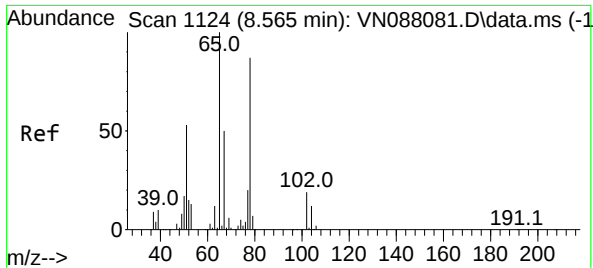
Tgt Ion:168 Resp: 263533
Ion Ratio Lower Upper
168 100
99 71.4 57.2 85.8



#30
Chloroform
Concen: 0.457 ug/l
RT: 7.953 min Scan# 1020
Delta R.T. 0.006 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

Tgt Ion: 83 Resp: 3086
Ion Ratio Lower Upper
83 100
85 37.7 50.7 76.1#





#33

1,2-Dichloroethane-d4

Concen: 52.597 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088124.D

Acq: 27 Oct 2025 18:41

Instrument :

MSVOA_N

ClientSampleId :

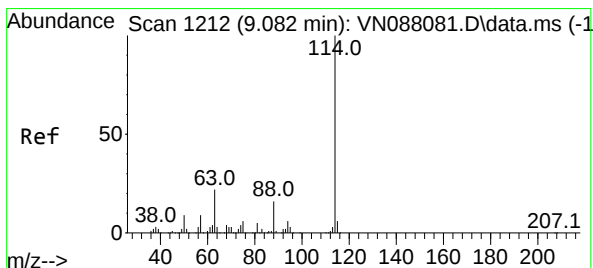
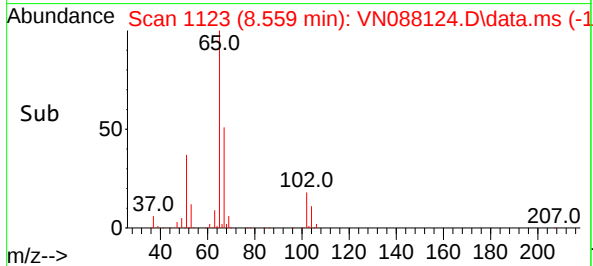
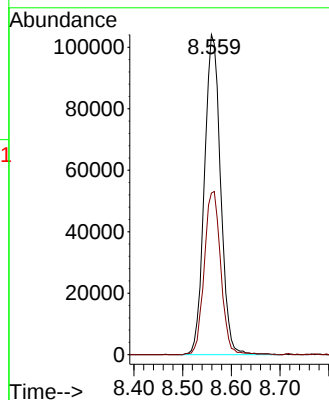
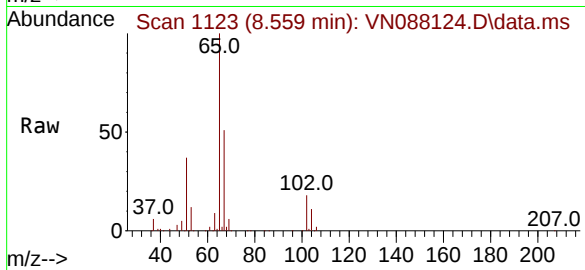
MW-11

Tgt Ion: 65 Resp: 239685

Ion Ratio Lower Upper

65 100

67 52.1 0.0 100.0



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1212

Delta R.T. -0.000 min

Lab File: VN088124.D

Acq: 27 Oct 2025 18:41

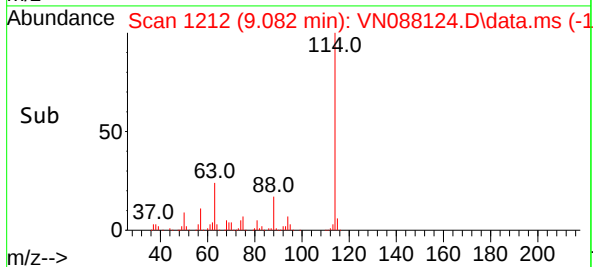
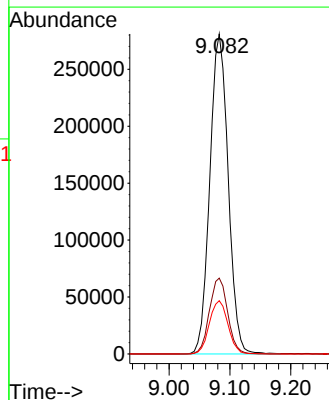
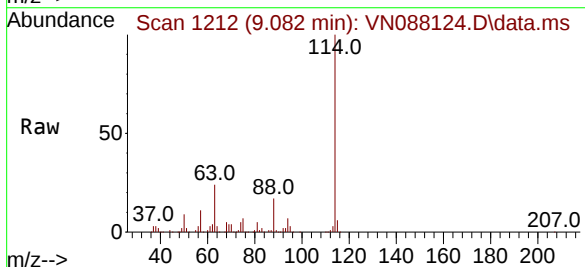
Tgt Ion: 114 Resp: 588016

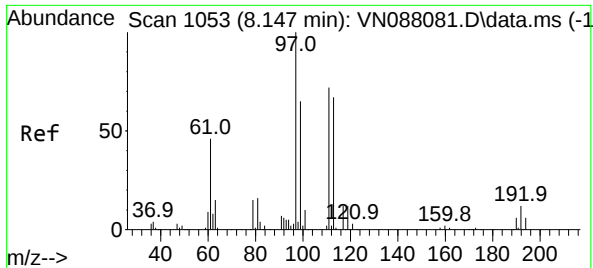
Ion Ratio Lower Upper

114 100

63 23.7 0.0 45.2

88 16.6 0.0 33.4





#35

Dibromofluoromethane

Concen: 45.408 ug/l

RT: 8.147 min Scan# 1053

Delta R.T. -0.006 min

Lab File: VN088124.D

Acq: 27 Oct 2025 18:41

Instrument :

MSVOA_N

ClientSampleId :

MW-11

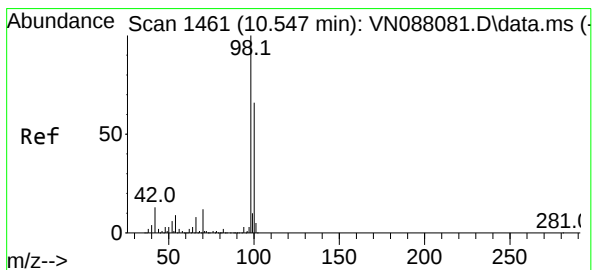
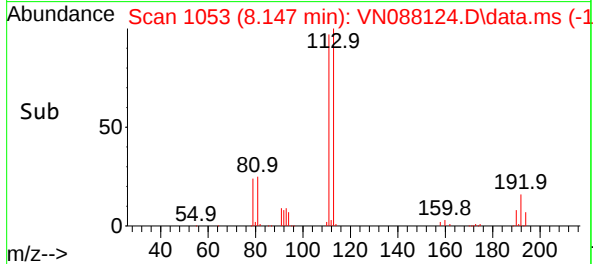
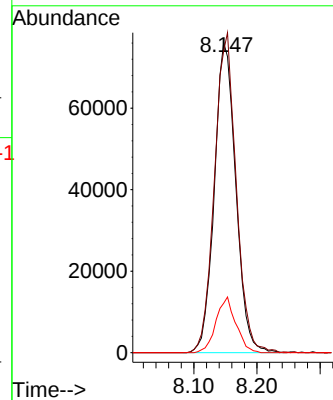
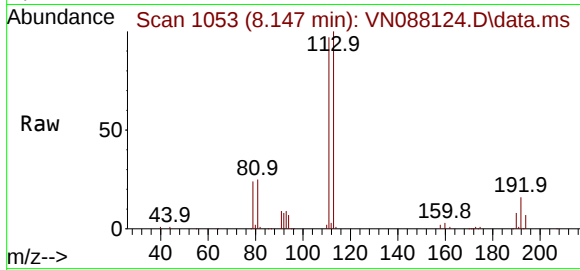
Tgt Ion:113 Resp: 179378

Ion Ratio Lower Upper

113 100

111 104.5 82.8 124.2

192 16.6 12.8 19.2



#50

Toluene-d8

Concen: 44.538 ug/l

RT: 10.547 min Scan# 1461

Delta R.T. -0.000 min

Lab File: VN088124.D

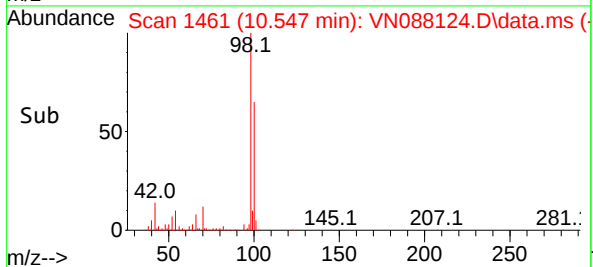
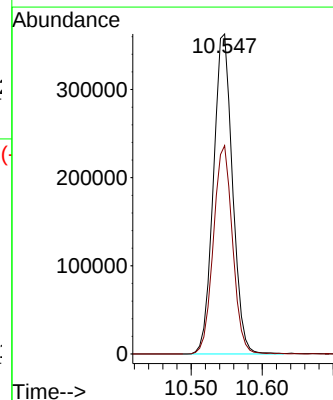
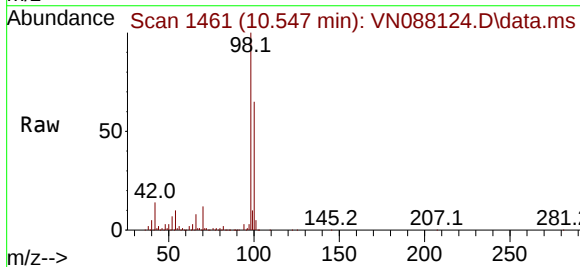
Acq: 27 Oct 2025 18:41

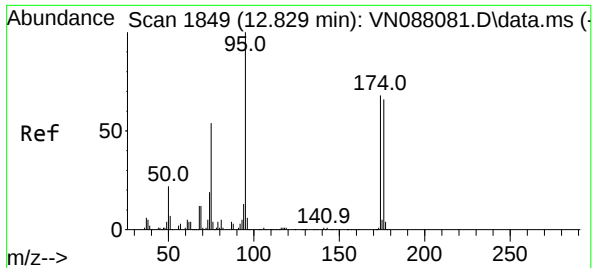
Tgt Ion: 98 Resp: 677929

Ion Ratio Lower Upper

98 100

100 65.2 52.8 79.2

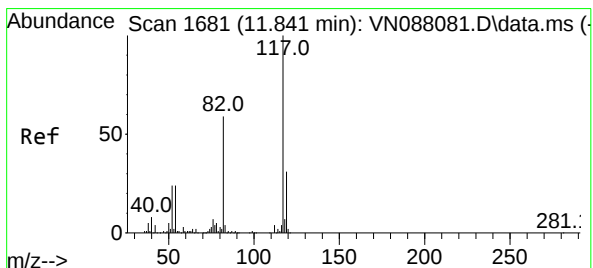
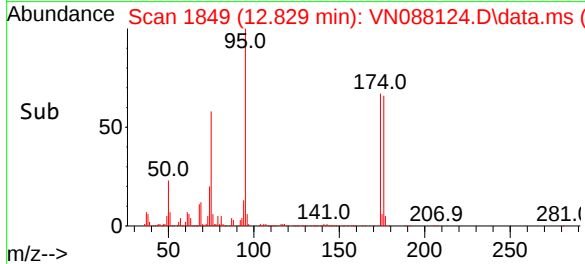
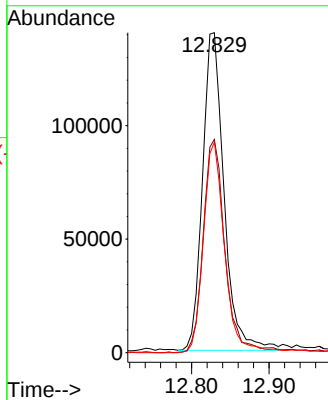
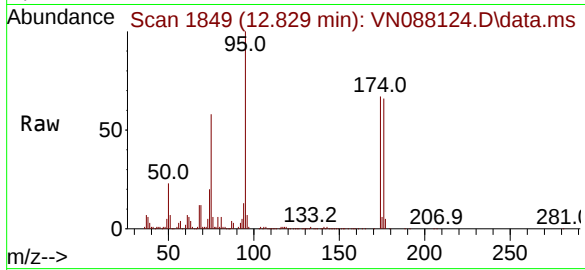




#62
4-Bromofluorobenzene
Concen: 50.075 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

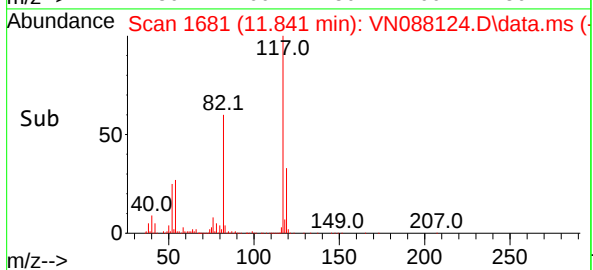
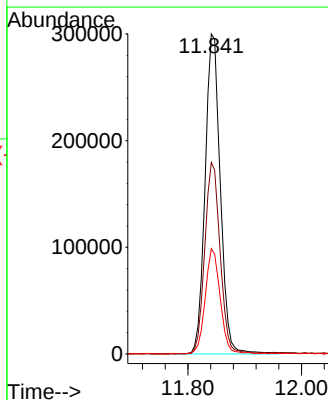
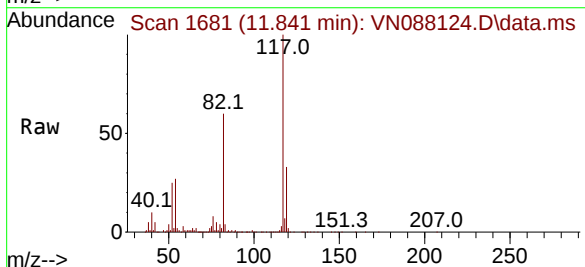
Instrument :
MSVOA_N
ClientSampleId :
MW-11

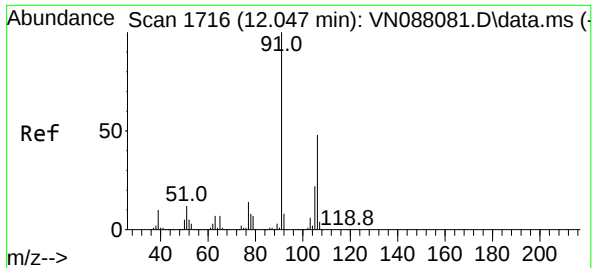
Tgt Ion: 95 Resp: 269183
Ion Ratio Lower Upper
95 100
174 68.1 0.0 138.4
176 65.4 0.0 132.6



#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.841 min Scan# 1681
Delta R.T. -0.000 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

Tgt Ion: 117 Resp: 556110
Ion Ratio Lower Upper
117 100
82 59.7 47.4 71.2
119 32.8 24.3 36.5

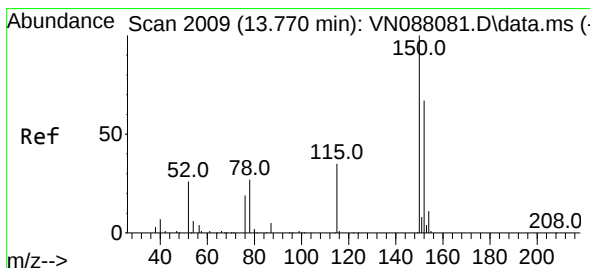
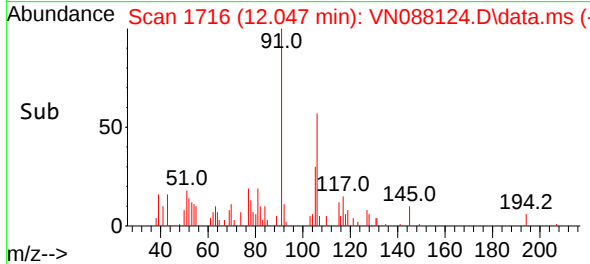
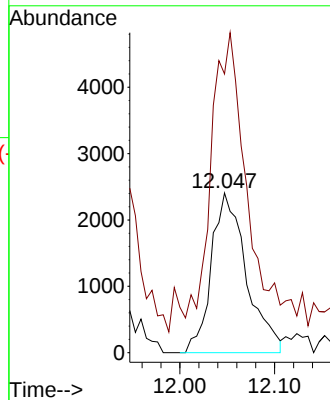
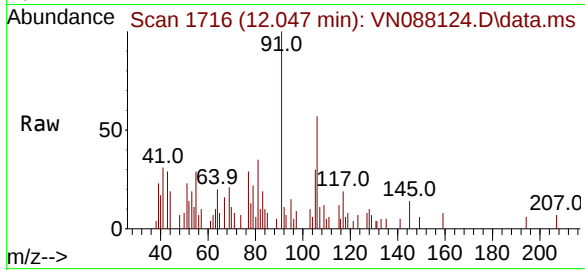




#68
m/p-Xylenes
Concen: 0.746 ug/l
RT: 12.047 min Scan# 1716
Delta R.T. -0.000 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

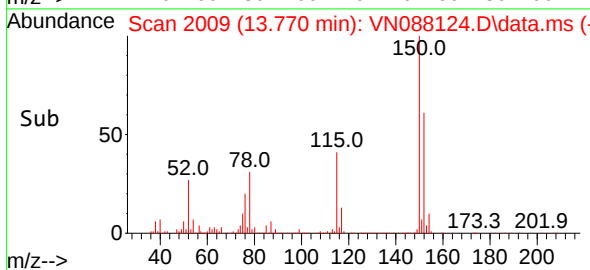
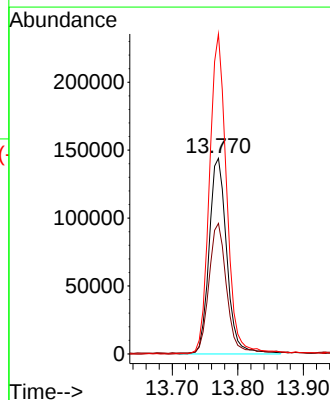
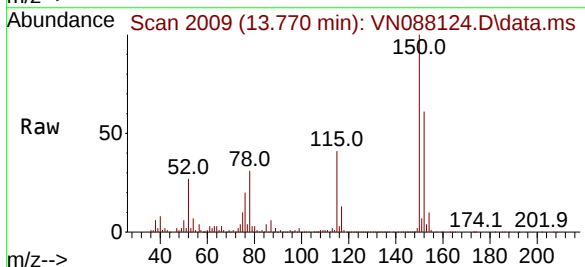
Instrument :
MSVOA_N
ClientSampleId :
MW-11

Tgt Ion:106 Resp: 6195
Ion Ratio Lower Upper
106 100
91 173.9 169.3 253.9



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088124.D
Acq: 27 Oct 2025 18:41

Tgt Ion:152 Resp: 269618
Ion Ratio Lower Upper
152 100
115 65.2 32.3 96.8
150 159.2 0.0 351.0





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	10/23/25
Project:	RFK Bridge RMB-Randall Island	Date Received:	10/24/25
Client Sample ID:	MW-13	SDG No.:	Q3468
Lab Sample ID:	Q3468-05	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/29/25 18:33	VN102925
71-43-2	Benzene	1.20		1	0.15	1.00	ug/L	10/29/25 18:33	VN102925
108-88-3	Toluene	1.00	U	1	0.14	1.00	ug/L	10/29/25 18:33	VN102925
100-41-4	Ethyl Benzene	1.30		1	0.13	1.00	ug/L	10/29/25 18:33	VN102925
179601-23-1	m/p-Xylenes	0.95	J	1	0.24	2.00	ug/L	10/29/25 18:33	VN102925
1330-20-7	Total Xylenes	2.65	J	1	0.36	3.00	ug/L	10/29/25 18:33	VN102925
95-47-6	o-Xylene	1.70		1	0.12	1.00	ug/L	10/29/25 18:33	VN102925
98-82-8	Isopropylbenzene	0.37	J	1	0.12	1.00	ug/L	10/29/25 18:33	VN102925
103-65-1	n-propylbenzene	0.48	J	1	0.13	1.00	ug/L	10/29/25 18:33	VN102925
108-67-8	1,3,5-Trimethylbenzene	1.00	U	1	0.15	1.00	ug/L	10/29/25 18:33	VN102925
98-06-6	tert-Butylbenzene	1.00	UQ	1	0.14	1.00	ug/L	10/29/25 18:33	VN102925
95-63-6	1,2,4-Trimethylbenzene	1.00	U	1	0.14	1.00	ug/L	10/29/25 18:33	VN102925
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/29/25 18:33	VN102925
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/29/25 18:33	VN102925
104-51-8	n-Butylbenzene	1.00	U	1	0.15	1.00	ug/L	10/29/25 18:33	VN102925
91-20-3	Naphthalene	1.00	U	1	0.20	1.00	ug/L	10/29/25 18:33	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	54.5			74 - 125	109%	SPK: 50		
1868-53-7	Dibromofluoromethane	44.8			75 - 124	90%	SPK: 50		
2037-26-5	Toluene-d8	45.0			86 - 113	90%	SPK: 50		
460-00-4	4-Bromofluorobenzene	51.7			77 - 121	103%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	328000							
540-36-3	1,4-Difluorobenzene	751000							
3114-55-4	Chlorobenzene-d5	708000							
3855-82-1	1,4-Dichlorobenzene-d4	355000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088170.D
 Acq On : 29 Oct 2025 18:33
 Operator : JC\MD
 Sample : Q3468-05
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 26 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-13

Quant Time: Oct 30 04:12:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

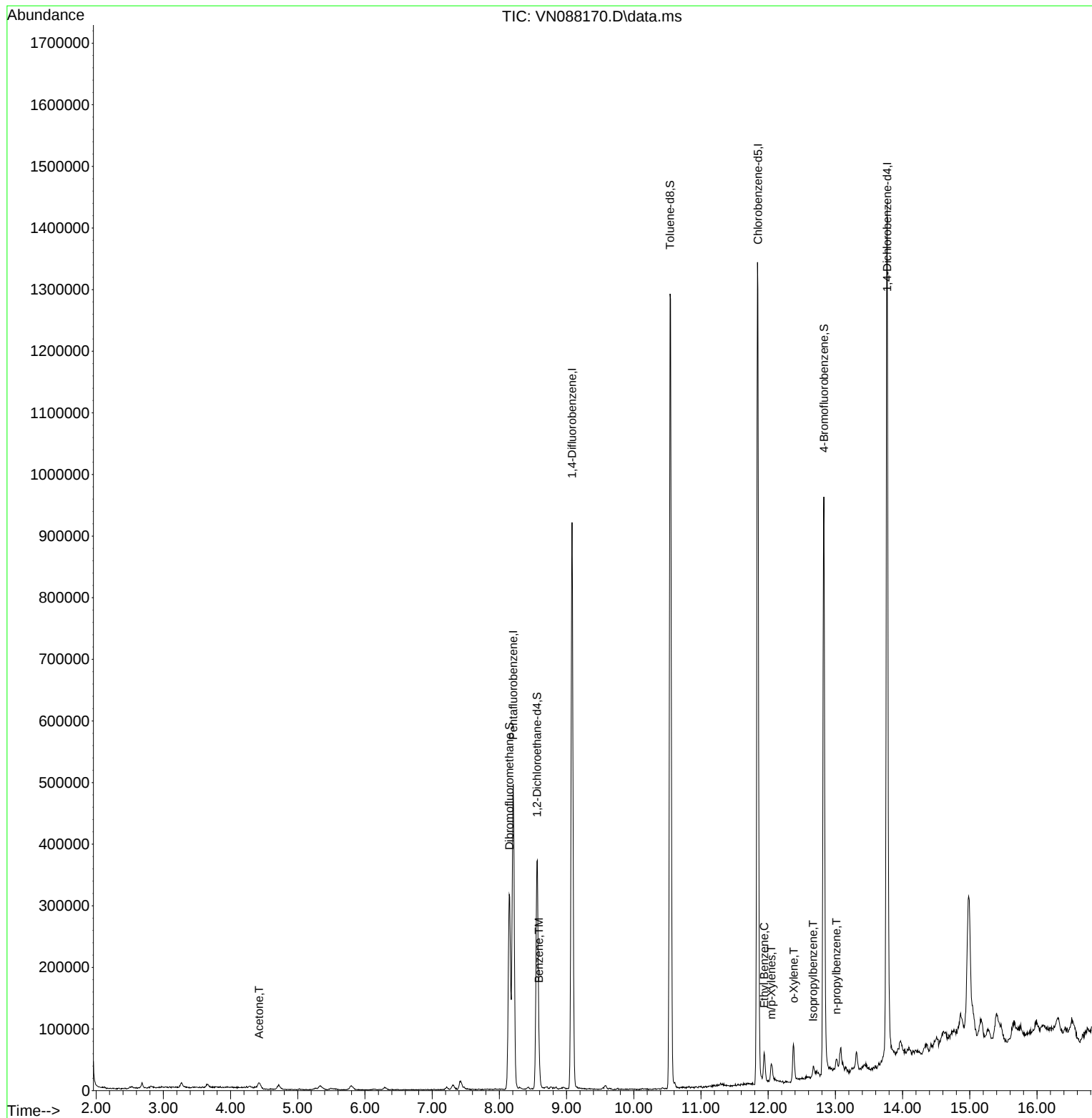
Internal Standards						
1) Pentafluorobenzene	8.206	168	328066	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	750626	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	708184	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	354853	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	309208	54.506	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery	= 109.020%		
35) Dibromofluoromethane	8.147	113	226133	44.843	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery	= 89.680%		
50) Toluene-d8	10.541	98	873627	44.962	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery	= 89.920%		
62) 4-Bromofluorobenzene	12.829	95	354779	51.701	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery	= 103.400%		
Target Compounds						Qvalue
16) Acetone	4.424	43	19110	6.705	ug/l	96
40) Benzene	8.588	78	26266	1.171	ug/l	93
67) Ethyl Benzene	11.941	91	36576	1.296	ug/l #	89
68) m/p-Xylenes	12.047	106	10093	0.954	ug/l	95
69) o-Xylene	12.382	106	17298	1.725	ug/l	97
73) Isopropylbenzene	12.670	105	10113	0.370	ug/l	85
78) n-propylbenzene	13.018	91	15960	0.478	ug/l	91

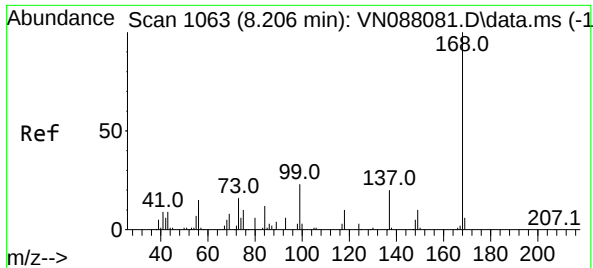
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088170.D
Acq On : 29 Oct 2025 18:33
Operator : JC\MD
Sample : Q3468-05
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
MW-13

Quant Time: Oct 30 04:12:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

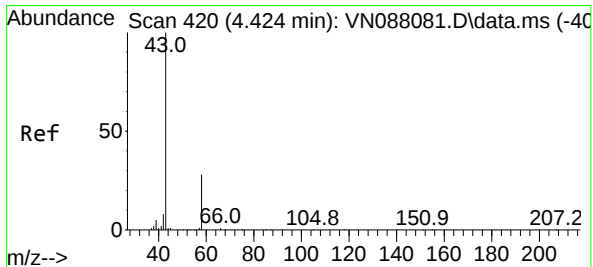
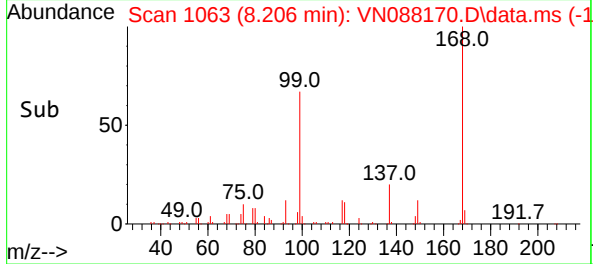
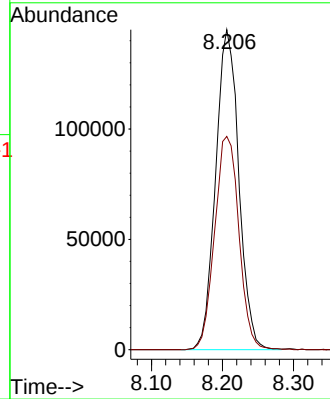
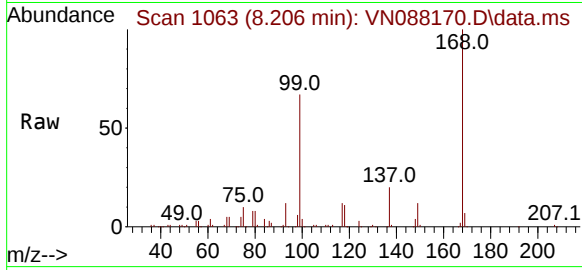




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

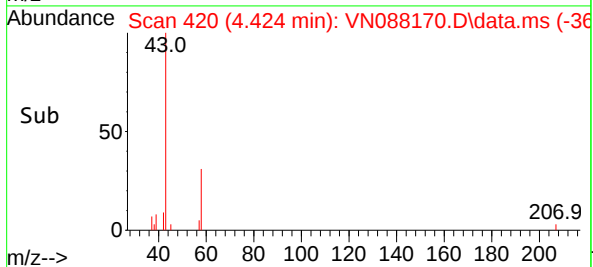
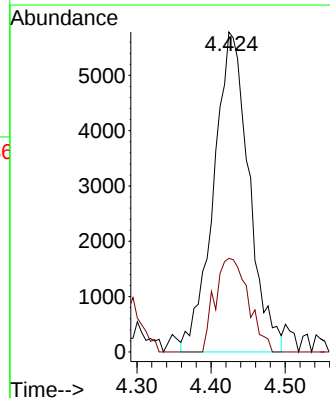
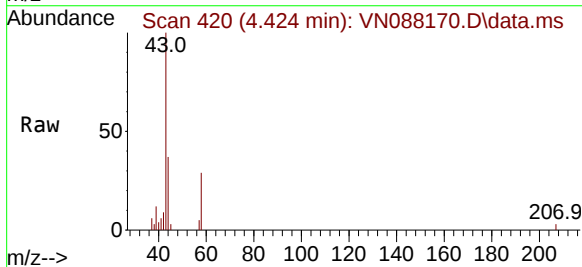
Instrument :
MSVOA_N
ClientSampleId :
MW-13

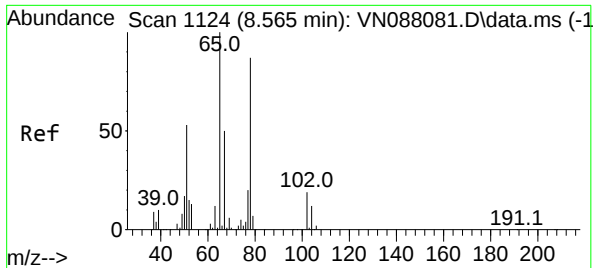
Tgt Ion:168 Resp: 328066
Ion Ratio Lower Upper
168 100
99 66.7 57.2 85.8



#16
Acetone
Concen: 6.705 ug/l
RT: 4.424 min Scan# 420
Delta R.T. -0.000 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

Tgt Ion: 43 Resp: 19110
Ion Ratio Lower Upper
43 100
58 30.1 22.6 33.8





#33

1,2-Dichloroethane-d4

Concen: 54.506 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088170.D

Acq: 29 Oct 2025 18:33

Instrument :

MSVOA_N

ClientSampleId :

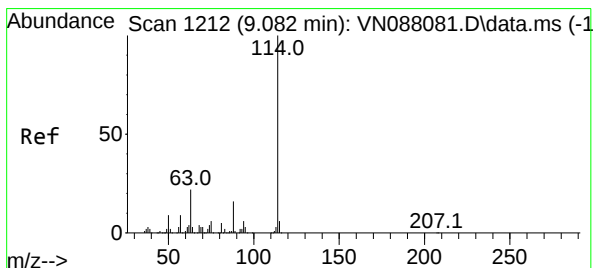
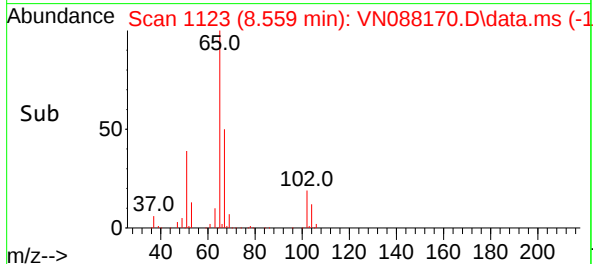
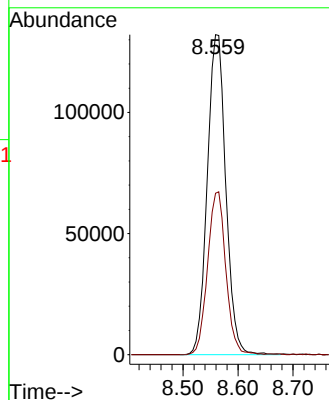
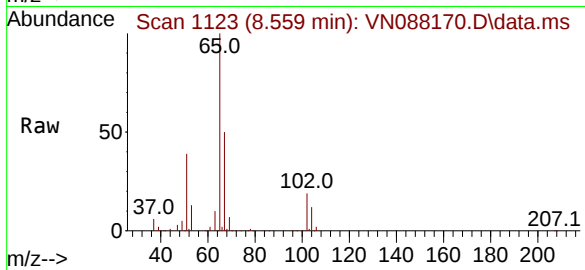
MW-13

Tgt Ion: 65 Resp: 309208

Ion Ratio Lower Upper

65 100

67 50.1 0.0 100.0



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1212

Delta R.T. -0.000 min

Lab File: VN088170.D

Acq: 29 Oct 2025 18:33

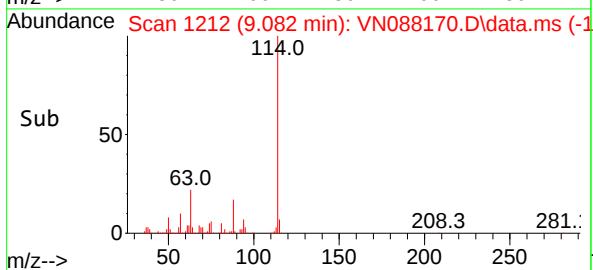
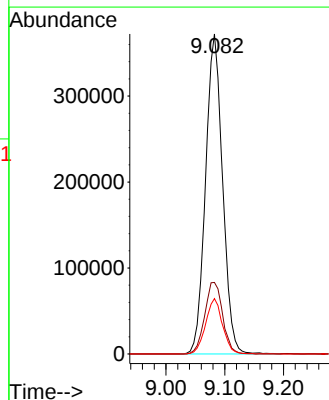
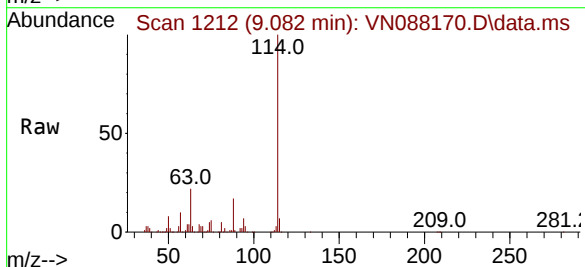
Tgt Ion: 114 Resp: 750626

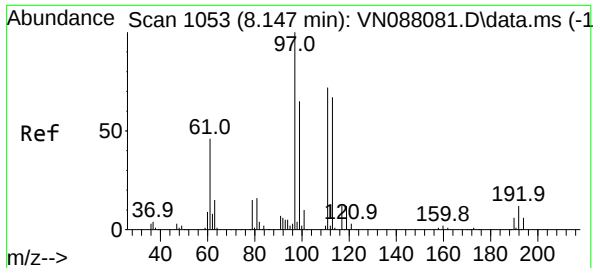
Ion Ratio Lower Upper

114 100

63 22.3 0.0 45.2

88 17.3 0.0 33.4





#35

Dibromofluoromethane

Concen: 44.843 ug/l

RT: 8.147 min Scan# 1103

Delta R.T. -0.006 min

Lab File: VN088170.D

Acq: 29 Oct 2025 18:33

Instrument :

MSVOA_N

ClientSampleId :

MW-13

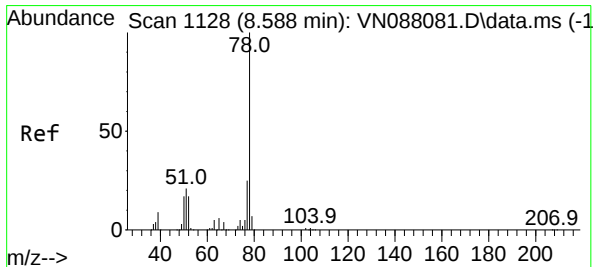
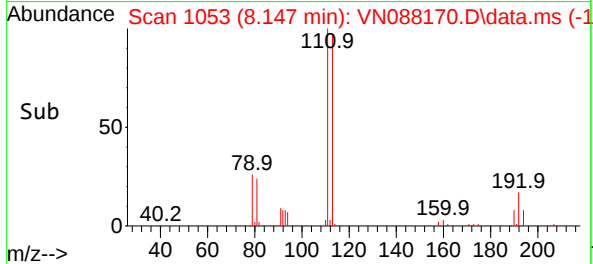
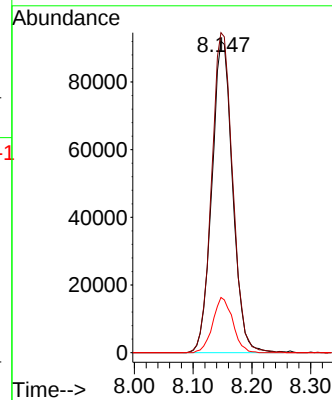
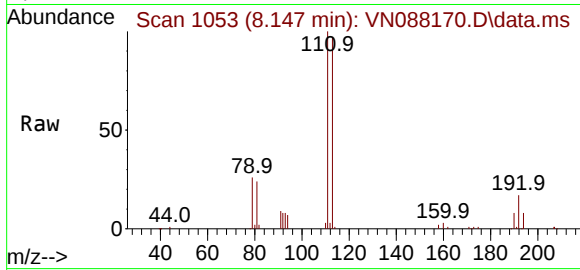
Tgt Ion:113 Resp: 226133

Ion Ratio Lower Upper

113 100

111 104.0 82.8 124.2

192 17.0 12.8 19.2



#40

Benzene

Concen: 1.171 ug/l

RT: 8.588 min Scan# 1128

Delta R.T. -0.000 min

Lab File: VN088170.D

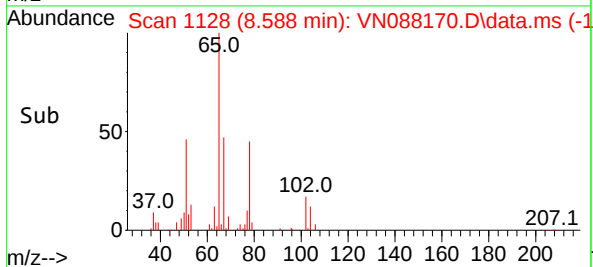
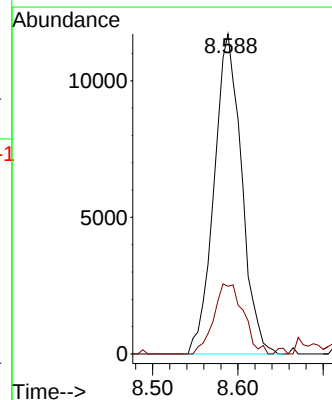
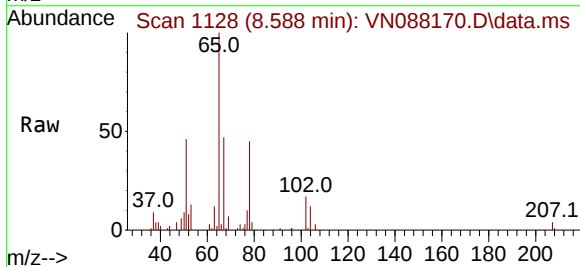
Acq: 29 Oct 2025 18:33

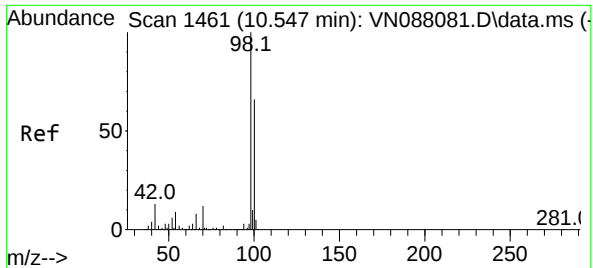
Tgt Ion: 78 Resp: 26266

Ion Ratio Lower Upper

78 100

77 21.2 19.7 29.5

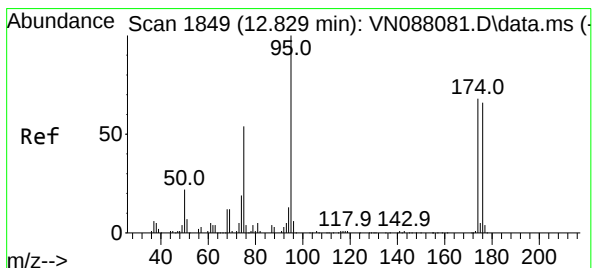
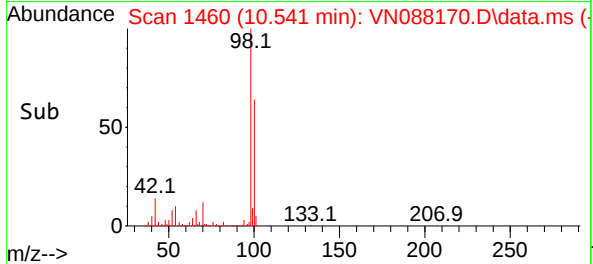
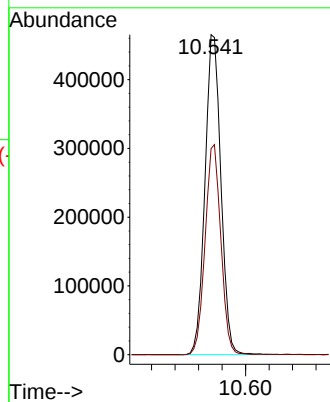
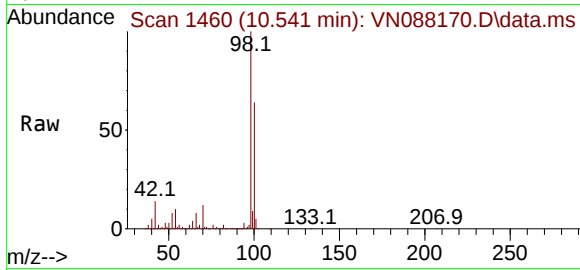




#50
Toluene-d8
Concen: 44.962 ug/l
RT: 10.541 min Scan# 1461
Delta R.T. -0.006 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

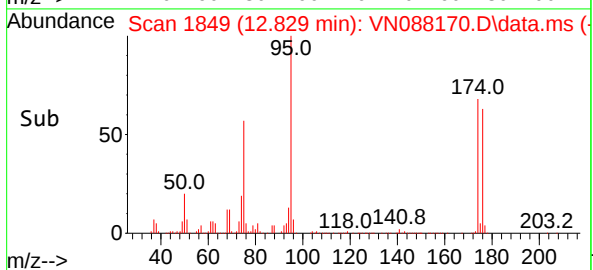
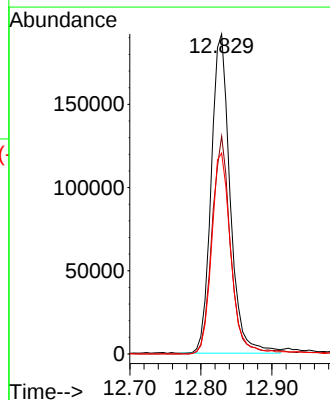
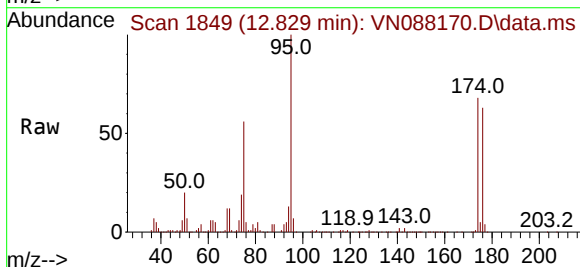
Instrument :
MSVOA_N
ClientSampleId :
MW-13

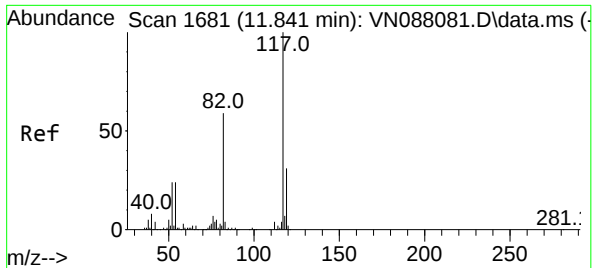
Tgt Ion: 98 Resp: 873627
Ion Ratio Lower Upper
98 100
100 64.9 52.8 79.2



#62
4-Bromofluorobenzene
Concen: 51.701 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

Tgt Ion: 95 Resp: 354779
Ion Ratio Lower Upper
95 100
174 67.3 0.0 138.4
176 65.1 0.0 132.6

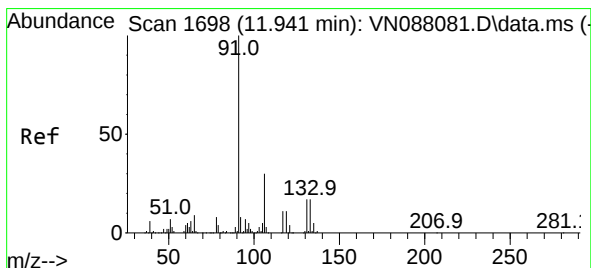
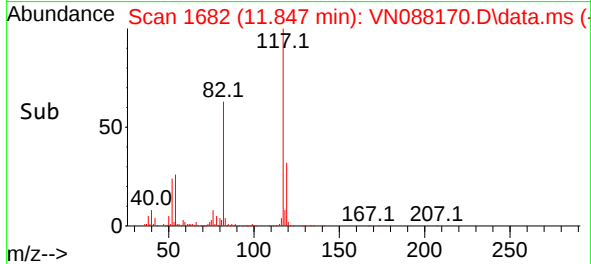
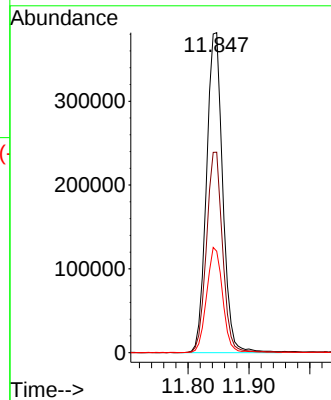
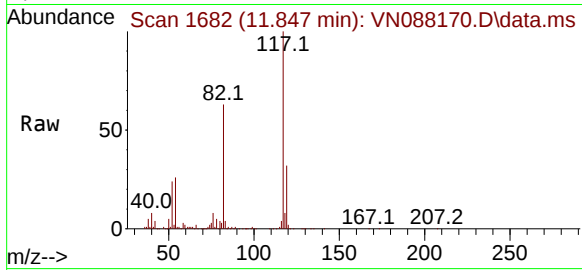




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

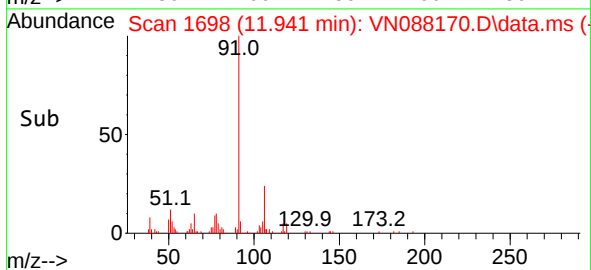
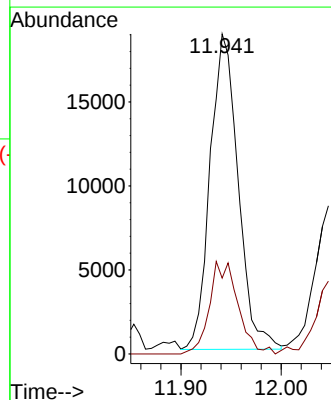
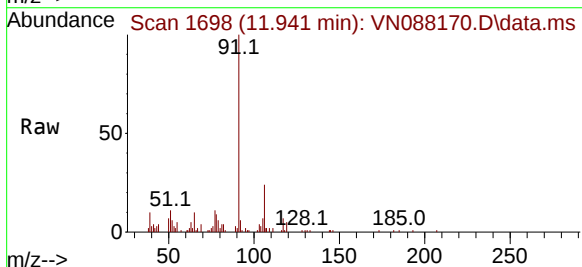
Instrument :
MSVOA_N
ClientSampleId :
MW-13

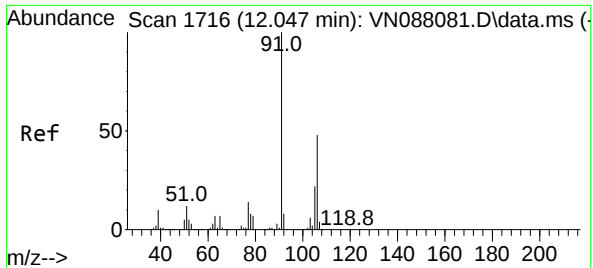
Tgt Ion:117 Resp: 708184
Ion Ratio Lower Upper
117 100
82 62.6 47.4 71.2
119 31.6 24.3 36.5



#67
Ethyl Benzene
Concen: 1.296 ug/l
RT: 11.941 min Scan# 1698
Delta R.T. -0.000 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

Tgt Ion: 91 Resp: 36576
Ion Ratio Lower Upper
91 100
106 24.1 24.1 36.1#

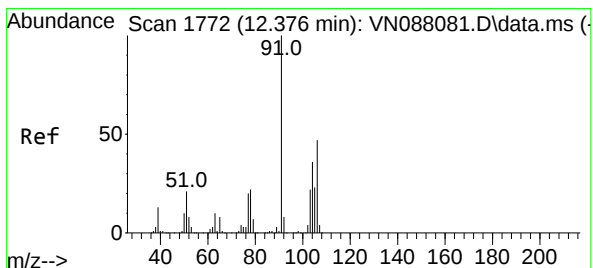
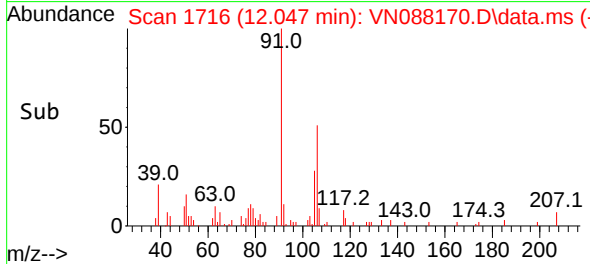
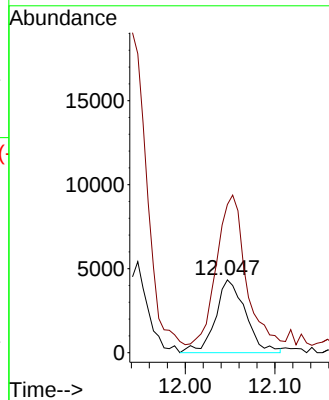
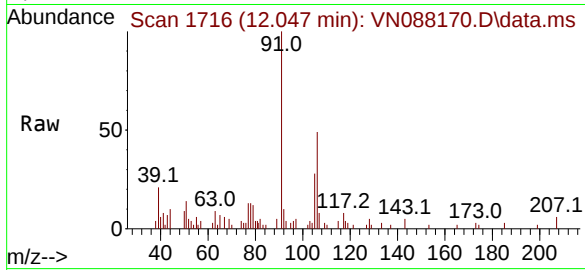




#68
m/p-Xylenes
Concen: 0.954 ug/l
RT: 12.047 min Scan# 1716
Delta R.T. -0.000 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

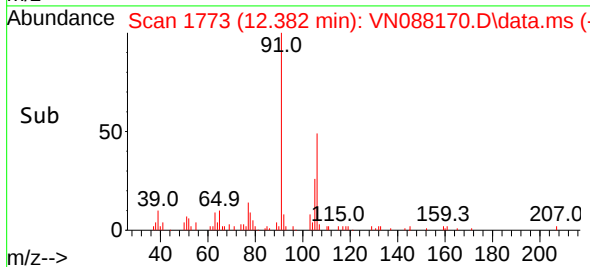
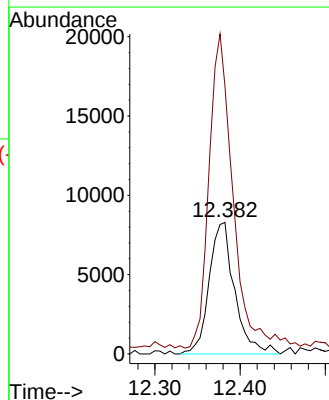
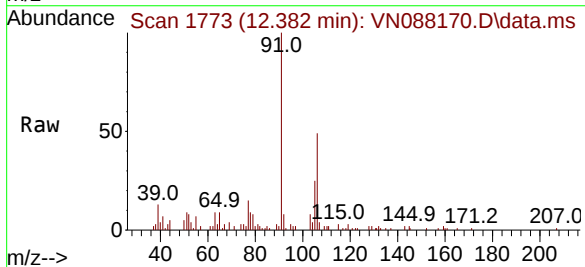
Instrument :
MSVOA_N
ClientSampleId :
MW-13

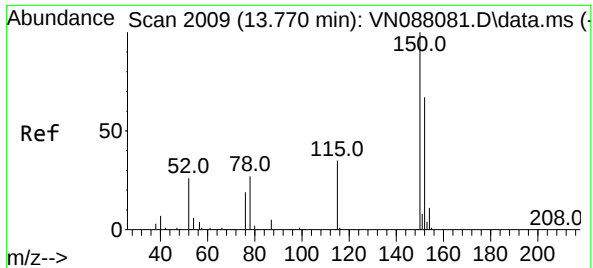
Tgt Ion:106 Resp: 10093
Ion Ratio Lower Upper
106 100
91 203.2 169.3 253.9



#69
o-Xylene
Concen: 1.725 ug/l
RT: 12.382 min Scan# 1773
Delta R.T. 0.006 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

Tgt Ion:106 Resp: 17298
Ion Ratio Lower Upper
106 100
91 218.6 111.4 334.2

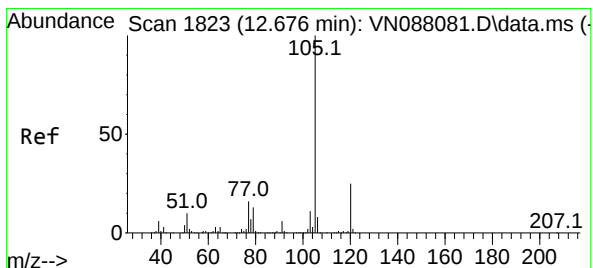
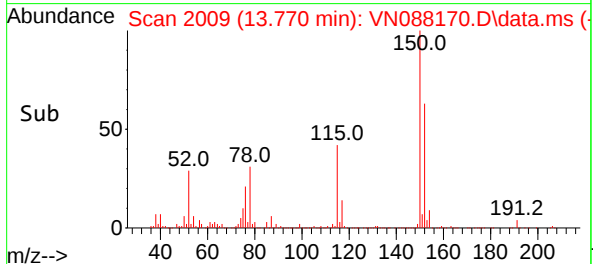
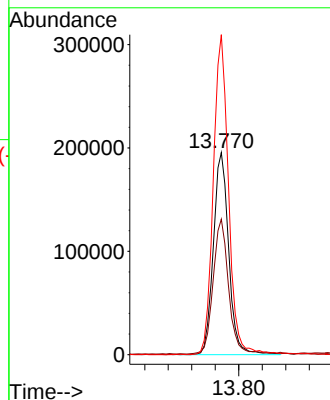
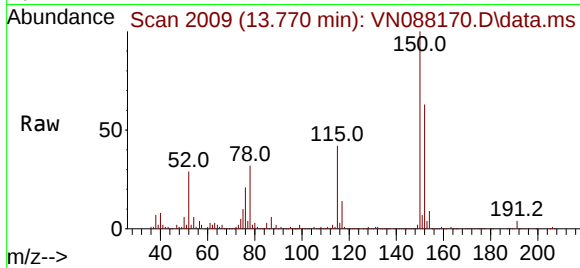




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

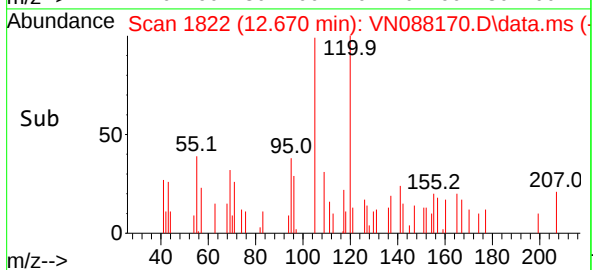
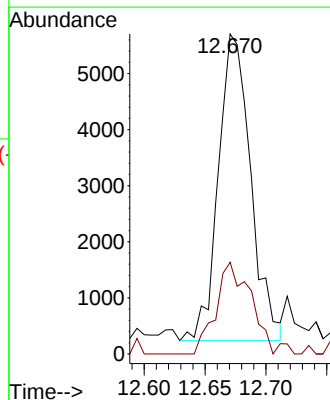
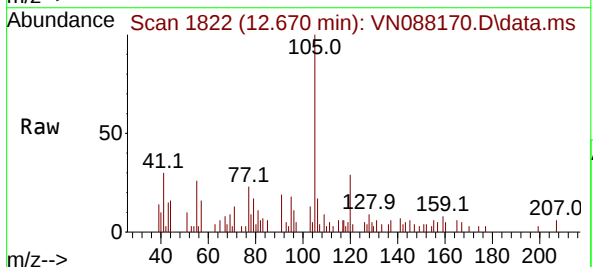
Instrument :
MSVOA_N
ClientSampleId :
MW-13

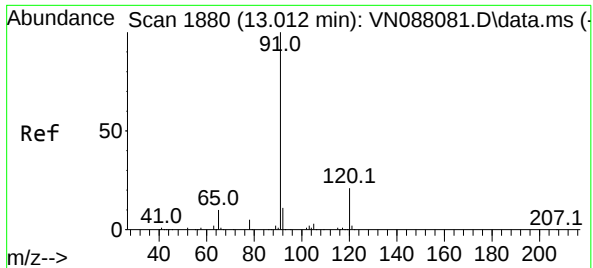
Tgt Ion	Ratio	Lower	Upper
152	100		
115	67.5	32.3	96.8
150	157.0	0.0	351.0



#73
Isopropylbenzene
Concen: 0.370 ug/l
RT: 12.670 min Scan# 1822
Delta R.T. -0.000 min
Lab File: VN088170.D
Acq: 29 Oct 2025 18:33

Tgt Ion	Ratio	Lower	Upper
105	100		
120	33.2	12.8	38.3





#78

n-propylbenzene

Concen: 0.478 ug/l

RT: 13.018 min Scan# 11

Delta R.T. 0.006 min

Lab File: VN088170.D

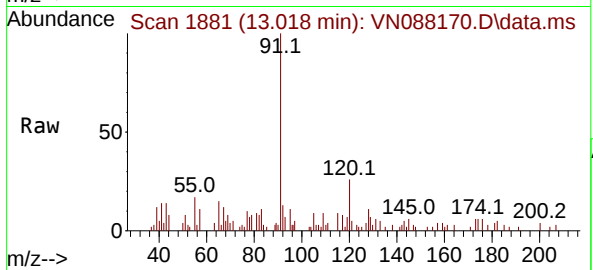
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Instrument :

MSVOA_N

ClientSampleId :

MW-13

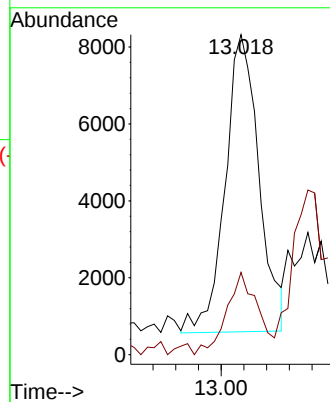
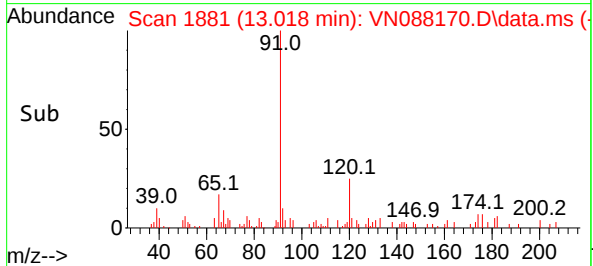


Tgt Ion: 91 Resp: 15960

Ion Ratio Lower Upper

91 100

120 25.7 10.7 32.1



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected: 10/23/25	
Project: RFK Bridge RMB-Randall Island	Date Received: 10/24/25	
Client Sample ID: MW-12	SDG No.: Q3468	
Lab Sample ID: Q3468-06	Matrix: Water	
Analytical Method: 8260D	% Solid: 0	
Sample Wt/Vol: 5 mL	Test: VOCMS Group1	
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/28/25 13:59	VN102825
71-43-2	Benzene	180	E	1	0.15	1.00	ug/L	10/28/25 13:59	VN102825
108-88-3	Toluene	140		1	0.14	1.00	ug/L	10/28/25 13:59	VN102825
100-41-4	Ethyl Benzene	600	EQ	1	0.13	1.00	ug/L	10/28/25 13:59	VN102825
179601-23-1	m/p-Xylenes	330	E	1	0.24	2.00	ug/L	10/28/25 13:59	VN102825
1330-20-7	Total Xylenes	770		1	0.36	3.00	ug/L	10/28/25 13:59	VN102825
95-47-6	o-Xylene	440	EQ	1	0.12	1.00	ug/L	10/28/25 13:59	VN102825
98-82-8	Isopropylbenzene	16.0		1	0.12	1.00	ug/L	10/28/25 13:59	VN102825
103-65-1	n-propylbenzene	31.0		1	0.13	1.00	ug/L	10/28/25 13:59	VN102825
108-67-8	1,3,5-Trimethylbenzene	4.90		1	0.15	1.00	ug/L	10/28/25 13:59	VN102825
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/28/25 13:59	VN102825
95-63-6	1,2,4-Trimethylbenzene	390	E	1	0.14	1.00	ug/L	10/28/25 13:59	VN102825
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/28/25 13:59	VN102825
99-87-6	p-Isopropyltoluene	1.50		1	0.13	1.00	ug/L	10/28/25 13:59	VN102825
104-51-8	n-Butylbenzene	2.20		1	0.15	1.00	ug/L	10/28/25 13:59	VN102825
91-20-3	Naphthalene	180	E	1	0.20	1.00	ug/L	10/28/25 13:59	VN102825
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	54.2			74 - 125	108%	SPK: 50		
1868-53-7	Dibromofluoromethane	46.0			75 - 124	92%	SPK: 50		
2037-26-5	Toluene-d8	44.7			86 - 113	89%	SPK: 50		
460-00-4	4-Bromofluorobenzene	51.6			77 - 121	103%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	239000							
540-36-3	1,4-Difluorobenzene	532000							
3114-55-4	Chlorobenzene-d5	512000							
3855-82-1	1,4-Dichlorobenzene-d4	250000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088136.D
 Acq On : 28 Oct 2025 13:59
 Operator : JC\MD
 Sample : Q3468-06
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-12

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 03:27:06 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	238860	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	531874	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	512440	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	250379	50.000	ug/l	# 0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.559	65	223698	54.159	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 108.320%	
35) Dibromofluoromethane	8.153	113	164260	45.971	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 91.940%	
50) Toluene-d8	10.547	98	615854	44.731	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 89.460%	
62) 4-Bromofluorobenzene	12.829	95	250761	51.572	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 103.140%	

Target Compounds

						Qvalue
6) Chloroethane	3.142	64	6643	2.670	ug/l	88
16) Acetone	4.424	43	126322	60.877	ug/l	95
25) 2-Butanone	7.477	43	48690	17.805	ug/l	92
31) Cyclohexane	8.241	56	106088	18.349	ug/l	95
39) Methylcyclohexane	9.582	83	50285	7.498	ug/l	92
40) Benzene	8.588	78	2837058	178.557	ug/l	98
52) Toluene	10.606	92	1345771	137.377	ug/l	98
67) Ethyl Benzene	11.941	91	12271883	600.837	ug/l	99
68) m/p-Xylenes	12.053	106	2542887	332.284	ug/l	100
69) o-Xylene	12.376	106	3222847	444.252	ug/l	98
73) Isopropylbenzene	12.676	105	308974	16.000	ug/l	99
78) n-propylbenzene	13.012	91	730347	30.991	ug/l	100
80) 1,3,5-Trimethylbenzene	13.135	105	78092m	4.869	ug/l	
84) 1,2,4-Trimethylbenzene	13.459	105	6250252	389.515	ug/l	100
86) p-Isopropyltoluene	13.706	119	26100	1.546	ug/l	# 74
89) n-Butylbenzene	14.029	91	37537m	2.244	ug/l	
95) Naphthalene	15.611	128	3031448m	182.341	ug/l	

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

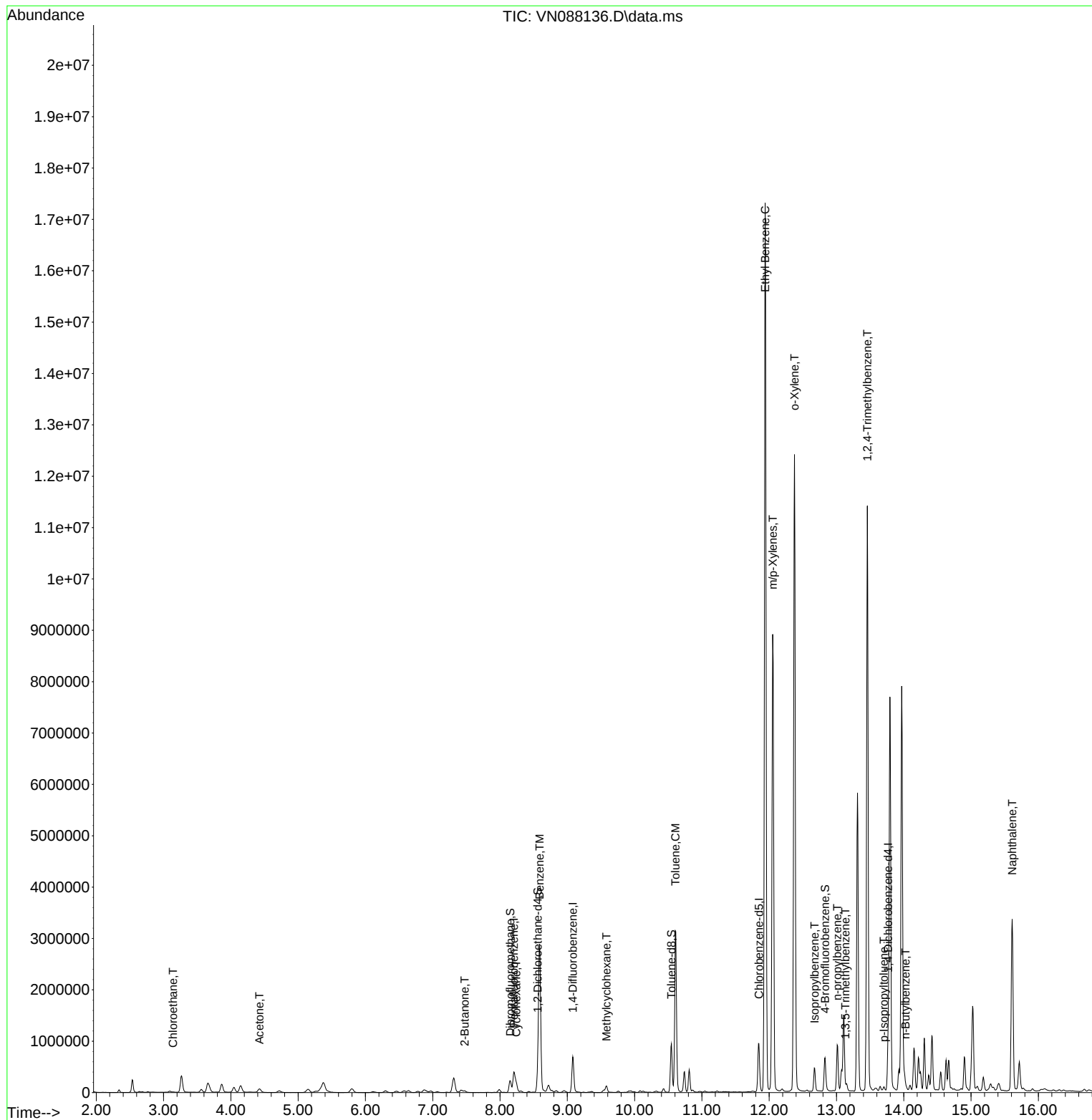
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Data File : VN088136.D
Acq On : 28 Oct 2025 13:59
Operator : JC\MD
Sample : Q3468-06
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

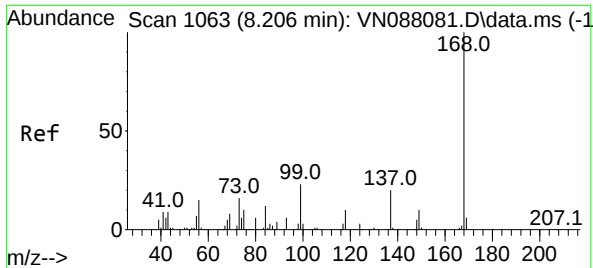
Instrument :
MSVOA_N
ClientSampleId :
MW-12

Manual Integrations
APPROVED

Reviewed By : John Carlone 10/29/2025
Supervised By : Semsettin Yesilyurt 10/29/2025

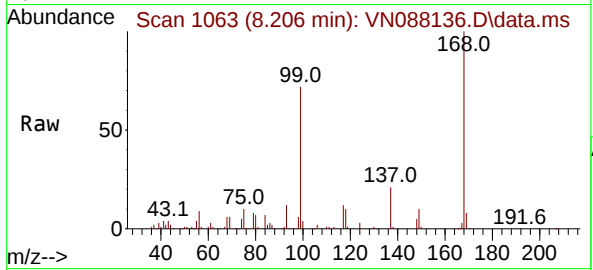
Quant Time: Oct 29 03:27:06 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

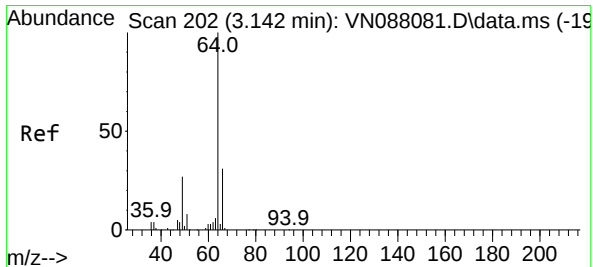
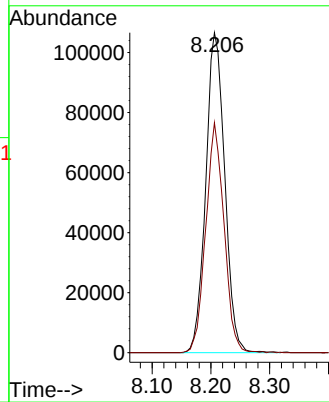
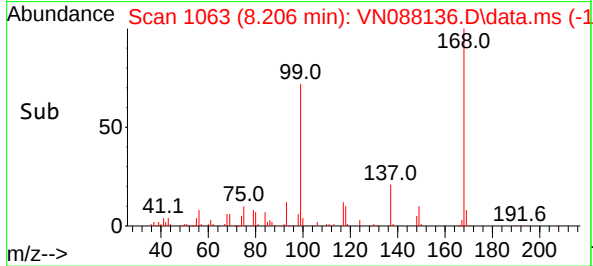
Instrument :
MSVOA_N
ClientSampleId :
MW-12



Tgt Ion:168 Resp: 238860
Ion Ratio Lower Upper
168 100
99 71.9 57.2 85.8

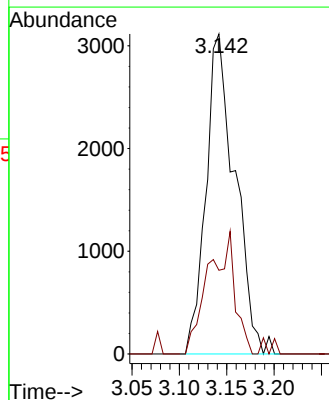
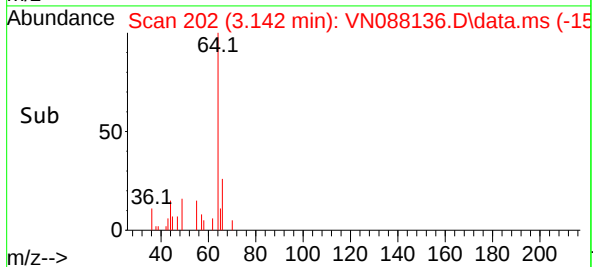
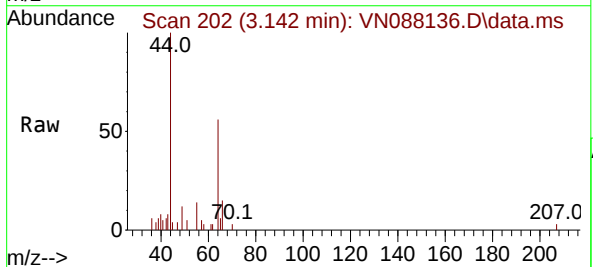
Manual Integrations
APPROVED

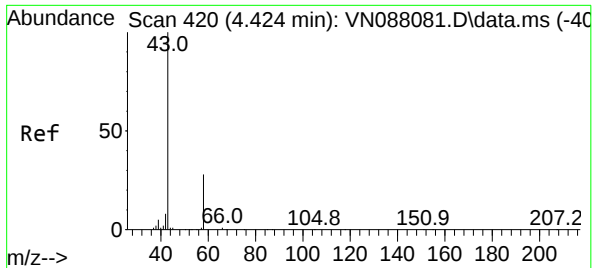
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#6
Chloroethane
Concen: 2.670 ug/l
RT: 3.142 min Scan# 202
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

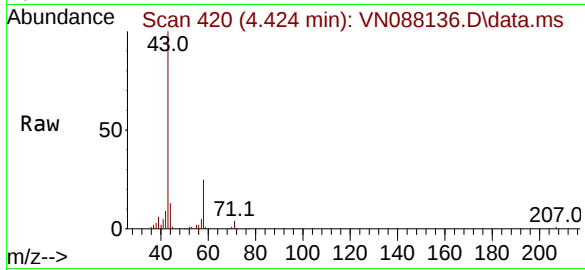
Tgt Ion: 64 Resp: 6643
Ion Ratio Lower Upper
64 100
66 26.2 26.2 39.2





#16
Acetone
Concen: 60.877 ug/l
RT: 4.424 min Scan# 41
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

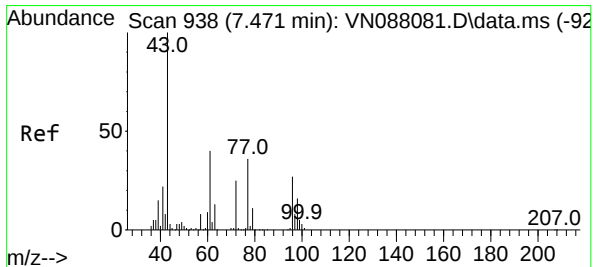
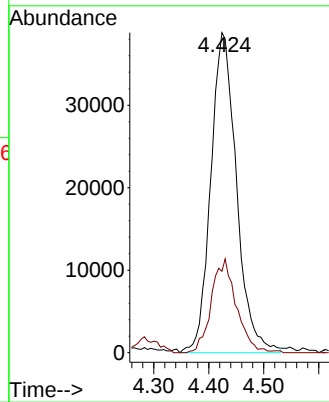
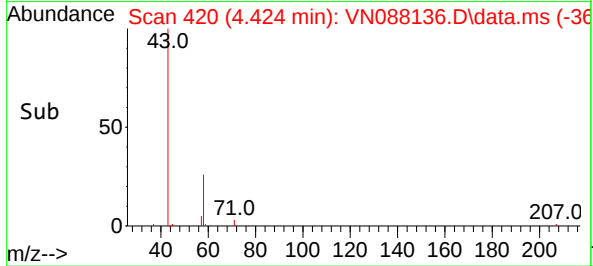
Instrument :
MSVOA_N
ClientSampleId :
MW-12



Tgt Ion: 43 Resp: 12632
Ion Ratio Lower Upper
43 100
58 25.4 22.6 33.8

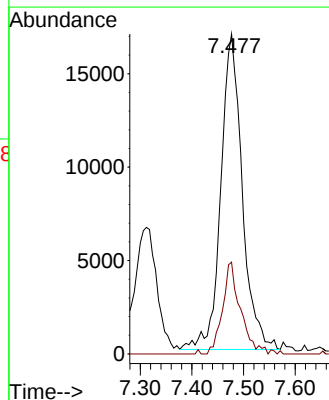
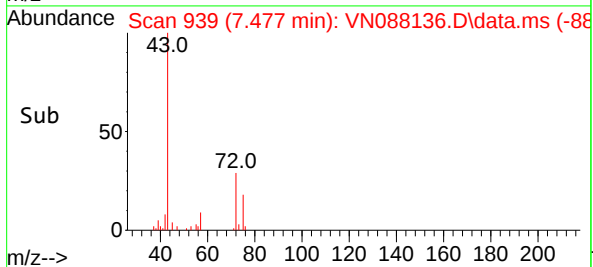
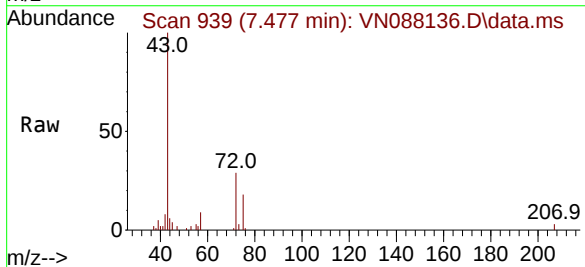
Manual Integrations
APPROVED

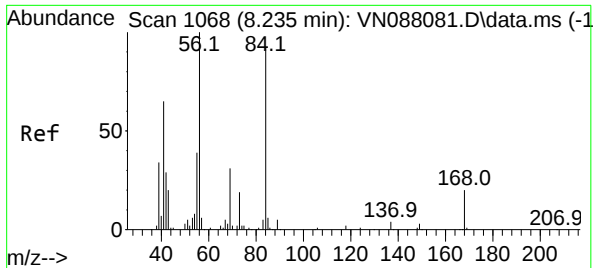
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#25
2-Butanone
Concen: 17.805 ug/l
RT: 7.477 min Scan# 939
Delta R.T. 0.012 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

Tgt Ion: 43 Resp: 48690
Ion Ratio Lower Upper
43 100
72 29.1 19.9 29.9





#31

Cyclohexane

Concen: 18.349 ug/l

RT: 8.241 min Scan# 1068

Delta R.T. 0.006 min

Lab File: VN088136.D

Acq: 28 Oct 2025 13:59

Instrument :

MSVOA_N

ClientSampleId :

MW-12

Tgt Ion: 56 Resp: 106088

Ion Ratio Lower Upper

56 100

69 34.0 23.7 35.5

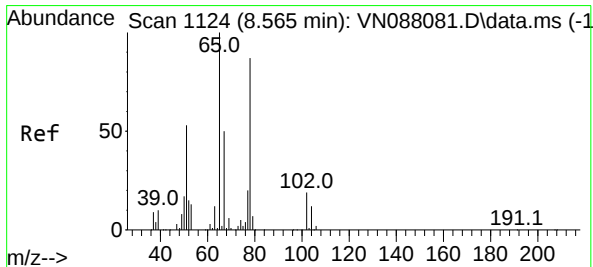
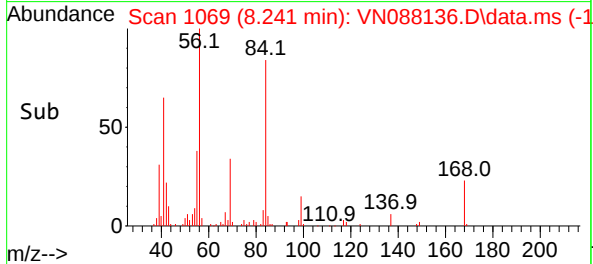
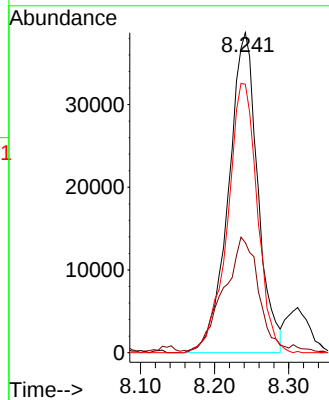
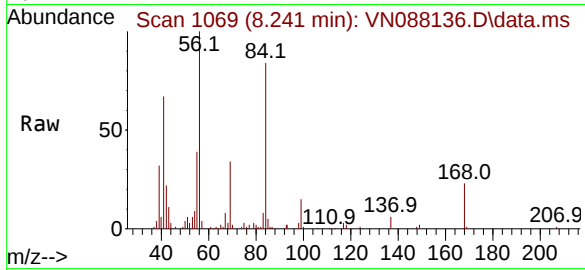
84 83.9 64.7 97.1

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#33

1,2-Dichloroethane-d4

Concen: 54.159 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088136.D

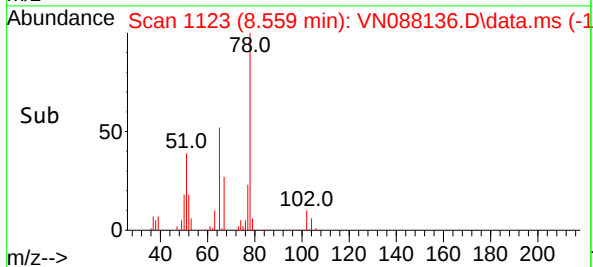
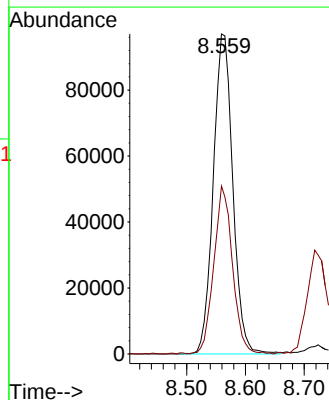
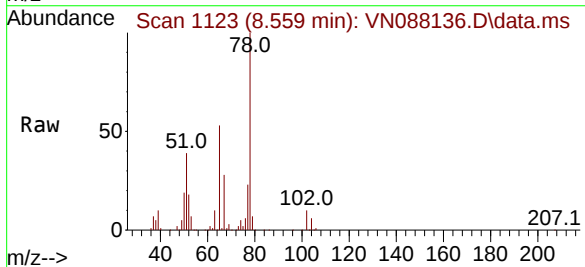
Acq: 28 Oct 2025 13:59

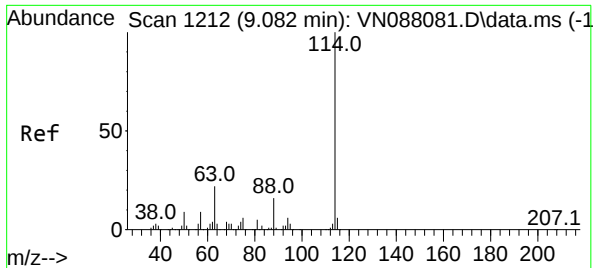
Tgt Ion: 65 Resp: 223698

Ion Ratio Lower Upper

65 100

67 50.4 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1

Delta R.T. -0.000 min

Lab File: VN088136.D

Acq: 28 Oct 2025 13:59

Instrument :

MSVOA_N

ClientSampleId :

MW-12

Tgt Ion:114 Resp: 531874

Ion Ratio Lower Upper

114 100

63 23.1 0.0 45.2

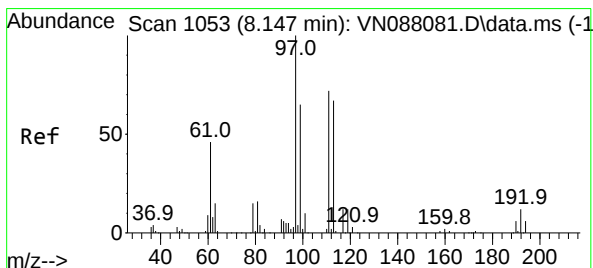
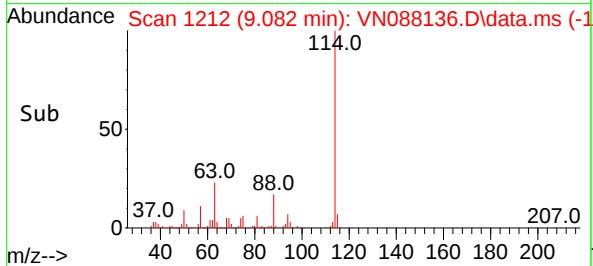
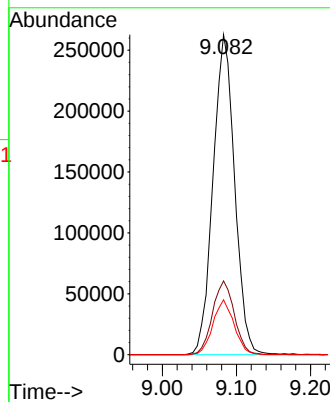
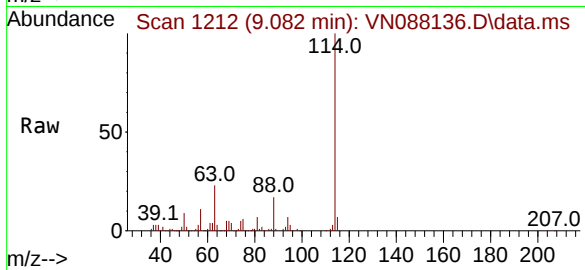
88 17.2 0.0 33.4

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#35

Dibromofluoromethane

Concen: 45.971 ug/l

RT: 8.153 min Scan# 1054

Delta R.T. -0.000 min

Lab File: VN088136.D

Acq: 28 Oct 2025 13:59

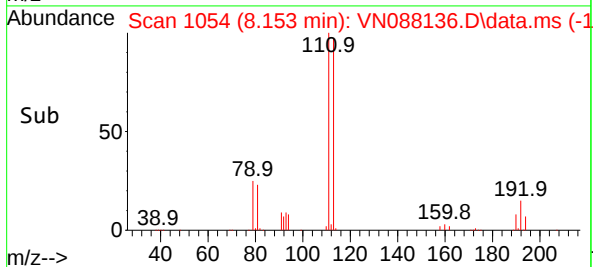
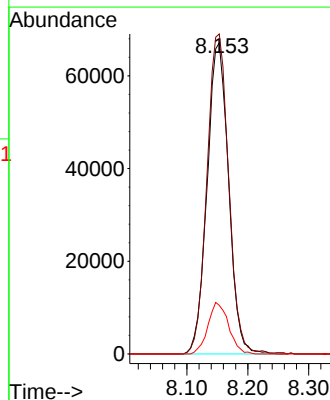
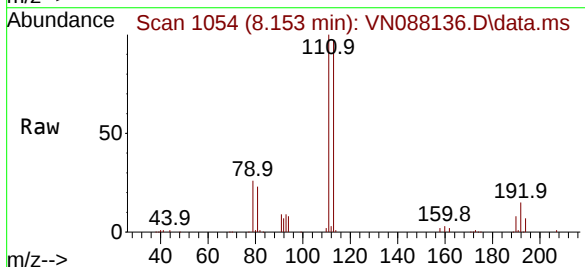
Tgt Ion:113 Resp: 164260

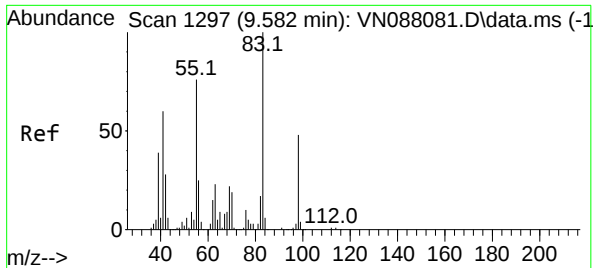
Ion Ratio Lower Upper

113 100

111 103.9 82.8 124.2

192 16.0 12.8 19.2





#39

Methylcyclohexane

Concen: 7.498 ug/l

RT: 9.582 min Scan# 1297

Delta R.T. -0.000 min

Lab File: VN088136.D

Acq: 28 Oct 2025 13:59

Instrument :

MSVOA_N

ClientSampleId :

MW-12

Tgt Ion: 83 Resp: 5028

Ion Ratio Lower Upper

83 100

55 90.2 64.6 96.8

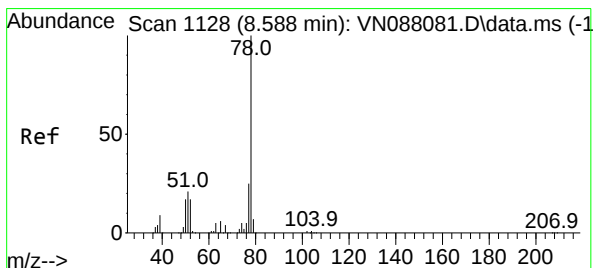
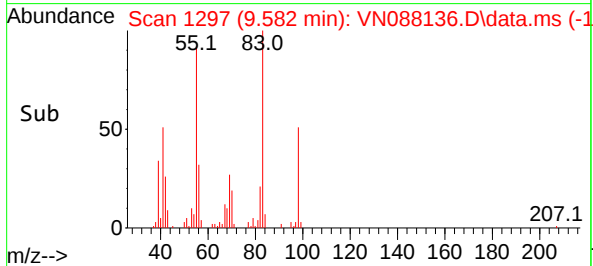
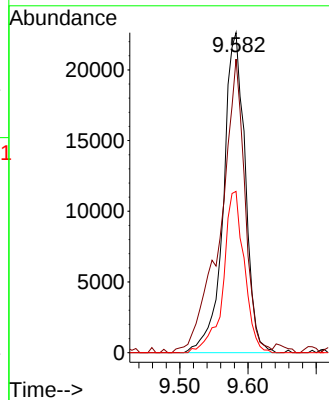
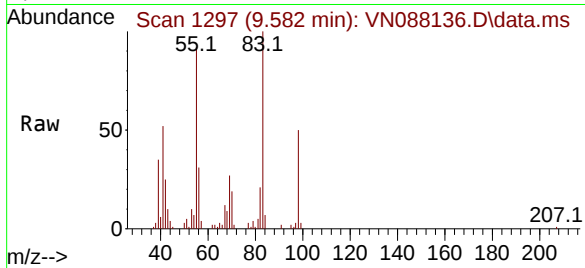
98 50.4 38.4 57.6

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



#40

Benzene

Concen: 178.557 ug/l

RT: 8.588 min Scan# 1128

Delta R.T. -0.000 min

Lab File: VN088136.D

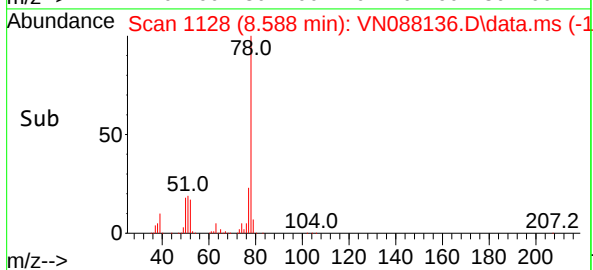
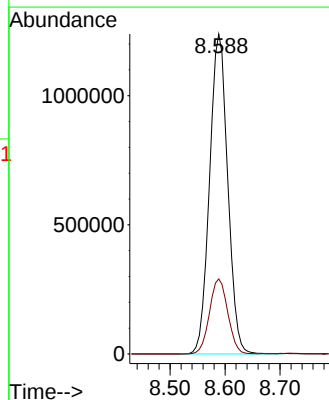
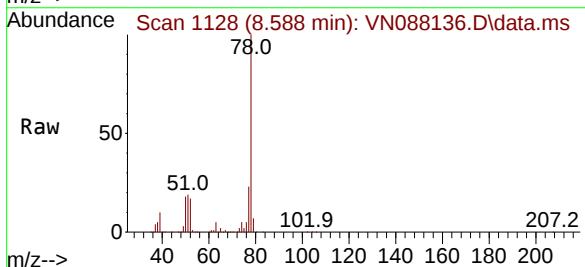
Acq: 28 Oct 2025 13:59

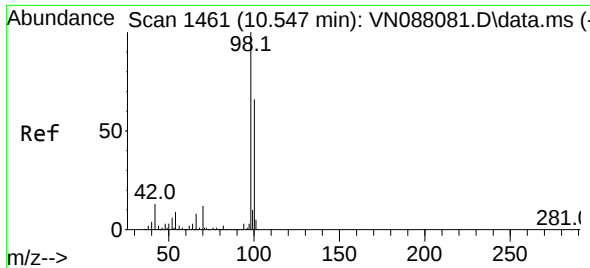
Tgt Ion: 78 Resp: 2837058

Ion Ratio Lower Upper

78 100

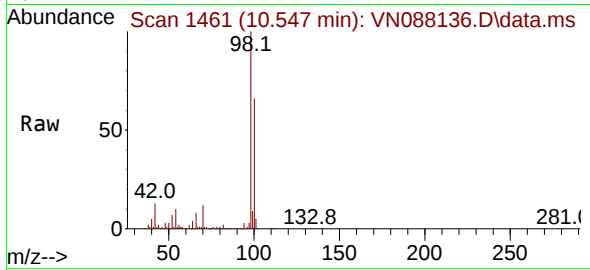
77 23.4 19.7 29.5





#50
Toluene-d8
Concen: 44.731 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

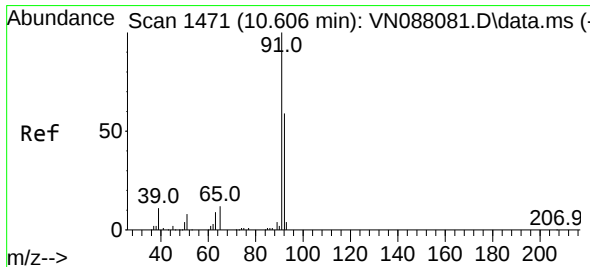
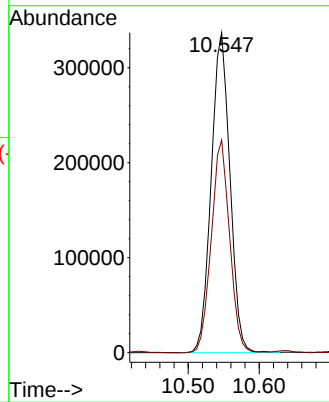
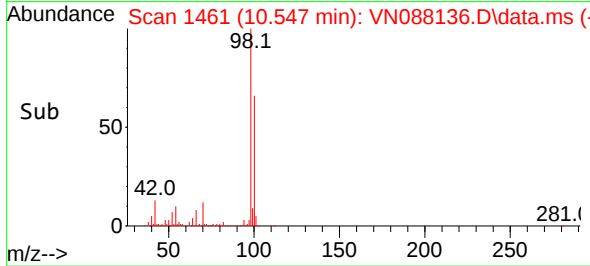
Instrument :
MSVOA_N
ClientSampleId :
MW-12



Tgt Ion: 98 Resp: 615854
Ion Ratio Lower Upper
98 100
100 65.1 52.8 79.2

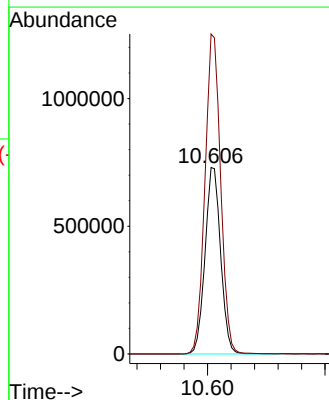
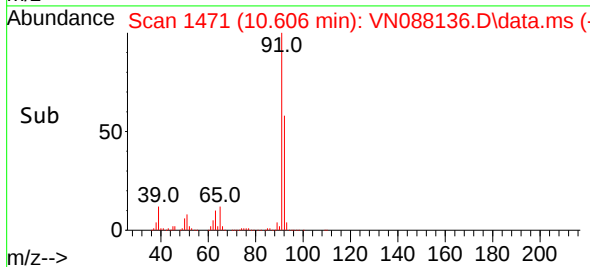
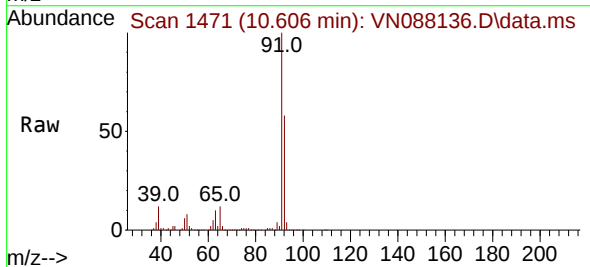
Manual Integrations
APPROVED

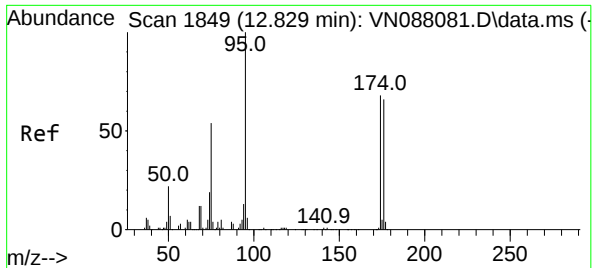
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#52
Toluene
Concen: 137.377 ug/l
RT: 10.606 min Scan# 1471
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

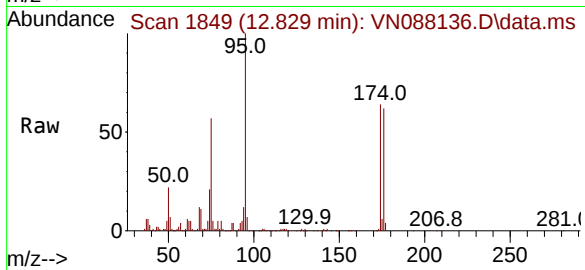
Tgt Ion: 92 Resp: 1345771
Ion Ratio Lower Upper
92 100
91 172.2 140.4 210.6





#62
4-Bromofluorobenzene
Concen: 51.572 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

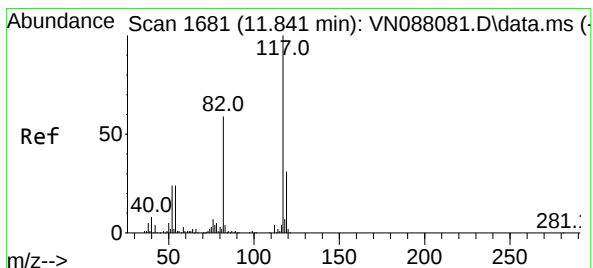
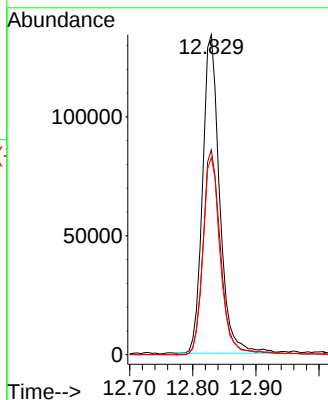
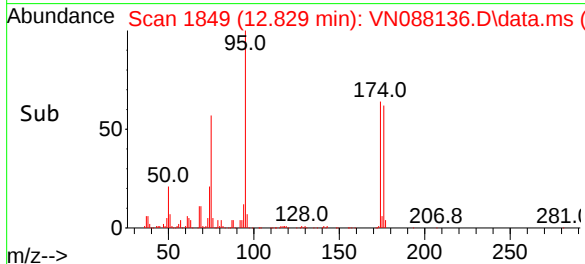
Instrument :
MSVOA_N
ClientSampleId :
MW-12



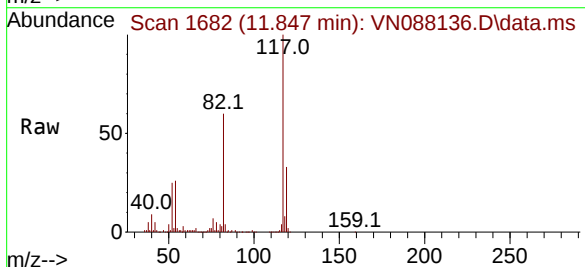
Tgt Ion: 95 Resp: 25076
Ion Ratio Lower Upper
95 100
174 66.4 0.0 138.4
176 63.7 0.0 132.6

Manual Integrations
APPROVED

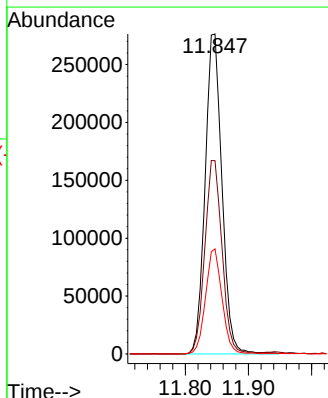
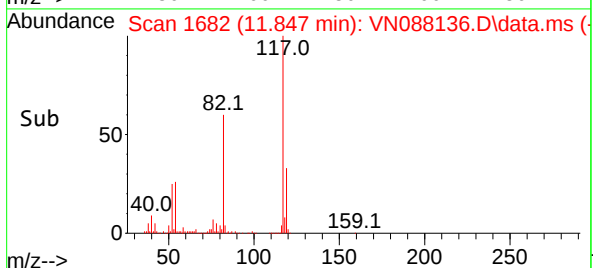
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

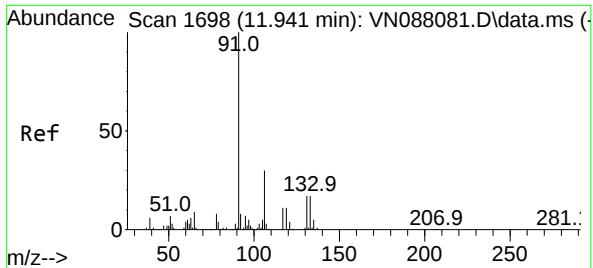


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59



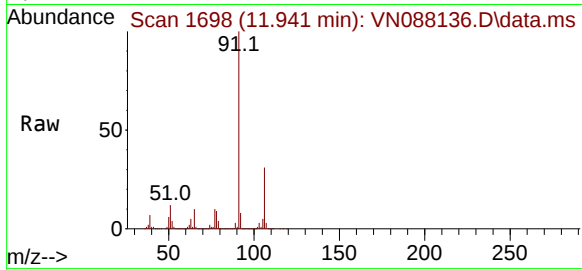
Tgt Ion:117 Resp: 512440
Ion Ratio Lower Upper
117 100
82 60.4 47.4 71.2
119 32.8 24.3 36.5





#67
Ethyl Benzene
Concen: 600.837 ug/l
RT: 11.941 min Scan# 1698
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

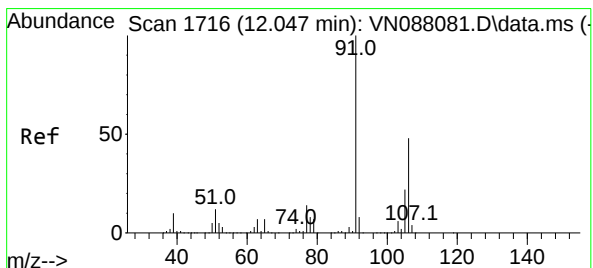
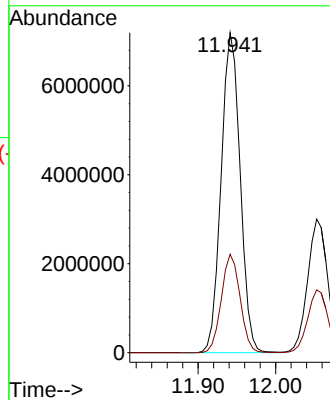
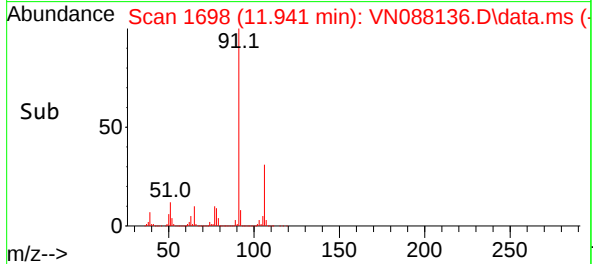
Instrument :
MSVOA_N
ClientSampleId :
MW-12



Tgt Ion: 91 Resp:1227188
Ion Ratio Lower Upper
91 100
106 30.7 24.1 36.1

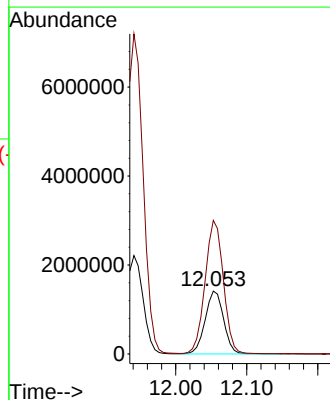
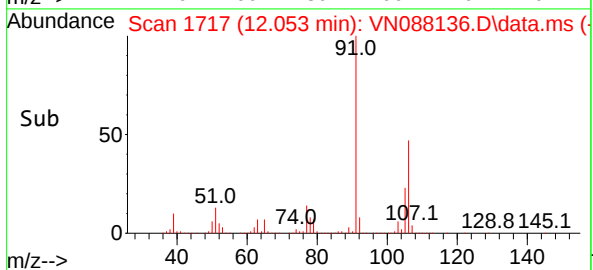
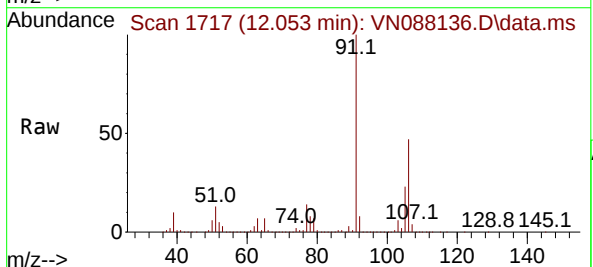
Manual Integrations
APPROVED

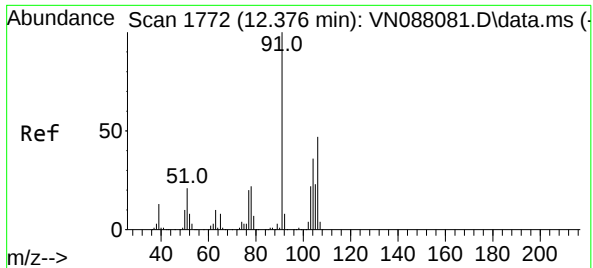
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#68
m/p-Xylenes
Concen: 332.284 ug/l
RT: 12.053 min Scan# 1717
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

Tgt Ion:106 Resp: 2542887
Ion Ratio Lower Upper
106 100
91 212.3 169.3 253.9





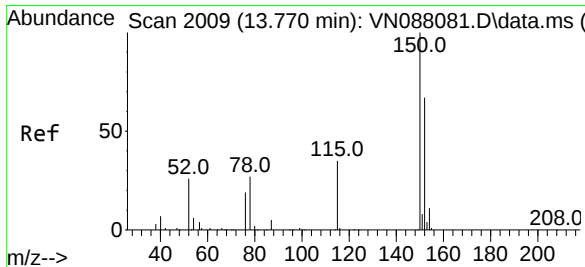
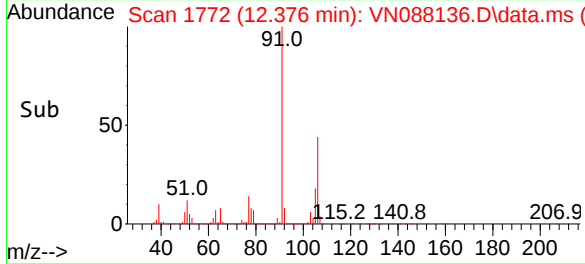
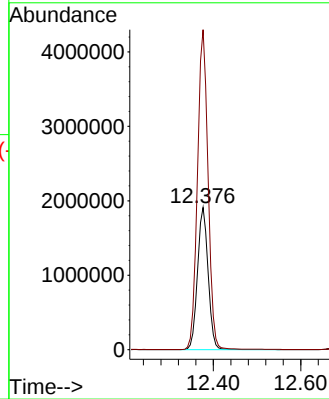
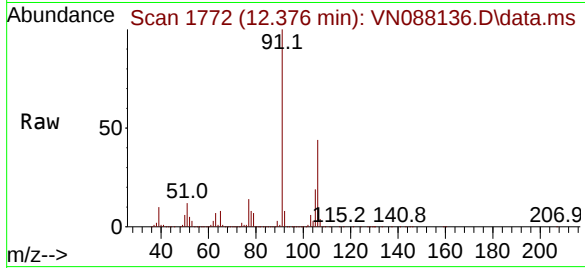
#69
o-Xylene
Concen: 444.252 ug/l
RT: 12.376 min Scan# 11
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

Instrument :
MSVOA_N
ClientSampleId :
MW-12

Tgt Ion:106 Resp: 322284
Ion Ratio Lower Upper
106 100
91 225.3 111.4 334.2

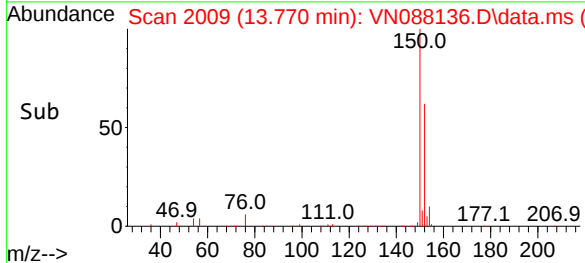
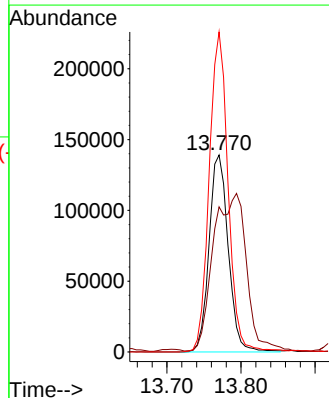
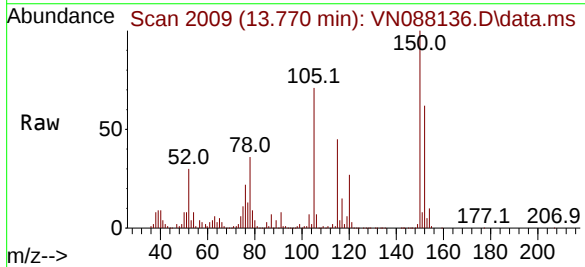
Manual Integrations
APPROVED

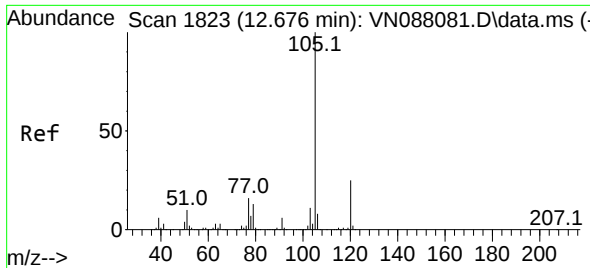
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

Tgt Ion:152 Resp: 250379
Ion Ratio Lower Upper
152 100
115 0.0 32.3 96.8#
150 159.9 0.0 351.0





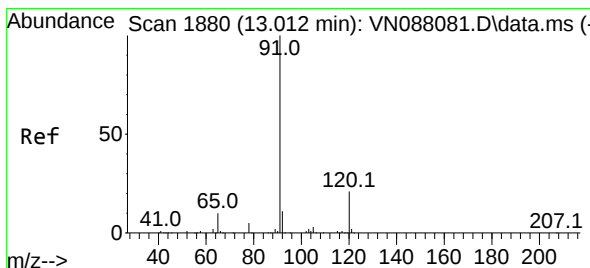
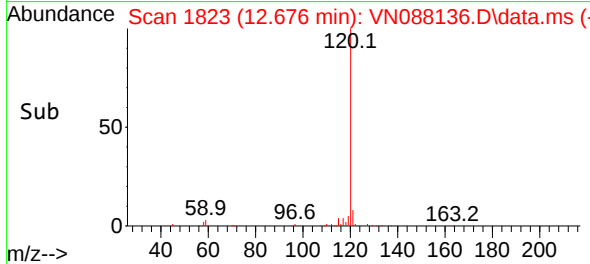
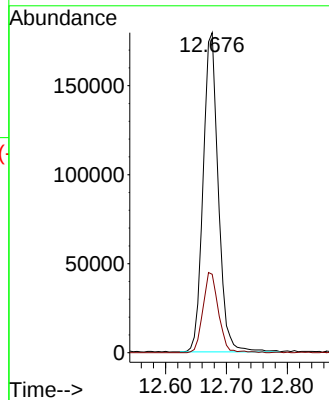
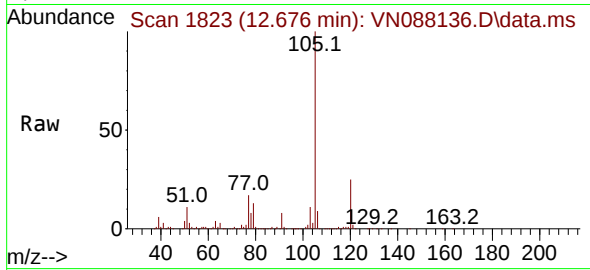
#73
Isopropylbenzene
Concen: 16.000 ug/l
RT: 12.676 min Scan# 1823
Delta R.T. 0.006 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

Instrument :
MSVOA_N
ClientSampleId :
MW-12

Tgt Ion:105 Resp: 308974
Ion Ratio Lower Upper
105 100
120 25.8 12.8 38.3

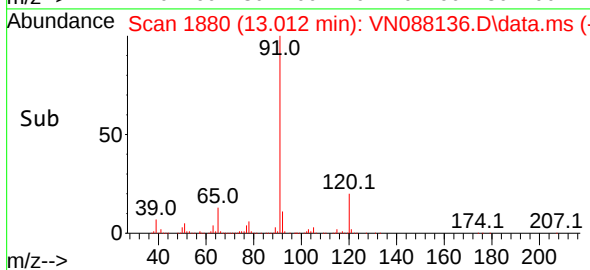
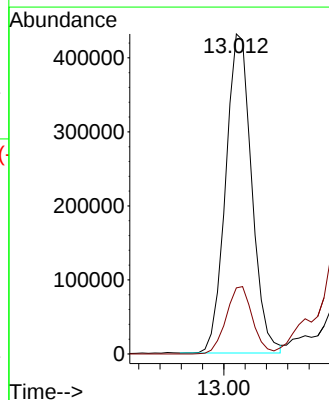
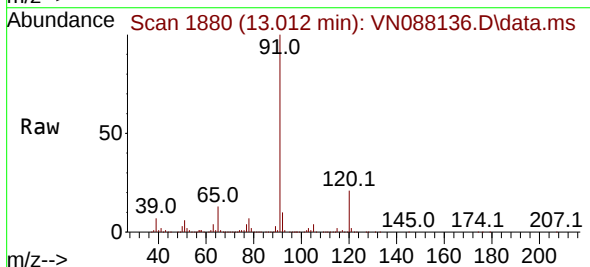
Manual Integrations
APPROVED

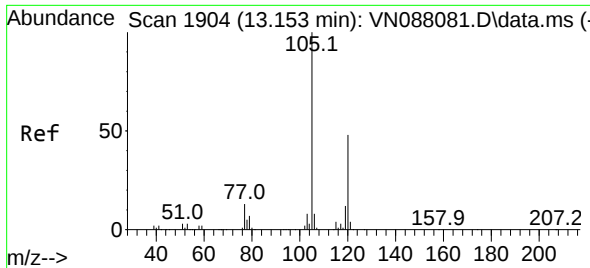
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#78
n-propylbenzene
Concen: 30.991 ug/l
RT: 13.012 min Scan# 1880
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

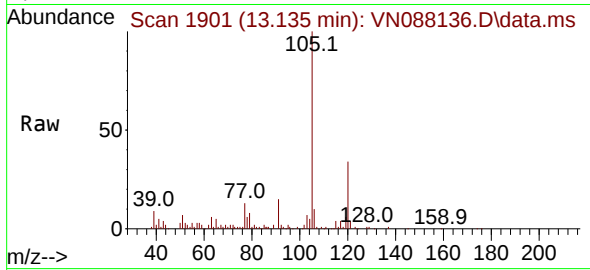
Tgt Ion: 91 Resp: 730347
Ion Ratio Lower Upper
91 100
120 21.3 10.7 32.1





#80
1,3,5-Trimethylbenzene
Concen: 4.869 ug/l m
RT: 13.135 min Scan# 1904
Delta R.T. -0.018 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

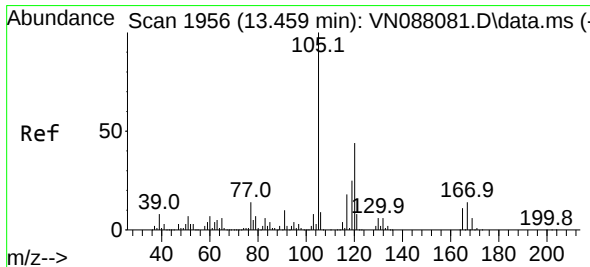
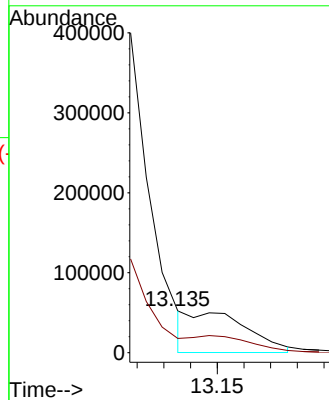
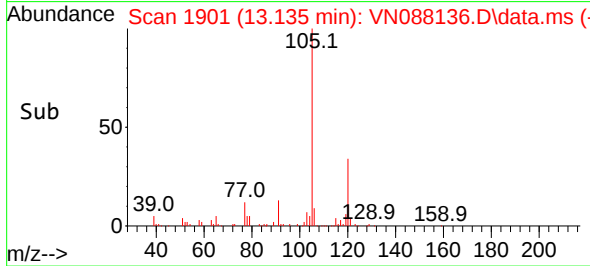
Instrument :
MSVOA_N
ClientSampleId :
MW-12



Tgt Ion:105 Resp: 78092
Ion Ratio Lower Upper
105 100
120 0.0 23.2 69.6

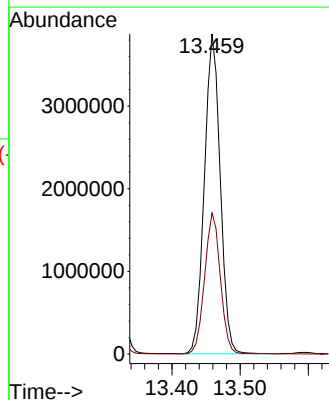
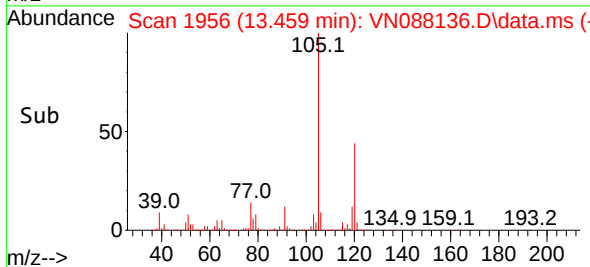
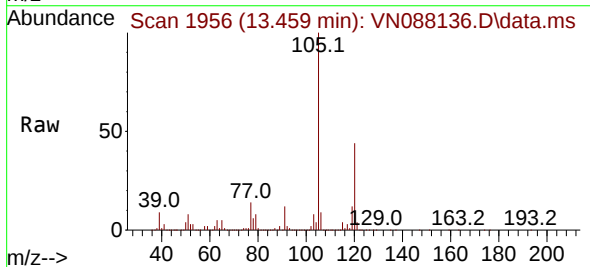
Manual Integrations
APPROVED

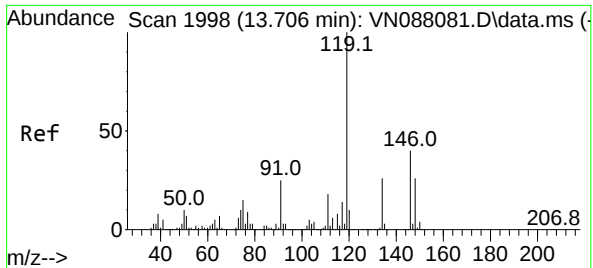
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025



#84
1,2,4-Trimethylbenzene
Concen: 389.515 ug/l
RT: 13.459 min Scan# 1956
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

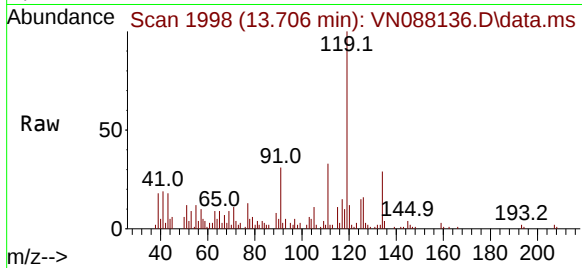
Tgt Ion:105 Resp: 6250252
Ion Ratio Lower Upper
105 100
120 43.7 22.0 66.0





#86
p-Isopropyltoluene
Concen: 1.546 ug/l
RT: 13.706 min Scan# 1998
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59

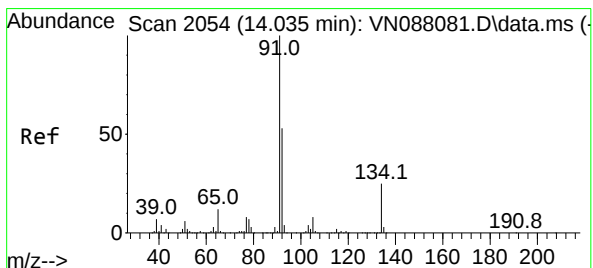
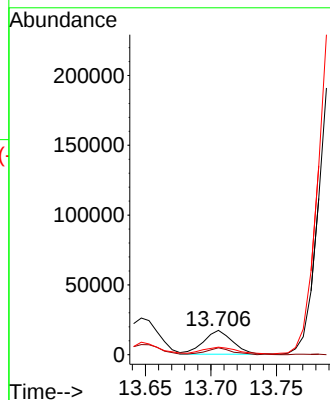
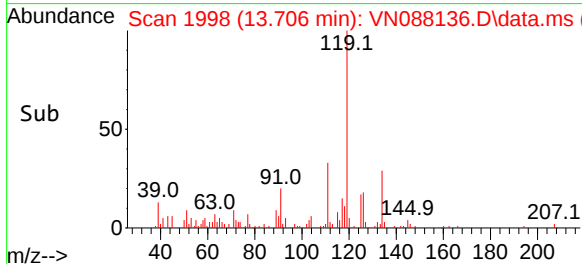
Instrument :
MSVOA_N
ClientSampleId :
MW-12



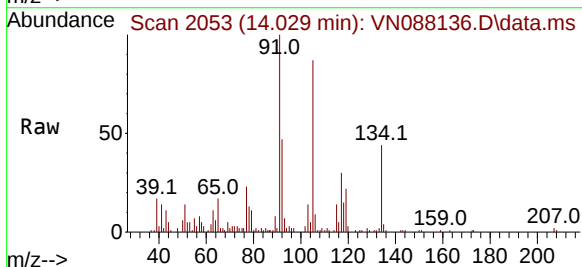
Tgt Ion: 119 Resp: 26100
Ion Ratio Lower Upper
119 100
134 26.6 12.7 38.0
91 0.0 12.5 37.5

Manual Integrations
APPROVED

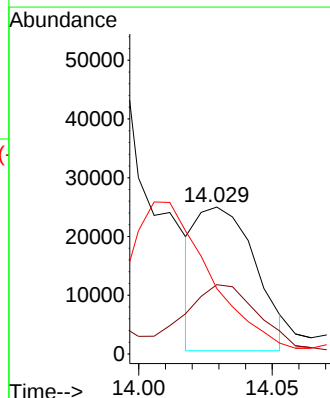
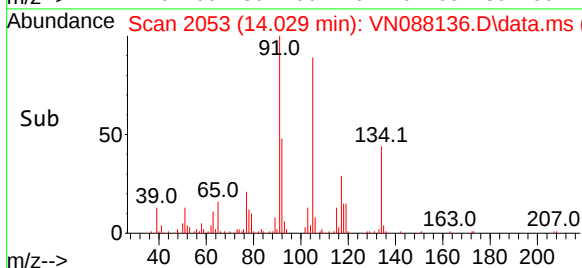
Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

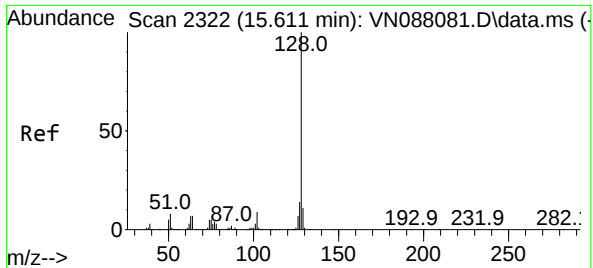


#89
n-Butylbenzene
Concen: 2.244 ug/l m
RT: 14.029 min Scan# 2053
Delta R.T. -0.000 min
Lab File: VN088136.D
Acq: 28 Oct 2025 13:59



Tgt Ion: 91 Resp: 37537
Ion Ratio Lower Upper
91 100
92 0.0 25.9 77.8#
134 0.0 11.7 35.0#





#95

Naphthalene

Concen: 182.341 ug/l m

RT: 15.611 min Scan# 21

Delta R.T. -0.000 min

Lab File: VN088136.D

Acq: 28 Oct 2025 13:59

Instrument :

MSVOA_N

ClientSampleId :

MW-12

Tgt Ion:128 Resp: 303144

Ion Ratio Lower Upper

128 100

127 0.0 10.6 15.8

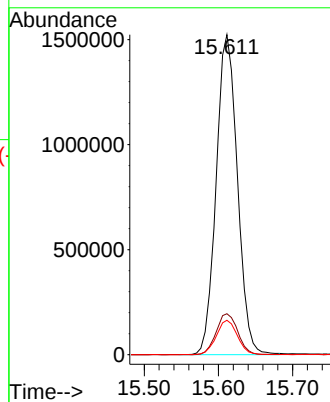
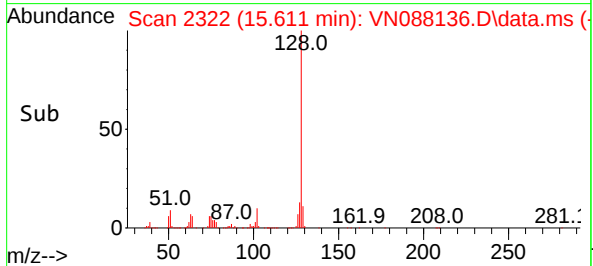
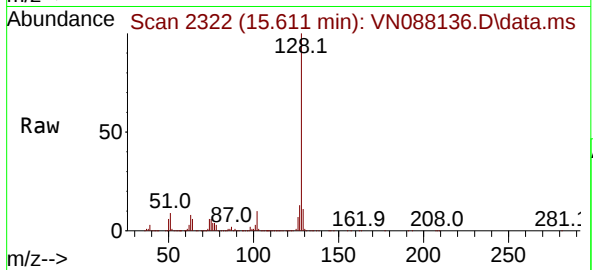
129 0.0 8.6 12.8

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/29/2025

Supervised By :Semsettin Yesilyurt 10/29/2025



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected: 10/23/25	
Project: RFK Bridge RMB-Randall Island	Date Received: 10/24/25	
Client Sample ID: MW-12DL	SDG No.: Q3468	
Lab Sample ID: Q3468-06DL	Matrix: Water	
Analytical Method: 8260D	% Solid: 0	
Sample Wt/Vol: 5 mL	Test: VOCMS Group1	
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	10.0	UD	10	1.60	10.0	ug/L	10/29/25 12:42	VN102925
71-43-2	Benzene	210	D	10	1.50	10.0	ug/L	10/29/25 12:42	VN102925
108-88-3	Toluene	160	D	10	1.40	10.0	ug/L	10/29/25 12:42	VN102925
100-41-4	Ethyl Benzene	710	D	10	1.30	10.0	ug/L	10/29/25 12:42	VN102925
179601-23-1	m/p-Xylenes	390	D	10	2.40	20.0	ug/L	10/29/25 12:42	VN102925
1330-20-7	Total Xylenes	900	D	10	3.60	30.0	ug/L	10/29/25 12:42	VN102925
95-47-6	o-Xylene	510	D	10	1.20	10.0	ug/L	10/29/25 12:42	VN102925
98-82-8	Isopropylbenzene	17.2	D	10	1.20	10.0	ug/L	10/29/25 12:42	VN102925
103-65-1	n-propylbenzene	34.4	D	10	1.30	10.0	ug/L	10/29/25 12:42	VN102925
108-67-8	1,3,5-Trimethylbenzene	10.0	UD	10	1.50	10.0	ug/L	10/29/25 12:42	VN102925
98-06-6	tert-Butylbenzene	10.0	UDQ	10	1.40	10.0	ug/L	10/29/25 12:42	VN102925
95-63-6	1,2,4-Trimethylbenzene	440	D	10	1.40	10.0	ug/L	10/29/25 12:42	VN102925
135-98-8	sec-Butylbenzene	10.0	UD	10	1.30	10.0	ug/L	10/29/25 12:42	VN102925
99-87-6	p-Isopropyltoluene	10.0	UD	10	1.30	10.0	ug/L	10/29/25 12:42	VN102925
104-51-8	n-Butylbenzene	10.0	UD	10	1.50	10.0	ug/L	10/29/25 12:42	VN102925
91-20-3	Naphthalene	190	D	10	2.00	10.0	ug/L	10/29/25 12:42	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	57.2			74 - 125	114%	SPK: 50		
1868-53-7	Dibromofluoromethane	48.3			75 - 124	97%	SPK: 50		
2037-26-5	Toluene-d8	46.5			86 - 113	93%	SPK: 50		
460-00-4	4-Bromofluorobenzene	52.1			77 - 121	104%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	208000							
540-36-3	1,4-Difluorobenzene	469000							
3114-55-4	Chlorobenzene-d5	447000							
3855-82-1	1,4-Dichlorobenzene-d4	226000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088153.D
 Acq On : 29 Oct 2025 12:42
 Operator : JC\MD
 Sample : Q3468-06DL 10X
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 MW-12DL

Quant Time: Oct 30 04:04:41 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

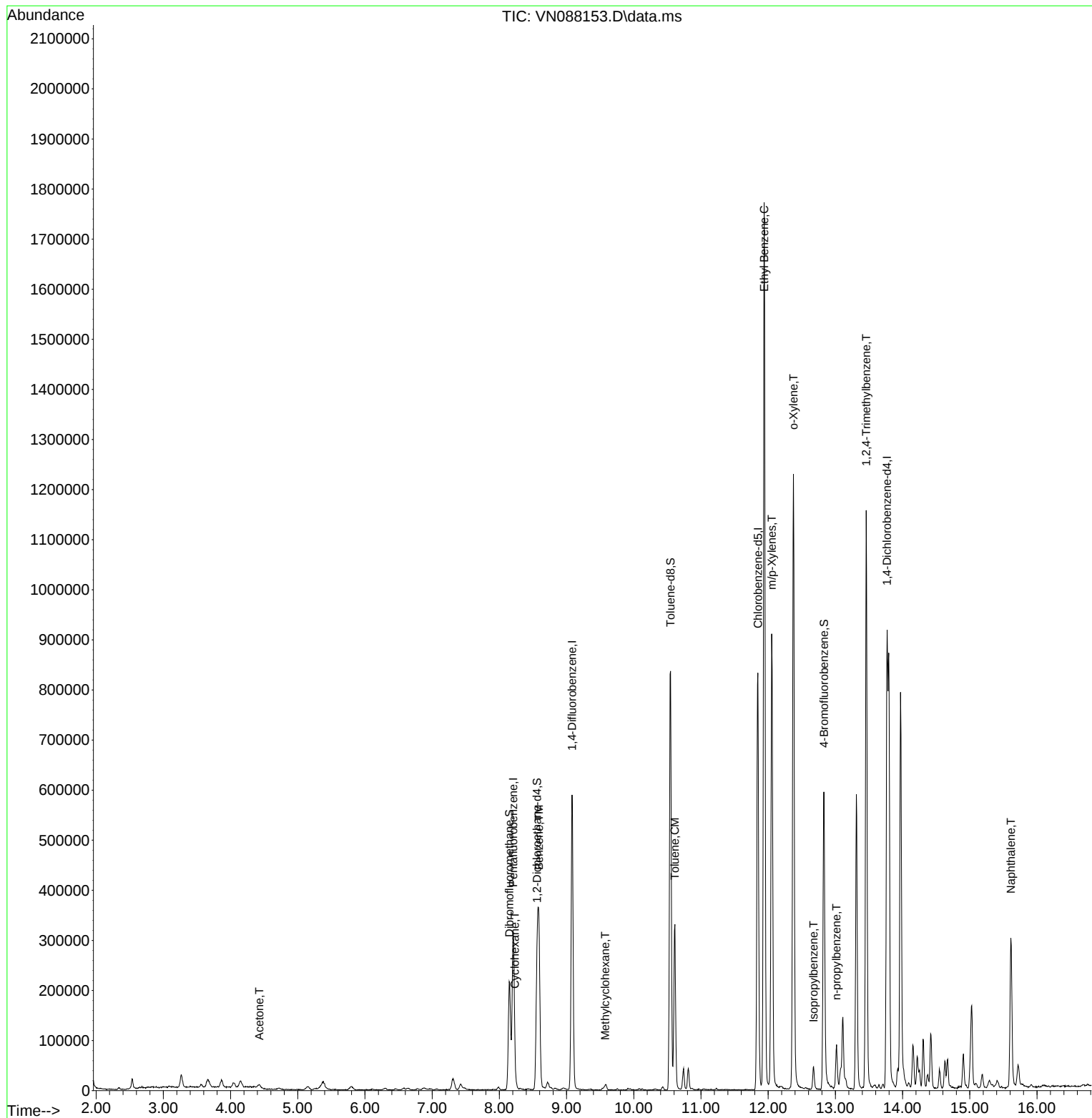
Internal Standards						
1) Pentafluorobenzene	8.206	168	208467	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	468936	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	447110	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	226296	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	206058	57.162	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 114.320%			
35) Dibromofluoromethane	8.147	113	152296	48.343	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 96.680%			
50) Toluene-d8	10.547	98	564534	46.507	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 93.020%			
62) 4-Bromofluorobenzene	12.829	95	223470	52.128	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 104.260%			
Target Compounds						
					Qvalue	
16) Acetone	4.430	43	14489	8.000	ug/l #	88
31) Cyclohexane	8.229	56	15656	3.103	ug/l #	70
39) Methylcyclohexane	9.576	83	4230	0.715	ug/l	97
40) Benzene	8.588	78	291762	20.827	ug/l	96
52) Toluene	10.612	92	135826	15.726	ug/l	100
67) Ethyl Benzene	11.941	91	1264412	70.952	ug/l	99
68) m/p-Xylenes	12.053	106	262075	39.250	ug/l	99
69) o-Xylene	12.376	106	323116	51.048	ug/l	96
73) Isopropylbenzene	12.676	105	29980	1.718	ug/l	97
78) n-propylbenzene	13.017	91	73177	3.436	ug/l	99
84) 1,2,4-Trimethylbenzene	13.459	105	645205	44.488	ug/l	100
95) Naphthalene	15.611	128	279733	18.617	ug/l	99

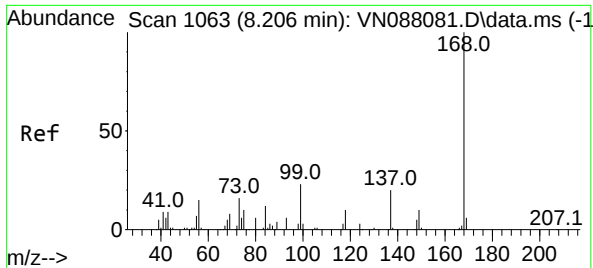
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088153.D
Acq On : 29 Oct 2025 12:42
Operator : JC\MD
Sample : Q3468-06DL 10X
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

Quant Time: Oct 30 04:04:41 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

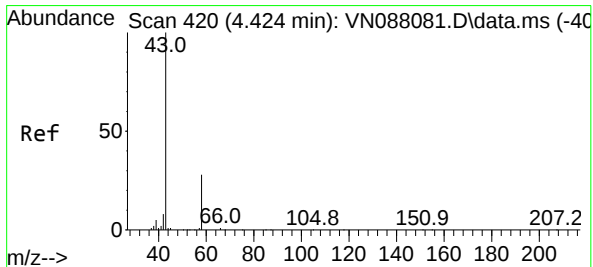
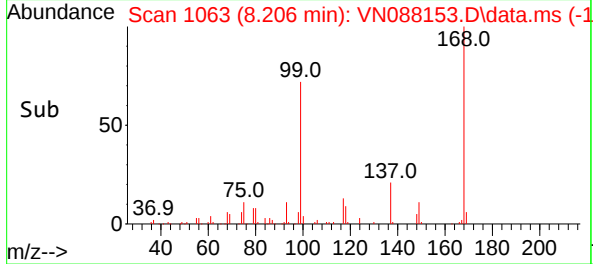
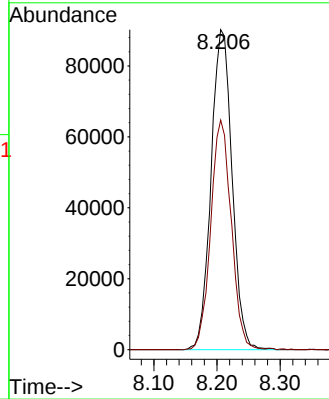
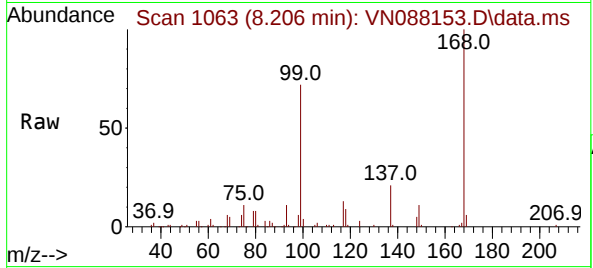




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. -0.000 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

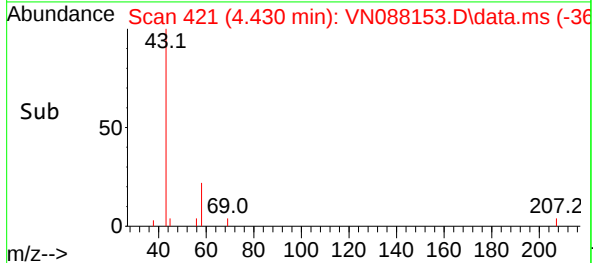
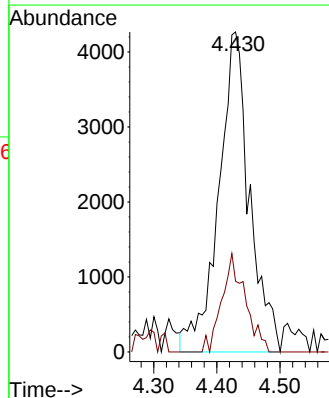
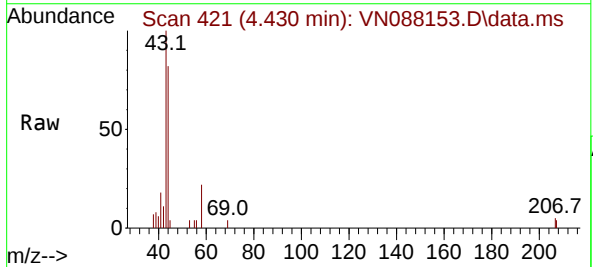
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

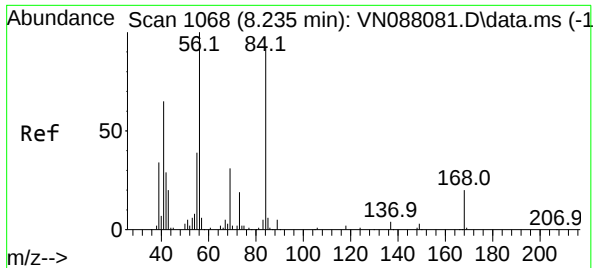
Tgt Ion:168 Resp: 208467
Ion Ratio Lower Upper
168 100
99 71.8 57.2 85.8



#16
Acetone
Concen: 8.000 ug/l
RT: 4.430 min Scan# 421
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion: 43 Resp: 14489
Ion Ratio Lower Upper
43 100
58 22.1 22.6 33.8#





#31

Cyclohexane

Concen: 3.103 ug/l

RT: 8.229 min Scan# 1

Delta R.T. -0.006 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

Instrument :

MSVOA_N

ClientSampleId :

MW-12DL

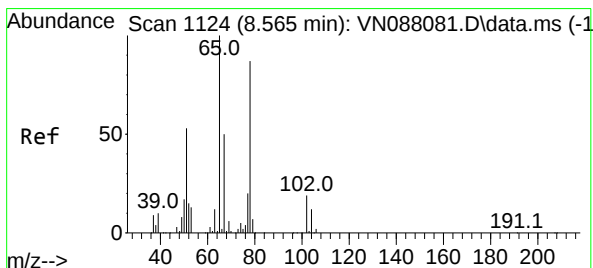
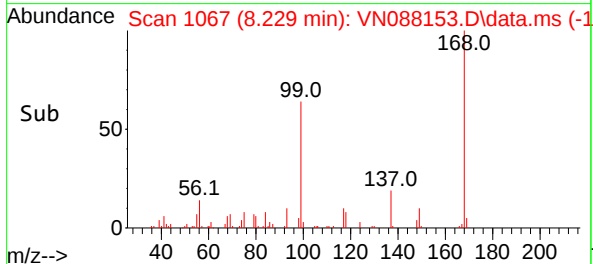
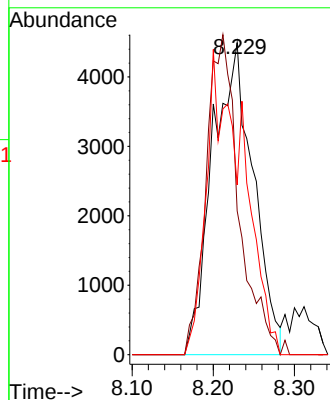
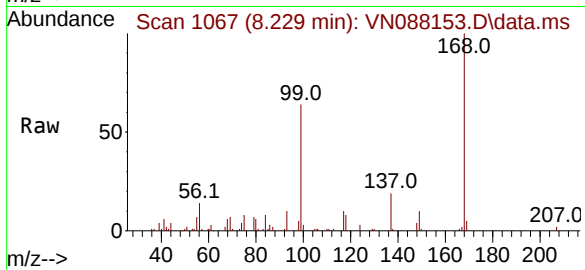
Tgt Ion: 56 Resp: 15656

Ion Ratio Lower Upper

56 100

69 46.1 23.7 35.5#

84 54.4 64.7 97.1#



#33

1,2-Dichloroethane-d4

Concen: 57.162 ug/l

RT: 8.559 min Scan# 1123

Delta R.T. -0.000 min

Lab File: VN088153.D

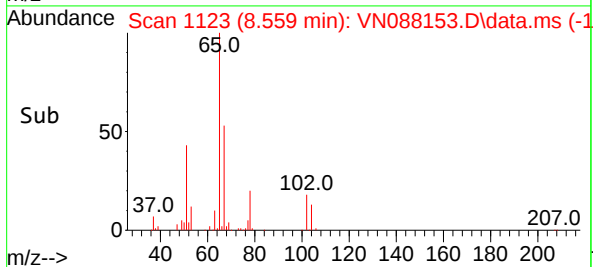
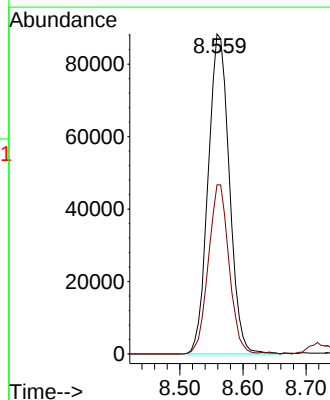
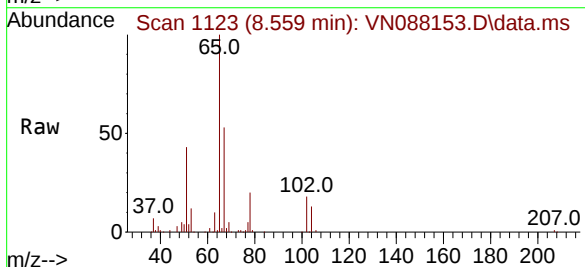
Acq: 29 Oct 2025 12:42

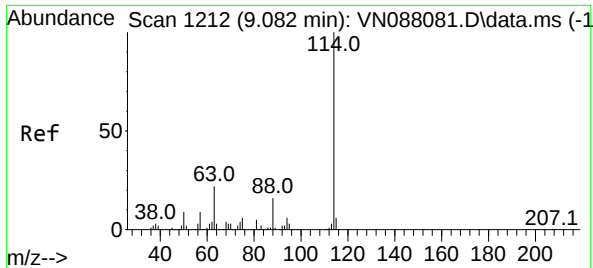
Tgt Ion: 65 Resp: 206058

Ion Ratio Lower Upper

65 100

67 51.5 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1

Delta R.T. -0.000 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

Instrument :

MSVOA_N

ClientSampleId :

MW-12DL

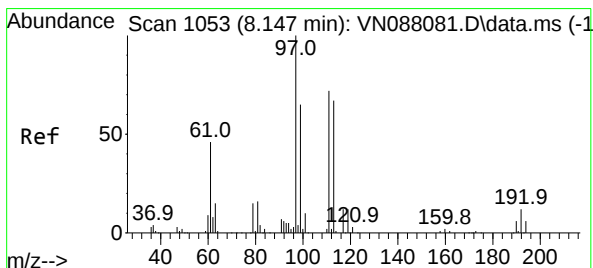
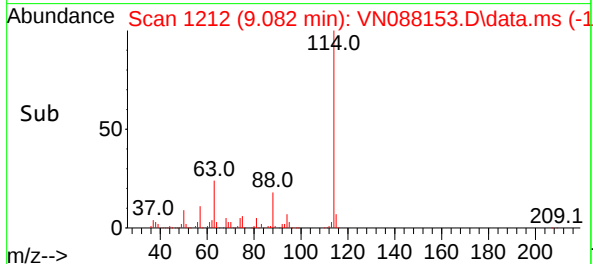
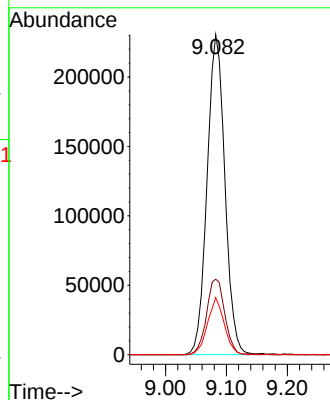
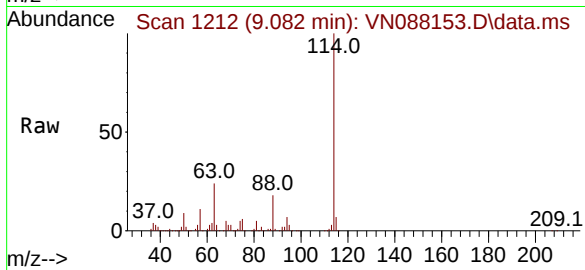
Tgt Ion:114 Resp: 468936

Ion Ratio Lower Upper

114 100

63 23.6 0.0 45.2

88 17.9 0.0 33.4



#35

Dibromofluoromethane

Concen: 48.343 ug/l

RT: 8.147 min Scan# 1053

Delta R.T. -0.006 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

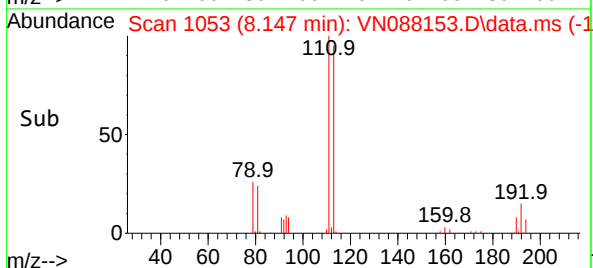
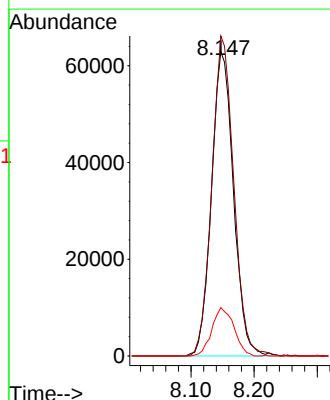
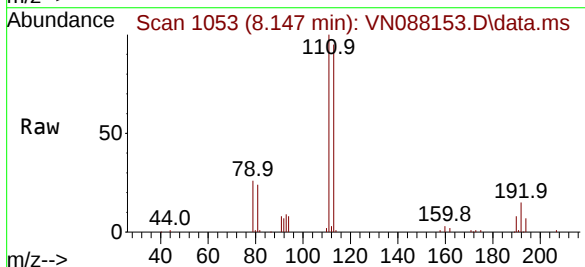
Tgt Ion:113 Resp: 152296

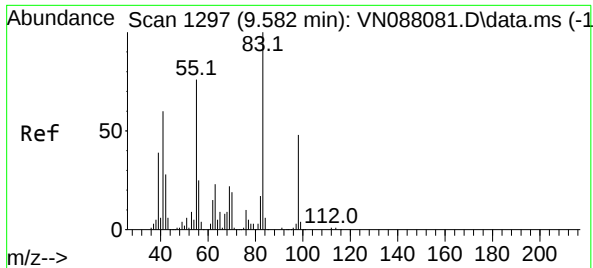
Ion Ratio Lower Upper

113 100

111 104.4 82.8 124.2

192 15.9 12.8 19.2





#39

Methylcyclohexane

Concen: 0.715 ug/l

RT: 9.576 min Scan# 1296

Delta R.T. -0.006 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

Instrument :

MSVOA_N

ClientSampleId :

MW-12DL

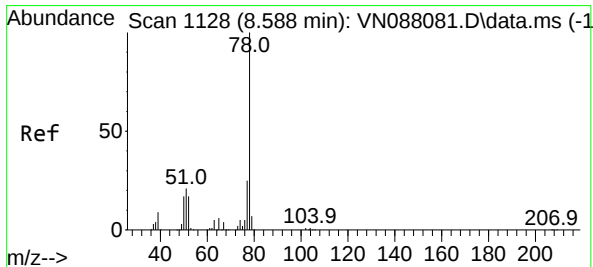
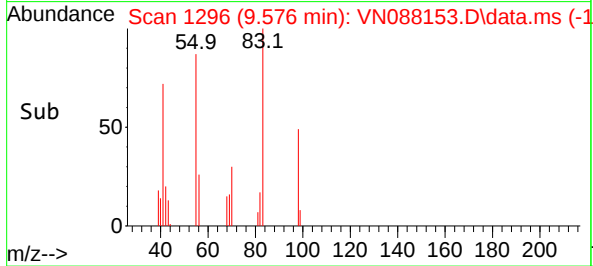
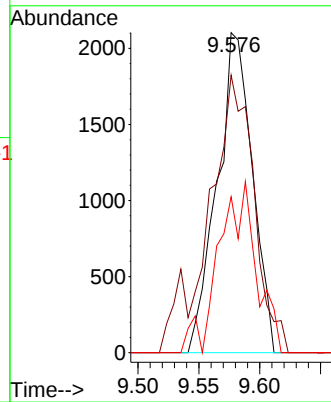
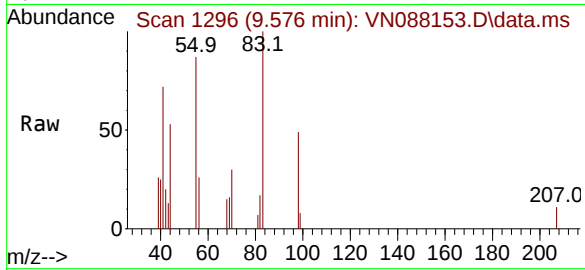
Tgt Ion: 83 Resp: 4230

Ion Ratio Lower Upper

83 100

55 76.7 64.6 96.8

98 48.7 38.4 57.6



#40

Benzene

Concen: 20.827 ug/l

RT: 8.588 min Scan# 1128

Delta R.T. -0.000 min

Lab File: VN088153.D

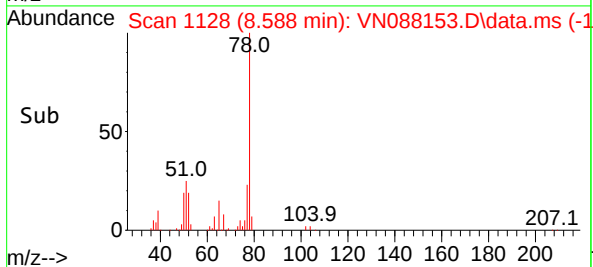
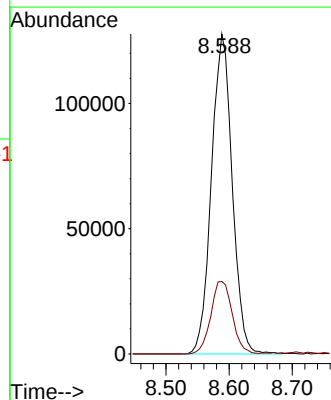
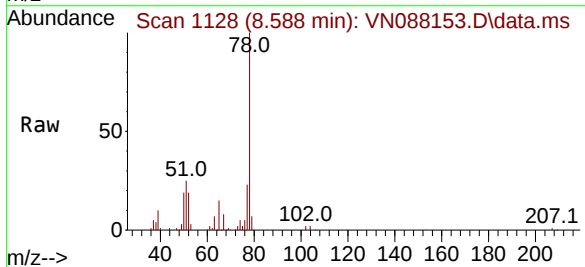
Acq: 29 Oct 2025 12:42

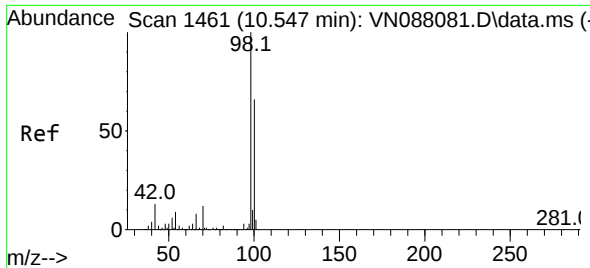
Tgt Ion: 78 Resp: 291762

Ion Ratio Lower Upper

78 100

77 22.6 19.7 29.5

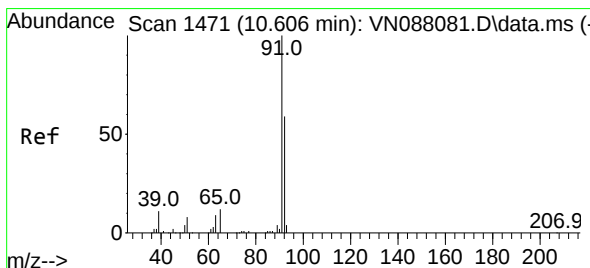
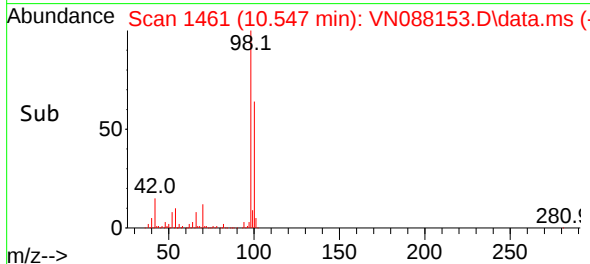
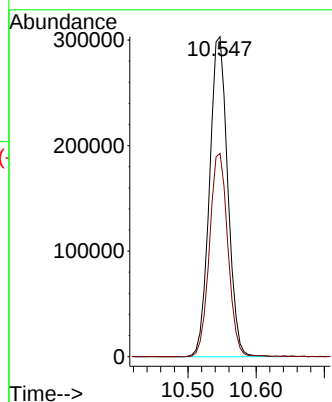
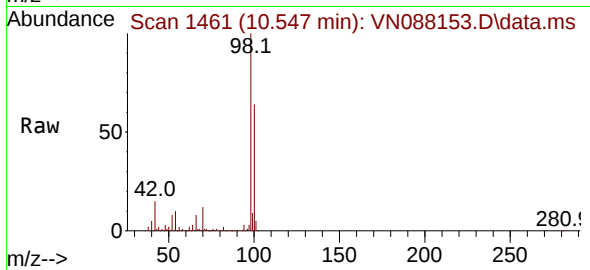




#50
Toluene-d8
Concen: 46.507 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

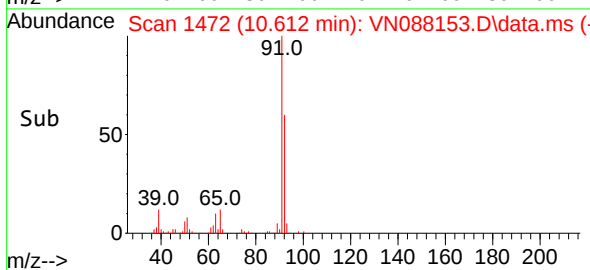
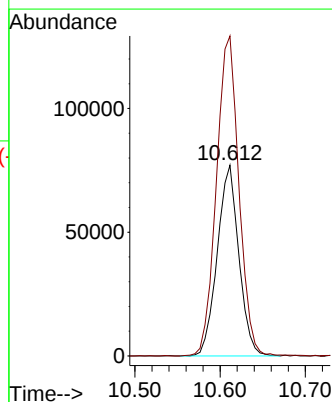
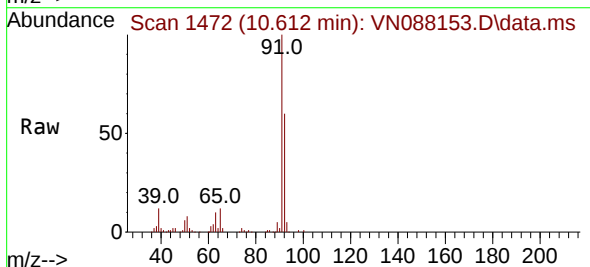
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

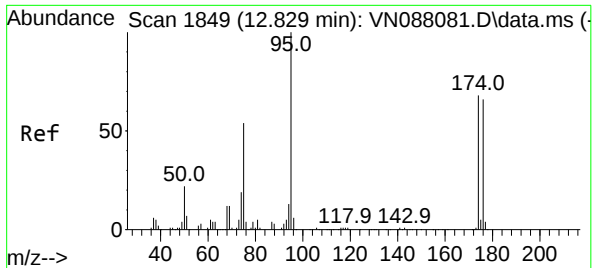
Tgt Ion: 98 Resp: 564534
Ion Ratio Lower Upper
98 100
100 64.0 52.8 79.2



#52
Toluene
Concen: 15.726 ug/l
RT: 10.612 min Scan# 1472
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion: 92 Resp: 135826
Ion Ratio Lower Upper
92 100
91 175.1 140.4 210.6

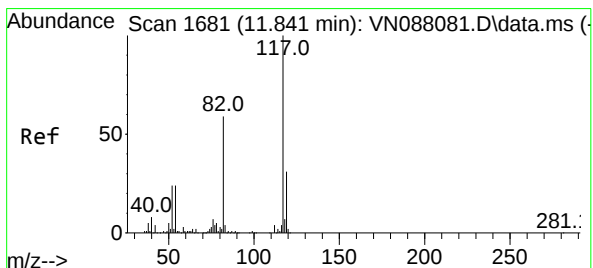
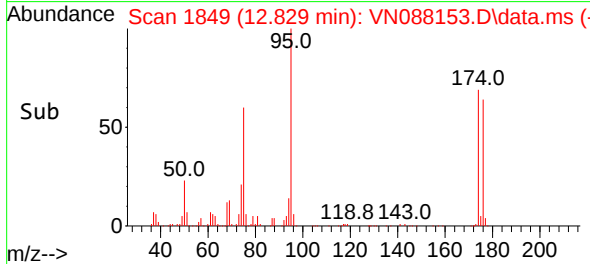
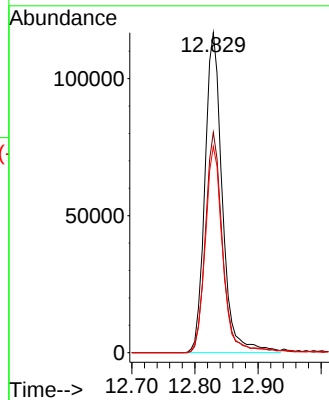
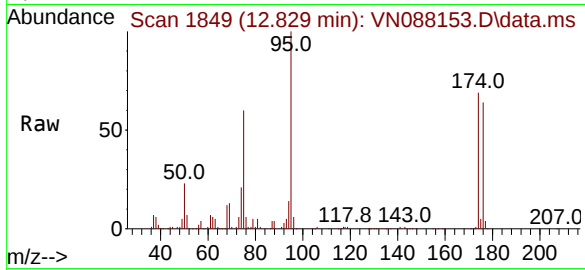




#62
4-Bromofluorobenzene
Concen: 52.128 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

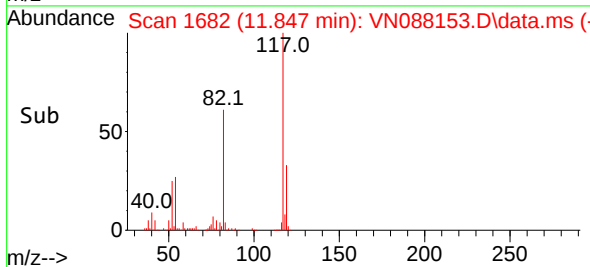
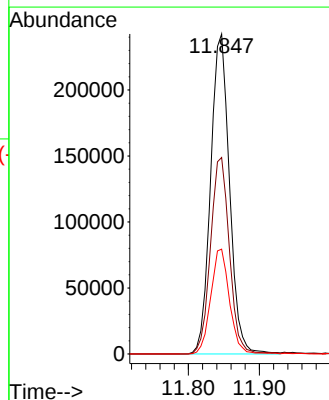
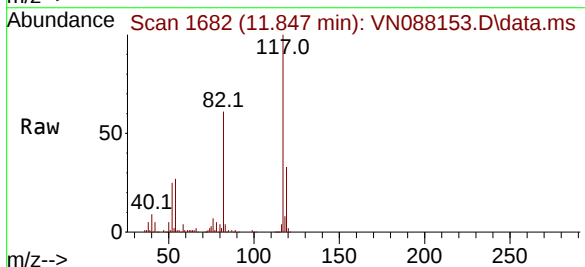
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

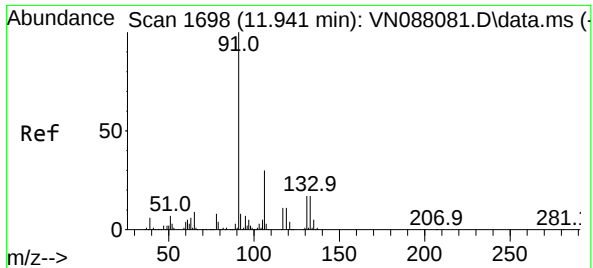
Tgt Ion: 95 Resp: 223470
Ion Ratio Lower Upper
95 100
174 68.1 0.0 138.4
176 65.5 0.0 132.6



#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1682
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion: 117 Resp: 447110
Ion Ratio Lower Upper
117 100
82 61.4 47.4 71.2
119 32.7 24.3 36.5

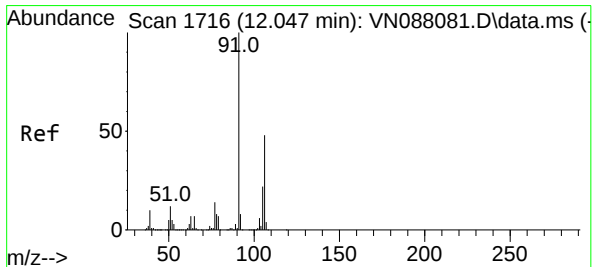
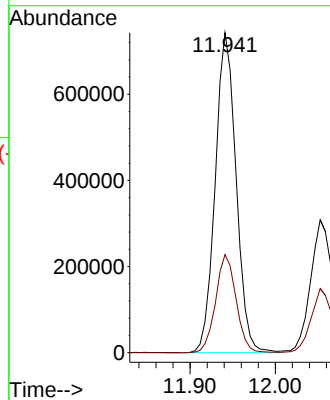
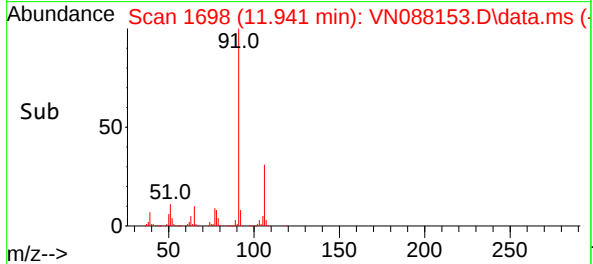
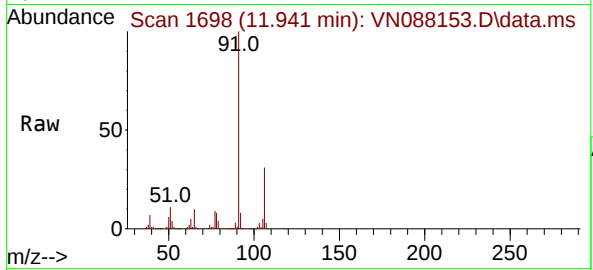




#67
Ethyl Benzene
Concen: 70.952 ug/l
RT: 11.941 min Scan# 1698
Delta R.T. -0.000 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

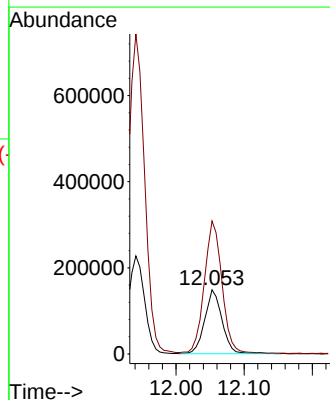
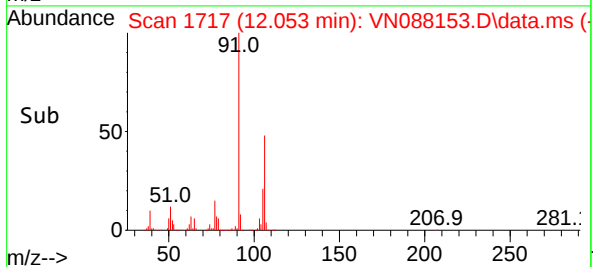
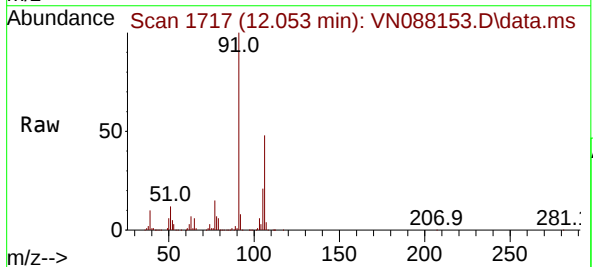
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

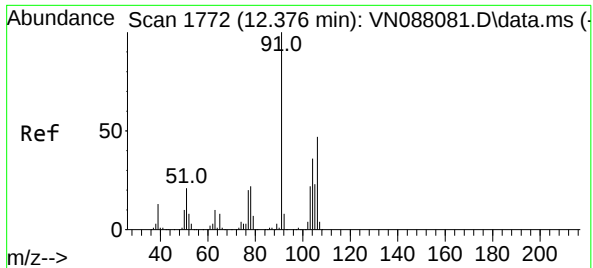
Tgt Ion: 91 Resp: 1264412
Ion Ratio Lower Upper
91 100
106 30.6 24.1 36.1



#68
m/p-Xylenes
Concen: 39.250 ug/l
RT: 12.053 min Scan# 1717
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion: 106 Resp: 262075
Ion Ratio Lower Upper
106 100
91 213.5 169.3 253.9

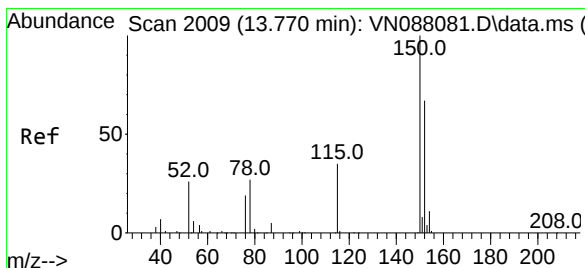
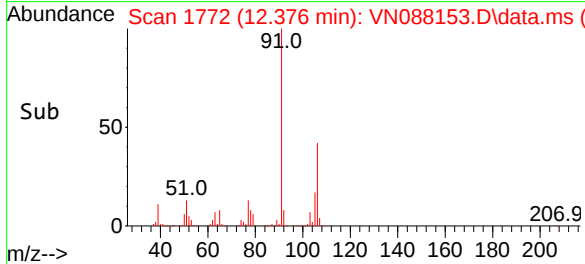
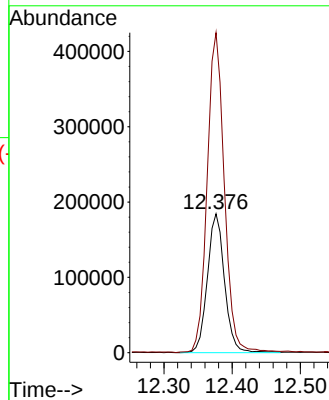
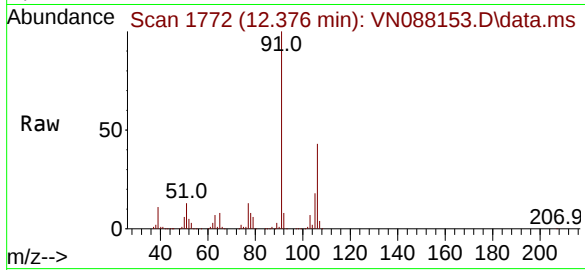




#69
o-Xylene
Concen: 51.048 ug/l
RT: 12.376 min Scan# 1772
Delta R.T. -0.000 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

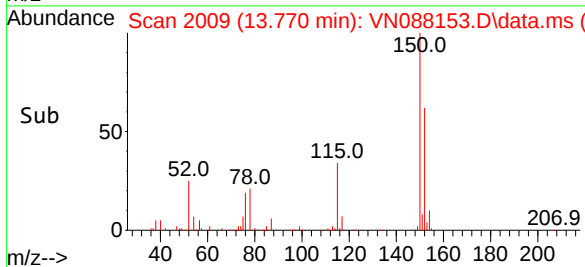
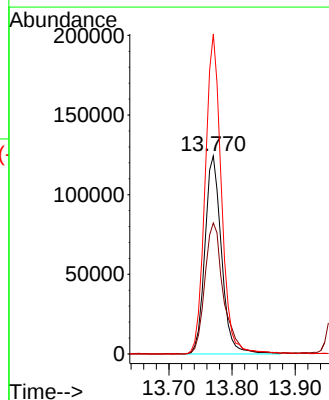
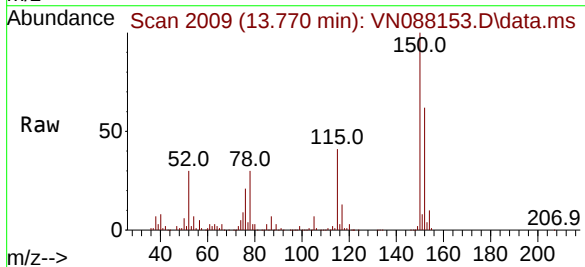
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

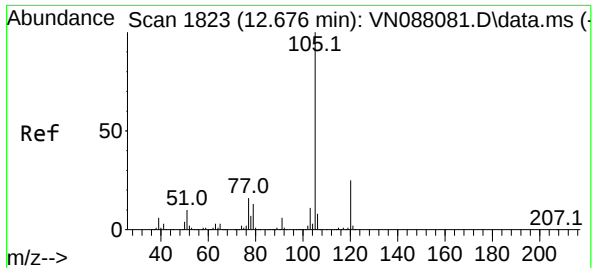
Tgt Ion:106 Resp: 323116
Ion Ratio Lower Upper
106 100
91 230.0 111.4 334.2



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion:152 Resp: 226296
Ion Ratio Lower Upper
152 100
115 75.4 32.3 96.8
150 159.3 0.0 351.0

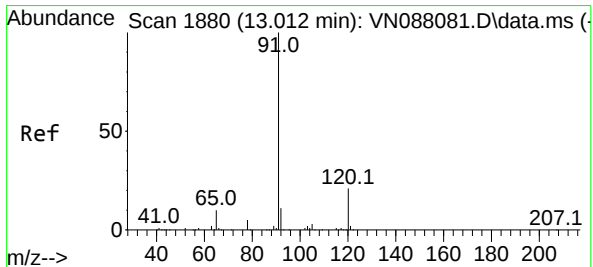
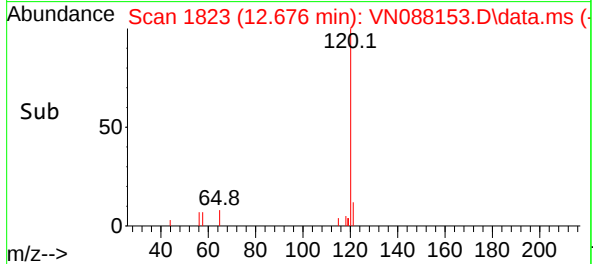
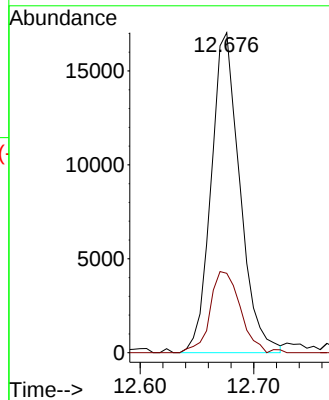
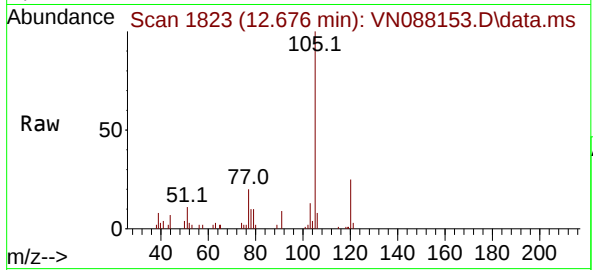




#73
Isopropylbenzene
Concen: 1.718 ug/l
RT: 12.676 min Scan# 1823
Delta R.T. 0.006 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

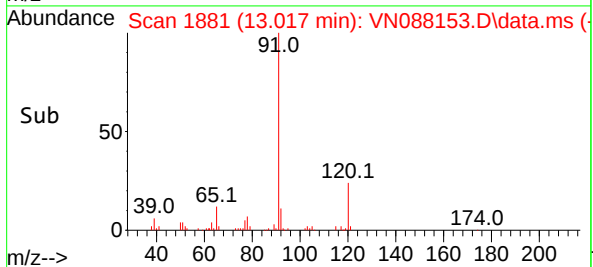
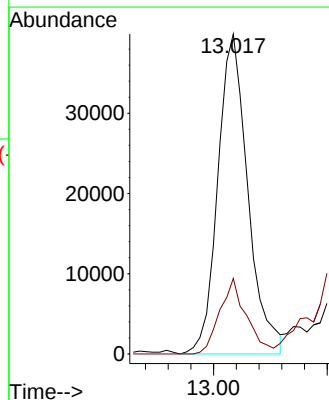
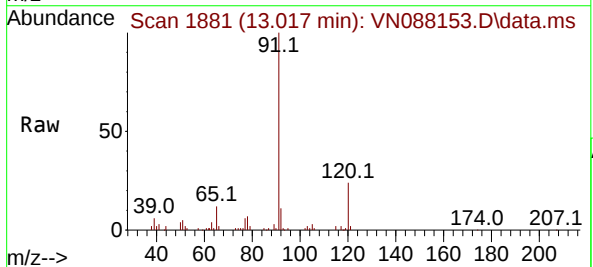
Instrument :
MSVOA_N
ClientSampleId :
MW-12DL

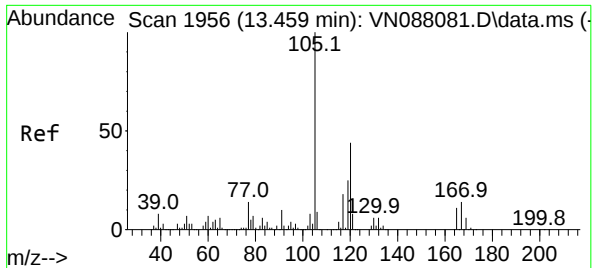
Tgt Ion:105 Resp: 29980
Ion Ratio Lower Upper
105 100
120 26.8 12.8 38.3



#78
n-propylbenzene
Concen: 3.436 ug/l
RT: 13.017 min Scan# 1881
Delta R.T. 0.005 min
Lab File: VN088153.D
Acq: 29 Oct 2025 12:42

Tgt Ion: 91 Resp: 73177
Ion Ratio Lower Upper
91 100
120 21.0 10.7 32.1





#84

1,2,4-Trimethylbenzene

Concen: 44.488 ug/l

RT: 13.459 min Scan# 1956

Delta R.T. -0.000 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

Instrument :

MSVOA_N

ClientSampleId :

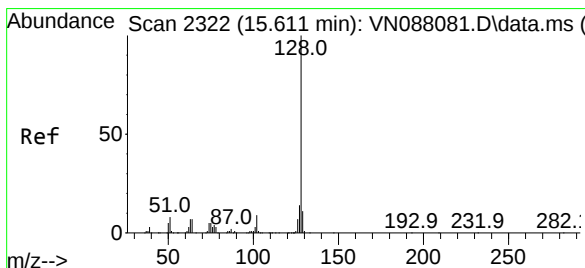
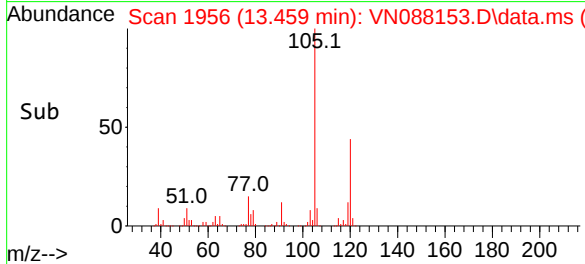
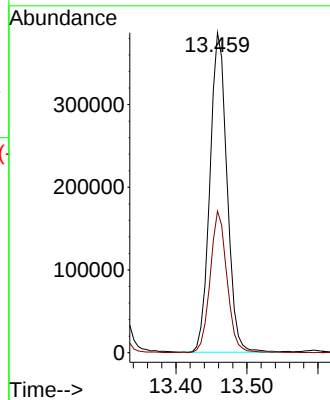
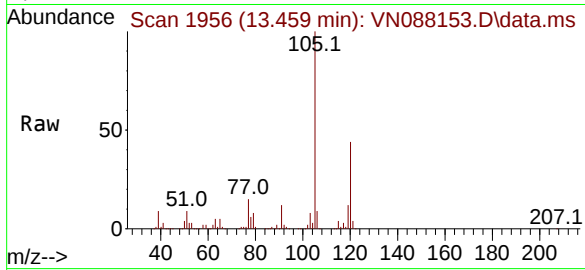
MW-12DL

Tgt Ion:105 Resp: 645205

Ion Ratio Lower Upper

105 100

120 43.8 22.0 66.0



#95

Naphthalene

Concen: 18.617 ug/l

RT: 15.611 min Scan# 2322

Delta R.T. -0.000 min

Lab File: VN088153.D

Acq: 29 Oct 2025 12:42

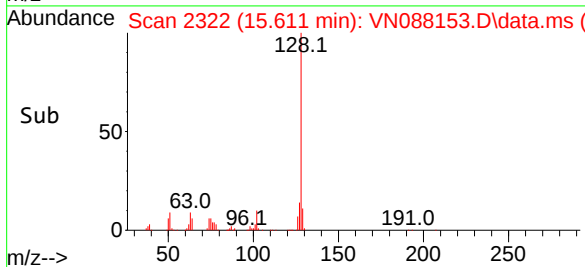
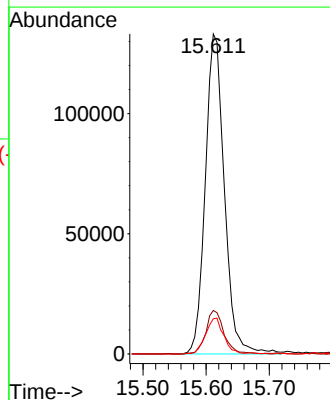
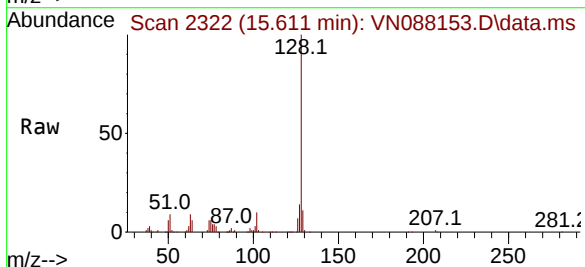
Tgt Ion:128 Resp: 279733

Ion Ratio Lower Upper

128 100

127 12.9 10.6 15.8

129 10.6 8.6 12.8





CALIBRATION SUMMARY



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: LIRO01
 Lab Code: ACE SDG No.: Q3468
 Instrument ID: MSVOA_N Calibration Date(s): 10/23/2025 10/23/2025
 Heated Purge: (Y/N) N Calibration Time(s): 09:42 12:02
 GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID:		RRF001 = VN088078.D		RRF005 = VN088079.D		RRF020 = VN088080.D			
		RRF050 = VN088081.D		RRF100 = VN088082.D		RRF150 = VN088083.D			
COMPOUND	RRF001	RRF005	RRF020	RRF050	RRF100	RRF150	RRF	% RSD	
Methyl tert-butyl Ether	2.356	2.498	2.493	1.790	2.370	2.342	2.308	11.4	
Benzene	1.621	1.577	1.609	1.216	1.372	1.566	1.494	10.9	
Toluene	0.971	0.958	0.991	0.755	0.862	0.989	0.921	10.2	
Ethyl Benzene	2.069	2.066	2.123	1.649	1.873	2.177	1.993	9.9	
m/p-Xylenes	0.733	0.774	0.804	0.635	0.708	0.827	0.747	9.4	
o-Xylene	0.670	0.742	0.764	0.604	0.684	0.784	0.708	9.6	
Isopropylbenzene	4.189	3.857	4.067	3.173	3.580	4.272	3.856	10.8	
n-propylbenzene	4.874	4.855	4.930	3.925	4.436	5.217	4.706	9.7	
1,3,5-Trimethylbenzene	3.329	3.254	3.385	2.669	3.028	3.551	3.203	9.8	
tert-Butylbenzene	3.154	2.876	3.002	2.358	2.646	3.131	2.861	10.8	
1,2,4-Trimethylbenzene	3.242	3.316	3.465	2.700	3.012	3.491	3.204	9.4	
sec-Butylbenzene	4.578	4.273	4.382	3.490	3.881	4.616	4.203	10.4	
p-Isopropyltoluene	3.269	3.541	3.602	2.866	3.170	3.783	3.372	9.9	
n-Butylbenzene	3.396	3.438	3.493	2.827	3.158	3.730	3.340	9.3	
Naphthalene	3.451	3.110	3.437	2.732	3.203	3.987	3.320	12.6	
1,2-Dichloroethane-d4		0.914	0.915	0.799	0.822	0.872	0.865	6.1	
Dibromofluoromethane		0.343	0.344	0.315	0.327	0.350	0.336	4.3	
Toluene-d8		1.283	1.298	1.224	1.283	1.384	1.294	4.4	
4-Bromofluorobenzene		0.435	0.457	0.439	0.466	0.488	0.457	4.8	

* 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_N\methods\
 Method File : 82N102325W.M
 Title : SW846 8260
 Last Update : Sat Oct 25 00:15:22 2025
 Response Via : Initial Calibration

Calibration Files

1 =VN088078.D 5 =VN088079.D 20 =VN088080.D 50 =VN088081.D 100 =VN088082.D 150 =VN088083.D

	Compound	1	5	20	50	100	150	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----							
2) T	Dichlorodifluo...	0.606	0.645	0.594	0.458	0.493	0.588	0.564	12.84
3) P	Chloromethane	0.782	0.707	0.725	0.519	0.579	0.669	0.664	14.74
4) C	Vinyl Chloride	0.801	0.784	0.787	0.581	0.639	0.746	0.723	12.62#
5) T	Bromomethane		0.527	0.485	0.341	0.389	0.420	0.432	17.19
6) T	Chloroethane	0.598	0.601	0.558	0.413	0.447	0.509	0.521	15.15
7) T	Trichlorofluor...	1.199	1.317	1.246	0.955	1.031	1.171	1.153	11.77
8) T	Diethyl Ether	0.456	0.501	0.455	0.320	0.400	0.440	0.429	14.57
9) T	1,1,2-Trichlor...	0.637	0.632	0.612	0.476	0.561	0.653	0.595	11.19
10) T	Methyl Iodide		0.430	0.550	0.456	0.674	0.609	0.544	18.85
11) T	Tert butyl alc...		0.164	0.170	0.116	0.151	0.144	0.149	14.24
12) CM	1,1-Dichloroet...	0.806	0.686	0.631	0.462	0.547	0.637	0.628	18.71#
13) T	Acrolein		0.196	0.172	0.124	0.163	0.183	0.168	16.30
14) T	Allyl chloride	1.325	1.149	1.106	0.813	1.124	1.093	1.102	14.98
15) T	Acrylonitrile	0.398	0.423	0.452	0.324	0.426	0.413	0.406	10.82
16) T	Acetone	0.563	0.441	0.440	0.319	0.411	0.431	0.434	17.93
17) T	Carbon Disulfide	2.143	2.041	1.984	1.483	1.917	1.895	1.910	11.92
18) T	Methyl Acetate	0.982	0.910	0.980	0.688	0.896	0.880	0.889	12.10
19) T	Methyl tert-bu...	2.356	2.498	2.493	1.790	2.370	2.342	2.308	11.40
20) T	Methylene Chlo...	0.894	0.774	0.775	0.540	0.708	0.684	0.729	16.17
21) T	trans-1,2-Dich...	0.820	0.716	0.715	0.536	0.673	0.678	0.690	13.32
22) T	Diisopropyl ether	2.325	2.460	2.644	1.883	2.138	2.449	2.317	11.68
23) T	Vinyl Acetate	1.958	2.237	2.387	1.737	1.958	2.244	2.087	11.60
24) P	1,1-Dichloroet...	1.371	1.432	1.418	1.026	1.142	1.312	1.283	12.80
25) T	2-Butanone	0.615	0.616	0.639	0.465	0.516	0.584	0.572	11.81
26) T	2,2-Dichloropr...	1.403	1.226	1.234	0.920	1.023	1.190	1.166	14.65
27) T	cis-1,2-Dichlo...	0.884	0.892	0.868	0.626	0.694	0.800	0.794	13.94
28) T	Bromochloromet...	0.608	0.669	0.549	0.589	0.596	0.627	0.606	6.59
29) T	Tetrahydrofuran	0.413	0.385	0.422	0.296	0.340	0.382	0.373	12.63
30) C	Chloroform	1.334	1.433	1.405	1.040	1.162	1.318	1.282	11.82#
31) T	Cyclohexane		1.488	1.301	0.965	1.055	1.243	1.210	17.05
32) T	1,1,1-Trichlor...	1.293	1.230	1.241	0.912	1.014	1.160	1.142	13.00
33) S	1,2-Dichloroet...		0.914	0.915	0.799	0.822	0.872	0.865	6.10
34) I	1,4-Difluorobenzene	-----ISTD-----							
35) S	Dibromofluorom...		0.343	0.344	0.315	0.327	0.350	0.336	4.27
36) T	1,1-Dichloropr...	0.515	0.514	0.530	0.406	0.453	0.525	0.490	10.21
37) T	Ethyl Acetate	0.742	0.656	0.676	0.491	0.579	0.653	0.633	13.72
38) T	Carbon Tetrach...	0.544	0.525	0.538	0.417	0.470	0.546	0.507	10.30
39) T	Methylcyclohexane	0.701	0.649	0.634	0.524	0.578	0.698	0.630	11.01
40) TM	Benzene	1.621	1.577	1.609	1.216	1.372	1.566	1.494	10.93
41) T	Methacrylonitrile	0.394	0.342	0.354	0.271	0.296	0.342	0.333	13.12
42) TM	1,2-Dichloroet...	0.552	0.572	0.590	0.436	0.480	0.554	0.531	11.22
43) T	Isopropyl Acetate	0.991	1.008	1.066	0.810	0.913	1.047	0.973	9.81
44) TM	Trichloroethene	0.375	0.374	0.374	0.284	0.318	0.369	0.349	11.10
45) C	1,2-Dichloropr...	0.420	0.408	0.397	0.306	0.340	0.391	0.377	11.73#
46) T	Dibromomethane	0.275	0.298	0.295	0.218	0.246	0.281	0.269	11.50
47) T	Bromodichlorom...	0.561	0.570	0.589	0.439	0.499	0.573	0.538	10.77
48) T	Methyl methacr...	0.488	0.429	0.489	0.372	0.425	0.490	0.449	10.78
49) T	1,4-Dioxane	0.005	0.006	0.006	0.004	0.005	0.006	0.006	13.34
50) S	Toluene-d8		1.283	1.298	1.223	1.283	1.384	1.294	4.45
51) T	4-Methyl-2-Pen...	0.548	0.600	0.647	0.485	0.552	0.620	0.575	10.20
52) CM	Toluene	0.971	0.958	0.991	0.755	0.862	0.989	0.921	10.23#
53) T	t-1,3-Dichloro...	0.554	0.576	0.618	0.479	0.559	0.652	0.573	10.40
54) T	cis-1,3-Dichlo...	0.615	0.622	0.652	0.501	0.587	0.671	0.608	9.91
55) T	1,1,2-Trichlor...	0.421	0.348	0.374	0.281	0.317	0.355	0.349	13.68
56) T	Ethyl methacry...	0.515	0.518	0.592	0.475	0.566	0.650	0.553	11.40

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
 Method File : 82N102325W.M

57)	T	1,3-Dichloropr...	0.639	0.647	0.674	0.506	0.572	0.647	0.614	10.25
58)	T	2-Chloroethyl ...	0.280	0.274	0.299	0.245	0.280	0.348	0.288	11.93
59)	T	2-Hexanone	0.369	0.332	0.418	0.333	0.392	0.447	0.382	12.13
60)	T	Dibromochlorom...	0.418	0.392	0.433	0.327	0.377	0.436	0.397	10.44
61)	T	1,2-Dibromoethane	0.403	0.356	0.384	0.289	0.339	0.388	0.360	11.60
62)	S	4-Bromofluorob...		0.435	0.457	0.439	0.466	0.488	0.457	4.80
63)	I	Chlorobenzene-d5	-----ISTD-----							
64)	T	Tetrachloroethene	0.400	0.344	0.335	0.258	0.298	0.344	0.330	14.61
65)	PM	Chlorobenzene	1.197	1.208	1.205	0.941	1.053	1.208	1.135	9.93
66)	T	1,1,1,2-Tetrac...	0.396	0.385	0.395	0.310	0.348	0.397	0.372	9.57
67)	C	Ethyl Benzene	2.069	2.066	2.123	1.649	1.873	2.177	1.993	9.89#
68)	T	m/p-Xylenes	0.733	0.774	0.804	0.635	0.708	0.827	0.747	9.41
69)	T	o-Xylene	0.670	0.742	0.764	0.604	0.684	0.784	0.708	9.57
70)	T	Styrene	0.946	1.204	1.276	1.011	1.165	1.325	1.154	12.89
71)	P	Bromoform	0.268	0.274	0.294	0.233	0.276	0.320	0.278	10.43
72)	I	1,4-Dichlorobenzen...	-----ISTD-----							
73)	T	Isopropylbenzene	4.189	3.857	4.067	3.173	3.580	4.272	3.856	10.83
74)	T	N-amyl acetate		0.931	0.993	0.920	1.094	1.535	1.095	23.37
75)	P	1,1,2,2-Tetrac...	1.304	1.258	1.336	0.957	1.080	1.270	1.201	12.42
76)	T	1,2,3-Trichlor...	1.334	1.351	1.062	0.930	1.014	1.169	1.143	15.11
77)	T	Bromobenzene	0.826	0.859	0.926	0.687	0.789	0.902	0.832	10.37
78)	T	n-propylbenzene	4.874	4.855	4.930	3.925	4.436	5.217	4.706	9.71
79)	T	2-Chlorotoluene	2.492	2.833	2.974	2.245	2.545	3.014	2.684	11.35
80)	T	1,3,5-Trimethy...	3.329	3.254	3.385	2.669	3.028	3.551	3.203	9.76
81)	T	trans-1,4-Dich...		0.422	0.399	0.317	0.403	0.508	0.410	16.68
82)	T	4-Chlorotoluene	3.219	3.019	3.114	2.345	2.623	3.102	2.904	11.81
83)	T	tert-Butylbenzene	3.154	2.876	3.002	2.358	2.646	3.131	2.861	10.80
84)	T	1,2,4-Trimethy...	3.242	3.316	3.465	2.700	3.012	3.491	3.204	9.42
85)	T	sec-Butylbenzene	4.578	4.273	4.382	3.490	3.881	4.616	4.203	10.43
86)	T	p-Isopropyltol...	3.269	3.541	3.602	2.866	3.170	3.783	3.372	9.90
87)	T	1,3-Dichlorobe...	1.777	1.673	1.822	1.380	1.535	1.773	1.660	10.33
88)	T	1,4-Dichlorobe...	2.065	1.953	1.863	1.399	1.582	1.836	1.783	13.86
89)	T	n-Butylbenzene	3.396	3.438	3.493	2.827	3.158	3.730	3.340	9.32
90)	T	Hexachloroethane	0.687	0.679	0.671	0.535	0.610	0.736	0.653	10.77
91)	T	1,2-Dichlorobe...	1.768	1.652	1.678	1.291	1.469	1.744	1.600	11.52
92)	T	1,2-Dibromo-3-...	0.325	0.289	0.301	0.214	0.243	0.305	0.279	15.13
93)	T	1,2,4-Trichlor...	1.058	0.976	0.989	0.785	0.902	1.105	0.969	11.80
94)	T	Hexachlorobuta...	0.412	0.374	0.373	0.293	0.319	0.395	0.361	12.69
95)	T	Naphthalene	3.451	3.110	3.437	2.732	3.203	3.987	3.320	12.63
96)	T	1,2,3-Trichlor...	1.098	0.894	0.937	0.736	0.848	1.062	0.929	14.54

(#) = Out of Range

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088078.D
 Acq On : 23 Oct 2025 09:42
 Operator : JC\MD
 Sample : VSTDICC001
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC001

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/24/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:50:39 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:50:29 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	310632	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	586229	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	509993	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	233824	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	0.000	65	0d	0.000	ug/l	
Spiked Amount	50.000	Range	74 - 125	Recovery	=	0.000%#
35) Dibromofluoromethane	0.000	113	0d	0.000	ug/l	
Spiked Amount	50.000	Range	75 - 124	Recovery	=	0.000%#
50) Toluene-d8	0.000	98	0d	0.000	ug/l	
Spiked Amount	50.000	Range	86 - 113	Recovery	=	0.000%#
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l	
Spiked Amount	50.000	Range	77 - 121	Recovery	=	0.000%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.142	85	3763	1.074	ug/l	96
3) Chloromethane	2.389	50	4857	1.178	ug/l	88
4) Vinyl Chloride	2.542	62	4975	1.108	ug/l	98
6) Chloroethane	3.136	64	3717	1.149	ug/l #	72
7) Trichlorofluoromethane	3.501	101	7446	1.039	ug/l	87
8) Diethyl Ether	3.959	74	2835	1.065	ug/l	60
9) 1,1,2-Trichlorotrifluo...	4.353	101	3959	1.071	ug/l #	22
12) 1,1-Dichloroethene	4.348	96	5008	1.283	ug/l #	64
14) Allyl chloride	5.012	41	8229m	1.206	ug/l	
15) Acrylonitrile	5.712	53	12351	4.900	ug/l	95
16) Acetone	4.424	43	17476	6.476	ug/l	95
17) Carbon Disulfide	4.700	76	13312	1.122	ug/l	96
18) Methyl Acetate	5.024	43	6099	1.104	ug/l #	86
19) Methyl tert-butyl Ether	5.777	73	14637	1.021	ug/l	93
20) Methylene Chloride	5.265	84	5554	2.075	ug/l	93
21) trans-1,2-Dichloroethene	5.765	96	5093m	1.180	ug/l	
22) Diisopropyl ether	6.659	45	14446	1.004	ug/l	89
23) Vinyl Acetate	6.594	43	60828	4.692	ug/l #	93
24) 1,1-Dichloroethane	6.553	63	8517	1.068	ug/l #	82
25) 2-Butanone	7.477	43	19098m	5.426	ug/l	
26) 2,2-Dichloropropane	7.477	77	8718	1.203	ug/l	93
27) cis-1,2-Dichloroethene	7.471	96	5492	1.113	ug/l	93
28) Bromochloromethane	7.800	49	3776	1.002	ug/l #	98
29) Tetrahydrofuran	7.836	42	12815	5.529	ug/l #	65
30) Chloroform	7.953	83	8286	1.040	ug/l	96
32) 1,1,1-Trichloroethane	8.153	97	8036	1.133	ug/l #	43
36) 1,1-Dichloropropene	8.347	75	6036	1.050	ug/l	90
37) Ethyl Acetate	7.553	43	8700m	1.177	ug/l	
38) Carbon Tetrachloride	8.347	117	6381	1.074	ug/l #	92
39) Methylcyclohexane	9.583	83	8221	1.112	ug/l	92
40) Benzene	8.588	78	19008	1.085	ug/l	96
41) Methacrylonitrile	7.771	41	4616	1.182	ug/l #	89
42) 1,2-Dichloroethane	8.653	62	6475	1.041	ug/l	100
43) Isopropyl Acetate	8.671	43	11616	1.019	ug/l	96
44) Trichloroethene	9.330	130	4394	1.073	ug/l	93
45) 1,2-Dichloropropane	9.600	63	4927	1.114	ug/l	91

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088078.D
 Acq On : 23 Oct 2025 09:42
 Operator : JC\MD
 Sample : VSTDIC001
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDIC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:50:39 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:50:29 2025
 Response via : Initial Calibration

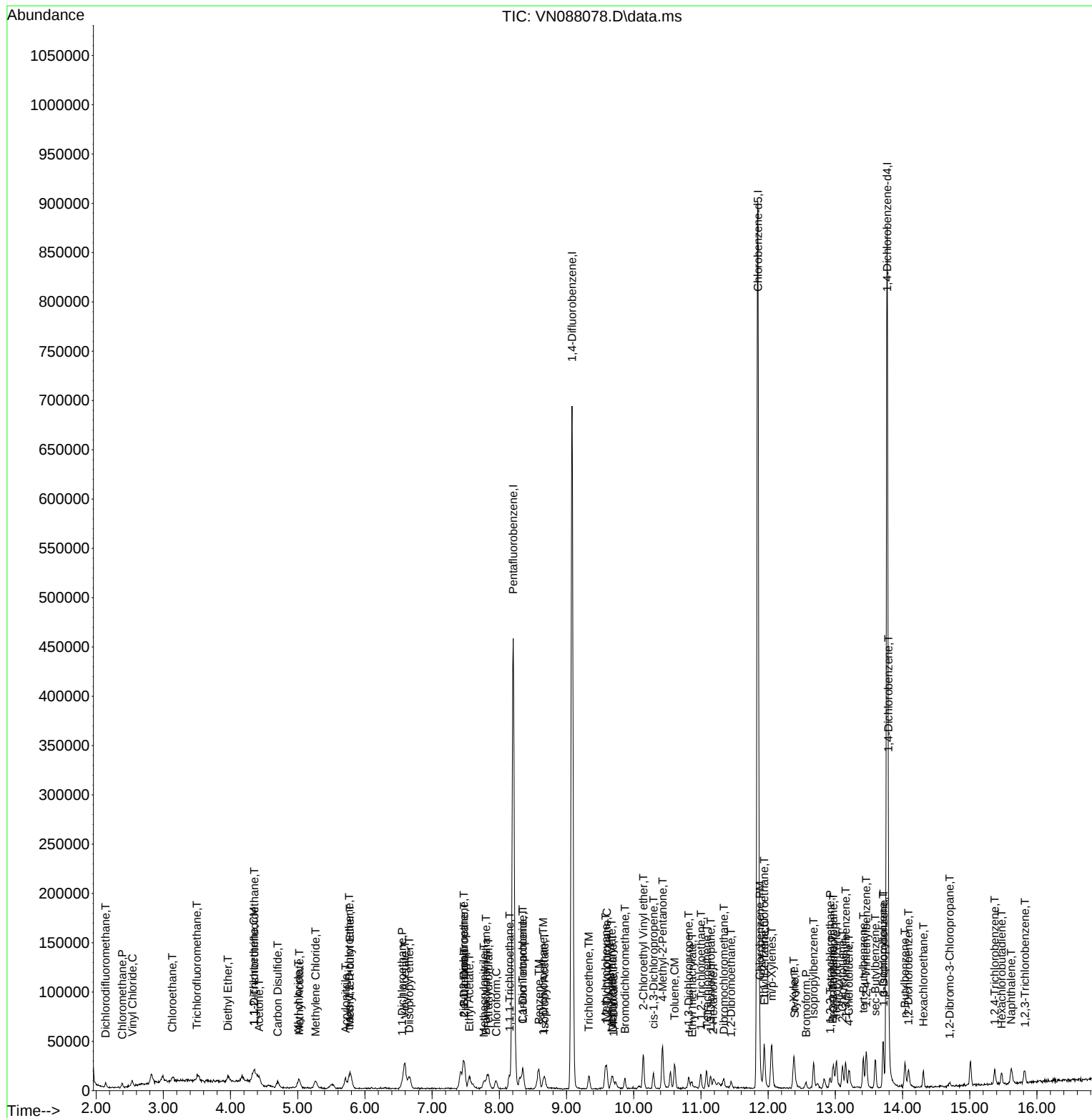
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Dibromomethane	9.688	93	3222	1.022	ug/l	90
47) Bromodichloromethane	9.871	83	6578	1.042	ug/l #	99
48) Methyl methacrylate	9.671	41	5726m	1.057	ug/l	
49) 1,4-Dioxane	9.700	88	1238m	18.907	ug/l	
51) 4-Methyl-2-Pentanone	10.430	43	32109	4.760	ug/l	96
52) Toluene	10.606	92	11382	1.054	ug/l	90
53) t-1,3-Dichloropropene	10.818	75	6496	0.967	ug/l	99
54) cis-1,3-Dichloropropene	10.294	75	7213	1.012	ug/l	98
55) 1,1,2-Trichloroethane	11.000	97	4933	1.204	ug/l #	82
56) Ethyl methacrylate	10.871	69	6039m	0.933	ug/l	
57) 1,3-Dichloropropane	11.147	76	7489	1.040	ug/l	89
58) 2-Chloroethyl Vinyl ether	10.141	63	16393	4.862	ug/l	99
59) 2-Hexanone	11.182	43	21660m	4.891	ug/l	
60) Dibromochloromethane	11.341	129	4900	1.052	ug/l	90
61) 1,2-Dibromoethane	11.447	107	4721	1.120	ug/l	83
64) Tetrachloroethene	11.088	164	4083	1.214	ug/l #	79
65) Chlorobenzene	11.876	112	12205	1.054	ug/l #	89
66) 1,1,1,2-Tetrachloroethane	11.941	131	4044	1.066	ug/l #	65
67) Ethyl Benzene	11.947	91	21103	1.038	ug/l	96
68) m/p-Xylenes	12.053	106	14958	1.964	ug/l	93
69) o-Xylene	12.382	106	6831	0.946	ug/l	98
70) Styrene	12.394	104	9645	0.819	ug/l	99
71) Bromoform	12.565	173	2730	0.964	ug/l #	100
73) Isopropylbenzene	12.676	105	19589	1.086	ug/l	99
75) 1,1,2,2-Tetrachloroethane	12.923	83	6098	1.086	ug/l	98
76) 1,2,3-Trichloropropane	12.971	75	6237m	1.246	ug/l	
77) Bromobenzene	12.959	156	3862	0.993	ug/l	71
78) n-propylbenzene	13.018	91	22793	1.036	ug/l	99
79) 2-Chlorotoluene	13.106	91	11655	0.929	ug/l	93
80) 1,3,5-Trimethylbenzene	13.153	105	15569	1.039	ug/l	98
82) 4-Chlorotoluene	13.200	91	15055	1.109	ug/l	93
83) tert-Butylbenzene	13.418	119	14748	1.102	ug/l	98
84) 1,2,4-Trimethylbenzene	13.459	105	15160	1.012	ug/l	97
85) sec-Butylbenzene	13.594	105	21410	1.089	ug/l	96
86) p-Isopropyltoluene	13.712	119	15289	0.970	ug/l	90
87) 1,3-Dichlorobenzene	13.718	146	8312	1.071	ug/l	100
88) 1,4-Dichlorobenzene	13.788	146	9656m	1.155	ug/l	
89) n-Butylbenzene	14.035	91	15880	1.017	ug/l	97
90) Hexachloroethane	14.312	117	3211	1.052	ug/l	96
91) 1,2-Dichlorobenzene	14.088	146	8266	1.105	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	14.700	75	1522	1.165	ug/l	75
93) 1,2,4-Trichlorobenzene	15.370	180	4946	1.091	ug/l	90
94) Hexachlorobutadiene	15.476	225	1928	1.142	ug/l	96
95) Naphthalene	15.617	128	16137	1.039	ug/l	99
96) 1,2,3-Trichlorobenzene	15.823	180	5137	1.182	ug/l	83

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

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088079.D
 Acq On : 23 Oct 2025 10:38
 Operator : JC\MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:51:36 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:50:29 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	296128	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	570271	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	502295	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	241248	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	27065	5.285	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	10.580%#		
35) Dibromofluoromethane	8.147	113	19551	5.103	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	10.200%#		
50) Toluene-d8	10.547	98	73162	4.956	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	9.920%#		
62) 4-Bromofluorobenzene	12.835	95	24787	4.755	ug/l	0.01
Spiked Amount 50.000	Range 77 - 121		Recovery =	9.500%#		
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	2.142	85	19109	5.721	ug/l	91
3) Chloromethane	2.383	50	20946	5.330	ug/l	100
4) Vinyl Chloride	2.536	62	23220	5.423	ug/l	96
5) Bromomethane	2.971	94	15617	6.098	ug/l #	80
6) Chloroethane	3.142	64	17800	5.770	ug/l #	84
7) Trichlorofluoromethane	3.506	101	39012	5.713	ug/l	98
8) Diethyl Ether	3.959	74	14837	5.846	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.377	101	18719	5.312	ug/l	94
10) Methyl Iodide	4.589	142	12726	7.564	ug/l	91
11) Tert butyl alcohol	5.524	59	24255	27.494	ug/l #	89
12) 1,1-Dichloroethene	4.342	96	20326	5.461	ug/l	88
13) Acrolein	4.171	56	29003	29.228	ug/l	93
14) Allyl chloride	5.012	41	34031	5.232	ug/l	99
15) Acrylonitrile	5.706	53	62612	26.056	ug/l	98
16) Acetone	4.430	43	65332	25.396	ug/l	99
17) Carbon Disulfide	4.706	76	60437	5.342	ug/l	97
18) Methyl Acetate	5.024	43	26935	5.114	ug/l	99
19) Methyl tert-butyl Ether	5.789	73	73958	5.411	ug/l	97
20) Methylene Chloride	5.265	84	22926	6.410	ug/l	97
21) trans-1,2-Dichloroethene	5.783	96	21204	5.152	ug/l	86
22) Diisopropyl ether	6.665	45	72852	5.310	ug/l	100
23) Vinyl Acetate	6.588	43	331195	26.799	ug/l	100
24) 1,1-Dichloroethane	6.547	63	42391	5.578	ug/l	96
25) 2-Butanone	7.477	43	91150	27.166	ug/l	95
26) 2,2-Dichloropropane	7.477	77	36306	5.257	ug/l	97
27) cis-1,2-Dichloroethene	7.471	96	26415	5.616	ug/l	96
28) Bromochloromethane	7.794	49	19805	5.515	ug/l	96
29) Tetrahydrofuran	7.824	42	56989	25.793	ug/l	99
30) Chloroform	7.947	83	42443	5.590	ug/l	97
31) Cyclohexane	8.241	56	44056	6.146	ug/l	95
32) 1,1,1-Trichloroethane	8.147	97	36411	5.384	ug/l #	85
36) 1,1-Dichloropropene	8.353	75	29318	5.241	ug/l	96
37) Ethyl Acetate	7.547	43	37387	5.201	ug/l #	94
38) Carbon Tetrachloride	8.347	117	29915	5.178	ug/l	93
39) Methylcyclohexane	9.582	83	37009	5.147	ug/l	96
40) Benzene	8.588	78	89925	5.279	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088079.D
 Acq On : 23 Oct 2025 10:38
 Operator : JC\MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDICC005

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/24/2025

Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:51:36 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M

Quant Title : SW846 8260

QLast Update : Fri Oct 24 02:50:29 2025

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.771	41	19516	5.137	ug/l	93
42) 1,2-Dichloroethane	8.653	62	32612	5.388	ug/l	99
43) Isopropyl Acetate	8.671	43	57498	5.184	ug/l	97
44) Trichloroethene	9.335	130	21346	5.361	ug/l	86
45) 1,2-Dichloropropane	9.594	63	23273	5.411	ug/l	95
46) Dibromomethane	9.682	93	17012	5.546	ug/l	95
47) Bromodichloromethane	9.865	83	32518	5.295	ug/l	91
48) Methyl methacrylate	9.665	41	24475	4.645	ug/l	92
49) 1,4-Dioxane	9.688	88	6763	106.179	ug/l #	95
51) 4-Methyl-2-Pentanone	10.424	43	170979	26.055	ug/l	98
52) Toluene	10.606	92	54632	5.201	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	32833	5.023	ug/l	96
54) cis-1,3-Dichloropropene	10.288	75	35495	5.118	ug/l	94
55) 1,1,2-Trichloroethane	10.994	97	19869	4.986	ug/l	92
56) Ethyl methacrylate	10.859	69	29566	4.695	ug/l	97
57) 1,3-Dichloropropane	11.141	76	36892	5.267	ug/l	97
58) 2-Chloroethyl Vinyl ether	10.141	63	78095	23.808	ug/l	99
59) 2-Hexanone	11.182	43	94577	21.954	ug/l	97
60) Dibromochloromethane	11.335	129	22347	4.934	ug/l	99
61) 1,2-Dibromoethane	11.447	107	20284	4.946	ug/l	96
64) Tetrachloroethene	11.082	164	17289	5.218	ug/l	88
65) Chlorobenzene	11.870	112	60700	5.322	ug/l	90
66) 1,1,1,2-Tetrachloroethane	11.941	131	19321	5.171	ug/l	95
67) Ethyl Benzene	11.941	91	103756	5.183	ug/l	98
68) m/p-Xylenes	12.047	106	77736	10.363	ug/l	92
69) o-Xylene	12.382	106	37251	5.239	ug/l	98
70) Styrene	12.394	104	60467	5.215	ug/l	98
71) Bromoform	12.559	173	13744	4.929	ug/l #	92
73) Isopropylbenzene	12.676	105	93056	5.001	ug/l	100
74) N-amyl acetate	12.865	43	22461m	4.171	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.917	83	30348	5.239	ug/l	98
76) 1,2,3-Trichloropropane	12.976	75	32601m	6.313	ug/l	
77) Bromobenzene	12.959	156	20721	5.164	ug/l	82
78) n-propylbenzene	13.012	91	117114	5.158	ug/l	98
79) 2-Chlorotoluene	13.106	91	68350	5.278	ug/l	98
80) 1,3,5-Trimethylbenzene	13.153	105	78511	5.081	ug/l	95
81) trans-1,4-Dichloro-2-b...	12.723	75	10183m	5.137	ug/l	
82) 4-Chlorotoluene	13.200	91	72836	5.199	ug/l	100
83) tert-Butylbenzene	13.417	119	69371	5.025	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	80008	5.175	ug/l	100
85) sec-Butylbenzene	13.594	105	103097	5.083	ug/l	98
86) p-Isopropyltoluene	13.706	119	85421	5.250	ug/l	99
87) 1,3-Dichlorobenzene	13.712	146	40364	5.039	ug/l	96
88) 1,4-Dichlorobenzene	13.788	146	47112	5.462	ug/l	95
89) n-Butylbenzene	14.035	91	82932	5.146	ug/l	99
90) Hexachloroethane	14.312	117	16391	5.202	ug/l	99
91) 1,2-Dichlorobenzene	14.082	146	39857	5.162	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	14.694	75	6964	5.165	ug/l	92
93) 1,2,4-Trichlorobenzene	15.370	180	23547	5.036	ug/l	99
94) Hexachlorobutadiene	15.476	225	9028	5.185	ug/l	97
95) Naphthalene	15.617	128	75031	4.684	ug/l	99
96) 1,2,3-Trichlorobenzene	15.817	180	21577	4.812	ug/l	94

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088079.D
Acq On : 23 Oct 2025 10:38
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:51:36 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:50:29 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

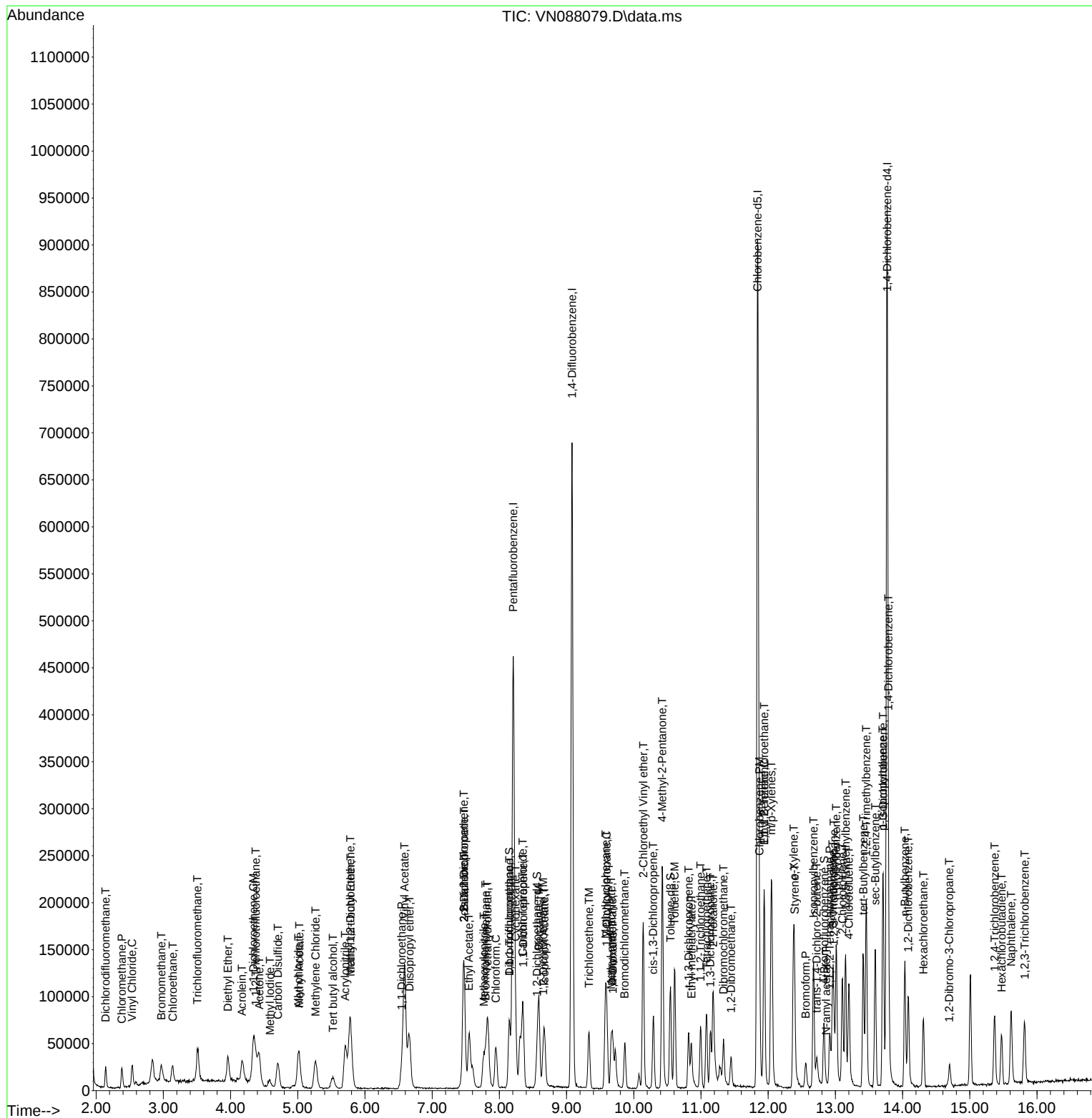
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088079.D
Acq On : 23 Oct 2025 10:38
Operator : JC\MD
Sample : VSTDIC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:51:36 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:50:29 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088080.D
 Acq On : 23 Oct 2025 10:59
 Operator : JC\MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:52:36 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:50:29 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	282090	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	546178	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	485620	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.771	152	241242	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	103292	21.175	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	42.360%#		
35) Dibromofluoromethane	8.147	113	75221	20.500	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	41.000%#		
50) Toluene-d8	10.547	98	283564	20.057	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	40.120%#		
62) 4-Bromofluorobenzene	12.829	95	99923	20.012	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	40.020%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.142	85	67069	21.078	ug/l	97
3) Chloromethane	2.383	50	81817	21.856	ug/l	96
4) Vinyl Chloride	2.536	62	88776	21.765	ug/l	98
5) Bromomethane	2.983	94	54697	22.420	ug/l	99
6) Chloroethane	3.136	64	62949	21.421	ug/l	93
7) Trichlorofluoromethane	3.512	101	140569	21.608	ug/l	95
8) Diethyl Ether	3.971	74	51299	21.217	ug/l	92
9) 1,1,2-Trichlorotrifluo...	4.365	101	69023	20.561	ug/l	98
10) Methyl Iodide	4.583	142	62029	21.370	ug/l	97
11) Tert butyl alcohol	5.524	59	95809	114.009	ug/l	97
12) 1,1-Dichloroethene	4.342	96	71244	20.094	ug/l	97
13) Acrolein	4.183	56	97190	102.818	ug/l	99
14) Allyl chloride	5.012	41	124762	20.136	ug/l	98
15) Acrylonitrile	5.706	53	254966	111.383	ug/l	98
16) Acetone	4.424	43	248513	101.409	ug/l	96
17) Carbon Disulfide	4.706	76	223844	20.769	ug/l	99
18) Methyl Acetate	5.018	43	110595	22.044	ug/l	98
19) Methyl tert-butyl Ether	5.789	73	281317	21.605	ug/l	94
20) Methylene Chloride	5.265	84	87400	23.333	ug/l	97
21) trans-1,2-Dichloroethene	5.771	96	80726	20.591	ug/l	95
22) Diisopropyl ether	6.653	45	298356	22.828	ug/l	96
23) Vinyl Acetate	6.589	43	1346497	114.374	ug/l	100
24) 1,1-Dichloroethane	6.559	63	159981	22.098	ug/l	97
25) 2-Butanone	7.471	43	360240	112.706	ug/l	96
26) 2,2-Dichloropropane	7.471	77	139276	21.169	ug/l	99
27) cis-1,2-Dichloroethene	7.471	96	97968	21.866	ug/l	100
28) Bromochloromethane	7.800	49	61975	18.117	ug/l	99
29) Tetrahydrofuran	7.824	42	237998	113.080	ug/l	99
30) Chloroform	7.947	83	158515	21.917	ug/l	99
31) Cyclohexane	8.236	56	146770	21.495	ug/l	96
32) 1,1,1-Trichloroethane	8.153	97	140074	21.745	ug/l	92
36) 1,1-Dichloropropene	8.353	75	115884	21.630	ug/l	99
37) Ethyl Acetate	7.547	43	147787	21.466	ug/l	99
38) Carbon Tetrachloride	8.341	117	117435	21.223	ug/l	90
39) Methylcyclohexane	9.583	83	138414	20.099	ug/l	96
40) Benzene	8.588	78	351627	21.551	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088080.D
 Acq On : 23 Oct 2025 10:59
 Operator : JC\MD
 Sample : VSTDIC020
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDIC020

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/24/2025

Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:52:36 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M

Quant Title : SW846 8260

QLast Update : Fri Oct 24 02:50:29 2025

Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	77407	21.272	ug/l	100
42) 1,2-Dichloroethane	8.653	62	128925	22.239	ug/l	99
43) Isopropyl Acetate	8.677	43	232810	21.914	ug/l	97
44) Trichloroethene	9.330	130	81811	21.452	ug/l	88
45) 1,2-Dichloropropane	9.600	63	86639	21.033	ug/l	97
46) Dibromomethane	9.688	93	64404	21.923	ug/l	99
47) Bromodichloromethane	9.871	83	128781	21.895	ug/l	95
48) Methyl methacrylate	9.659	41	106892	21.182	ug/l	97
49) 1,4-Dioxane	9.677	88	28059	459.958	ug/l #	94
51) 4-Methyl-2-Pentanone	10.424	43	706841	112.466	ug/l	99
52) Toluene	10.606	92	216580	21.530	ug/l	97
53) t-1,3-Dichloropropene	10.818	75	135097	21.581	ug/l	94
54) cis-1,3-Dichloropropene	10.294	75	142472	21.447	ug/l	98
55) 1,1,2-Trichloroethane	10.994	97	81773	21.426	ug/l	97
56) Ethyl methacrylate	10.859	69	129419	21.460	ug/l	99
57) 1,3-Dichloropropane	11.141	76	147164	21.938	ug/l	98
58) 2-Chloroethyl Vinyl ether	10.141	63	326199	103.833	ug/l	99
59) 2-Hexanone	11.177	43	456992	110.762	ug/l	96
60) Dibromochloromethane	11.335	129	94659	21.821	ug/l	97
61) 1,2-Dibromoethane	11.447	107	83824	21.341	ug/l	97
64) Tetrachloroethene	11.082	164	65019	20.298	ug/l	94
65) Chlorobenzene	11.871	112	233976	21.219	ug/l	95
66) 1,1,1,2-Tetrachloroethane	11.941	131	76803	21.259	ug/l	97
67) Ethyl Benzene	11.941	91	412481	21.311	ug/l	98
68) m/p-Xylenes	12.047	106	312179	43.046	ug/l	98
69) o-Xylene	12.376	106	148393	21.585	ug/l	99
70) Styrene	12.388	104	247794	22.103	ug/l	98
71) Bromoform	12.559	173	57194	21.214	ug/l #	94
73) Isopropylbenzene	12.671	105	392471	21.093	ug/l	98
74) N-amyl acetate	12.671	43	95839m	17.796	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.918	83	128906	22.253	ug/l	98
76) 1,2,3-Trichloropropane	12.971	75	102475m	19.844	ug/l	
77) Bromobenzene	12.959	156	89317	22.261	ug/l	93
78) n-propylbenzene	13.012	91	475747	20.952	ug/l	98
79) 2-Chlorotoluene	13.100	91	286955	22.160	ug/l	100
80) 1,3,5-Trimethylbenzene	13.153	105	326659	21.139	ug/l	97
81) trans-1,4-Dichloro-2-b...	12.718	75	38485	19.415	ug/l	84
82) 4-Chlorotoluene	13.200	91	300449	21.446	ug/l	99
83) tert-Butylbenzene	13.412	119	289688	20.986	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	334370	21.627	ug/l	99
85) sec-Butylbenzene	13.594	105	422803	20.848	ug/l	99
86) p-Isopropyltoluene	13.706	119	347584	21.364	ug/l	99
87) 1,3-Dichlorobenzene	13.712	146	175823	21.951	ug/l	98
88) 1,4-Dichlorobenzene	13.788	146	179756	20.841	ug/l	99
89) n-Butylbenzene	14.035	91	337053	20.915	ug/l	99
90) Hexachloroethane	14.306	117	64770	20.558	ug/l	99
91) 1,2-Dichlorobenzene	14.082	146	161912	20.971	ug/l	97
92) 1,2-Dibromo-3-Chloropr...	14.694	75	29025	21.527	ug/l	97
93) 1,2,4-Trichlorobenzene	15.370	180	95446	20.412	ug/l	99
94) Hexachlorobutadiene	15.476	225	35960	20.651	ug/l	96
95) Naphthalene	15.612	128	331649	20.704	ug/l	100
96) 1,2,3-Trichlorobenzene	15.812	180	90374	20.157	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088080.D
Acq On : 23 Oct 2025 10:59
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:52:36 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:50:29 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

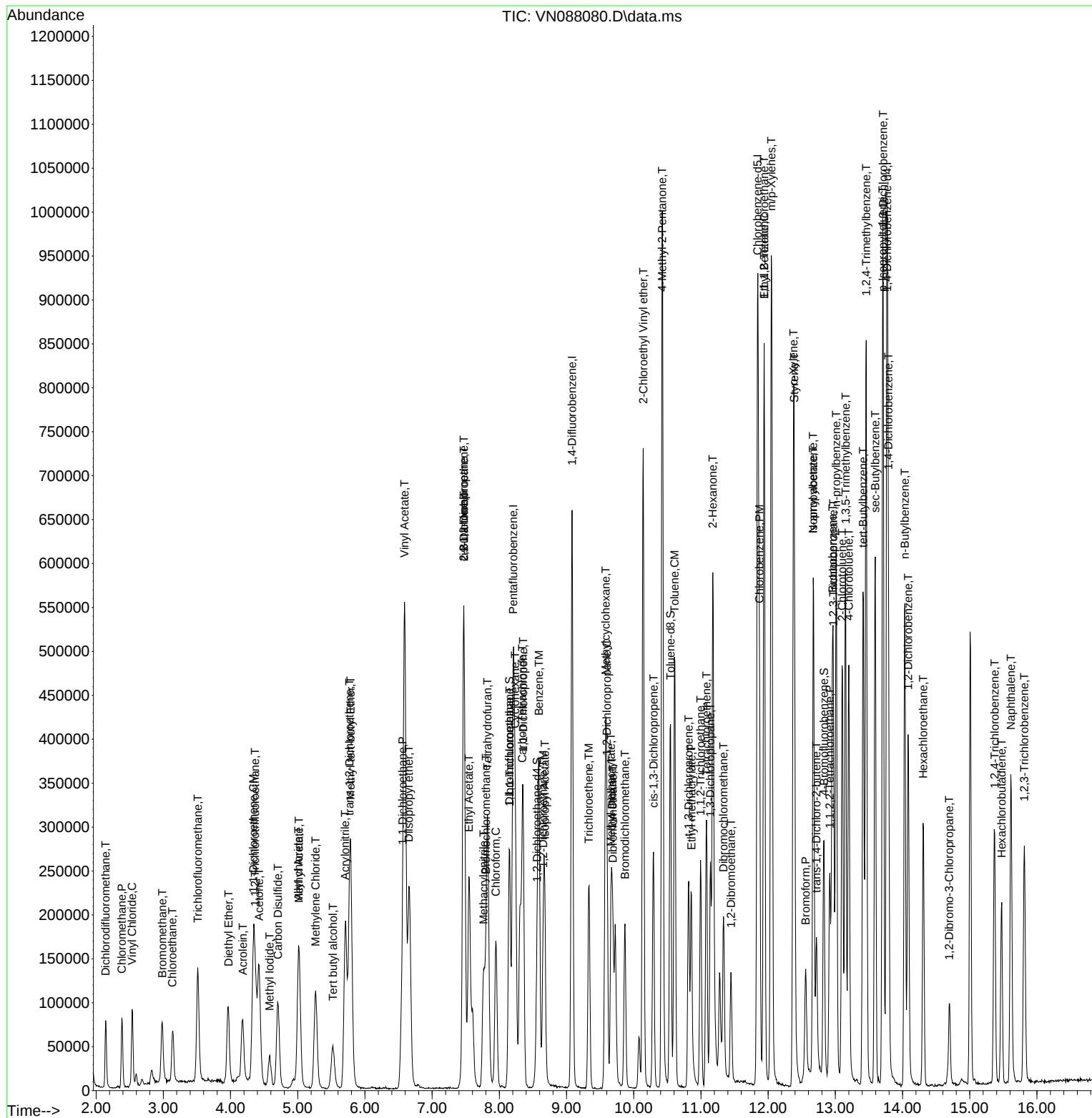
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088080.D
Acq On : 23 Oct 2025 10:59
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:52:36 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:50:29 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088081.D
 Acq On : 23 Oct 2025 11:20
 Operator : JC\MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:42:28 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	338069	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	628399	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	559795	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	281739	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.565	65	270271	46.232	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	92.460%		
35) Dibromofluoromethane	8.147	113	198004	46.902	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	93.800%		
50) Toluene-d8	10.547	98	768846	47.265	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	94.540%		
62) 4-Bromofluorobenzene	12.829	95	275556	47.966	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	95.940%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.142	85	154728	40.575	ug/l	97
3) Chloromethane	2.383	50	175497	39.118	ug/l	100
4) Vinyl Chloride	2.542	62	196434	40.185	ug/l	98
5) Bromomethane	2.977	94	115396	39.468	ug/l	97
6) Chloroethane	3.142	64	139507	39.611	ug/l	97
7) Trichlorofluoromethane	3.512	101	322932	41.420	ug/l	94
8) Diethyl Ether	3.959	74	108102	37.307	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.371	101	160825	39.976	ug/l	97
10) Methyl Iodide	4.583	142	154156	39.794	ug/l	96
11) Tert butyl alcohol	5.524	59	195274	193.892	ug/l	97
12) 1,1-Dichloroethene	4.341	96	156355	36.797	ug/l	93
13) Acrolein	4.177	56	209393	184.839	ug/l	100
14) Allyl chloride	5.012	41	274719	36.996	ug/l	97
15) Acrylonitrile	5.712	53	547451	199.555	ug/l	98
16) Acetone	4.424	43	539588	183.727	ug/l	99
17) Carbon Disulfide	4.706	76	501402	38.818	ug/l	98
18) Methyl Acetate	5.018	43	232583	38.683	ug/l	97
19) Methyl tert-butyl Ether	5.783	73	605018	38.771	ug/l	96
20) Methylene Chloride	5.265	84	182571	40.095	ug/l	96
21) trans-1,2-Dichloroethene	5.771	96	181288	38.584	ug/l	95
22) Diisopropyl ether	6.659	45	636418	40.632	ug/l	97
23) Vinyl Acetate	6.588	43	2935326	208.046	ug/l	99
24) 1,1-Dichloroethane	6.553	63	346792	39.970	ug/l	96
25) 2-Butanone	7.471	43	786350	205.282	ug/l	100
26) 2,2-Dichloropropane	7.471	77	311175	39.466	ug/l	100
27) cis-1,2-Dichloroethene	7.471	96	211777	39.442	ug/l	99
28) Bromochloromethane	7.794	49	199116	48.569	ug/l	99
29) Tetrahydrofuran	7.824	42	501146	198.682	ug/l	100
30) Chloroform	7.947	83	351684	40.574	ug/l	97
31) Cyclohexane	8.235	56	326389	39.886	ug/l	91
32) 1,1,1-Trichloroethane	8.153	97	308171	39.919	ug/l	98
36) 1,1-Dichloropropene	8.353	75	254886	41.351	ug/l	98
37) Ethyl Acetate	7.547	43	308710	38.973	ug/l	96
38) Carbon Tetrachloride	8.347	117	262154	41.178	ug/l	93
39) Methylcyclohexane	9.582	83	329045	41.530	ug/l	97
40) Benzene	8.588	78	764344	40.717	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088081.D
 Acq On : 23 Oct 2025 11:20
 Operator : JC\MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:42:28 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	169994	40.604	ug/l	100
42) 1,2-Dichloroethane	8.653	62	274103	41.094	ug/l	100
43) Isopropyl Acetate	8.671	43	509309	41.668	ug/l	99
44) Trichloroethene	9.335	130	178438	40.667	ug/l	100
45) 1,2-Dichloropropane	9.600	63	192587	40.637	ug/l	97
46) Dibromomethane	9.688	93	137229	40.600	ug/l	99
47) Bromodichloromethane	9.871	83	275730	40.745	ug/l	97
48) Methyl methacrylate	9.659	41	233909	40.288	ug/l	96
49) 1,4-Dioxane	9.682	88	55303	787.940	ug/l #	97
51) 4-Methyl-2-Pentanone	10.423	43	1524408	210.814	ug/l	99
52) Toluene	10.606	92	474479	40.995	ug/l	99
53) t-1,3-Dichloropropene	10.818	75	300895	41.776	ug/l	99
54) cis-1,3-Dichloropropene	10.294	75	314717	41.178	ug/l	95
55) 1,1,2-Trichloroethane	10.994	97	176797	40.263	ug/l	98
56) Ethyl methacrylate	10.853	69	298768	43.059	ug/l	97
57) 1,3-Dichloropropane	11.141	76	317787	41.174	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	769938	213.014	ug/l	100
59) 2-Hexanone	11.176	43	1044741	220.085	ug/l	98
60) Dibromochloromethane	11.335	129	205395	41.154	ug/l	100
61) 1,2-Dibromoethane	11.447	107	181469	40.156	ug/l	97
64) Tetrachloroethene	11.082	164	144389	39.103	ug/l	96
65) Chlorobenzene	11.870	112	526904	41.452	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.941	131	173604	41.687	ug/l	99
67) Ethyl Benzene	11.941	91	923328	41.382	ug/l	100
68) m/p-Xylenes	12.047	106	710517	84.991	ug/l	95
69) o-Xylene	12.376	106	337999	42.650	ug/l	97
70) Styrene	12.388	104	565710	43.775	ug/l	99
71) Bromoform	12.559	173	130569	42.013	ug/l #	99
73) Isopropylbenzene	12.676	105	893962	41.140	ug/l	98
74) N-amyl acetate	12.506	43	259151m	51.362	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.917	83	269498	39.836	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	261895m	43.425	ug/l	
77) Bromobenzene	12.959	156	193682	41.334	ug/l	98
78) n-propylbenzene	13.012	91	1105898	41.704	ug/l	98
79) 2-Chlorotoluene	13.100	91	632531	41.827	ug/l	100
80) 1,3,5-Trimethylbenzene	13.153	105	751960	41.667	ug/l	97
81) trans-1,4-Dichloro-2-b...	12.717	75	89183	38.524	ug/l #	81
82) 4-Chlorotoluene	13.200	91	660605	40.376	ug/l	97
83) tert-Butylbenzene	13.417	119	664441	41.215	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	760563	42.122	ug/l	99
85) sec-Butylbenzene	13.594	105	983204	41.511	ug/l	100
86) p-Isopropyltoluene	13.706	119	807519	42.500	ug/l	99
87) 1,3-Dichlorobenzene	13.711	146	388787	41.563	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	394135	39.127	ug/l	98
89) n-Butylbenzene	14.035	91	796348	42.312	ug/l	99
90) Hexachloroethane	14.306	117	150804	40.985	ug/l	96
91) 1,2-Dichlorobenzene	14.082	146	363732	40.339	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.700	75	60256	38.267	ug/l	96
93) 1,2,4-Trichlorobenzene	15.370	180	221034	40.476	ug/l	98
94) Hexachlorobutadiene	15.476	225	82469	40.553	ug/l	99
95) Naphthalene	15.611	128	769709	41.144	ug/l	100
96) 1,2,3-Trichlorobenzene	15.811	180	207445	39.618	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088081.D
Acq On : 23 Oct 2025 11:20
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:42:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:37:20 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

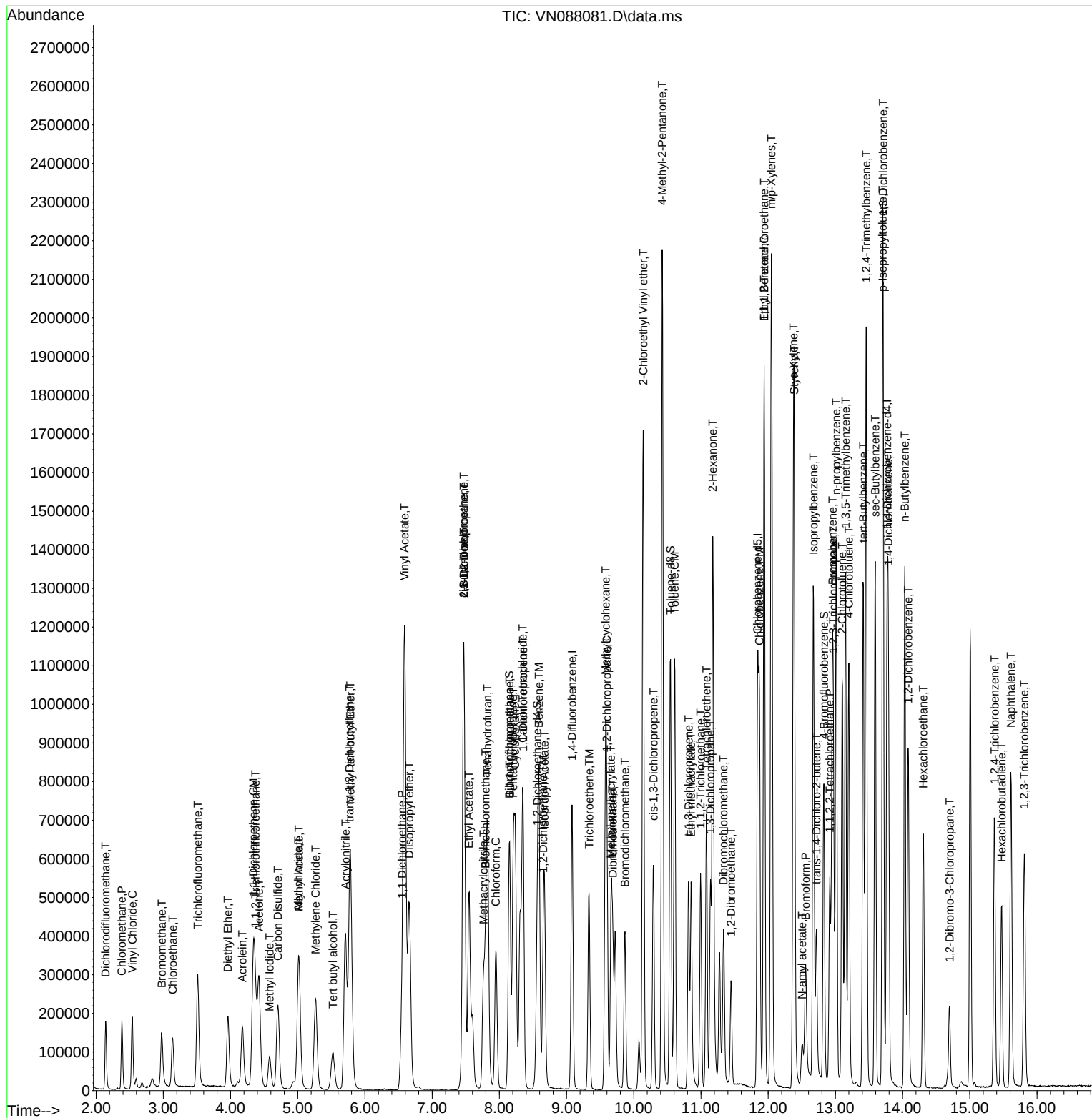
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\  
Data File : VN088081.D  
Acq On    : 23 Oct 2025  11:20  
Operator  : JC\MD  
Sample    : VSTDICCC050  
Misc      : 5.0mL/MSVOA_N/WATER  
ALS Vial  : 6      Sample Multiplier: 1
```

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:42:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:37:20 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088082.D
 Acq On : 23 Oct 2025 11:41
 Operator : JC\MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:43:27 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	328655	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	610283	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	541844	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	276404	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	540367	95.083	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 190.160%#			
35) Dibromofluoromethane	8.147	113	399554	97.454	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 194.900%#			
50) Toluene-d8	10.547	98	1566524	99.162	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 198.320%#			
62) 4-Bromofluorobenzene	12.829	95	569341	102.048	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 204.100%#			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.142	85	323877	87.364	ug/l	98
3) Chloromethane	2.383	50	380310	87.199	ug/l	99
4) Vinyl Chloride	2.536	62	419872	88.355	ug/l	98
5) Bromomethane	2.959	94	255765	89.983	ug/l	99
6) Chloroethane	3.130	64	293645	85.765	ug/l	99
7) Trichlorofluoromethane	3.506	101	677579	89.398	ug/l	97
8) Diethyl Ether	3.959	74	262726	93.266	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.365	101	368583	94.241	ug/l	99
10) Methyl Iodide	4.577	142	443084	109.415	ug/l	99
11) Tert butyl alcohol	5.524	59	496669	507.281	ug/l	97
12) 1,1-Dichloroethene	4.330	96	359796	87.100	ug/l	96
13) Acrolein	4.177	56	535773	486.494	ug/l	100
14) Allyl chloride	5.012	41	739017	102.372	ug/l	97
15) Acrylonitrile	5.706	53	1398460	524.363	ug/l	98
16) Acetone	4.424	43	1352111	473.573	ug/l	95
17) Carbon Disulfide	4.700	76	1260006	100.343	ug/l	97
18) Methyl Acetate	5.012	43	588757	100.725	ug/l	98
19) Methyl tert-butyl Ether	5.788	73	1557573	102.672	ug/l	99
20) Methylene Chloride	5.265	84	465262	103.852	ug/l	94
21) trans-1,2-Dichloroethene	5.771	96	442419	96.858	ug/l	97
22) Diisopropyl ether	6.659	45	1405211	92.284	ug/l	99
23) Vinyl Acetate	6.588	43	6435529	469.193	ug/l	100
24) 1,1-Dichloroethane	6.553	63	750482	88.975	ug/l	98
25) 2-Butanone	7.471	43	1695926	455.416	ug/l	99
26) 2,2-Dichloropropane	7.471	77	672222	87.699	ug/l	98
27) cis-1,2-Dichloroethene	7.471	96	456379	87.431	ug/l	97
28) Bromochloromethane	7.800	49	392057	98.372	ug/l	97
29) Tetrahydrofuran	7.824	42	1118711	456.222	ug/l	99
30) Chloroform	7.953	83	763656	90.626	ug/l	100
31) Cyclohexane	8.241	56	693259	87.146	ug/l	97
32) 1,1,1-Trichloroethane	8.153	97	666712	88.836	ug/l	97
36) 1,1-Dichloropropene	8.353	75	552930	92.365	ug/l	98
37) Ethyl Acetate	7.547	43	706621	91.855	ug/l	98
38) Carbon Tetrachloride	8.347	117	573295	92.723	ug/l	96
39) Methylcyclohexane	9.582	83	705005	91.622	ug/l	96
40) Benzene	8.588	78	1675215	91.888	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088082.D
 Acq On : 23 Oct 2025 11:41
 Operator : JC\MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:43:27 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.759	41	361660	88.949	ug/l	98
42) 1,2-Dichloroethane	8.653	62	585932	90.453	ug/l	100
43) Isopropyl Acetate	8.671	43	1114940	93.923	ug/l	98
44) Trichloroethene	9.335	130	388649	91.204	ug/l	94
45) 1,2-Dichloropropane	9.600	63	414728	90.107	ug/l	99
46) Dibromomethane	9.688	93	300542	91.556	ug/l	99
47) Bromodichloromethane	9.871	83	608546	92.594	ug/l #	98
48) Methyl methacrylate	9.665	41	518783	92.006	ug/l	97
49) 1,4-Dioxane	9.682	88	129011	1892.672	ug/l #	99
51) 4-Methyl-2-Pentanone	10.423	43	3369067	479.746	ug/l	99
52) Toluene	10.606	92	1051747	93.569	ug/l	97
53) t-1,3-Dichloropropene	10.818	75	682584	97.583	ug/l	98
54) cis-1,3-Dichloropropene	10.294	75	716101	96.477	ug/l	95
55) 1,1,2-Trichloroethane	10.994	97	386802	90.704	ug/l	98
56) Ethyl methacrylate	10.853	69	690302	102.440	ug/l	96
57) 1,3-Dichloropropane	11.141	76	698638	93.206	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	1711029	487.433	ug/l	99
59) 2-Hexanone	11.176	43	2389312	518.272	ug/l	99
60) Dibromochloromethane	11.335	129	460237	94.953	ug/l	100
61) 1,2-Dibromoethane	11.447	107	413544	94.227	ug/l	99
64) Tetrachloroethene	11.082	164	322496	90.231	ug/l	97
65) Chlorobenzene	11.870	112	1141556	92.783	ug/l	97
66) 1,1,1,2-Tetrachloroethane	11.935	131	377142	93.562	ug/l	99
67) Ethyl Benzene	11.941	91	2030094	94.000	ug/l	99
68) m/p-Xylenes	12.047	106	1533978	189.570	ug/l	97
69) o-Xylene	12.376	106	741253	96.633	ug/l	98
70) Styrene	12.388	104	1262211	100.907	ug/l	99
71) Bromoform	12.559	173	299375	99.521	ug/l #	98
73) Isopropylbenzene	12.676	105	1978907	92.826	ug/l	99
74) N-amyl acetate	12.488	43	604970	95.060	ug/l #	89
75) 1,1,2,2-Tetrachloroethane	12.917	83	596827	89.923	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	560461m	94.724	ug/l	
77) Bromobenzene	12.959	156	436345	94.918	ug/l	98
78) n-propylbenzene	13.012	91	2451982	94.250	ug/l	98
79) 2-Chlorotoluene	13.100	91	1406851	94.825	ug/l	100
80) 1,3,5-Trimethylbenzene	13.147	105	1673751	94.536	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.717	75	222990	98.182	ug/l #	79
82) 4-Chlorotoluene	13.200	91	1449779	90.321	ug/l	97
83) tert-Butylbenzene	13.417	119	1462710	92.484	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	1665233	94.006	ug/l	99
85) sec-Butylbenzene	13.594	105	2145645	92.338	ug/l	100
86) p-Isopropyltoluene	13.706	119	1752529	94.017	ug/l	100
87) 1,3-Dichlorobenzene	13.711	146	848480	92.456	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	874733	88.514	ug/l	99
89) n-Butylbenzene	14.035	91	1745999	94.560	ug/l	99
90) Hexachloroethane	14.311	117	337079	93.379	ug/l	96
91) 1,2-Dichlorobenzene	14.082	146	812199	91.813	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	14.694	75	134329	86.956	ug/l	94
93) 1,2,4-Trichlorobenzene	15.364	180	498767	93.098	ug/l	99
94) Hexachlorobutadiene	15.476	225	176342	88.389	ug/l	98
95) Naphthalene	15.611	128	1770584	96.473	ug/l	99
96) 1,2,3-Trichlorobenzene	15.811	180	468875	91.276	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088082.D
Acq On : 23 Oct 2025 11:41
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:43:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:37:20 2025
Response via : Initial Calibration

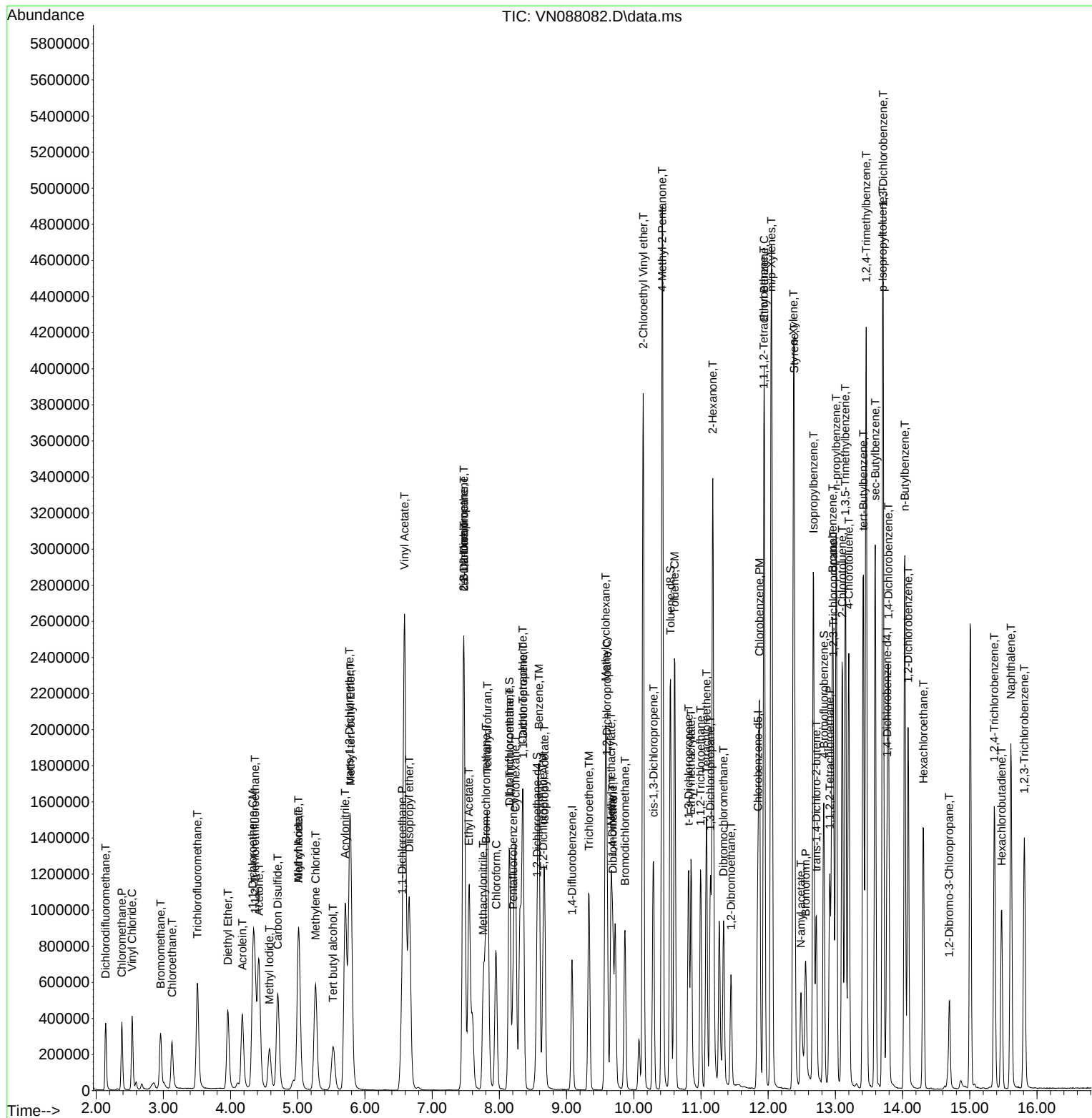
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088083.D
 Acq On : 23 Oct 2025 12:02
 Operator : JC\MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:44:28 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	317042	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	583838	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	513566	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	251277	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	829477	151.300	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 302.600%#			
35) Dibromofluoromethane	8.147	113	612902	156.263	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 312.520%#			
50) Toluene-d8	10.547	98	2423445	160.354	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 320.700%#			
62) 4-Bromofluorobenzene	12.823	95	855591	160.301	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 320.600%#			
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	2.142	85	559446	156.435	ug/l	100
3) Chloromethane	2.383	50	636497	151.285	ug/l	100
4) Vinyl Chloride	2.536	62	709780	154.833	ug/l	98
5) Bromomethane	2.942	94	399041	145.533	ug/l	99
6) Chloroethane	3.118	64	483772	146.472	ug/l	100
7) Trichlorofluoromethane	3.506	101	1113526	152.297	ug/l	97
8) Diethyl Ether	3.959	74	418383	153.964	ug/l	99
9) 1,1,2-Trichlorotrifluo...	4.365	101	620616	164.495	ug/l	99
10) Methyl Iodide	4.577	142	579553	146.858	ug/l	98
11) Tert butyl alcohol	5.536	59	687112	727.499	ug/l	98
12) 1,1-Dichloroethene	4.336	96	605802	152.025	ug/l	99
13) Acrolein	4.171	56	868773	817.761	ug/l	99
14) Allyl chloride	5.006	41	1039367	149.252	ug/l	97
15) Acrylonitrile	5.706	53	1962438	762.784	ug/l	99
16) Acetone	4.418	43	2050839	744.611	ug/l	97
17) Carbon Disulfide	4.700	76	1802128	148.772	ug/l	99
18) Methyl Acetate	5.012	43	837402	148.512	ug/l	98
19) Methyl tert-butyl Ether	5.789	73	2227290	152.197	ug/l	98
20) Methylene Chloride	5.259	84	650781	150.235	ug/l	98
21) trans-1,2-Dichloroethene	5.771	96	645153	146.416	ug/l	98
22) Diisopropyl ether	6.659	45	2329739	158.605	ug/l	99
23) Vinyl Acetate	6.589	43	10671220	806.501	ug/l	100
24) 1,1-Dichloroethane	6.553	63	1247462	153.312	ug/l	98
25) 2-Butanone	7.471	43	2779236	773.659	ug/l	99
26) 2,2-Dichloropropane	7.471	77	1131888	153.076	ug/l	99
27) cis-1,2-Dichloroethene	7.471	96	760672	151.064	ug/l	99
28) Bromochloromethane	7.794	49	596061	155.037	ug/l	97
29) Tetrahydrofuran	7.824	42	1817452	768.325	ug/l	100
30) Chloroform	7.947	83	1253456	154.201	ug/l	99
31) Cyclohexane	8.236	56	1181969	154.021	ug/l	95
32) 1,1,1-Trichloroethane	8.147	97	1103627	152.438	ug/l	96
36) 1,1-Dichloropropene	8.353	75	919113	160.490	ug/l	99
37) Ethyl Acetate	7.547	43	1144197	155.473	ug/l	98
38) Carbon Tetrachloride	8.341	117	956561	161.719	ug/l	96
39) Methylcyclohexane	9.577	83	1221844	165.983	ug/l	98
40) Benzene	8.588	78	2742115	157.221	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088083.D
 Acq On : 23 Oct 2025 12:02
 Operator : JC\MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/24/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:44:28 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 02:37:20 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	598399	153.840	ug/l	98
42) 1,2-Dichloroethane	8.653	62	970030	156.530	ug/l	100
43) Isopropyl Acetate	8.671	43	1833475	161.449	ug/l	98
44) Trichloroethene	9.335	130	646011	158.466	ug/l	95
45) 1,2-Dichloropropane	9.600	63	685501	155.683	ug/l	100
46) Dibromomethane	9.688	93	492395	156.795	ug/l	98
47) Bromodichloromethane	9.871	83	1002977	159.522	ug/l	98
48) Methyl methacrylate	9.659	41	858241	159.103	ug/l	96
49) 1,4-Dioxane	9.682	88	216888	3326.006	ug/l #	100
51) 4-Methyl-2-Pentanone	10.424	43	5433828	808.811	ug/l	99
52) Toluene	10.606	92	1731531	161.024	ug/l	97
53) t-1,3-Dichloropropene	10.812	75	1142477	170.728	ug/l	99
54) cis-1,3-Dichloropropene	10.294	75	1176069	165.622	ug/l	95
55) 1,1,2-Trichloroethane	10.994	97	621088	152.240	ug/l	97
56) Ethyl methacrylate	10.853	69	1139330	176.733	ug/l	97
57) 1,3-Dichloropropane	11.141	76	1133717	158.102	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	3047762	907.564	ug/l	100
59) 2-Hexanone	11.177	43	3910437	886.644	ug/l	99
60) Dibromochloromethane	11.341	129	763098	164.568	ug/l	99
61) 1,2-Dibromoethane	11.447	107	679250	161.779	ug/l	99
64) Tetrachloroethene	11.082	164	530165	156.503	ug/l	94
65) Chlorobenzene	11.871	112	1860929	159.579	ug/l	97
66) 1,1,1,2-Tetrachloroethane	11.935	131	611842	160.145	ug/l	99
67) Ethyl Benzene	11.941	91	3353341	163.821	ug/l	100
68) m/p-Xylenes	12.047	106	2548912	332.341	ug/l	96
69) o-Xylene	12.376	106	1207897	166.137	ug/l	98
70) Styrene	12.388	104	2041763	172.216	ug/l	100
71) Bromoform	12.559	173	493476	173.079	ug/l #	98
73) Isopropylbenzene	12.671	105	3220528	166.175	ug/l	99
74) N-amyl acetate	12.482	43	1157298	151.264	ug/l #	87
75) 1,1,2,2-Tetrachloroethane	12.918	83	957146	158.633	ug/l	100
76) 1,2,3-Trichloropropane	12.971	75	880864m	163.762	ug/l	
77) Bromobenzene	12.959	156	680258	162.773	ug/l	100
78) n-propylbenzene	13.012	91	3932907	166.291	ug/l	98
79) 2-Chlorotoluene	13.100	91	2271825	168.438	ug/l	100
80) 1,3,5-Trimethylbenzene	13.147	105	2676801	166.308	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.712	75	383072	185.532	ug/l #	79
82) 4-Chlorotoluene	13.200	91	2338686	160.269	ug/l	98
83) tert-Butylbenzene	13.418	119	2359884	164.130	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	2631783	163.426	ug/l	98
85) sec-Butylbenzene	13.594	105	3479715	164.725	ug/l	100
86) p-Isopropyltoluene	13.706	119	2852012	168.299	ug/l	99
87) 1,3-Dichlorobenzene	13.712	146	1336615	160.211	ug/l	100
88) 1,4-Dichlorobenzene	13.788	146	1384247	154.079	ug/l	100
89) n-Butylbenzene	14.029	91	2811417	167.487	ug/l	98
90) Hexachloroethane	14.306	117	554569	168.991	ug/l	97
91) 1,2-Dichlorobenzene	14.082	146	1314340	163.434	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.694	75	229843	163.663	ug/l	95
93) 1,2,4-Trichlorobenzene	15.364	180	833168	171.067	ug/l	99
94) Hexachlorobutadiene	15.476	225	297412	163.980	ug/l	99
95) Naphthalene	15.612	128	3005848	180.155	ug/l	99
96) 1,2,3-Trichlorobenzene	15.812	180	800234	171.359	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088083.D
Acq On : 23 Oct 2025 12:02
Operator : JC\MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC150

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 02:44:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 02:37:20 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_N\Data\VN102325\
 Data File : VN088083.D
 Acq On : 23 Oct 2025 12:02
 Operator : JC\MD
 Sample : VSTDIC150
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :

MSVOA_N

Client Sample Id :

VSTDIC150

Manual Integrations

APPROVED

Reviewed By : John Carlone 10/24/2025

Supervised By : Mahesh Dadoda 10/27/2025

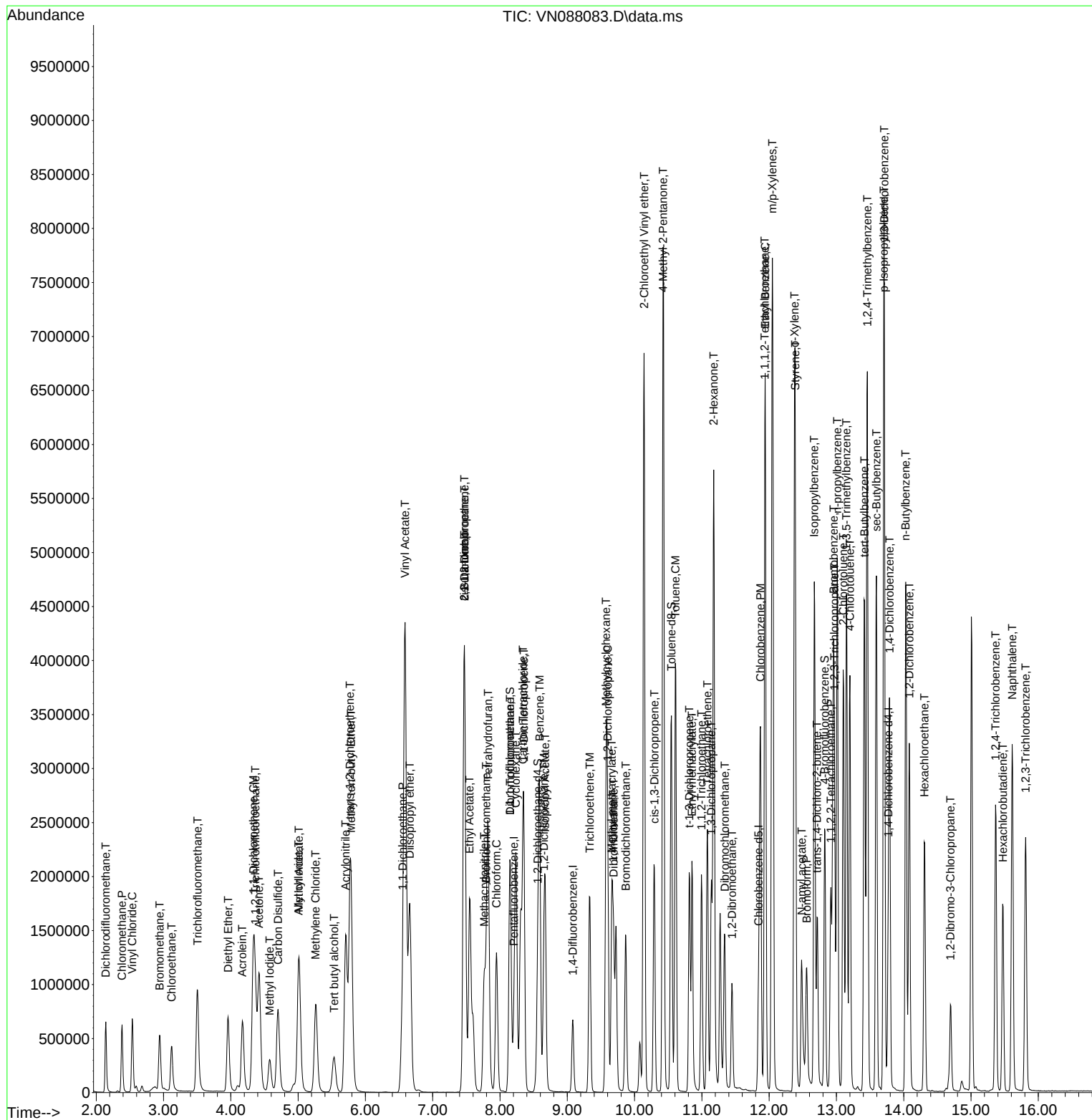
Quant Time: Oct 24 02:44:28 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M

Quant Title : SW846 8260

QLast Update : Fri Oct 24 02:37:20 2025

Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
 Supervised By :Mahesh Dadoda 10/27/2025

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	329791	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	629673	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	552962	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.771	152	275365	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	266313	46.699	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	93.400%		
35) Dibromofluoromethane	8.147	113	194019	45.865	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	91.740%		
50) Toluene-d8	10.547	98	763509	46.842	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	93.680%		
62) 4-Bromofluorobenzene	12.829	95	270623	47.012	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	94.020%		
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.142	85	181807	48.872	ug/l	100
3) Chloromethane	2.383	50	219077	50.058	ug/l	100
4) Vinyl Chloride	2.536	62	236939	49.688	ug/l	100
5) Bromomethane	2.971	94	148038	51.903	ug/l	99
6) Chloroethane	3.136	64	174590	50.817	ug/l	95
7) Trichlorofluoromethane	3.512	101	391081	51.420	ug/l	100
8) Diethyl Ether	3.959	74	151702	53.668	ug/l	99
9) 1,1,2-Trichlorotrifluo...	4.365	101	214444	54.641	ug/l	98
10) Methyl Iodide	4.583	142	188924	48.914	ug/l	94
11) Tert butyl alcohol	5.512	59	223370	227.357	ug/l	100
12) 1,1-Dichloroethene	4.336	96	214504	51.748	ug/l	99
13) Acrolein	4.177	56	314965	285.010	ug/l	99
14) Allyl chloride	5.012	41	338733	46.622	ug/l	97
15) Acrylonitrile	5.706	53	652411	243.784	ug/l	98
16) Acetone	4.418	43	708708	247.368	ug/l	98
17) Carbon Disulfide	4.706	76	597135	47.390	ug/l	98
18) Methyl Acetate	5.018	43	278412	47.467	ug/l	98
19) Methyl tert-butyl Ether	5.783	73	754371	49.555	ug/l	99
20) Methylene Chloride	5.259	84	226995	50.891	ug/l	98
21) trans-1,2-Dichloroethene	5.771	96	217864	47.883	ug/l	99
22) Diisopropyl ether	6.653	45	789811	51.691	ug/l	98
23) Vinyl Acetate	6.589	43	3597787	261.399	ug/l	99
24) 1,1-Dichloroethane	6.547	63	422648	49.935	ug/l	98
25) 2-Butanone	7.465	43	930039	246.326	ug/l	99
26) 2,2-Dichloropropane	7.471	77	384885	50.040	ug/l	99
27) cis-1,2-Dichloroethene	7.465	96	258806	49.410	ug/l	98
28) Bromochloromethane	7.794	49	202137	50.544	ug/l	100
29) Tetrahydrofuran	7.818	42	604070	245.497	ug/l	99
30) Chloroform	7.947	83	423655	50.104	ug/l	96
31) Cyclohexane	8.236	56	395022	49.485	ug/l	96
32) 1,1,1-Trichloroethane	8.147	97	374970	49.791	ug/l	98
36) 1,1-Dichloropropene	8.353	75	305017	49.383	ug/l	97
37) Ethyl Acetate	7.547	43	368137	46.186	ug/l	97
38) Carbon Tetrachloride	8.341	117	320797	50.287	ug/l	98
39) Methylcyclohexane	9.583	83	396292	49.916	ug/l	97
40) Benzene	8.588	78	933204	49.611	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 2025
 Response via : Initial Calibration

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
 Supervised By :Mahesh Dadoda 10/27/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.759	41	201543	48.042	ug/l	99
42) 1,2-Dichloroethane	8.647	62	333208	49.855	ug/l	100
43) Isopropyl Acetate	8.671	43	617708	50.434	ug/l	98
44) Trichloroethene	9.330	130	215931	49.112	ug/l	97
45) 1,2-Dichloropropane	9.600	63	233818	49.237	ug/l	94
46) Dibromomethane	9.688	93	169580	50.069	ug/l	98
47) Bromodichloromethane	9.865	83	341897	50.420	ug/l	97
48) Methyl methacrylate	9.659	41	285311	50.456	ug/l	97
49) 1,4-Dioxane	9.677	88	68041	967.465	ug/l #	99
51) 4-Methyl-2-Pentanone	10.424	43	1835452	253.315	ug/l	99
52) Toluene	10.606	92	584587	50.407	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	378294	52.416	ug/l	98
54) cis-1,3-Dichloropropene	10.288	75	396097	51.721	ug/l	96
55) 1,1,2-Trichloroethane	10.994	97	212827	48.370	ug/l	96
56) Ethyl methacrylate	10.853	69	377487	54.214	ug/l	96
57) 1,3-Dichloropropane	11.141	76	393469	50.877	ug/l	98
58) 2-Chloroethyl Vinyl ether	10.141	63	973004	268.651	ug/l	99
59) 2-Hexanone	11.177	43	1284662	267.268	ug/l	98
60) Dibromochloromethane	11.341	129	253809	50.751	ug/l	99
61) 1,2-Dibromoethane	11.447	107	226306	49.976	ug/l	99
64) Tetrachloroethene	11.082	164	175856	48.214	ug/l	97
65) Chlorobenzene	11.871	112	637824	50.798	ug/l	95
66) 1,1,1,2-Tetrachloroethane	11.935	131	209987	51.047	ug/l	98
67) Ethyl Benzene	11.941	91	1128615	51.208	ug/l	99
68) m/p-Xylenes	12.047	106	859721	104.109	ug/l	98
69) o-Xylene	12.376	106	414102	52.899	ug/l	97
70) Styrene	12.388	104	691022	54.133	ug/l	99
71) Bromoform	12.559	173	158376	51.590	ug/l #	98
73) Isopropylbenzene	12.671	105	1095685	51.590	ug/l	99
74) N-amyl acetate	12.500	43	282147	58.174	ug/l	97
75) 1,1,2,2-Tetrachloroethane	12.918	83	327851	49.583	ug/l	100
76) 1,2,3-Trichloropropane	12.971	75	313480m	49.793	ug/l	
77) Bromobenzene	12.959	156	240684	52.553	ug/l	98
78) n-propylbenzene	13.012	91	1344076	51.859	ug/l	98
79) 2-Chlorotoluene	13.100	91	775440	52.463	ug/l	100
80) 1,3,5-Trimethylbenzene	13.147	105	914603	51.853	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.718	75	115268	51.074	ug/l #	80
82) 4-Chlorotoluene	13.200	91	807500	50.497	ug/l	98
83) tert-Butylbenzene	13.418	119	807306	51.237	ug/l	98
84) 1,2,4-Trimethylbenzene	13.459	105	923338	52.321	ug/l	99
85) sec-Butylbenzene	13.594	105	1189055	51.364	ug/l	99
86) p-Isopropyltoluene	13.706	119	993123	53.478	ug/l	100
87) 1,3-Dichlorobenzene	13.712	146	469549	51.358	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	481076	48.992	ug/l	99
89) n-Butylbenzene	14.035	91	950993	51.698	ug/l	98
90) Hexachloroethane	14.306	117	181442	50.453	ug/l	96
91) 1,2-Dichlorobenzene	14.082	146	447427	50.769	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.694	75	72041	46.810	ug/l	97
93) 1,2,4-Trichlorobenzene	15.365	180	265531	49.750	ug/l	99
94) Hexachlorobutadiene	15.470	225	96309	48.455	ug/l	97
95) Naphthalene	15.612	128	919023	50.263	ug/l	100
96) 1,2,3-Trichlorobenzene	15.812	180	250044	48.860	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088085.D
Acq On : 23 Oct 2025 14:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN102325

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025

Quant Time: Oct 24 03:19:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 03:16:47 2025
Response via : Initial Calibration

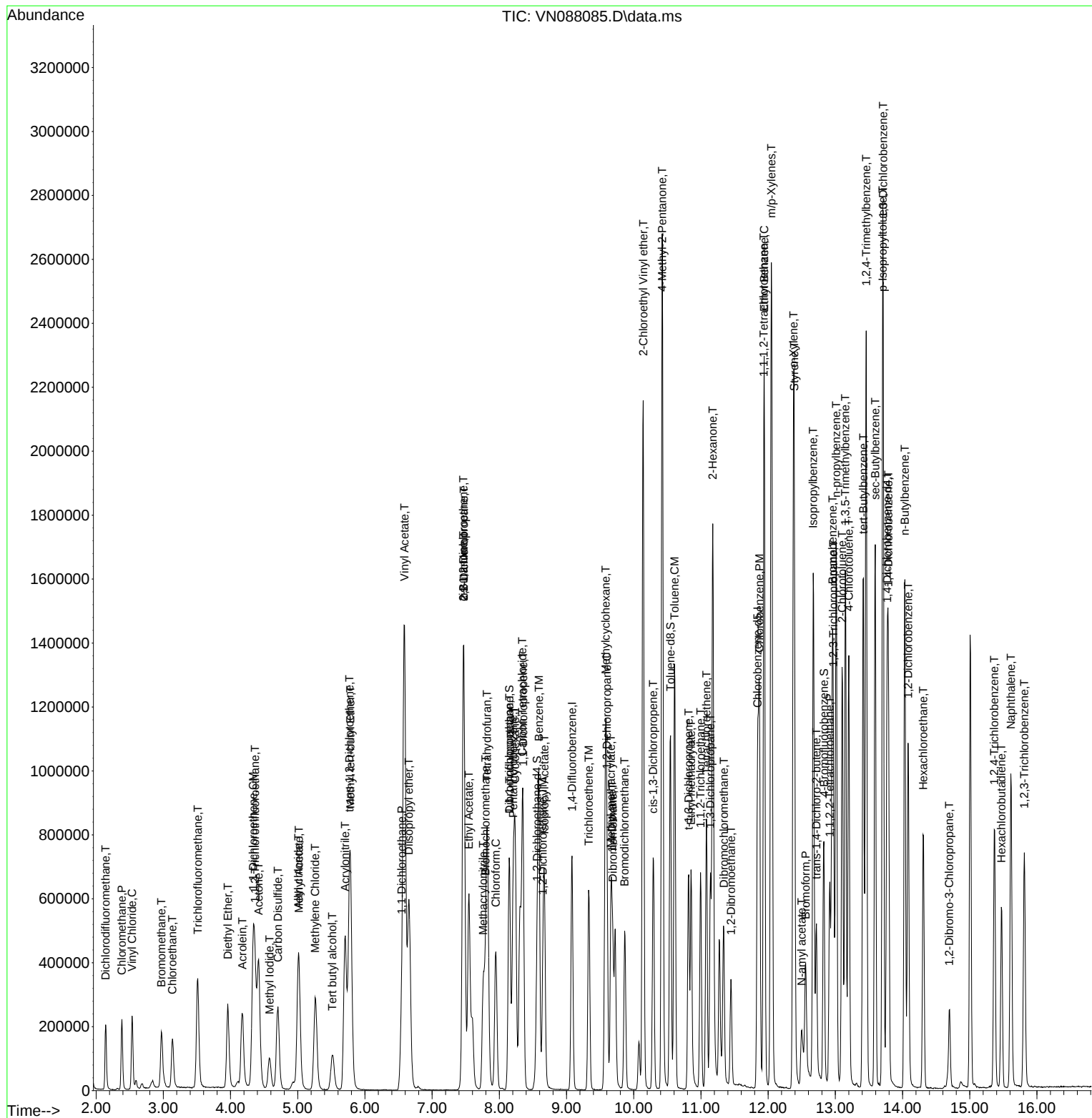
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
MSVOA_N
ClientSampleId :
ICVVN102325

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/27/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICSVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 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	98	0.00
2 T	Dichlorodifluoromethane	0.564	0.551	2.3	118	0.00
3 P	Chloromethane	0.664	0.664	0.0	125	0.00
4 C	Vinyl Chloride	0.723	0.718	0.7#	121	0.00
5 T	Bromomethane	0.432	0.449	-3.9	128	0.00
6 T	Chloroethane	0.521	0.529	-1.5	125	0.00
7 T	Trichlorofluoromethane	1.153	1.186	-2.9	121	0.00
8 T	Diethyl Ether	0.429	0.460	-7.2	140	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.595	0.650	-9.2	133	0.00
10 T	Methyl Iodide	0.544	0.573	-5.3	123	0.00
11 T	Tert butyl alcohol	0.149	0.135	9.4	114	0.00
12 CM	1,1-Dichloroethene	0.628	0.650	-3.5#	137	0.00
13 T	Acrolein	0.168	0.191	-13.7	150#	0.00
14 T	Allyl chloride	1.102	1.027	6.8	123	0.00
15 T	Acrylonitrile	0.406	0.396	2.5	119	0.00
16 T	Acetone	0.434	0.430	0.9	131	0.00
17 T	Carbon Disulfide	1.910	1.811	5.2	119	0.00
18 T	Methyl Acetate	0.889	0.844	5.1	120	0.00
19 T	Methyl tert-butyl Ether	2.308	2.287	0.9	125	0.00
20 T	Methylene Chloride	0.729	0.688	5.6	124	0.00
21 T	trans-1,2-Dichloroethene	0.690	0.661	4.2	120	0.00
22 T	Diisopropyl ether	2.317	2.395	-3.4	124	0.00
23 T	Vinyl Acetate	2.087	2.182	-4.6	123	0.00
24 P	1,1-Dichloroethane	1.283	1.282	0.1	122	0.00
25 T	2-Butanone	0.572	0.564	1.4	118	0.00
26 T	2,2-Dichloropropane	1.166	1.167	-0.1	124	0.00
27 T	cis-1,2-Dichloroethene	0.794	0.785	1.1	122	0.00
28 T	Bromochloromethane	0.606	0.613	-1.2	102	0.00
29 T	Tetrahydrofuran	0.373	0.366	1.9	121	0.00
30 C	Chloroform	1.282	1.285	-0.2#	120	0.00
31 T	Cyclohexane	1.210	1.198	1.0	121	0.00
32 T	1,1,1-Trichloroethane	1.142	1.137	0.4	122	0.00
33 S	1,2-Dichloroethane-d4	0.865	0.808	6.6	99	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	100	0.00
35 S	Dibromofluoromethane	0.336	0.308	8.3	98	0.00
36 T	1,1-Dichloropropene	0.490	0.484	1.2	120	0.00
37 T	Ethyl Acetate	0.633	0.585	7.6	119	0.00
38 T	Carbon Tetrachloride	0.507	0.509	-0.4	122	0.00
39 T	Methylcyclohexane	0.630	0.629	0.2	120	0.00
40 TM	Benzene	1.494	1.482	0.8	122	0.00
41 T	Methacrylonitrile	0.333	0.320	3.9	119	0.00
42 TM	1,2-Dichloroethane	0.531	0.529	0.4	122	0.00
43 T	Isopropyl Acetate	0.973	0.981	-0.8	121	0.00
44 TM	Trichloroethene	0.349	0.343	1.7	121	0.00
45 C	1,2-Dichloropropane	0.377	0.371	1.6#	121	0.00
46 T	Dibromomethane	0.269	0.269	0.0	124	0.00
47 T	Bromodichloromethane	0.538	0.543	-0.9	124	0.00
48 T	Methyl methacrylate	0.449	0.453	-0.9	122	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICSVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 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	0.006	0.005	16.7	123	0.00
50 S	Toluene-d8	1.294	1.213	6.3	99	0.00
51 T	4-Methyl-2-Pentanone	0.575	0.583	-1.4	120	0.00
52 CM	Toluene	0.921	0.928	-0.8#	123	0.00
53 T	t-1,3-Dichloropropene	0.573	0.601	-4.9	126	0.00
54 T	cis-1,3-Dichloropropene	0.608	0.629	-3.5	126	0.00
55 T	1,1,2-Trichloroethane	0.349	0.338	3.2	120	0.00
56 T	Ethyl methacrylate	0.553	0.599	-8.3	126	0.00
57 T	1,3-Dichloropropane	0.614	0.625	-1.8	124	0.00
58 T	2-Chloroethyl Vinyl ether	0.288	0.309	-7.3	126	0.00
59 T	2-Hexanone	0.382	0.408	-6.8	123	0.00
60 T	Dibromochloromethane	0.397	0.403	-1.5	124	0.00
61 T	1,2-Dibromoethane	0.360	0.359	0.3	125	0.00
62 S	4-Bromofluorobenzene	0.457	0.430	5.9	98	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
64 T	Tetrachloroethene	0.330	0.318	3.6	122	0.00
65 PM	Chlorobenzene	1.135	1.153	-1.6	121	0.00
66 T	1,1,1,2-Tetrachloroethane	0.372	0.380	-2.2	121	0.00
67 C	Ethyl Benzene	1.993	2.041	-2.4#	122	0.00
68 T	m/p-Xylenes	0.747	0.777	-4.0	121	0.00
69 T	o-Xylene	0.708	0.749	-5.8	123	0.00
70 T	Styrene	1.154	1.250	-8.3	122	0.00
71 P	Bromoform	0.278	0.286	-2.9	121	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00
73 T	Isopropylbenzene	3.856	3.979	-3.2	123	0.00
74 T	N-amyl acetate	1.095	1.025	6.4	109	0.00
75 P	1,1,2,2-Tetrachloroethane	1.201	1.191	0.8	122	0.00
76 T	1,2,3-Trichloropropane	1.143	1.138	0.4	120	0.00
77 T	Bromobenzene	0.832	0.874	-5.0	124	0.00
78 T	n-propylbenzene	4.706	4.881	-3.7	122	0.00
79 T	2-Chlorotoluene	2.684	2.816	-4.9	123	0.00
80 T	1,3,5-Trimethylbenzene	3.203	3.321	-3.7	122	0.00
81 T	trans-1,4-Dichloro-2-butene	0.410	0.419	-2.2	129	0.00
82 T	4-Chlorotoluene	2.904	2.932	-1.0	122	0.00
83 T	tert-Butylbenzene	2.861	2.932	-2.5	122	0.00
84 T	1,2,4-Trimethylbenzene	3.204	3.353	-4.7	121	0.00
85 T	sec-Butylbenzene	4.203	4.318	-2.7	121	0.00
86 T	p-Isopropyltoluene	3.372	3.607	-7.0	123	0.00
87 T	1,3-Dichlorobenzene	1.660	1.705	-2.7	121	0.00
88 T	1,4-Dichlorobenzene	1.783	1.747	2.0	122	0.00
89 T	n-Butylbenzene	3.340	3.454	-3.4	119	0.00
90 T	Hexachloroethane	0.653	0.659	-0.9	120	0.00
91 T	1,2-Dichlorobenzene	1.600	1.625	-1.6	123	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.279	0.262	6.1	120	0.00
93 T	1,2,4-Trichlorobenzene	0.969	0.964	0.5	120	0.00
94 T	Hexachlorobutadiene	0.361	0.350	3.0	117	0.00
95 T	Naphthalene	3.320	3.337	-0.5	119	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088085.D
Acq On : 23 Oct 2025 14:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN102325

Quant Time: Oct 24 03:19:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 03:16:47 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	0.929	0.908	2.3	121	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 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	98	0.00
2 T	Dichlorodifluoromethane	50.000	48.872	2.3	118	0.00
3 P	Chloromethane	50.000	50.058	-0.1	125	0.00
4 C	Vinyl Chloride	50.000	49.688	0.6#	121	0.00
5 T	Bromomethane	50.000	51.903	-3.8	128	0.00
6 T	Chloroethane	50.000	50.817	-1.6	125	0.00
7 T	Trichlorofluoromethane	50.000	51.420	-2.8	121	0.00
8 T	Diethyl Ether	50.000	53.668	-7.3	140	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	54.641	-9.3	133	0.00
10 T	Methyl Iodide	50.000	48.914	2.2	123	0.00
11 T	Tert butyl alcohol	250.000	227.357	9.1	114	0.00
12 CM	1,1-Dichloroethene	50.000	51.748	-3.5#	137	0.00
13 T	Acrolein	250.000	285.010	-14.0	150	0.00
14 T	Allyl chloride	50.000	46.622	6.8	123	0.00
15 T	Acrylonitrile	250.000	243.784	2.5	119	0.00
16 T	Acetone	250.000	247.368	1.1	131	0.00
17 T	Carbon Disulfide	50.000	47.390	5.2	119	0.00
18 T	Methyl Acetate	50.000	47.467	5.1	120	0.00
19 T	Methyl tert-butyl Ether	50.000	49.555	0.9	125	0.00
20 T	Methylene Chloride	50.000	50.891	-1.8	124	0.00
21 T	trans-1,2-Dichloroethene	50.000	47.883	4.2	120	0.00
22 T	Diisopropyl ether	50.000	51.691	-3.4	124	0.00
23 T	Vinyl Acetate	250.000	261.399	-4.6	123	0.00
24 P	1,1-Dichloroethane	50.000	49.935	0.1	122	0.00
25 T	2-Butanone	250.000	246.326	1.5	118	0.00
26 T	2,2-Dichloropropane	50.000	50.040	-0.1	124	0.00
27 T	cis-1,2-Dichloroethene	50.000	49.410	1.2	122	0.00
28 T	Bromochloromethane	50.000	50.544	-1.1	102	0.00
29 T	Tetrahydrofuran	250.000	245.497	1.8	121	0.00
30 C	Chloroform	50.000	50.104	-0.2#	120	0.00
31 T	Cyclohexane	50.000	49.485	1.0	121	0.00
32 T	1,1,1-Trichloroethane	50.000	49.791	0.4	122	0.00
33 S	1,2-Dichloroethane-d4	50.000	46.699	6.6	99	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	100	0.00
35 S	Dibromofluoromethane	50.000	45.865	8.3	98	0.00
36 T	1,1-Dichloropropene	50.000	49.383	1.2	120	0.00
37 T	Ethyl Acetate	50.000	46.186	7.6	119	0.00
38 T	Carbon Tetrachloride	50.000	50.287	-0.6	122	0.00
39 T	Methylcyclohexane	50.000	49.916	0.2	120	0.00
40 TM	Benzene	50.000	49.611	0.8	122	0.00
41 T	Methacrylonitrile	50.000	48.042	3.9	119	0.00
42 TM	1,2-Dichloroethane	50.000	49.855	0.3	122	0.00
43 T	Isopropyl Acetate	50.000	50.434	-0.9	121	0.00
44 TM	Trichloroethene	50.000	49.112	1.8	121	0.00
45 C	1,2-Dichloropropane	50.000	49.237	1.5#	121	0.00
46 T	Dibromomethane	50.000	50.069	-0.1	124	0.00
47 T	Bromodichloromethane	50.000	50.420	-0.8	124	0.00
48 T	Methyl methacrylate	50.000	50.456	-0.9	122	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
 Data File : VN088085.D
 Acq On : 23 Oct 2025 14:54
 Operator : JC\MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 ICVVN102325

Quant Time: Oct 24 03:19:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Fri Oct 24 03:16:47 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	967.465	3.3	123	0.00
50 S	Toluene-d8	50.000	46.842	6.3	99	0.00
51 T	4-Methyl-2-Pentanone	250.000	253.315	-1.3	120	0.00
52 CM	Toluene	50.000	50.407	-0.8#	123	0.00
53 T	t-1,3-Dichloropropene	50.000	52.416	-4.8	126	0.00
54 T	cis-1,3-Dichloropropene	50.000	51.721	-3.4	126	0.00
55 T	1,1,2-Trichloroethane	50.000	48.370	3.3	120	0.00
56 T	Ethyl methacrylate	50.000	54.214	-8.4	126	0.00
57 T	1,3-Dichloropropane	50.000	50.877	-1.8	124	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	268.651	-7.5	126	0.00
59 T	2-Hexanone	250.000	267.268	-6.9	123	0.00
60 T	Dibromochloromethane	50.000	50.751	-1.5	124	0.00
61 T	1,2-Dibromoethane	50.000	49.976	0.0	125	0.00
62 S	4-Bromofluorobenzene	50.000	47.012	6.0	98	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	99	0.00
64 T	Tetrachloroethene	50.000	48.214	3.6	122	0.00
65 PM	Chlorobenzene	50.000	50.798	-1.6	121	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	51.047	-2.1	121	0.00
67 C	Ethyl Benzene	50.000	51.208	-2.4#	122	0.00
68 T	m/p-Xylenes	100.000	104.109	-4.1	121	0.00
69 T	o-Xylene	50.000	52.899	-5.8	123	0.00
70 T	Styrene	50.000	54.133	-8.3	122	0.00
71 P	Bromoform	50.000	51.590	-3.2	121	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	98	0.00
73 T	Isopropylbenzene	50.000	51.590	-3.2	123	0.00
74 T	N-amyl acetate	50.000	58.174	-16.3	109	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	49.583	0.8	122	0.00
76 T	1,2,3-Trichloropropane	50.000	49.793	0.4	120	0.00
77 T	Bromobenzene	50.000	52.553	-5.1	124	0.00
78 T	n-propylbenzene	50.000	51.859	-3.7	122	0.00
79 T	2-Chlorotoluene	50.000	52.463	-4.9	123	0.00
80 T	1,3,5-Trimethylbenzene	50.000	51.853	-3.7	122	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	51.074	-2.1	129	0.00
82 T	4-Chlorotoluene	50.000	50.497	-1.0	122	0.00
83 T	tert-Butylbenzene	50.000	51.237	-2.5	122	0.00
84 T	1,2,4-Trimethylbenzene	50.000	52.321	-4.6	121	0.00
85 T	sec-Butylbenzene	50.000	51.364	-2.7	121	0.00
86 T	p-Isopropyltoluene	50.000	53.478	-7.0	123	0.00
87 T	1,3-Dichlorobenzene	50.000	51.358	-2.7	121	0.00
88 T	1,4-Dichlorobenzene	50.000	48.992	2.0	122	0.00
89 T	n-Butylbenzene	50.000	51.698	-3.4	119	0.00
90 T	Hexachloroethane	50.000	50.453	-0.9	120	0.00
91 T	1,2-Dichlorobenzene	50.000	50.769	-1.5	123	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	46.810	6.4	120	0.00
93 T	1,2,4-Trichlorobenzene	50.000	49.750	0.5	120	0.00
94 T	Hexachlorobutadiene	50.000	48.455	3.1	117	0.00
95 T	Naphthalene	50.000	50.263	-0.5	119	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088085.D
Acq On : 23 Oct 2025 14:54
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN102325

Quant Time: Oct 24 03:19:30 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Fri Oct 24 03:16:47 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	48.860	2.3	121	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>LIRO01</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3468</u>
Instrument ID:	<u>MSVOA_N</u>	Calibration Date/Time:	<u>10/27/2025</u> <u>10:40</u>
Lab File ID:	<u>VN088102.D</u>	Init. Calib. Date(s):	<u>10/23/2025</u> <u>10/23/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>09:42</u> <u>12:02</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Methyl tert-butyl Ether	2.308	2.427		5.16	20
Benzene	1.494	1.599		7.03	20
Toluene	0.921	0.975		5.86	20
Ethyl Benzene	1.993	2.130		6.87	20
m/p-Xylenes	0.747	0.796		6.56	20
o-Xylene	0.708	0.768		8.48	20
Isopropylbenzene	3.856	4.002		3.79	20
n-propylbenzene	4.706	4.968		5.57	20
1,3,5-Trimethylbenzene	3.203	3.432		7.15	20
tert-Butylbenzene	2.861	2.988		4.44	20
1,2,4-Trimethylbenzene	3.204	3.458		7.93	20
sec-Butylbenzene	4.203	4.388		4.4	20
p-Isopropyltoluene	3.372	3.664		8.66	20
n-Butylbenzene	3.340	3.566		6.77	20
Naphthalene	3.320	3.431		3.34	20
1,2-Dichloroethane-d4	0.865	0.876		1.27	20
Dibromofluoromethane	0.336	0.332		-1.19	20
Toluene-d8	1.294	1.241		-4.1	20
4-Bromofluorobenzene	0.457	0.460		0.66	20

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/28/2025
 Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	321965	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	587119	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	522069	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	267876	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	281974	50.647	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 101.300%	
35) Dibromofluoromethane	8.147	113	194920	49.418	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 98.840%	
50) Toluene-d8	10.547	98	728690	47.946	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 95.900%	
62) 4-Bromofluorobenzene	12.829	95	269801	50.267	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 100.540%	

Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.142	85	192457	52.993	ug/l	99
3) Chloromethane	2.383	50	220091	51.512	ug/l	98
4) Vinyl Chloride	2.536	62	240095	51.574	ug/l	95
5) Bromomethane	2.965	94	126264	45.345	ug/l	93
6) Chloroethane	3.136	64	153869	45.875	ug/l	97
7) Trichlorofluoromethane	3.506	101	363927	49.013	ug/l	100
8) Diethyl Ether	3.959	74	133136	48.245	ug/l	95
9) 1,1,2-Trichlorotrifluo...	4.365	101	191739	50.044	ug/l	98
10) Methyl Iodide	4.583	142	184213	48.858	ug/l	98
11) Tert butyl alcohol	5.524	59	252556	263.312	ug/l	98
12) 1,1-Dichloroethene	4.336	96	188755	46.643	ug/l	95
13) Acrolein	4.177	56	340988	316.058	ug/l	100
14) Allyl chloride	5.018	41	360462	50.819	ug/l	97
15) Acrylonitrile	5.706	53	697816	267.088	ug/l	99
16) Acetone	4.424	43	692239	247.493	ug/l	98
17) Carbon Disulfide	4.706	76	605311	49.207	ug/l	100
18) Methyl Acetate	5.018	43	308316	53.843	ug/l	99
19) Methyl tert-butyl Ether	5.783	73	781435	52.581	ug/l	97
20) Methylene Chloride	5.265	84	233190	53.510	ug/l	93
21) trans-1,2-Dichloroethene	5.777	96	218235	49.131	ug/l	97
22) Diisopropyl ether	6.659	45	803931	53.894	ug/l	98
23) Vinyl Acetate	6.594	43	3682428	274.052	ug/l	100
24) 1,1-Dichloroethane	6.553	63	440607	53.322	ug/l	99
25) 2-Butanone	7.471	43	989217	268.368	ug/l	98
26) 2,2-Dichloropropane	7.477	77	378497	50.405	ug/l	98
27) cis-1,2-Dichloroethene	7.465	96	255734	50.010	ug/l	92
28) Bromochloromethane	7.794	49	195405	50.048	ug/l	99
29) Tetrahydrofuran	7.824	42	635795	264.671	ug/l	98
30) Chloroform	7.947	83	442103	53.556	ug/l	99
31) Cyclohexane	8.241	56	403281	51.747	ug/l	99
32) 1,1,1-Trichloroethane	8.153	97	383459	52.155	ug/l	98
36) 1,1-Dichloropropene	8.353	75	313772	54.483	ug/l	99
37) Ethyl Acetate	7.547	43	387720	52.169	ug/l	97
38) Carbon Tetrachloride	8.341	117	334369	56.213	ug/l	96
39) Methylcyclohexane	9.582	83	383340	51.784	ug/l	99
40) Benzene	8.588	78	938729	53.522	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/28/2025
 Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	208389	53.275	ug/l	98
42) 1,2-Dichloroethane	8.653	62	362020	58.091	ug/l	99
43) Isopropyl Acetate	8.671	43	631669	55.312	ug/l	99
44) Trichloroethene	9.335	130	211158	51.507	ug/l	99
45) 1,2-Dichloropropane	9.600	63	242214	54.702	ug/l	99
46) Dibromomethane	9.688	93	173231	54.854	ug/l	98
47) Bromodichloromethane	9.871	83	357488	56.540	ug/l	98
48) Methyl methacrylate	9.665	41	305563	57.954	ug/l	98
49) 1,4-Dioxane	9.676	88	70907	1081.292	ug/l #	93
51) 4-Methyl-2-Pentanone	10.423	43	1942375	287.502	ug/l	100
52) Toluene	10.606	92	572392	52.932	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	375796	55.844	ug/l	100
54) cis-1,3-Dichloropropene	10.294	75	388258	54.372	ug/l	99
55) 1,1,2-Trichloroethane	10.994	97	219324	53.460	ug/l	99
56) Ethyl methacrylate	10.853	69	370392	57.050	ug/l	95
57) 1,3-Dichloropropane	11.141	76	390798	54.194	ug/l	98
58) 2-Chloroethyl Vinyl ether	10.141	63	976156	289.056	ug/l	100
59) 2-Hexanone	11.176	43	1315305	293.477	ug/l	99
60) Dibromochloromethane	11.341	129	253054	54.268	ug/l	99
61) 1,2-Dibromoethane	11.447	107	225061	53.304	ug/l	100
64) Tetrachloroethene	11.082	164	179133	52.018	ug/l	96
65) Chlorobenzene	11.870	112	609369	51.404	ug/l	97
66) 1,1,1,2-Tetrachloroethane	11.935	131	210704	54.252	ug/l	99
67) Ethyl Benzene	11.941	91	1111924	53.436	ug/l	99
68) m/p-Xylenes	12.047	106	830752	106.554	ug/l	99
69) o-Xylene	12.376	106	400758	54.223	ug/l	99
70) Styrene	12.388	104	683706	56.729	ug/l	98
71) Bromoform	12.559	173	160954	55.533	ug/l #	99
73) Isopropylbenzene	12.676	105	1071906	51.882	ug/l	99
74) N-amyl acetate	12.506	43	306906m	52.328	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.917	83	333767	51.889	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	327140m	53.415	ug/l	
77) Bromobenzene	12.959	156	237552	53.320	ug/l	97
78) n-propylbenzene	13.012	91	1330747	52.780	ug/l	99
79) 2-Chlorotoluene	13.100	91	786292	54.685	ug/l	97
80) 1,3,5-Trimethylbenzene	13.153	105	919244	53.573	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.717	75	104371	47.538	ug/l	90
82) 4-Chlorotoluene	13.200	91	803817	51.672	ug/l	99
83) tert-Butylbenzene	13.412	119	800535	52.227	ug/l	100
84) 1,2,4-Trimethylbenzene	13.459	105	926257	53.954	ug/l	99
85) sec-Butylbenzene	13.594	105	1175420	52.195	ug/l	100
86) p-Isopropyltoluene	13.706	119	981553	54.333	ug/l	99
87) 1,3-Dichlorobenzene	13.711	146	469251	52.761	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	485747	50.850	ug/l	98
89) n-Butylbenzene	14.035	91	955257	53.382	ug/l	99
90) Hexachloroethane	14.306	117	186582	53.333	ug/l	95
91) 1,2-Dichlorobenzene	14.082	146	448834	52.353	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.694	75	82283	54.960	ug/l	95
93) 1,2,4-Trichlorobenzene	15.364	180	271820	52.352	ug/l	99
94) Hexachlorobutadiene	15.470	225	105206	54.412	ug/l	99
95) Naphthalene	15.611	128	919189	51.678	ug/l	100
96) 1,2,3-Trichlorobenzene	15.811	180	258279	51.880	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088102.D
Acq On : 27 Oct 2025 10:40
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/28/2025
Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:20:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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_N\Data\VN102725\
Data File : VN088102.D
Acq On : 27 Oct 2025 10:40
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDCCC050

Manual Integrations

APPROVED

Reviewed By :John Carlone 10/28/2025

Supervised By :Semsettin Yesilyurt 10/28/2025

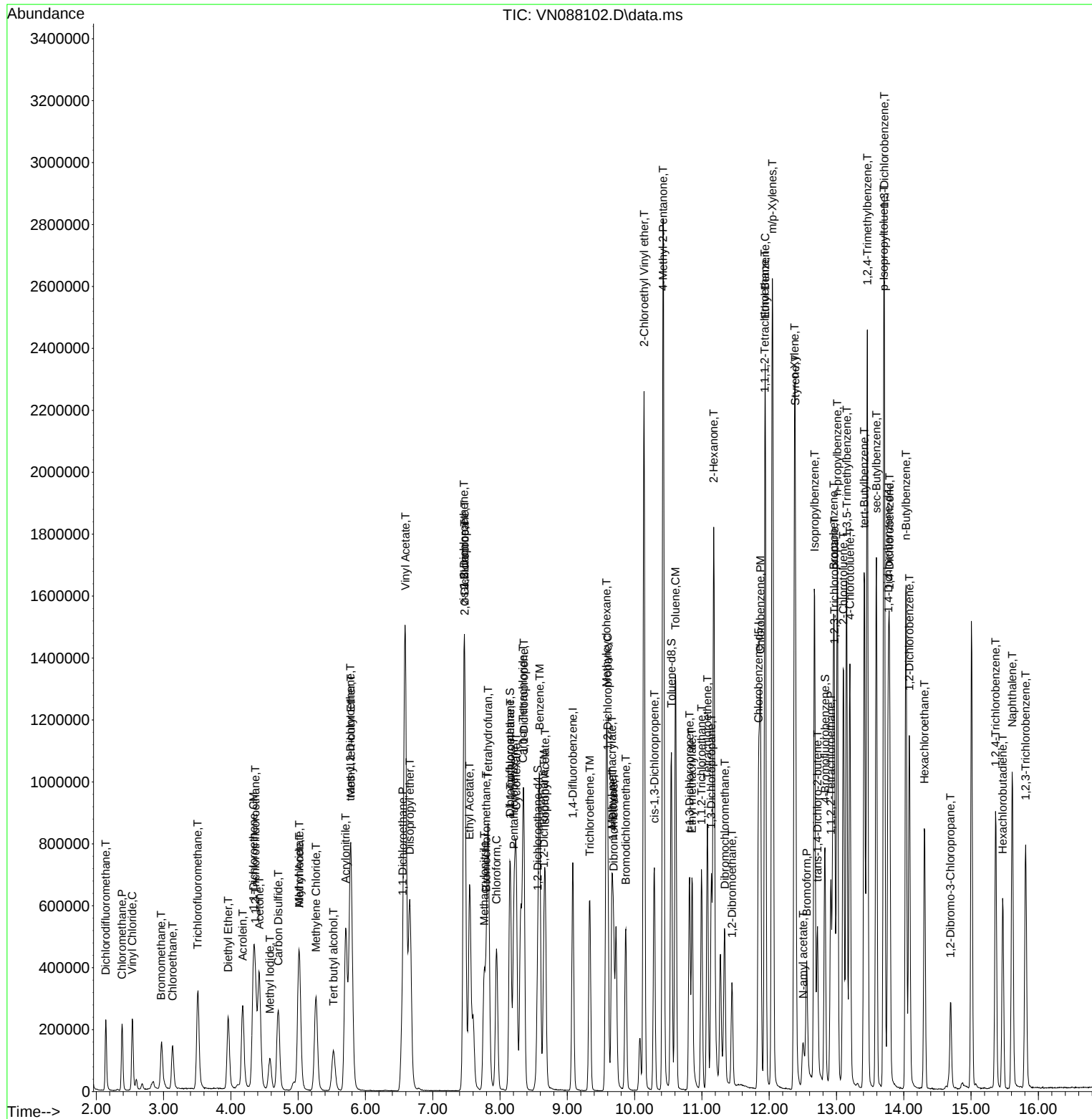
Quant Time: Oct 28 01:20:32 2025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M

Quant Title : SW846 8260

QLast Update : Sat Oct 25 00:15:22 2025

Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	0.564	0.598	-6.0	124	0.00
3 P	Chloromethane	0.664	0.684	-3.0	125	0.00
4 C	Vinyl Chloride	0.723	0.746	-3.2#	122	0.00
5 T	Bromomethane	0.432	0.392	9.3	109	0.00
6 T	Chloroethane	0.521	0.478	8.3	110	0.00
7 T	Trichlorofluoromethane	1.153	1.130	2.0	113	0.00
8 T	Diethyl Ether	0.429	0.414	3.5	123	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.595	0.596	-0.2	119	0.00
10 T	Methyl Iodide	0.544	0.572	-5.1	119	0.00
11 T	Tert butyl alcohol	0.149	0.157	-5.4	129	0.00
12 CM	1,1-Dichloroethene	0.628	0.586	6.7#	121	0.00
13 T	Acrolein	0.168	0.212	-26.2#	163#	0.00
14 T	Allyl chloride	1.102	1.120	-1.6	131	0.01
15 T	Acrylonitrile	0.406	0.433	-6.7	127	0.00
16 T	Acetone	0.434	0.430	0.9	128	0.00
17 T	Carbon Disulfide	1.910	1.880	1.6	121	0.00
18 T	Methyl Acetate	0.889	0.958	-7.8	133	0.00
19 T	Methyl tert-butyl Ether	2.308	2.427	-5.2	129	0.00
20 T	Methylene Chloride	0.729	0.724	0.7	128	0.00
21 T	trans-1,2-Dichloroethene	0.690	0.678	1.7	120	0.00
22 T	Diisopropyl ether	2.317	2.497	-7.8	126	0.00
23 T	Vinyl Acetate	2.087	2.287	-9.6	125	0.00
24 P	1,1-Dichloroethane	1.283	1.368	-6.6	127	0.00
25 T	2-Butanone	0.572	0.614	-7.3	126	0.00
26 T	2,2-Dichloropropane	1.166	1.176	-0.9	122	0.00
27 T	cis-1,2-Dichloroethene	0.794	0.794	0.0	121	0.00
28 T	Bromochloromethane	0.606	0.607	-0.2	98	0.00
29 T	Tetrahydrofuran	0.373	0.395	-5.9	127	0.00
30 C	Chloroform	1.282	1.373	-7.1#	126	0.00
31 T	Cyclohexane	1.210	1.253	-3.6	124	0.00
32 T	1,1,1-Trichloroethane	1.142	1.191	-4.3	124	0.00
33 S	1,2-Dichloroethane-d4	0.865	0.876	-1.3	104	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	93	0.00
35 S	Dibromofluoromethane	0.336	0.332	1.2	98	0.00
36 T	1,1-Dichloropropene	0.490	0.534	-9.0	123	0.00
37 T	Ethyl Acetate	0.633	0.660	-4.3	126	0.00
38 T	Carbon Tetrachloride	0.507	0.570	-12.4	128	0.00
39 T	Methylcyclohexane	0.630	0.653	-3.7	117	0.00
40 TM	Benzene	1.494	1.599	-7.0	123	0.00
41 T	Methacrylonitrile	0.333	0.355	-6.6	123	0.00
42 TM	1,2-Dichloroethane	0.531	0.617	-16.2	132	0.00
43 T	Isopropyl Acetate	0.973	1.076	-10.6	124	0.00
44 TM	Trichloroethene	0.349	0.360	-3.2	118	0.00
45 C	1,2-Dichloropropane	0.377	0.413	-9.5#	126	0.00
46 T	Dibromomethane	0.269	0.295	-9.7	126	0.00
47 T	Bromodichloromethane	0.538	0.609	-13.2	130	0.00
48 T	Methyl methacrylate	0.449	0.520	-15.8	131	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	0.006	0.006	0.0	128	0.00
50 S	Toluene-d8	1.294	1.241	4.1	95	0.00
51 T	4-Methyl-2-Pentanone	0.575	0.662	-15.1	127	0.00
52 CM	Toluene	0.921	0.975	-5.9#	121	0.00
53 T	t-1,3-Dichloropropene	0.573	0.640	-11.7	125	0.00
54 T	cis-1,3-Dichloropropene	0.608	0.661	-8.7	123	0.00
55 T	1,1,2-Trichloroethane	0.349	0.374	-7.2	124	0.00
56 T	Ethyl methacrylate	0.553	0.631	-14.1	124	0.00
57 T	1,3-Dichloropropane	0.614	0.666	-8.5	123	0.00
58 T	2-Chloroethyl Vinyl ether	0.288	0.333	-15.6	127	0.00
59 T	2-Hexanone	0.382	0.448	-17.3	126	0.00
60 T	Dibromochloromethane	0.397	0.431	-8.6	123	0.00
61 T	1,2-Dibromoethane	0.360	0.383	-6.4	124	0.00
62 S	4-Bromofluorobenzene	0.457	0.460	-0.7	98	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	93	0.00
64 T	Tetrachloroethene	0.330	0.343	-3.9	124	0.00
65 PM	Chlorobenzene	1.135	1.167	-2.8	116	0.00
66 T	1,1,1,2-Tetrachloroethane	0.372	0.404	-8.6	121	0.00
67 C	Ethyl Benzene	1.993	2.130	-6.9#	120	0.00
68 T	m/p-Xylenes	0.747	0.796	-6.6	117	0.00
69 T	o-Xylene	0.708	0.768	-8.5	119	0.00
70 T	Styrene	1.154	1.310	-13.5	121	0.00
71 P	Bromoform	0.278	0.308	-10.8	123	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	95	0.00
73 T	Isopropylbenzene	3.856	4.002	-3.8	120	0.00
74 T	N-amyl acetate	1.095	1.146	-4.7	118	0.00
75 P	1,1,2,2-Tetrachloroethane	1.201	1.246	-3.7	124	0.00
76 T	1,2,3-Trichloropropane	1.143	1.221	-6.8	125	0.00
77 T	Bromobenzene	0.832	0.887	-6.6	123	0.00
78 T	n-propylbenzene	4.706	4.968	-5.6	120	0.00
79 T	2-Chlorotoluene	2.684	2.935	-9.4	124	0.00
80 T	1,3,5-Trimethylbenzene	3.203	3.432	-7.1	122	0.00
81 T	trans-1,4-Dichloro-2-butene	0.410	0.390	4.9	117	0.00
82 T	4-Chlorotoluene	2.904	3.001	-3.3	122	0.00
83 T	tert-Butylbenzene	2.861	2.988	-4.4	120	0.00
84 T	1,2,4-Trimethylbenzene	3.204	3.458	-7.9	122	0.00
85 T	sec-Butylbenzene	4.203	4.388	-4.4	120	0.00
86 T	p-Isopropyltoluene	3.372	3.664	-8.7	122	0.00
87 T	1,3-Dichlorobenzene	1.660	1.752	-5.5	121	0.00
88 T	1,4-Dichlorobenzene	1.783	1.813	-1.7	123	0.00
89 T	n-Butylbenzene	3.340	3.566	-6.8	120	0.00
90 T	Hexachloroethane	0.653	0.697	-6.7	124	0.00
91 T	1,2-Dichlorobenzene	1.600	1.676	-4.7	123	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.279	0.307	-10.0	137	0.00
93 T	1,2,4-Trichlorobenzene	0.969	1.015	-4.7	123	0.00
94 T	Hexachlorobutadiene	0.361	0.393	-8.9	128	0.00
95 T	Naphthalene	3.320	3.431	-3.3	119	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088102.D
Acq On : 27 Oct 2025 10:40
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	0.929	0.964	-3.8	125	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	52.993	-6.0	124	0.00
3 P	Chloromethane	50.000	51.512	-3.0	125	0.00
4 C	Vinyl Chloride	50.000	51.574	-3.1#	122	0.00
5 T	Bromomethane	50.000	45.345	9.3	109	0.00
6 T	Chloroethane	50.000	45.875	8.3	110	0.00
7 T	Trichlorofluoromethane	50.000	49.013	2.0	113	0.00
8 T	Diethyl Ether	50.000	48.245	3.5	123	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	50.044	-0.1	119	0.00
10 T	Methyl Iodide	50.000	48.858	2.3	119	0.00
11 T	Tert butyl alcohol	250.000	263.312	-5.3	129	0.00
12 CM	1,1-Dichloroethene	50.000	46.643	6.7#	121	0.00
13 T	Acrolein	250.000	316.058	-26.4#	163	0.00
14 T	Allyl chloride	50.000	50.819	-1.6	131	0.01
15 T	Acrylonitrile	250.000	267.088	-6.8	127	0.00
16 T	Acetone	250.000	247.493	1.0	128	0.00
17 T	Carbon Disulfide	50.000	49.207	1.6	121	0.00
18 T	Methyl Acetate	50.000	53.843	-7.7	133	0.00
19 T	Methyl tert-butyl Ether	50.000	52.581	-5.2	129	0.00
20 T	Methylene Chloride	50.000	53.510	-7.0	128	0.00
21 T	trans-1,2-Dichloroethene	50.000	49.131	1.7	120	0.00
22 T	Diisopropyl ether	50.000	53.894	-7.8	126	0.00
23 T	Vinyl Acetate	250.000	274.052	-9.6	125	0.00
24 P	1,1-Dichloroethane	50.000	53.322	-6.6	127	0.00
25 T	2-Butanone	250.000	268.368	-7.3	126	0.00
26 T	2,2-Dichloropropane	50.000	50.405	-0.8	122	0.00
27 T	cis-1,2-Dichloroethene	50.000	50.010	-0.0	121	0.00
28 T	Bromochloromethane	50.000	50.048	-0.1	98	0.00
29 T	Tetrahydrofuran	250.000	264.671	-5.9	127	0.00
30 C	Chloroform	50.000	53.556	-7.1#	126	0.00
31 T	Cyclohexane	50.000	51.747	-3.5	124	0.00
32 T	1,1,1-Trichloroethane	50.000	52.155	-4.3	124	0.00
33 S	1,2-Dichloroethane-d4	50.000	50.647	-1.3	104	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	93	0.00
35 S	Dibromofluoromethane	50.000	49.418	1.2	98	0.00
36 T	1,1-Dichloropropene	50.000	54.483	-9.0	123	0.00
37 T	Ethyl Acetate	50.000	52.169	-4.3	126	0.00
38 T	Carbon Tetrachloride	50.000	56.213	-12.4	128	0.00
39 T	Methylcyclohexane	50.000	51.784	-3.6	117	0.00
40 TM	Benzene	50.000	53.522	-7.0	123	0.00
41 T	Methacrylonitrile	50.000	53.275	-6.5	123	0.00
42 TM	1,2-Dichloroethane	50.000	58.091	-16.2	132	0.00
43 T	Isopropyl Acetate	50.000	55.312	-10.6	124	0.00
44 TM	Trichloroethene	50.000	51.507	-3.0	118	0.00
45 C	1,2-Dichloropropane	50.000	54.702	-9.4#	126	0.00
46 T	Dibromomethane	50.000	54.854	-9.7	126	0.00
47 T	Bromodichloromethane	50.000	56.540	-13.1	130	0.00
48 T	Methyl methacrylate	50.000	57.954	-15.9	131	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088102.D
 Acq On : 27 Oct 2025 10:40
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	1081.292	-8.1	128	0.00
50 S	Toluene-d8	50.000	47.946	4.1	95	0.00
51 T	4-Methyl-2-Pentanone	250.000	287.502	-15.0	127	0.00
52 CM	Toluene	50.000	52.932	-5.9#	121	0.00
53 T	t-1,3-Dichloropropene	50.000	55.844	-11.7	125	0.00
54 T	cis-1,3-Dichloropropene	50.000	54.372	-8.7	123	0.00
55 T	1,1,2-Trichloroethane	50.000	53.460	-6.9	124	0.00
56 T	Ethyl methacrylate	50.000	57.050	-14.1	124	0.00
57 T	1,3-Dichloropropane	50.000	54.194	-8.4	123	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	289.056	-15.6	127	0.00
59 T	2-Hexanone	250.000	293.477	-17.4	126	0.00
60 T	Dibromochloromethane	50.000	54.268	-8.5	123	0.00
61 T	1,2-Dibromoethane	50.000	53.304	-6.6	124	0.00
62 S	4-Bromofluorobenzene	50.000	50.267	-0.5	98	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	93	0.00
64 T	Tetrachloroethene	50.000	52.018	-4.0	124	0.00
65 PM	Chlorobenzene	50.000	51.404	-2.8	116	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	54.252	-8.5	121	0.00
67 C	Ethyl Benzene	50.000	53.436	-6.9#	120	0.00
68 T	m/p-Xylenes	100.000	106.554	-6.6	117	0.00
69 T	o-Xylene	50.000	54.223	-8.4	119	0.00
70 T	Styrene	50.000	56.729	-13.5	121	0.00
71 P	Bromoform	50.000	55.533	-11.1	123	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	95	0.00
73 T	Isopropylbenzene	50.000	51.882	-3.8	120	0.00
74 T	N-ethyl acetate	50.000	52.328	-4.7	118	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	51.889	-3.8	124	0.00
76 T	1,2,3-Trichloropropane	50.000	53.415	-6.8	125	0.00
77 T	Bromobenzene	50.000	53.320	-6.6	123	0.00
78 T	n-propylbenzene	50.000	52.780	-5.6	120	0.00
79 T	2-Chlorotoluene	50.000	54.685	-9.4	124	0.00
80 T	1,3,5-Trimethylbenzene	50.000	53.573	-7.1	122	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	47.538	4.9	117	0.00
82 T	4-Chlorotoluene	50.000	51.672	-3.3	122	0.00
83 T	tert-Butylbenzene	50.000	52.227	-4.5	120	0.00
84 T	1,2,4-Trimethylbenzene	50.000	53.954	-7.9	122	0.00
85 T	sec-Butylbenzene	50.000	52.195	-4.4	120	0.00
86 T	p-Isopropyltoluene	50.000	54.333	-8.7	122	0.00
87 T	1,3-Dichlorobenzene	50.000	52.761	-5.5	121	0.00
88 T	1,4-Dichlorobenzene	50.000	50.850	-1.7	123	0.00
89 T	n-Butylbenzene	50.000	53.382	-6.8	120	0.00
90 T	Hexachloroethane	50.000	53.333	-6.7	124	0.00
91 T	1,2-Dichlorobenzene	50.000	52.353	-4.7	123	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	54.960	-9.9	137	0.00
93 T	1,2,4-Trichlorobenzene	50.000	52.352	-4.7	123	0.00
94 T	Hexachlorobutadiene	50.000	54.412	-8.8	128	0.00
95 T	Naphthalene	50.000	51.678	-3.4	119	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088102.D
Acq On : 27 Oct 2025 10:40
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 28 01:20:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	51.880	-3.8	125	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>LIRO01</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3468</u>
Instrument ID:	<u>MSVOA_N</u>	Calibration Date/Time:	<u>10/28/2025</u> <u>10:23</u>
Lab File ID:	<u>VN088127.D</u>	Init. Calib. Date(s):	<u>10/23/2025</u> <u>10/23/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>09:42</u> <u>12:02</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Methyl tert-butyl Ether	2.308	2.786		20.71	20
Benzene	1.494	1.602		7.23	20
Toluene	0.921	0.978		6.19	20
Ethyl Benzene	1.993	2.129		6.82	20
m/p-Xylenes	0.747	0.796		6.56	20
o-Xylene	0.708	0.779		10.03	20
Isopropylbenzene	3.856	3.984		3.32	20
n-propylbenzene	4.706	4.889		3.89	20
1,3,5-Trimethylbenzene	3.203	3.442		7.46	20
tert-Butylbenzene	2.861	2.928		2.34	20
1,2,4-Trimethylbenzene	3.204	3.555		10.95	20
sec-Butylbenzene	4.203	4.256		1.26	20
p-Isopropyltoluene	3.372	3.599		6.73	20
n-Butylbenzene	3.340	3.444		3.11	20
Naphthalene	3.320	3.767		13.46	20
1,2-Dichloroethane-d4	0.865	0.954		10.29	20
Dibromofluoromethane	0.336	0.330		-1.79	20
Toluene-d8	1.294	1.205		-6.88	20
4-Bromofluorobenzene	0.457	0.461		0.88	20

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By :John
 Carlone

10/29/2025
 Supervised By :Semsettin
 Yesilyurt

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	299407	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	575460	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	507990	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	256667	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.559	65	285735	55.189	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 110.380%	
35) Dibromofluoromethane	8.147	113	189636	49.053	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 98.100%	
50) Toluene-d8	10.547	98	693271	46.540	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 93.080%	
62) 4-Bromofluorobenzene	12.829	95	265394	50.447	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 100.900%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.142	85	165343	48.957	ug/l	97
3) Chloromethane	2.383	50	197707	49.759	ug/l	99
4) Vinyl Chloride	2.536	62	218965	50.579	ug/l	99
5) Bromomethane	2.965	94	120716	46.619	ug/l	99
6) Chloroethane	3.130	64	148752	47.690	ug/l	96
7) Trichlorofluoromethane	3.506	101	319409	46.259	ug/l	95
8) Diethyl Ether	3.959	74	143883	56.067	ug/l	97
9) 1,1,2-Trichlorotrifluo...	4.365	101	171239	48.060	ug/l	97
10) Methyl Iodide	4.583	142	179205	50.917	ug/l	98
11) Tert butyl alcohol	5.524	59	273808	306.977	ug/l	98
12) 1,1-Dichloroethene	4.336	96	171171	45.485	ug/l	99
13) Acrolein	4.171	56	385481	384.218	ug/l	100
14) Allyl chloride	5.012	41	351935	53.355	ug/l	97
15) Acrylonitrile	5.706	53	738214	303.839	ug/l	99
16) Acetone	4.418	43	769528	295.854	ug/l	99
17) Carbon Disulfide	4.700	76	541134	47.304	ug/l	99
18) Methyl Acetate	5.012	43	330926	62.146	ug/l	99
19) Methyl tert-butyl Ether	5.783	73	834179	60.359	ug/l	96
20) Methylene Chloride	5.259	84	235037	57.932	ug/l	98
21) trans-1,2-Dichloroethene	5.777	96	207202	50.162	ug/l	98
22) Diisopropyl ether	6.659	45	824495	59.436	ug/l	99
23) Vinyl Acetate	6.589	43	3877983	310.350	ug/l	98
24) 1,1-Dichloroethane	6.547	63	435253	56.643	ug/l	98
25) 2-Butanone	7.471	43	1058779	308.881	ug/l	99
26) 2,2-Dichloropropane	7.471	77	356388	51.037	ug/l	97
27) cis-1,2-Dichloroethene	7.471	96	262031	55.103	ug/l	95
28) Bromochloromethane	7.794	49	196992	54.256	ug/l	99
29) Tetrahydrofuran	7.824	42	665751	298.022	ug/l	100
30) Chloroform	7.947	83	438587	57.133	ug/l	98
31) Cyclohexane	8.235	56	352350	48.619	ug/l	97
32) 1,1,1-Trichloroethane	8.147	97	362874	53.074	ug/l	98
36) 1,1-Dichloropropene	8.353	75	291695	51.675	ug/l	99
37) Ethyl Acetate	7.547	43	431150	59.188	ug/l	99
38) Carbon Tetrachloride	8.341	117	301826	51.770	ug/l	97
39) Methylcyclohexane	9.582	83	346302	47.729	ug/l	99
40) Benzene	8.588	78	921773	53.620	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDCCC050

Manual Integrations

APPROVED

Reviewed By :John
 Carlone

10/29/2025

Supervised By :Semsettin
 Yesilyurt

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	218170	56.905	ug/l	97
42) 1,2-Dichloroethane	8.653	62	374929	61.382	ug/l	99
43) Isopropyl Acetate	8.671	43	671446	59.986	ug/l	100
44) Trichloroethene	9.330	130	205268	51.085	ug/l	99
45) 1,2-Dichloropropane	9.600	63	244021	56.226	ug/l	96
46) Dibromomethane	9.688	93	178819	57.771	ug/l	98
47) Bromodichloromethane	9.871	83	363105	58.592	ug/l	100
48) Methyl methacrylate	9.665	41	322595	62.424	ug/l	99
49) 1,4-Dioxane	9.682	88	76421	1188.988	ug/l #	92
51) 4-Methyl-2-Pentanone	10.424	43	2027818	306.230	ug/l	100
52) Toluene	10.612	92	563049	53.123	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	392411	59.495	ug/l	98
54) cis-1,3-Dichloropropene	10.294	75	404571	57.804	ug/l	98
55) 1,1,2-Trichloroethane	10.994	97	221552	55.097	ug/l	97
56) Ethyl methacrylate	10.859	69	396279	62.274	ug/l	97
57) 1,3-Dichloropropane	11.141	76	403668	57.113	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	1089153	329.050	ug/l	100
59) 2-Hexanone	11.176	43	1386798	315.698	ug/l	100
60) Dibromochloromethane	11.341	129	259206	56.714	ug/l	100
61) 1,2-Dibromoethane	11.447	107	235862	56.994	ug/l	98
64) Tetrachloroethene	11.082	164	166457	49.677	ug/l	96
65) Chlorobenzene	11.871	112	616979	53.488	ug/l	97
66) 1,1,1,2-Tetrachloroethane	11.941	131	214188	56.678	ug/l	99
67) Ethyl Benzene	11.941	91	1081282	53.404	ug/l	100
68) m/p-Xylenes	12.047	106	808821	106.616	ug/l	100
69) o-Xylene	12.376	106	395850	55.044	ug/l	98
70) Styrene	12.388	104	676532	57.690	ug/l	97
71) Bromoform	12.559	173	163603	58.011	ug/l #	100
73) Isopropylbenzene	12.676	105	1022659	51.660	ug/l	100
74) N-amyl acetate	12.506	43	275299m	48.989	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.918	83	340536	55.254	ug/l	96
76) 1,2,3-Trichloropropane	12.970	75	301372m	51.357	ug/l	
77) Bromobenzene	12.959	156	241872	56.660	ug/l	97
78) n-propylbenzene	13.012	91	1254882	51.945	ug/l	99
79) 2-Chlorotoluene	13.106	91	766410	55.630	ug/l	97
80) 1,3,5-Trimethylbenzene	13.153	105	883376	53.731	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.718	75	110297	52.431	ug/l	91
82) 4-Chlorotoluene	13.200	91	791760	53.119	ug/l	100
83) tert-Butylbenzene	13.418	119	751458	51.166	ug/l	98
84) 1,2,4-Trimethylbenzene	13.459	105	912471	55.472	ug/l	99
85) sec-Butylbenzene	13.594	105	1092336	50.624	ug/l	100
86) p-Isopropyltoluene	13.706	119	923723	53.365	ug/l	98
87) 1,3-Dichlorobenzene	13.712	146	462789	54.307	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	473911	51.778	ug/l	99
89) n-Butylbenzene	14.035	91	883911	51.552	ug/l	99
90) Hexachloroethane	14.312	117	168148	50.163	ug/l	96
91) 1,2-Dichlorobenzene	14.082	146	439540	53.508	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.700	75	85200	59.394	ug/l	96
93) 1,2,4-Trichlorobenzene	15.364	180	268093	53.889	ug/l	99
94) Hexachlorobutadiene	15.476	225	94323	50.913	ug/l	99
95) Naphthalene	15.611	128	966786	56.727	ug/l	100
96) 1,2,3-Trichlorobenzene	15.811	180	261133	54.744	ug/l	99

10/29/2025

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088127.D
Acq On : 28 Oct 2025 10:23
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :John
Carlone

10/29/2025
Supervised By :Semsettin
Yesilyurt

10/29/2025

Quant Time: Oct 29 02:16:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :

MSVOA_N

ClientSampleId :

VSTDCCC050

Manual Integrations

APPROVED

Reviewed By :John
 Carlone

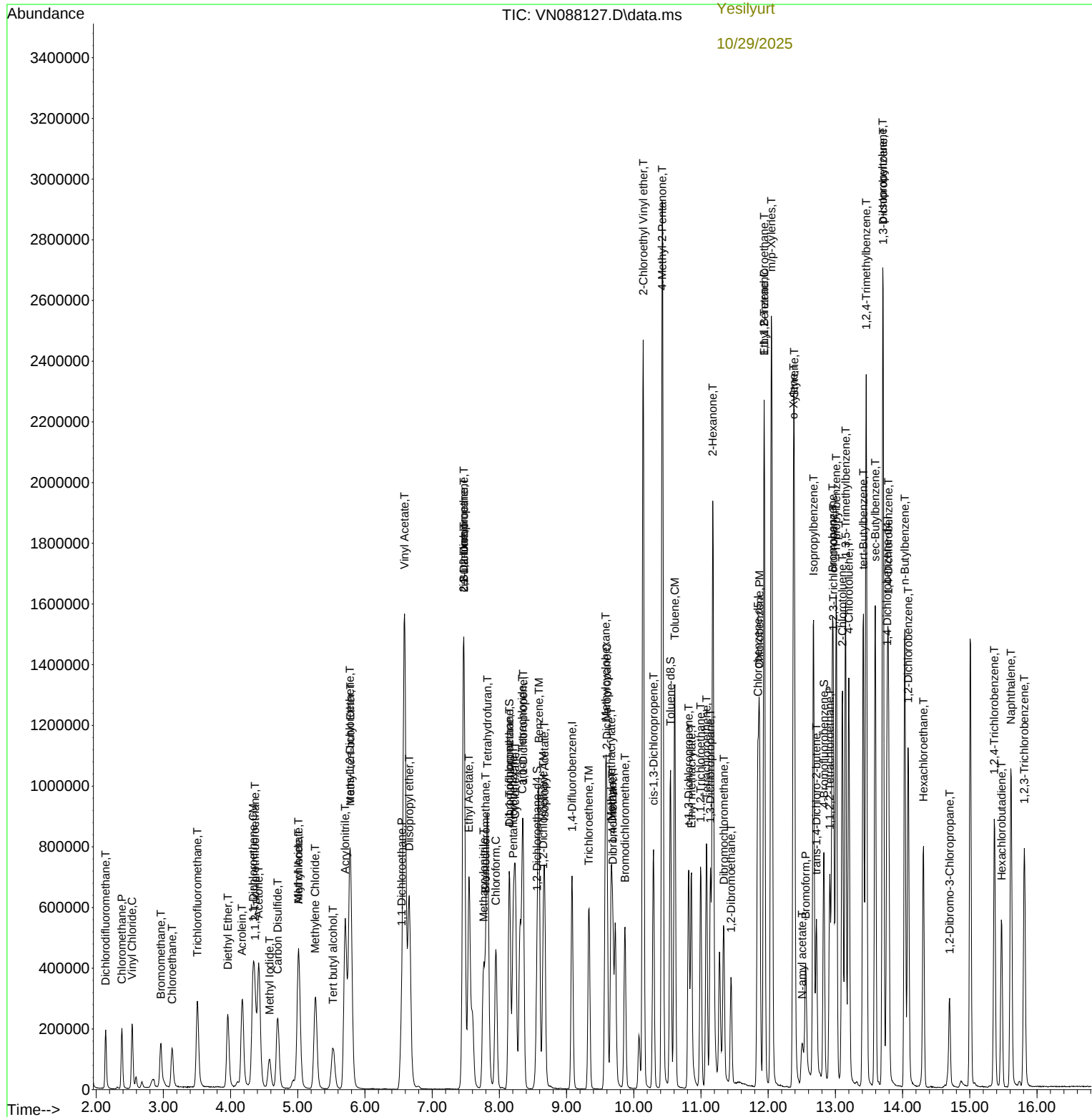
10/29/2025

Supervised By :Semsettin

Yesilyurt

10/29/2025

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	89	0.00
2 T	Dichlorodifluoromethane	0.564	0.552	2.1	107	0.00
3 P	Chloromethane	0.664	0.660	0.6	113	0.00
4 C	Vinyl Chloride	0.723	0.731	-1.1#	111	0.00
5 T	Bromomethane	0.432	0.403	6.7	105	0.00
6 T	Chloroethane	0.521	0.497	4.6	107	0.00
7 T	Trichlorofluoromethane	1.153	1.067	7.5	99	0.00
8 T	Diethyl Ether	0.429	0.481	-12.1	133	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.595	0.572	3.9	106	0.00
10 T	Methyl Iodide	0.544	0.599	-10.1	116	0.00
11 T	Tert butyl alcohol	0.149	0.183	-22.8	140	0.00
12 CM	1,1-Dichloroethene	0.628	0.572	8.9#	109	0.00
13 T	Acrolein	0.168	0.257	-53.0#	184#	0.00
14 T	Allyl chloride	1.102	1.175	-6.6	128	0.00
15 T	Acrylonitrile	0.406	0.493	-21.4	135	0.00
16 T	Acetone	0.434	0.514	-18.4	143	0.00
17 T	Carbon Disulfide	1.910	1.807	5.4	108	0.00
18 T	Methyl Acetate	0.889	1.105	-24.3	142	0.00
19 T	Methyl tert-butyl Ether	2.308	2.786	-20.7	138	0.00
20 T	Methylene Chloride	0.729	0.785	-7.7	129	0.00
21 T	trans-1,2-Dichloroethene	0.690	0.692	-0.3	114	0.00
22 T	Diisopropyl ether	2.317	2.754	-18.9	130	0.00
23 T	Vinyl Acetate	2.087	2.590	-24.1	132	0.00
24 P	1,1-Dichloroethane	1.283	1.454	-13.3	126	0.00
25 T	2-Butanone	0.572	0.707	-23.6	135	0.00
26 T	2,2-Dichloropropane	1.166	1.190	-2.1	115	0.00
27 T	cis-1,2-Dichloroethene	0.794	0.875	-10.2	124	0.00
28 T	Bromochloromethane	0.606	0.658	-8.6	99	0.00
29 T	Tetrahydrofuran	0.373	0.445	-19.3	133	0.00
30 C	Chloroform	1.282	1.465	-14.3#	125	0.00
31 T	Cyclohexane	1.210	1.177	2.7	108	0.00
32 T	1,1,1-Trichloroethane	1.142	1.212	-6.1	118	0.00
33 S	1,2-Dichloroethane-d4	0.865	0.954	-10.3	106	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	92	0.00
35 S	Dibromofluoromethane	0.336	0.330	1.8	96	0.00
36 T	1,1-Dichloropropene	0.490	0.507	-3.5	114	0.00
37 T	Ethyl Acetate	0.633	0.749	-18.3	140	0.00
38 T	Carbon Tetrachloride	0.507	0.524	-3.4	115	0.00
39 T	Methylcyclohexane	0.630	0.602	4.4	105	0.00
40 TM	Benzene	1.494	1.602	-7.2	121	0.00
41 T	Methacrylonitrile	0.333	0.379	-13.8	128	0.00
42 TM	1,2-Dichloroethane	0.531	0.652	-22.8	137	0.00
43 T	Isopropyl Acetate	0.973	1.167	-19.9	132	0.00
44 TM	Trichloroethene	0.349	0.357	-2.3	115	0.00
45 C	1,2-Dichloropropane	0.377	0.424	-12.5#	127	0.00
46 T	Dibromomethane	0.269	0.311	-15.6	130	0.00
47 T	Bromodichloromethane	0.538	0.631	-17.3	132	0.00
48 T	Methyl methacrylate	0.449	0.561	-24.9	138	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	0.006	0.007	-16.7	138	0.00
50 S	Toluene-d8	1.294	1.205	6.9	90	0.00
51 T	4-Methyl-2-Pentanone	0.575	0.705	-22.6	133	0.00
52 CM	Toluene	0.921	0.978	-6.2#	119	0.00
53 T	t-1,3-Dichloropropene	0.573	0.682	-19.0	130	0.00
54 T	cis-1,3-Dichloropropene	0.608	0.703	-15.6	129	0.00
55 T	1,1,2-Trichloroethane	0.349	0.385	-10.3	125	0.00
56 T	Ethyl methacrylate	0.553	0.689	-24.6	133	0.00
57 T	1,3-Dichloropropane	0.614	0.701	-14.2	127	0.00
58 T	2-Chloroethyl Vinyl ether	0.288	0.379	-31.6#	141	0.00
59 T	2-Hexanone	0.382	0.482	-26.2#	133	0.00
60 T	Dibromochloromethane	0.397	0.450	-13.4	126	0.00
61 T	1,2-Dibromoethane	0.360	0.410	-13.9	130	0.00
62 S	4-Bromofluorobenzene	0.457	0.461	-0.9	96	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	91	0.00
64 T	Tetrachloroethene	0.330	0.328	0.6	115	0.00
65 PM	Chlorobenzene	1.135	1.215	-7.0	117	0.00
66 T	1,1,1,2-Tetrachloroethane	0.372	0.422	-13.4	123	0.00
67 C	Ethyl Benzene	1.993	2.129	-6.8#	117	0.00
68 T	m/p-Xylenes	0.747	0.796	-6.6	114	0.00
69 T	o-Xylene	0.708	0.779	-10.0	117	0.00
70 T	Styrene	1.154	1.332	-15.4	120	0.00
71 P	Bromoform	0.278	0.322	-15.8	125	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	91	0.00
73 T	Isopropylbenzene	3.856	3.984	-3.3	114	0.00
74 T	N-amyl acetate	1.095	1.073	2.0	106	0.00
75 P	1,1,2,2-Tetrachloroethane	1.201	1.327	-10.5	126	0.00
76 T	1,2,3-Trichloropropane	1.143	1.174	-2.7	115	0.00
77 T	Bromobenzene	0.832	0.942	-13.2	125	0.00
78 T	n-propylbenzene	4.706	4.889	-3.9	113	0.00
79 T	2-Chlorotoluene	2.684	2.986	-11.3	121	0.00
80 T	1,3,5-Trimethylbenzene	3.203	3.442	-7.5	117	0.00
81 T	trans-1,4-Dichloro-2-butene	0.410	0.430	-4.9	124	0.00
82 T	4-Chlorotoluene	2.904	3.085	-6.2	120	0.00
83 T	tert-Butylbenzene	2.861	2.928	-2.3	113	0.00
84 T	1,2,4-Trimethylbenzene	3.204	3.555	-11.0	120	0.00
85 T	sec-Butylbenzene	4.203	4.256	-1.3	111	0.00
86 T	p-Isopropyltoluene	3.372	3.599	-6.7	114	0.00
87 T	1,3-Dichlorobenzene	1.660	1.803	-8.6	119	0.00
88 T	1,4-Dichlorobenzene	1.783	1.846	-3.5	120	0.00
89 T	n-Butylbenzene	3.340	3.444	-3.1	111	0.00
90 T	Hexachloroethane	0.653	0.655	-0.3	112	0.00
91 T	1,2-Dichlorobenzene	1.600	1.712	-7.0	121	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.279	0.332	-19.0	141	0.00
93 T	1,2,4-Trichlorobenzene	0.969	1.045	-7.8	121	0.00
94 T	Hexachlorobutadiene	0.361	0.367	-1.7	114	0.00
95 T	Naphthalene	3.320	3.767	-13.5	126	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088127.D
Acq On : 28 Oct 2025 10:23
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	0.929	1.017	-9.5	126	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	89	0.00
2 T	Dichlorodifluoromethane	50.000	48.957	2.1	107	0.00
3 P	Chloromethane	50.000	49.759	0.5	113	0.00
4 C	Vinyl Chloride	50.000	50.579	-1.2#	111	0.00
5 T	Bromomethane	50.000	46.619	6.8	105	0.00
6 T	Chloroethane	50.000	47.690	4.6	107	0.00
7 T	Trichlorofluoromethane	50.000	46.259	7.5	99	0.00
8 T	Diethyl Ether	50.000	56.067	-12.1	133	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	48.060	3.9	106	0.00
10 T	Methyl Iodide	50.000	50.917	-1.8	116	0.00
11 T	Tert butyl alcohol	250.000	306.977	-22.8	140	0.00
12 CM	1,1-Dichloroethene	50.000	45.485	9.0#	109	0.00
13 T	Acrolein	250.000	384.218	-53.7#	184	0.00
14 T	Allyl chloride	50.000	53.355	-6.7	128	0.00
15 T	Acrylonitrile	250.000	303.839	-21.5	135	0.00
16 T	Acetone	250.000	295.854	-18.3	143	0.00
17 T	Carbon Disulfide	50.000	47.304	5.4	108	0.00
18 T	Methyl Acetate	50.000	62.146	-24.3	142	0.00
19 T	Methyl tert-butyl Ether	50.000	60.359	-20.7	138	0.00
20 T	Methylene Chloride	50.000	57.932	-15.9	129	0.00
21 T	trans-1,2-Dichloroethene	50.000	50.162	-0.3	114	0.00
22 T	Diisopropyl ether	50.000	59.436	-18.9	130	0.00
23 T	Vinyl Acetate	250.000	310.350	-24.1	132	0.00
24 P	1,1-Dichloroethane	50.000	56.643	-13.3	126	0.00
25 T	2-Butanone	250.000	308.881	-23.6	135	0.00
26 T	2,2-Dichloropropane	50.000	51.037	-2.1	115	0.00
27 T	cis-1,2-Dichloroethene	50.000	55.103	-10.2	124	0.00
28 T	Bromochloromethane	50.000	54.256	-8.5	99	0.00
29 T	Tetrahydrofuran	250.000	298.022	-19.2	133	0.00
30 C	Chloroform	50.000	57.133	-14.3#	125	0.00
31 T	Cyclohexane	50.000	48.619	2.8	108	0.00
32 T	1,1,1-Trichloroethane	50.000	53.074	-6.1	118	0.00
33 S	1,2-Dichloroethane-d4	50.000	55.189	-10.4	106	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	92	0.00
35 S	Dibromofluoromethane	50.000	49.053	1.9	96	0.00
36 T	1,1-Dichloropropene	50.000	51.675	-3.3	114	0.00
37 T	Ethyl Acetate	50.000	59.188	-18.4	140	0.00
38 T	Carbon Tetrachloride	50.000	51.770	-3.5	115	0.00
39 T	Methylcyclohexane	50.000	47.729	4.5	105	0.00
40 TM	Benzene	50.000	53.620	-7.2	121	0.00
41 T	Methacrylonitrile	50.000	56.905	-13.8	128	0.00
42 TM	1,2-Dichloroethane	50.000	61.382	-22.8	137	0.00
43 T	Isopropyl Acetate	50.000	59.986	-20.0	132	0.00
44 TM	Trichloroethene	50.000	51.085	-2.2	115	0.00
45 C	1,2-Dichloropropane	50.000	56.226	-12.5#	127	0.00
46 T	Dibromomethane	50.000	57.771	-15.5	130	0.00
47 T	Bromodichloromethane	50.000	58.592	-17.2	132	0.00
48 T	Methyl methacrylate	50.000	62.424	-24.8	138	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088127.D
 Acq On : 28 Oct 2025 10:23
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	1188.988	-18.9	138	0.00
50 S	Toluene-d8	50.000	46.540	6.9	90	0.00
51 T	4-Methyl-2-Pentanone	250.000	306.230	-22.5	133	0.00
52 CM	Toluene	50.000	53.123	-6.2#	119	0.00
53 T	t-1,3-Dichloropropene	50.000	59.495	-19.0	130	0.00
54 T	cis-1,3-Dichloropropene	50.000	57.804	-15.6	129	0.00
55 T	1,1,2-Trichloroethane	50.000	55.097	-10.2	125	0.00
56 T	Ethyl methacrylate	50.000	62.274	-24.5	133	0.00
57 T	1,3-Dichloropropane	50.000	57.113	-14.2	127	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	329.050	-31.6#	141	0.00
59 T	2-Hexanone	250.000	315.698	-26.3#	133	0.00
60 T	Dibromochloromethane	50.000	56.714	-13.4	126	0.00
61 T	1,2-Dibromoethane	50.000	56.994	-14.0	130	0.00
62 S	4-Bromofluorobenzene	50.000	50.447	-0.9	96	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	91	0.00
64 T	Tetrachloroethene	50.000	49.677	0.6	115	0.00
65 PM	Chlorobenzene	50.000	53.488	-7.0	117	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	56.678	-13.4	123	0.00
67 C	Ethyl Benzene	50.000	53.404	-6.8#	117	0.00
68 T	m/p-Xylenes	100.000	106.616	-6.6	114	0.00
69 T	o-Xylene	50.000	55.044	-10.1	117	0.00
70 T	Styrene	50.000	57.690	-15.4	120	0.00
71 P	Bromoform	50.000	58.011	-16.0	125	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	91	0.00
73 T	Isopropylbenzene	50.000	51.660	-3.3	114	0.00
74 T	N-amyl acetate	50.000	48.989	2.0	106	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	55.254	-10.5	126	0.00
76 T	1,2,3-Trichloropropane	50.000	51.357	-2.7	115	0.00
77 T	Bromobenzene	50.000	56.660	-13.3	125	0.00
78 T	n-propylbenzene	50.000	51.945	-3.9	113	0.00
79 T	2-Chlorotoluene	50.000	55.630	-11.3	121	0.00
80 T	1,3,5-Trimethylbenzene	50.000	53.731	-7.5	117	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	52.431	-4.9	124	0.00
82 T	4-Chlorotoluene	50.000	53.119	-6.2	120	0.00
83 T	tert-Butylbenzene	50.000	51.166	-2.3	113	0.00
84 T	1,2,4-Trimethylbenzene	50.000	55.472	-10.9	120	0.00
85 T	sec-Butylbenzene	50.000	50.624	-1.2	111	0.00
86 T	p-Isopropyltoluene	50.000	53.365	-6.7	114	0.00
87 T	1,3-Dichlorobenzene	50.000	54.307	-8.6	119	0.00
88 T	1,4-Dichlorobenzene	50.000	51.778	-3.6	120	0.00
89 T	n-Butylbenzene	50.000	51.552	-3.1	111	0.00
90 T	Hexachloroethane	50.000	50.163	-0.3	112	0.00
91 T	1,2-Dichlorobenzene	50.000	53.508	-7.0	121	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	59.394	-18.8	141	0.00
93 T	1,2,4-Trichlorobenzene	50.000	53.889	-7.8	121	0.00
94 T	Hexachlorobutadiene	50.000	50.913	-1.8	114	0.00
95 T	Naphthalene	50.000	56.727	-13.5	126	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088127.D
Acq On : 28 Oct 2025 10:23
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 29 02:16:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	54.744	-9.5	126	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>LIRO01</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3468</u>
Instrument ID:	<u>MSVOA_N</u>	Calibration Date/Time:	<u>10/29/2025</u> <u>10:24</u>
Lab File ID:	<u>VN088147.D</u>	Init. Calib. Date(s):	<u>10/23/2025</u> <u>10/23/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>09:42</u> <u>12:02</u>
GC Column:	<u>RXI-624</u>	ID:	<u>0.25</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Methyl tert-butyl Ether	2.308	2.670		15.69	20
Benzene	1.494	1.622		8.57	20
Toluene	0.921	0.998		8.36	20
Ethyl Benzene	1.993	2.204		10.59	20
m/p-Xylenes	0.747	0.817		9.37	20
o-Xylene	0.708	0.796		12.43	20
Isopropylbenzene	3.856	4.049		5.01	20
n-propylbenzene	4.706	5.001		6.27	20
1,3,5-Trimethylbenzene	3.203	3.418		6.71	20
tert-Butylbenzene	2.861	2.965		3.63	20
1,2,4-Trimethylbenzene	3.204	3.544		10.61	20
sec-Butylbenzene	4.203	4.348		3.45	20
p-Isopropyltoluene	3.372	3.656		8.42	20
n-Butylbenzene	3.340	3.566		6.77	20
Naphthalene	3.320	3.695		11.3	20
1,2-Dichloroethane-d4	0.865	0.988		14.22	20
Dibromofluoromethane	0.336	0.354		5.36	20
Toluene-d8	1.294	1.288		-0.46	20
4-Bromofluorobenzene	0.457	0.482		5.47	20

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	276791	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	513941	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	450607	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	235546	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	273604	57.164	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 114.320%	
35) Dibromofluoromethane	8.147	113	182180	52.765	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 105.520%	
50) Toluene-d8	10.547	98	661877	49.751	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 99.500%	
62) 4-Bromofluorobenzene	12.829	95	247544	52.687	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 105.380%	

Target Compounds				Qvalue		
2) Dichlorodifluoromethane	2.142	85	164970	52.838	ug/l	100
3) Chloromethane	2.383	50	183800	50.039	ug/l	95
4) Vinyl Chloride	2.536	62	207336	51.806	ug/l	99
5) Bromomethane	2.959	94	121693	50.836	ug/l	98
6) Chloroethane	3.130	64	136689	47.404	ug/l	98
7) Trichlorofluoromethane	3.506	101	322344	50.498	ug/l	96
8) Diethyl Ether	3.959	74	128195	54.036	ug/l	94
9) 1,1,2-Trichlorotrifluo...	4.365	101	171449	52.051	ug/l	99
10) Methyl Iodide	4.577	142	152457	47.192	ug/l	99
11) Tert butyl alcohol	5.524	59	240346	291.479	ug/l	98
12) 1,1-Dichloroethene	4.336	96	166280	47.796	ug/l	91
13) Acrolein	4.171	56	399139	430.337	ug/l	100
14) Allyl chloride	5.012	41	320247	52.518	ug/l	100
15) Acrylonitrile	5.706	53	669318	297.991	ug/l	99
16) Acetone	4.418	43	698546	290.508	ug/l	99
17) Carbon Disulfide	4.700	76	503774	47.636	ug/l	98
18) Methyl Acetate	5.018	43	304255	61.806	ug/l	99
19) Methyl tert-butyl Ether	5.789	73	738964	57.838	ug/l	98
20) Methylene Chloride	5.259	84	213890	57.040	ug/l	93
21) trans-1,2-Dichloroethene	5.777	96	194037	50.813	ug/l	99
22) Diisopropyl ether	6.653	45	750083	58.490	ug/l	98
23) Vinyl Acetate	6.589	43	3502969	303.244	ug/l	98
24) 1,1-Dichloroethane	6.547	63	400432	56.369	ug/l	98
25) 2-Butanone	7.471	43	957991	302.314	ug/l	99
26) 2,2-Dichloropropane	7.471	77	329175	50.991	ug/l	98
27) cis-1,2-Dichloroethene	7.471	96	233426	53.098	ug/l	93
28) Bromochloromethane	7.794	49	178228	53.099	ug/l	97
29) Tetrahydrofuran	7.824	42	614290	297.454	ug/l	98
30) Chloroform	7.947	83	403678	56.883	ug/l	98
31) Cyclohexane	8.241	56	344672	51.445	ug/l	97
32) 1,1,1-Trichloroethane	8.147	97	346537	54.826	ug/l	98
36) 1,1-Dichloropropene	8.353	75	276199	54.787	ug/l	100
37) Ethyl Acetate	7.547	43	388034	59.645	ug/l	98
38) Carbon Tetrachloride	8.341	117	289057	55.515	ug/l	99
39) Methylcyclohexane	9.582	83	333429	51.455	ug/l	98
40) Benzene	8.588	78	833839	54.311	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	204403	59.696	ug/l	98
42) 1,2-Dichloroethane	8.653	62	341565	62.613	ug/l	98
43) Isopropyl Acetate	8.671	43	598332	59.852	ug/l	100
44) Trichloroethene	9.335	130	188118	52.421	ug/l	95
45) 1,2-Dichloropropane	9.600	63	222476	57.398	ug/l	96
46) Dibromomethane	9.688	93	160429	58.034	ug/l	98
47) Bromodichloromethane	9.865	83	328426	59.340	ug/l	96
48) Methyl methacrylate	9.665	41	291080	63.068	ug/l	98
49) 1,4-Dioxane	9.682	88	70074	1220.741	ug/l #	92
51) 4-Methyl-2-Pentanone	10.424	43	1859047	314.348	ug/l	99
52) Toluene	10.606	92	512754	54.169	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	348452	59.154	ug/l	98
54) cis-1,3-Dichloropropene	10.294	75	363639	58.175	ug/l	97
55) 1,1,2-Trichloroethane	10.994	97	202441	56.371	ug/l	96
56) Ethyl methacrylate	10.853	69	348210	61.271	ug/l	97
57) 1,3-Dichloropropane	11.141	76	369528	58.541	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	964688	326.334	ug/l	99
59) 2-Hexanone	11.177	43	1260002	321.167	ug/l	99
60) Dibromochloromethane	11.335	129	235956	57.806	ug/l	99
61) 1,2-Dibromoethane	11.447	107	207697	56.195	ug/l	97
64) Tetrachloroethene	11.082	164	153151	51.526	ug/l	95
65) Chlorobenzene	11.871	112	557475	54.484	ug/l	98
66) 1,1,1,2-Tetrachloroethane	11.935	131	192433	57.405	ug/l	100
67) Ethyl Benzene	11.941	91	993281	55.305	ug/l	100
68) m/p-Xylenes	12.047	106	736560	109.455	ug/l	98
69) o-Xylene	12.376	106	358701	56.230	ug/l	98
70) Styrene	12.388	104	613971	59.022	ug/l	96
71) Bromoform	12.559	173	148569	59.389	ug/l #	98
73) Isopropylbenzene	12.676	105	953816	52.502	ug/l	100
74) N-amyl acetate	12.506	43	152600	29.590	ug/l #	90
75) 1,1,2,2-Tetrachloroethane	12.918	83	311886	55.143	ug/l	99
76) 1,2,3-Trichloropropane	12.971	75	308532m	57.291	ug/l	
77) Bromobenzene	12.959	156	212806	54.321	ug/l	94
78) n-propylbenzene	13.012	91	1177896	53.130	ug/l	100
79) 2-Chlorotoluene	13.106	91	705272	55.783	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	805138	53.363	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.718	75	101773	52.717	ug/l	90
82) 4-Chlorotoluene	13.200	91	742918	54.312	ug/l	99
83) tert-Butylbenzene	13.418	119	698366	51.815	ug/l	99
84) 1,2,4-Trimethylbenzene	13.459	105	834714	55.295	ug/l	99
85) sec-Butylbenzene	13.594	105	1024249	51.725	ug/l	100
86) p-Isopropyltoluene	13.706	119	861086	54.207	ug/l	98
87) 1,3-Dichlorobenzene	13.712	146	424640	54.298	ug/l	98
88) 1,4-Dichlorobenzene	13.788	146	433469	51.606	ug/l	98
89) n-Butylbenzene	14.035	91	839862	53.375	ug/l	99
90) Hexachloroethane	14.312	117	157187	51.098	ug/l	95
91) 1,2-Dichlorobenzene	14.082	146	404865	53.706	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.700	75	79245	60.196	ug/l	92
93) 1,2,4-Trichlorobenzene	15.364	180	244895	53.640	ug/l	99
94) Hexachlorobutadiene	15.470	225	91800	53.995	ug/l	99
95) Naphthalene	15.612	128	870340	55.647	ug/l	99
96) 1,2,3-Trichlorobenzene	15.812	180	233523	53.345	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088147.D
Acq On : 29 Oct 2025 10:24
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

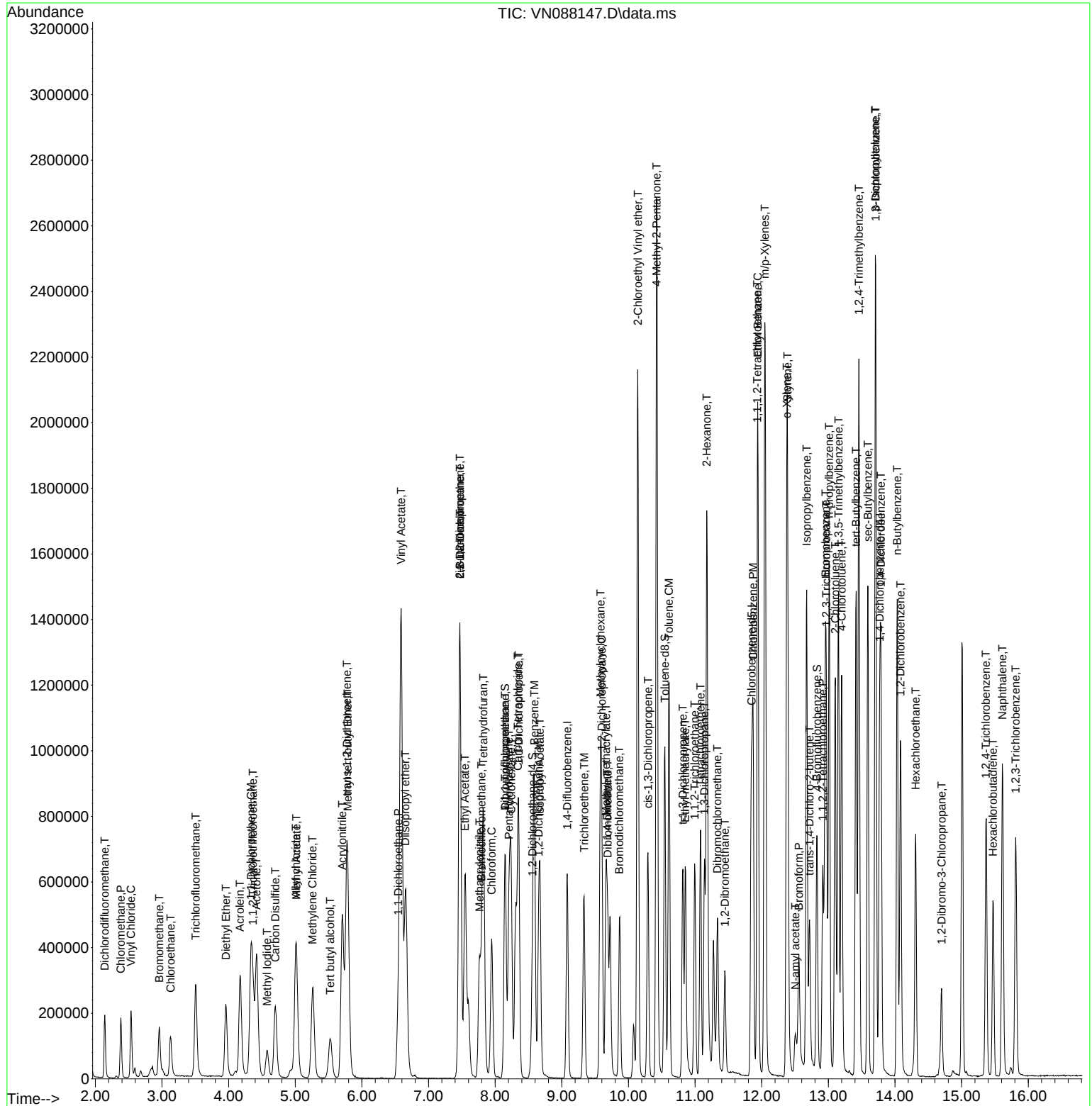
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

```
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\  
Data File : VN088147.D  
Acq On    : 29 Oct 2025  10:24  
Operator  : JC\MD  
Sample    : VSTDCCC050  
Misc      : 5.0mL/MSVOA_N/WATER  
ALS Vial  : 3    Sample Multiplier: 1
```

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	82	0.00
2 T	Dichlorodifluoromethane	0.564	0.596	-5.7	107	0.00
3 P	Chloromethane	0.664	0.664	0.0	105	0.00
4 C	Vinyl Chloride	0.723	0.749	-3.6#	106	0.00
5 T	Bromomethane	0.432	0.440	-1.9	105	-0.01
6 T	Chloroethane	0.521	0.494	5.2	98	0.00
7 T	Trichlorofluoromethane	1.153	1.165	-1.0	100	0.00
8 T	Diethyl Ether	0.429	0.463	-7.9	119	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.595	0.619	-4.0	107	0.00
10 T	Methyl Iodide	0.544	0.551	-1.3	99	0.00
11 T	Tert butyl alcohol	0.149	0.174	-16.8	123	0.00
12 CM	1,1-Dichloroethene	0.628	0.601	4.3#	106	0.00
13 T	Acrolein	0.168	0.288	-71.4#	191#	0.00
14 T	Allyl chloride	1.102	1.157	-5.0	117	0.00
15 T	Acrylonitrile	0.406	0.484	-19.2	122	0.00
16 T	Acetone	0.434	0.505	-16.4	129	0.00
17 T	Carbon Disulfide	1.910	1.820	4.7	100	0.00
18 T	Methyl Acetate	0.889	1.099	-23.6	131	0.00
19 T	Methyl tert-butyl Ether	2.308	2.670	-15.7	122	0.00
20 T	Methylene Chloride	0.729	0.773	-6.0	117	0.00
21 T	trans-1,2-Dichloroethene	0.690	0.701	-1.6	107	0.00
22 T	Diisopropyl ether	2.317	2.710	-17.0	118	0.00
23 T	Vinyl Acetate	2.087	2.531	-21.3	119	0.00
24 P	1,1-Dichloroethane	1.283	1.447	-12.8	115	0.00
25 T	2-Butanone	0.572	0.692	-21.0	122	0.00
26 T	2,2-Dichloropropane	1.166	1.189	-2.0	106	0.00
27 T	cis-1,2-Dichloroethene	0.794	0.843	-6.2	110	0.00
28 T	Bromochloromethane	0.606	0.644	-6.3	90	0.00
29 T	Tetrahydrofuran	0.373	0.444	-19.0	123	0.00
30 C	Chloroform	1.282	1.458	-13.7#	115	0.00
31 T	Cyclohexane	1.210	1.245	-2.9	106	0.00
32 T	1,1,1-Trichloroethane	1.142	1.252	-9.6	112	0.00
33 S	1,2-Dichloroethane-d4	0.865	0.988	-14.2	101	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	82	0.00
35 S	Dibromofluoromethane	0.336	0.354	-5.4	92	0.00
36 T	1,1-Dichloropropene	0.490	0.537	-9.6	108	0.00
37 T	Ethyl Acetate	0.633	0.755	-19.3	126	0.00
38 T	Carbon Tetrachloride	0.507	0.562	-10.8	110	0.00
39 T	Methylcyclohexane	0.630	0.649	-3.0	101	0.00
40 TM	Benzene	1.494	1.622	-8.6	109	0.00
41 T	Methacrylonitrile	0.333	0.398	-19.5	120	0.00
42 TM	1,2-Dichloroethane	0.531	0.665	-25.2#	125	0.00
43 T	Isopropyl Acetate	0.973	1.164	-19.6	117	0.00
44 TM	Trichloroethene	0.349	0.366	-4.9	105	0.00
45 C	1,2-Dichloropropane	0.377	0.433	-14.9#	116	0.00
46 T	Dibromomethane	0.269	0.312	-16.0	117	0.00
47 T	Bromodichloromethane	0.538	0.639	-18.8	119	0.00
48 T	Methyl methacrylate	0.449	0.566	-26.1#	124	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	0.006	0.007	-16.7	127	0.00
50 S	Toluene-d8	1.294	1.288	0.5	86	0.00
51 T	4-Methyl-2-Pentanone	0.575	0.723	-25.7#	122	0.00
52 CM	Toluene	0.921	0.998	-8.4#	108	0.00
53 T	t-1,3-Dichloropropene	0.573	0.678	-18.3	116	0.00
54 T	cis-1,3-Dichloropropene	0.608	0.708	-16.4	116	0.00
55 T	1,1,2-Trichloroethane	0.349	0.394	-12.9	115	0.00
56 T	Ethyl methacrylate	0.553	0.678	-22.6	117	0.00
57 T	1,3-Dichloropropane	0.614	0.719	-17.1	116	0.00
58 T	2-Chloroethyl Vinyl ether	0.288	0.375	-30.2#	125	0.00
59 T	2-Hexanone	0.382	0.490	-28.3#	121	0.00
60 T	Dibromochloromethane	0.397	0.459	-15.6	115	0.00
61 T	1,2-Dibromoethane	0.360	0.404	-12.2	114	0.00
62 S	4-Bromofluorobenzene	0.457	0.482	-5.5	90	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	80	0.00
64 T	Tetrachloroethene	0.330	0.340	-3.0	106	0.00
65 PM	Chlorobenzene	1.135	1.237	-9.0	106	0.00
66 T	1,1,1,2-Tetrachloroethane	0.372	0.427	-14.8	111	0.00
67 C	Ethyl Benzene	1.993	2.204	-10.6#	108	0.00
68 T	m/p-Xylenes	0.747	0.817	-9.4	104	0.00
69 T	o-Xylene	0.708	0.796	-12.4	106	0.00
70 T	Styrene	1.154	1.363	-18.1	109	0.00
71 P	Bromoform	0.278	0.330	-18.7	114	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	84	0.00
73 T	Isopropylbenzene	3.856	4.049	-5.0	107	0.00
74 T	N-amyl acetate	1.095	0.648	40.8#	59	0.00
75 P	1,1,2,2-Tetrachloroethane	1.201	1.324	-10.2	116	0.00
76 T	1,2,3-Trichloropropane	1.143	1.310	-14.6	118	0.00
77 T	Bromobenzene	0.832	0.903	-8.5	110	0.00
78 T	n-propylbenzene	4.706	5.001	-6.3	107	0.00
79 T	2-Chlorotoluene	2.684	2.994	-11.5	111	0.00
80 T	1,3,5-Trimethylbenzene	3.203	3.418	-6.7	107	0.00
81 T	trans-1,4-Dichloro-2-butene	0.410	0.432	-5.4	114	0.00
82 T	4-Chlorotoluene	2.904	3.154	-8.6	112	0.00
83 T	tert-Butylbenzene	2.861	2.965	-3.6	105	0.00
84 T	1,2,4-Trimethylbenzene	3.204	3.544	-10.6	110	0.00
85 T	sec-Butylbenzene	4.203	4.348	-3.4	104	0.00
86 T	p-Isopropyltoluene	3.372	3.656	-8.4	107	0.00
87 T	1,3-Dichlorobenzene	1.660	1.803	-8.6	109	0.00
88 T	1,4-Dichlorobenzene	1.783	1.840	-3.2	110	0.00
89 T	n-Butylbenzene	3.340	3.566	-6.8	105	0.00
90 T	Hexachloroethane	0.653	0.667	-2.1	104	0.00
91 T	1,2-Dichlorobenzene	1.600	1.719	-7.4	111	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.279	0.336	-20.4	132	0.00
93 T	1,2,4-Trichlorobenzene	0.969	1.040	-7.3	111	0.00
94 T	Hexachlorobutadiene	0.361	0.390	-8.0	111	0.00
95 T	Naphthalene	3.320	3.695	-11.3	113	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088147.D
Acq On : 29 Oct 2025 10:24
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	0.929	0.991	-6.7	113	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	82	0.00
2 T	Dichlorodifluoromethane	50.000	52.838	-5.7	107	0.00
3 P	Chloromethane	50.000	50.039	-0.1	105	0.00
4 C	Vinyl Chloride	50.000	51.806	-3.6#	106	0.00
5 T	Bromomethane	50.000	50.836	-1.7	105	-0.01
6 T	Chloroethane	50.000	47.404	5.2	98	0.00
7 T	Trichlorofluoromethane	50.000	50.498	-1.0	100	0.00
8 T	Diethyl Ether	50.000	54.036	-8.1	119	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	52.051	-4.1	107	0.00
10 T	Methyl Iodide	50.000	47.192	5.6	99	0.00
11 T	Tert butyl alcohol	250.000	291.479	-16.6	123	0.00
12 CM	1,1-Dichloroethene	50.000	47.796	4.4#	106	0.00
13 T	Acrolein	250.000	430.337	-72.1#	191	0.00
14 T	Allyl chloride	50.000	52.518	-5.0	117	0.00
15 T	Acrylonitrile	250.000	297.991	-19.2	122	0.00
16 T	Acetone	250.000	290.508	-16.2	129	0.00
17 T	Carbon Disulfide	50.000	47.636	4.7	100	0.00
18 T	Methyl Acetate	50.000	61.806	-23.6	131	0.00
19 T	Methyl tert-butyl Ether	50.000	57.838	-15.7	122	0.00
20 T	Methylene Chloride	50.000	57.040	-14.1	117	0.00
21 T	trans-1,2-Dichloroethene	50.000	50.813	-1.6	107	0.00
22 T	Diisopropyl ether	50.000	58.490	-17.0	118	0.00
23 T	Vinyl Acetate	250.000	303.244	-21.3	119	0.00
24 P	1,1-Dichloroethane	50.000	56.369	-12.7	115	0.00
25 T	2-Butanone	250.000	302.314	-20.9	122	0.00
26 T	2,2-Dichloropropane	50.000	50.991	-2.0	106	0.00
27 T	cis-1,2-Dichloroethene	50.000	53.098	-6.2	110	0.00
28 T	Bromochloromethane	50.000	53.099	-6.2	90	0.00
29 T	Tetrahydrofuran	250.000	297.454	-19.0	123	0.00
30 C	Chloroform	50.000	56.883	-13.8#	115	0.00
31 T	Cyclohexane	50.000	51.445	-2.9	106	0.00
32 T	1,1,1-Trichloroethane	50.000	54.826	-9.7	112	0.00
33 S	1,2-Dichloroethane-d4	50.000	57.164	-14.3	101	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	82	0.00
35 S	Dibromofluoromethane	50.000	52.765	-5.5	92	0.00
36 T	1,1-Dichloropropene	50.000	54.787	-9.6	108	0.00
37 T	Ethyl Acetate	50.000	59.645	-19.3	126	0.00
38 T	Carbon Tetrachloride	50.000	55.515	-11.0	110	0.00
39 T	Methylcyclohexane	50.000	51.455	-2.9	101	0.00
40 TM	Benzene	50.000	54.311	-8.6	109	0.00
41 T	Methacrylonitrile	50.000	59.696	-19.4	120	0.00
42 TM	1,2-Dichloroethane	50.000	62.613	-25.2#	125	0.00
43 T	Isopropyl Acetate	50.000	59.852	-19.7	117	0.00
44 TM	Trichloroethene	50.000	52.421	-4.8	105	0.00
45 C	1,2-Dichloropropane	50.000	57.398	-14.8#	116	0.00
46 T	Dibromomethane	50.000	58.034	-16.1	117	0.00
47 T	Bromodichloromethane	50.000	59.340	-18.7	119	0.00
48 T	Methyl methacrylate	50.000	63.068	-26.1#	124	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088147.D
 Acq On : 29 Oct 2025 10:24
 Operator : JC\MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 3 Sample Multiplier: 1

Instrument :
 MSVOA_N
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 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	1220.741	-22.1	127	0.00
50 S	Toluene-d8	50.000	49.751	0.5	86	0.00
51 T	4-Methyl-2-Pentanone	250.000	314.348	-25.7#	122	0.00
52 CM	Toluene	50.000	54.169	-8.3#	108	0.00
53 T	t-1,3-Dichloropropene	50.000	59.154	-18.3	116	0.00
54 T	cis-1,3-Dichloropropene	50.000	58.175	-16.3	116	0.00
55 T	1,1,2-Trichloroethane	50.000	56.371	-12.7	115	0.00
56 T	Ethyl methacrylate	50.000	61.271	-22.5	117	0.00
57 T	1,3-Dichloropropane	50.000	58.541	-17.1	116	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	326.334	-30.5#	125	0.00
59 T	2-Hexanone	250.000	321.167	-28.5#	121	0.00
60 T	Dibromochloromethane	50.000	57.806	-15.6	115	0.00
61 T	1,2-Dibromoethane	50.000	56.195	-12.4	114	0.00
62 S	4-Bromofluorobenzene	50.000	52.687	-5.4	90	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	80	0.00
64 T	Tetrachloroethene	50.000	51.526	-3.1	106	0.00
65 PM	Chlorobenzene	50.000	54.484	-9.0	106	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	57.405	-14.8	111	0.00
67 C	Ethyl Benzene	50.000	55.305	-10.6#	108	0.00
68 T	m/p-Xylenes	100.000	109.455	-9.5	104	0.00
69 T	o-Xylene	50.000	56.230	-12.5	106	0.00
70 T	Styrene	50.000	59.022	-18.0	109	0.00
71 P	Bromoform	50.000	59.389	-18.8	114	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	84	0.00
73 T	Isopropylbenzene	50.000	52.502	-5.0	107	0.00
74 T	N-amyl acetate	50.000	29.590	40.8#	59	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	55.143	-10.3	116	0.00
76 T	1,2,3-Trichloropropane	50.000	57.291	-14.6	118	0.00
77 T	Bromobenzene	50.000	54.321	-8.6	110	0.00
78 T	n-propylbenzene	50.000	53.130	-6.3	107	0.00
79 T	2-Chlorotoluene	50.000	55.783	-11.6	111	0.00
80 T	1,3,5-Trimethylbenzene	50.000	53.363	-6.7	107	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	52.717	-5.4	114	0.00
82 T	4-Chlorotoluene	50.000	54.312	-8.6	112	0.00
83 T	tert-Butylbenzene	50.000	51.815	-3.6	105	0.00
84 T	1,2,4-Trimethylbenzene	50.000	55.295	-10.6	110	0.00
85 T	sec-Butylbenzene	50.000	51.725	-3.5	104	0.00
86 T	p-Isopropyltoluene	50.000	54.207	-8.4	107	0.00
87 T	1,3-Dichlorobenzene	50.000	54.298	-8.6	109	0.00
88 T	1,4-Dichlorobenzene	50.000	51.606	-3.2	110	0.00
89 T	n-Butylbenzene	50.000	53.375	-6.8	105	0.00
90 T	Hexachloroethane	50.000	51.098	-2.2	104	0.00
91 T	1,2-Dichlorobenzene	50.000	53.706	-7.4	111	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	60.196	-20.4	132	0.00
93 T	1,2,4-Trichlorobenzene	50.000	53.640	-7.3	111	0.00
94 T	Hexachlorobutadiene	50.000	53.995	-8.0	111	0.00
95 T	Naphthalene	50.000	55.647	-11.3	113	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088147.D
Acq On : 29 Oct 2025 10:24
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Oct 30 04:01:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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	53.345	-6.7	113	0.00

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



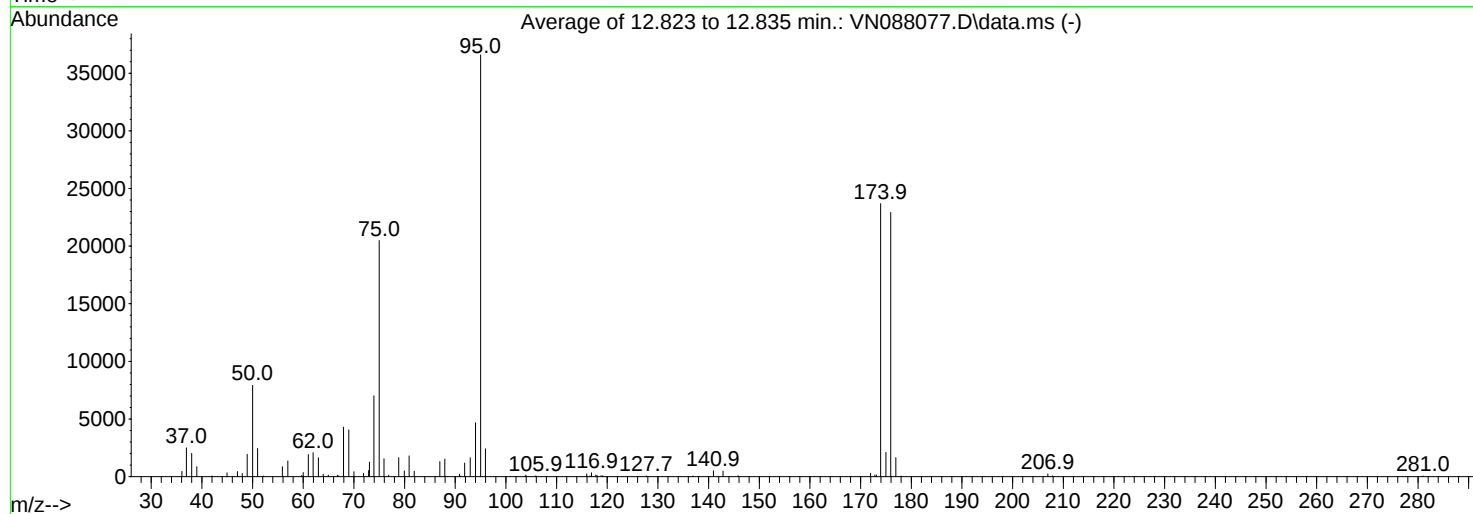
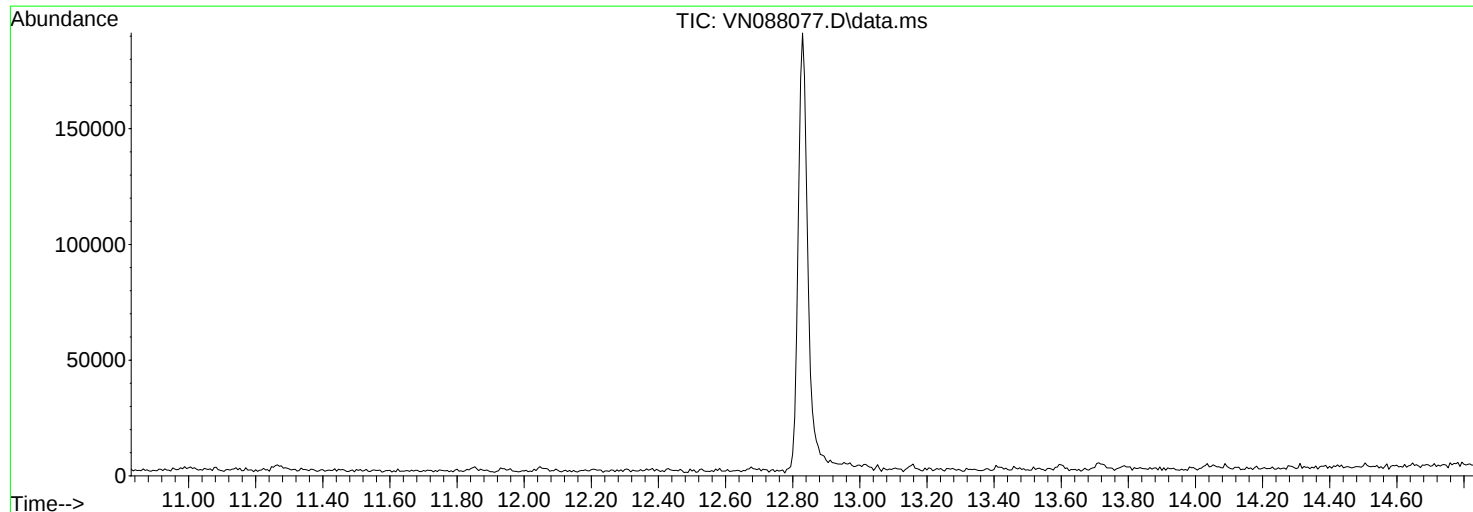
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102325\
Data File : VN088077.D
Acq On : 23 Oct 2025 09:09
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Title : SW846 8260
Last Update : Sat Oct 25 00:15:22 2025



AutoFind: Scans 1848, 1849, 1850; Background Corrected with Scan 1839

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.7	7924	PASS
75	95	30	60	56.0	20496	PASS
95	95	100	100	100.0	36595	PASS
96	95	5	9	6.6	2412	PASS
173	174	0.00	2	0.6	141	PASS
174	95	50	100	64.7	23688	PASS
175	174	5	9	8.9	2114	PASS
176	174	95	101	96.8	22925	PASS
177	176	5	9	7.2	1653	PASS

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	458	50.00	7924	64.95	132	75.95	155
36.95	2501	51.00	2446	66.75	129	76.85	12
38.00	2013	52.20	50	67.00	76	78.85	165
39.00	861	55.90	867	67.95	4293	79.95	50
39.85	28	56.95	1354	69.00	4051	80.90	1809
42.00	57	59.70	109	70.00	424	81.90	470
43.90	19	60.00	356	71.90	286	86.95	1303
44.95	328	61.00	1910	72.90	530	87.95	1532
47.00	441	61.95	2077	73.05	1259	90.85	210
47.95	276	63.00	1644	73.95	7010	91.10	62
48.95	1951	63.95	214	75.00	20496	91.85	1175

Average of 12.823 to 12.835 min.: VN088077.D\data.ms

BFB

Modified:subtracted

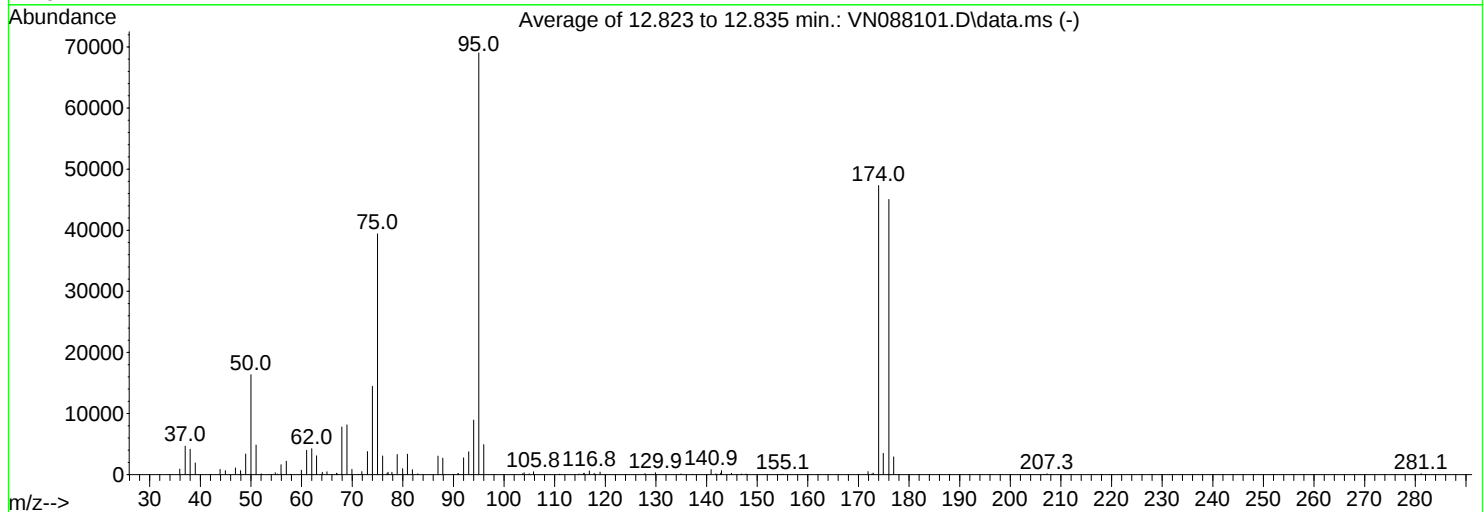
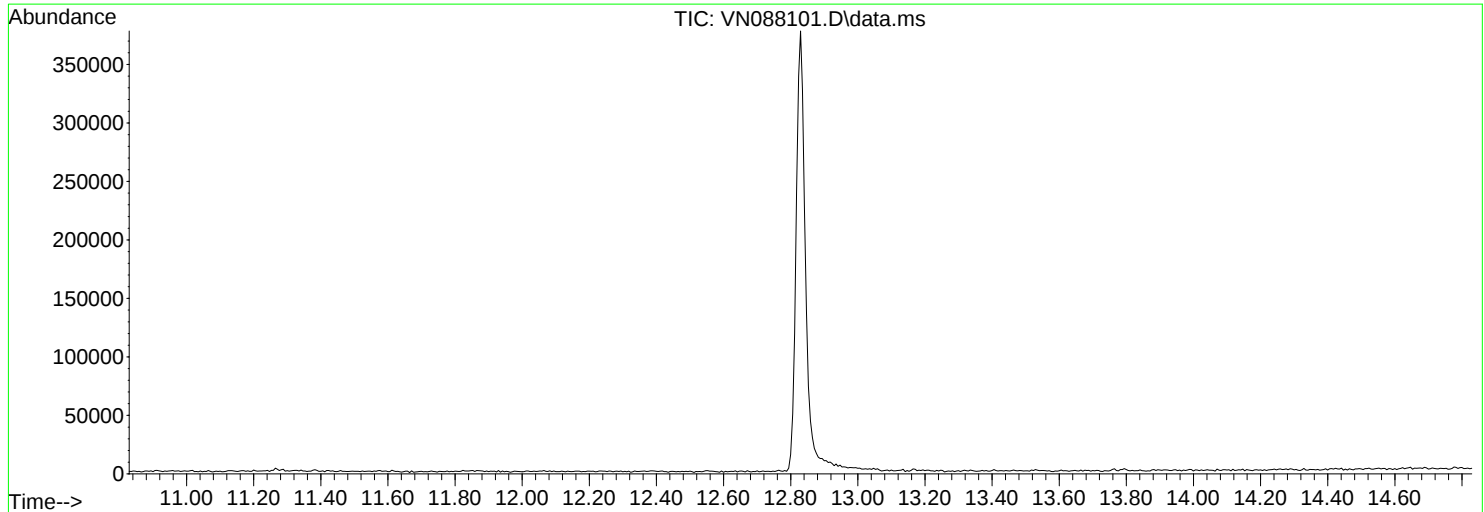
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.95	1644	117.95	115	173.95	23688		
94.00	4674	118.80	84	175.00	2114		
95.00	36595	119.10	82	175.95	22925		
95.95	2412	127.70	70	176.95	1653		
103.80	60	136.90	63	178.00	54		
103.95	139	140.95	512	206.95	238		
105.90	74	142.85	486	207.90	72		
115.95	231	145.80	89	281.00	50		
116.60	62	171.95	296				
116.90	332	172.80	135				
117.75	138	173.10	141				

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088101.D
Acq On : 27 Oct 2025 09:58
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Title : SW846 8260
Last Update : Sat Oct 25 00:15:22 2025



AutoFind: Scans 1848, 1849, 1850; Background Corrected with Scan 1840

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	23.7	16367	PASS
75	95	30	60	57.1	39427	PASS
95	95	100	100	100.0	69032	PASS
96	95	5	9	7.1	4924	PASS
173	174	0.00	2	0.6	268	PASS
174	95	50	100	68.6	47325	PASS
175	174	5	9	7.4	3492	PASS
176	174	95	101	95.2	45051	PASS
177	176	5	9	6.5	2918	PASS

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	920	52.05	141	65.00	485	76.00	306
37.00	4661	54.80	326	66.90	226	76.90	241
38.00	4179	55.20	100	67.10	97	77.10	38
39.00	1917	55.95	1627	67.95	7794	77.85	38
43.90	874	57.00	2206	68.95	8159	78.90	3298
44.95	660	57.90	82	69.95	863	79.95	966
46.95	1114	59.95	741	71.20	53	80.90	3365
47.95	651	61.00	3995	71.90	497	81.90	822
48.95	3377	62.00	4259	73.00	3760	82.95	135
50.00	16367	62.95	3086	74.00	14470	86.95	3033
51.00	4844	64.10	386	75.00	39427	87.90	2708

Average of 12.823 to 12.835 min.: VN088101.D\data.ms

BFB

Modified:subtracted

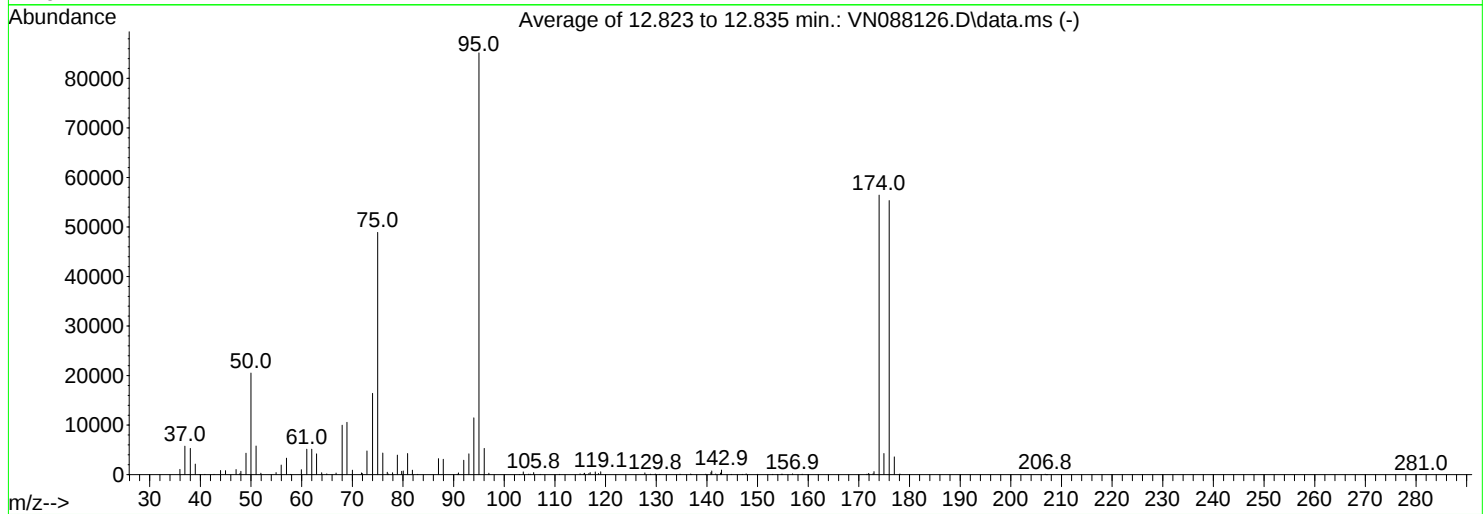
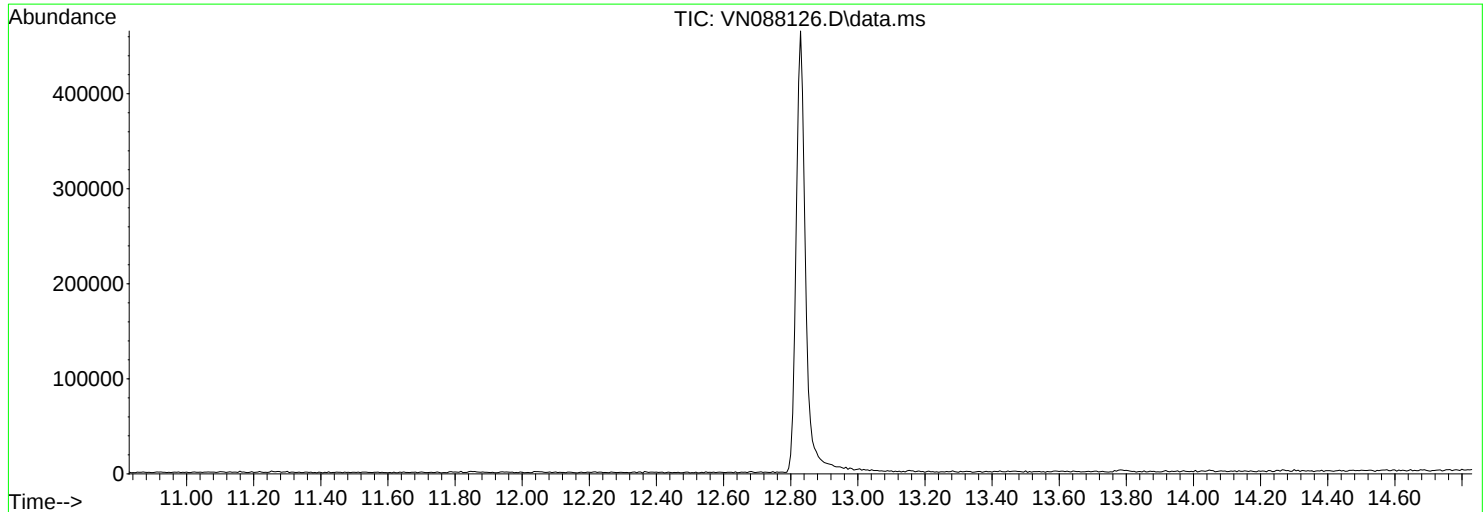
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.80	147	111.00	85	137.20	54	172.70	145
91.00	195	114.80	105	140.90	846	172.90	268
92.00	2747	115.70	182	141.85	129	174.00	47325
93.00	3738	115.85	226	142.80	247	174.90	3492
94.00	8930	116.85	597	142.95	658	176.00	45051
95.00	69032	117.80	210	144.90	215	176.95	2918
96.00	4924	118.00	94	146.90	114	206.60	62
103.70	148	118.95	425	147.80	111	207.25	155
103.95	329	127.85	189	154.70	54	208.20	54
104.95	146	129.90	309	155.10	89	281.15	157
105.80	470	134.95	139	171.90	488		

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088126.D
Acq On : 28 Oct 2025 09:26
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Title : SW846 8260
Last Update : Sat Oct 25 00:15:22 2025



AutoFind: Scans 1848, 1849, 1850; Background Corrected with Scan 1839

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.1	20512	PASS
75	95	30	60	57.4	48912	PASS
95	95	100	100	100.0	85157	PASS
96	95	5	9	6.2	5307	PASS
173	174	0.00	2	1.1	601	PASS
174	95	50	100	66.3	56432	PASS
175	174	5	9	7.6	4276	PASS
176	174	95	101	98.0	55320	PASS
177	176	5	9	6.5	3593	PASS

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	1079	48.00	688	62.00	5129	74.00	1640
36.95	5754	49.00	4342	62.95	4207	75.00	4891
38.00	5296	50.00	20512	63.95	389	76.00	435
39.00	2142	51.00	5773	64.95	171	76.90	48
39.90	31	51.95	277	66.80	327	77.10	146
40.90	55	54.95	417	68.00	9986	77.95	378
42.70	62	55.95	1949	68.95	10569	78.90	3928
44.00	855	57.00	3328	70.00	921	79.75	686
44.95	814	57.80	72	71.80	375	80.05	743
47.05	1032	59.95	1014	72.00	183	80.90	4262
47.80	187	61.00	5136	72.90	4795	81.85	913

Average of 12.823 to 12.835 min.: VN088126.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
82.90	61	103.00	51	116.95	433	139.80	86
87.00	3231	103.75	540	117.95	560	140.80	432
87.95	3099	104.80	104	118.60	235	140.95	728
90.70	89	105.10	90	119.05	596	141.75	126
90.95	370	105.80	421	127.75	352	142.70	324
92.00	2901	107.10	55	128.90	109	142.90	949
93.00	4193	110.90	58	129.80	121	144.80	56
94.00	11466	114.95	167	130.70	54	147.00	54
95.00	85157	115.70	142	134.70	97	147.75	161
96.05	5307	115.85	298	136.80	122	150.00	54
96.95	302	116.70	217	137.00	78	153.00	55

Average of 12.823 to 12.835 min.: VN088126.D\data.ms

BFB

Modified:subtracted

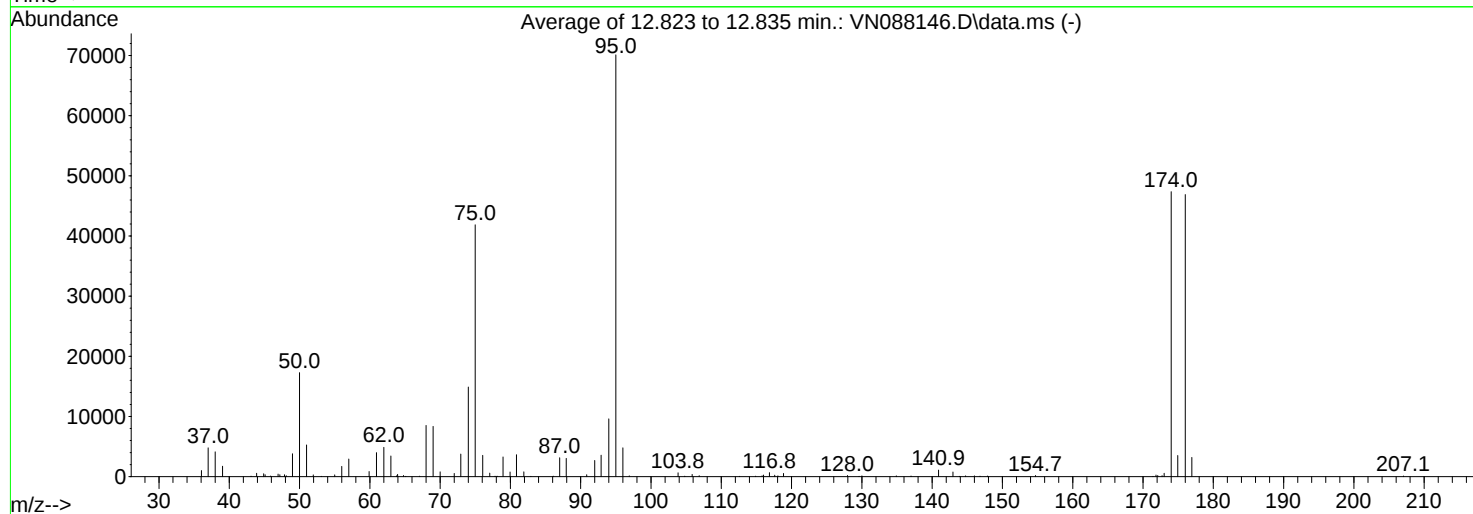
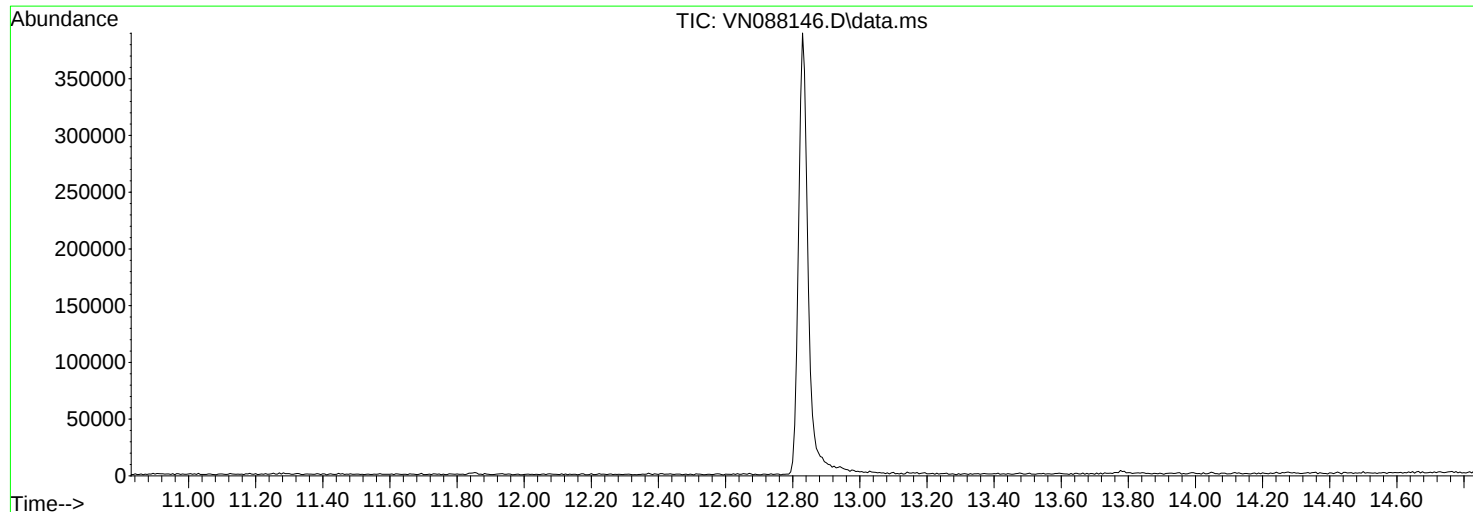
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
153.90	50	174.95	4276				
154.70	92	176.00	55320				
154.90	110	177.00	3593				
156.90	176	178.10	118				
158.80	84	206.80	88				
171.60	84	207.05	2				
171.90	219	281.00	50				
172.10	90						
172.80	150						
173.00	601						
174.00	56432						

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088146.D
Acq On : 29 Oct 2025 09:07
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Title : SW846 8260
Last Update : Sat Oct 25 00:15:22 2025



AutoFind: Scans 1848, 1849, 1850; Background Corrected with Scan 1840

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	24.7	17300	PASS
75	95	30	60	59.7	41867	PASS
95	95	100	100	100.0	70120	PASS
96	95	5	9	6.8	4784	PASS
173	174	0.00	2	1.2	566	PASS
174	95	50	100	67.6	47387	PASS
175	174	5	9	7.4	3519	PASS
176	174	95	101	99.0	46891	PASS
177	176	5	9	6.8	3203	PASS

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	1020	47.85	312	60.95	3996	72.00	531
37.00	4781	48.10	150	62.00	4877	72.95	3741
38.00	4116	49.00	3806	63.00	3431	74.00	1488
39.05	1737	50.00	17300	63.80	143	75.00	4186
43.10	76	51.00	5259	63.95	384	76.05	3543
43.90	565	51.95	305	64.80	195	77.05	596
44.90	479	53.10	60	65.10	58	77.80	88
45.10	322	55.00	296	67.10	89	78.10	80
45.90	97	56.00	1707	68.00	8517	78.95	3270
46.95	433	57.00	2920	69.00	8349	79.95	780
47.20	334	59.90	855	70.00	800	80.85	3640

Average of 12.823 to 12.835 min.: VN088146.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
81.90	808	96.90	125	118.05	125	146.00	125
82.90	61	103.85	632	118.85	536	146.80	74
86.10	69	104.80	72	127.95	187	147.90	110
87.00	3131	105.85	370	129.60	59	154.70	192
87.95	3024	106.85	159	130.00	124	171.40	59
90.85	329	112.60	54	134.90	131	171.85	268
92.00	2697	114.90	75	137.00	116	172.10	190
92.90	3570	115.80	142	140.90	1096	172.70	150
94.00	9597	116.00	263	142.95	783	173.00	566
95.00	70120	116.85	667	143.90	62	174.00	47387
96.00	4784	117.60	237	144.75	140	174.95	3519

Average of 12.823 to 12.835 min.: VN088146.D\data.ms

BFB

Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
176.00	46891						
176.95	3203						
207.05	120						

Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected:	
Project: RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID: VN1027WBL01	SDG No.:	Q3468
Lab Sample ID: VN1027WBL01	Matrix:	Water
Analytical Method: 8260D	% Solid:	0
Sample Wt/Vol: 5 mL	Test:	VOCMS Group1
Level : LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/27/25 11:34	VN102725
71-43-2	Benzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 11:34	VN102725
108-88-3	Toluene	1.00	U	1	0.14	1.00	ug/L	10/27/25 11:34	VN102725
100-41-4	Ethyl Benzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 11:34	VN102725
179601-23-1	m/p-Xylenes	2.00	U	1	0.24	2.00	ug/L	10/27/25 11:34	VN102725
1330-20-7	Total Xylenes	3.00	U	1	0.36	3.00	ug/L	10/27/25 11:34	VN102725
95-47-6	o-Xylene	1.00	U	1	0.12	1.00	ug/L	10/27/25 11:34	VN102725
98-82-8	Isopropylbenzene	1.00	U	1	0.12	1.00	ug/L	10/27/25 11:34	VN102725
103-65-1	n-propylbenzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 11:34	VN102725
108-67-8	1,3,5-Trimethylbenzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 11:34	VN102725
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/27/25 11:34	VN102725
95-63-6	1,2,4-Trimethylbenzene	1.00	U	1	0.14	1.00	ug/L	10/27/25 11:34	VN102725
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/27/25 11:34	VN102725
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/27/25 11:34	VN102725
104-51-8	n-Butylbenzene	1.00	U	1	0.15	1.00	ug/L	10/27/25 11:34	VN102725
91-20-3	Naphthalene	1.00	U	1	0.20	1.00	ug/L	10/27/25 11:34	VN102725
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	61.1			74 - 125	122%	SPK: 50		
1868-53-7	Dibromofluoromethane	52.8			75 - 124	106%	SPK: 50		
2037-26-5	Toluene-d8	49.9			86 - 113	100%	SPK: 50		
460-00-4	4-Bromofluorobenzene	51.9			77 - 121	104%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	199000							
540-36-3	1,4-Difluorobenzene	446000							
3114-55-4	Chlorobenzene-d5	423000							
3855-82-1	1,4-Dichlorobenzene-d4	200000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088104.D
 Acq On : 27 Oct 2025 11:34
 Operator : JC\MD
 Sample : VN1027WBL01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1027WBL01

Quant Time: Oct 28 01:22:08 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	198801	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	446179	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.841	117	422679	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	199580	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	209923	61.065	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 122.140%	
35) Dibromofluoromethane	8.147	113	158342	52.825	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 105.660%	
50) Toluene-d8	10.547	98	576347	49.901	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 99.800%	
62) 4-Bromofluorobenzene	12.829	95	211880	51.945	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 103.900%	

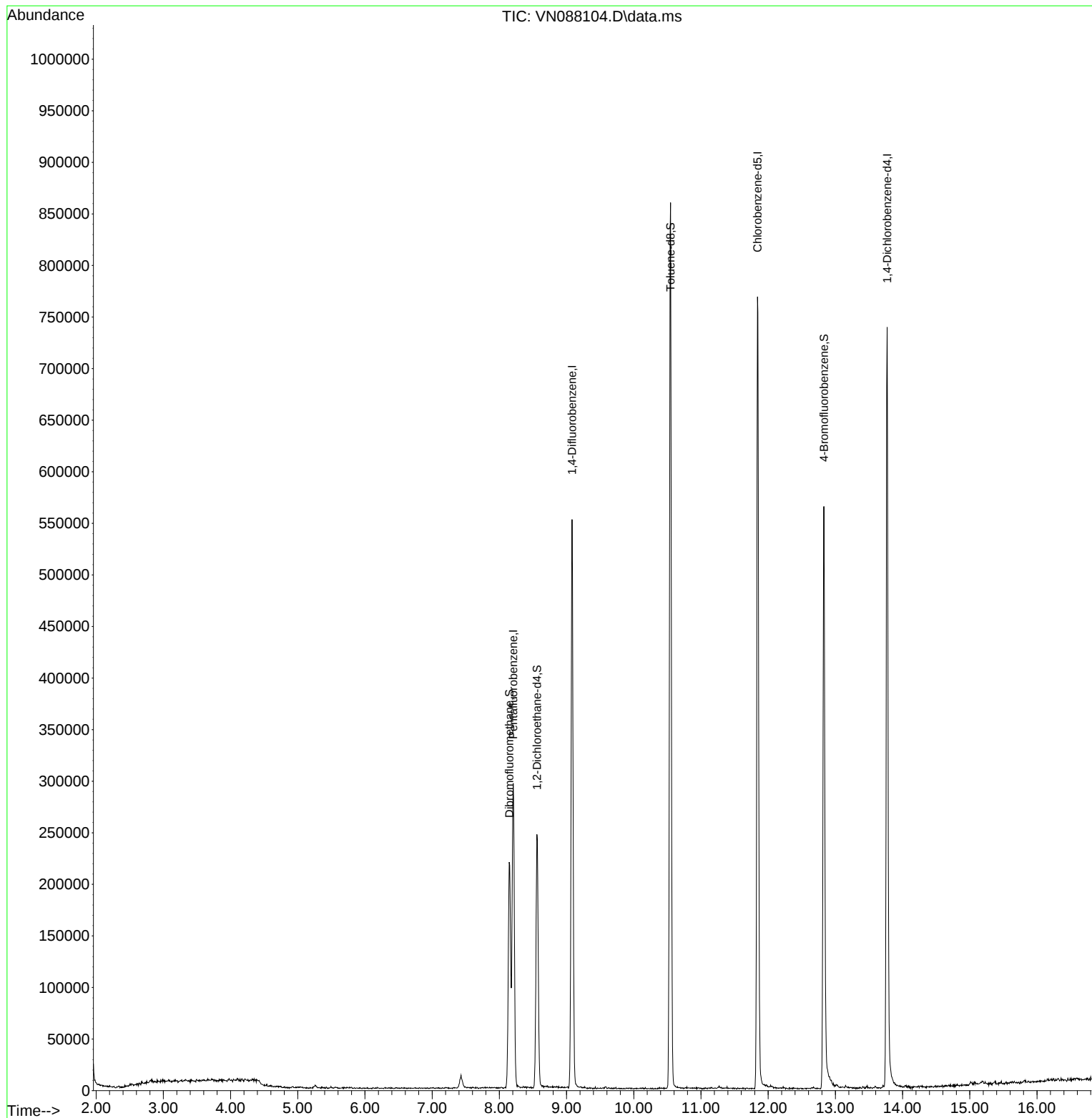
Target Compounds	Qvalue

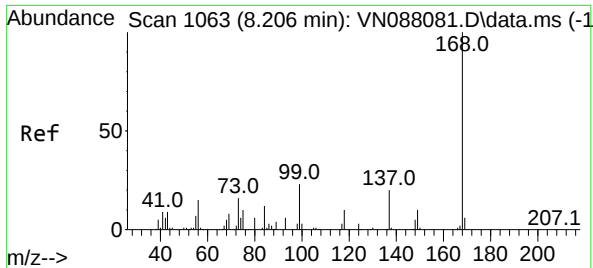
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088104.D
Acq On : 27 Oct 2025 11:34
Operator : JC\MD
Sample : VN1027WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1027WBL01

Quant Time: Oct 28 01:22:08 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

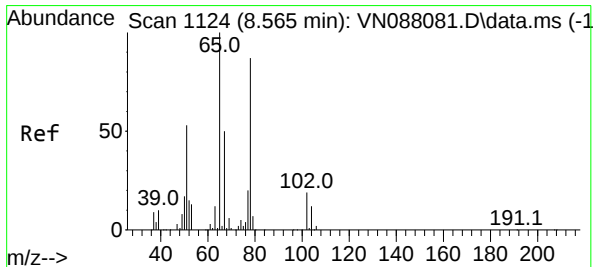
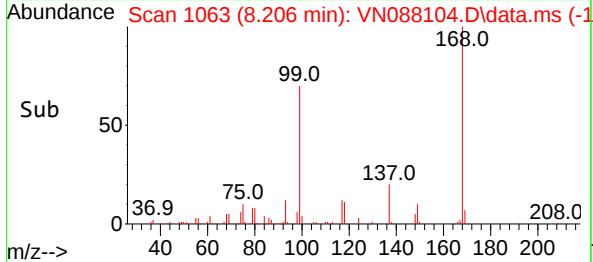
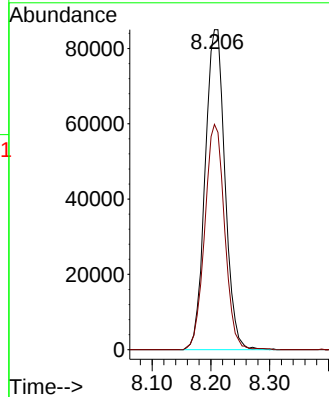
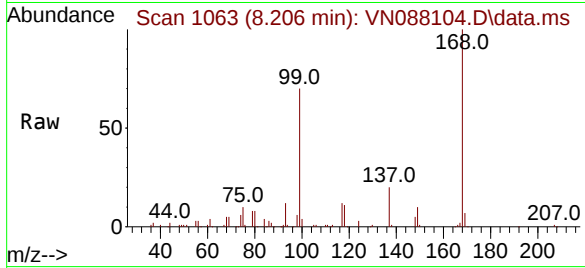




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1106
Delta R.T. 0.000 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

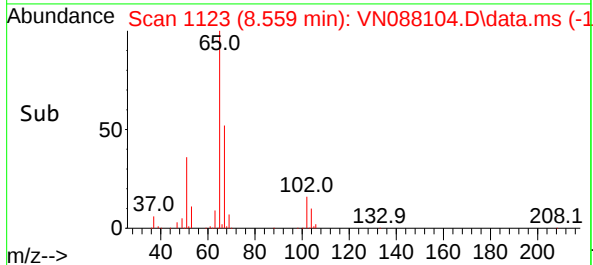
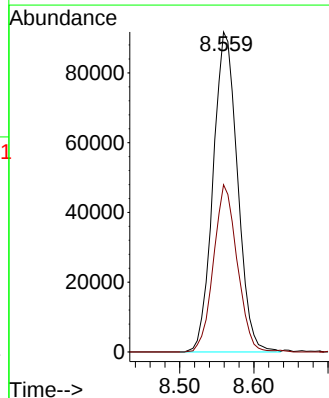
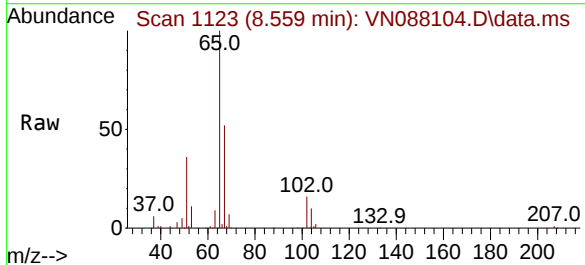
Instrument :
MSVOA_N
ClientSampleId :
VN1027WBL01

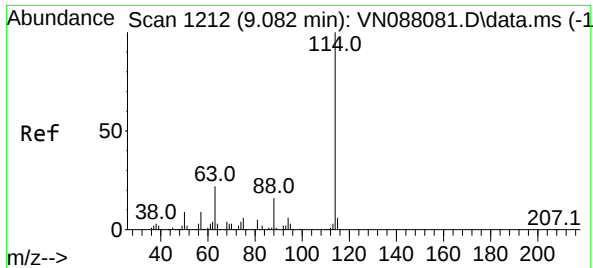
Tgt Ion:168 Resp: 198801
Ion Ratio Lower Upper
168 100
99 70.4 57.2 85.8



#33
1,2-Dichloroethane-d4
Concen: 61.065 ug/l
RT: 8.559 min Scan# 1123
Delta R.T. -0.000 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

Tgt Ion: 65 Resp: 209923
Ion Ratio Lower Upper
65 100
67 50.6 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.082 min Scan# 1

Delta R.T. -0.000 min

Lab File: VN088104.D

Acq: 27 Oct 2025 11:34

Instrument :

MSVOA_N

ClientSampleId :

VN1027WBL01

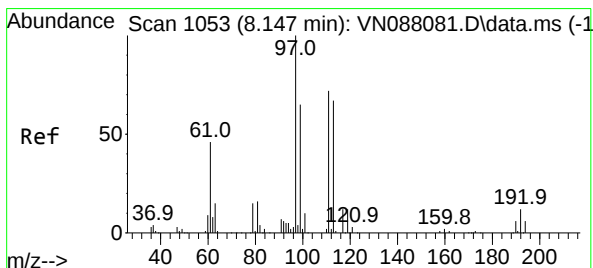
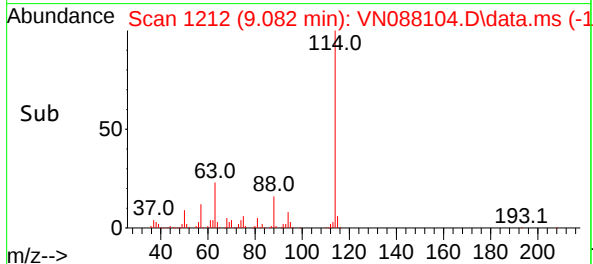
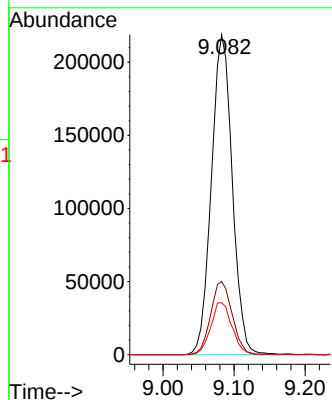
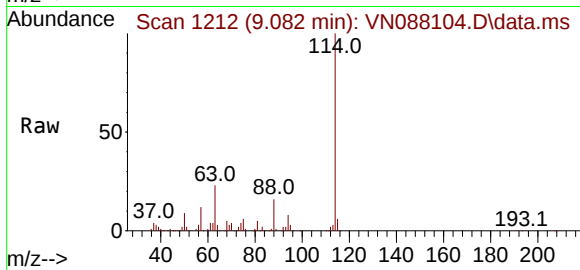
Tgt Ion:114 Resp: 446179

Ion Ratio Lower Upper

114 100

63 22.8 0.0 45.2

88 16.3 0.0 33.4



#35

Dibromofluoromethane

Concen: 52.825 ug/l

RT: 8.147 min Scan# 1053

Delta R.T. -0.006 min

Lab File: VN088104.D

Acq: 27 Oct 2025 11:34

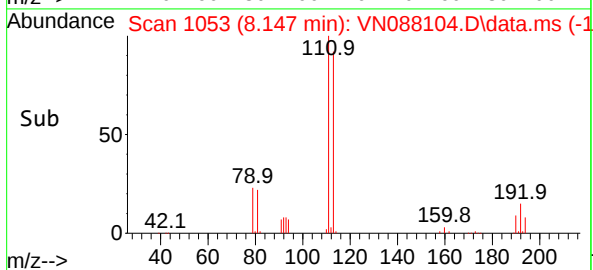
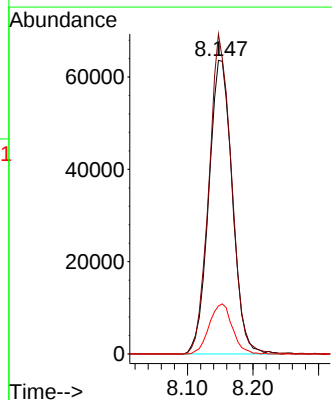
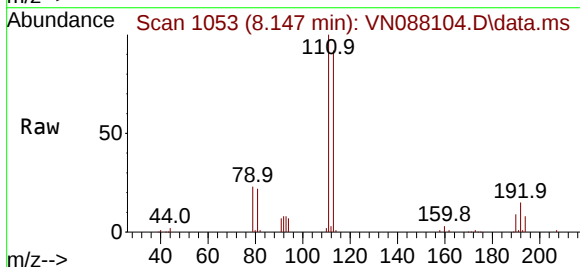
Tgt Ion:113 Resp: 158342

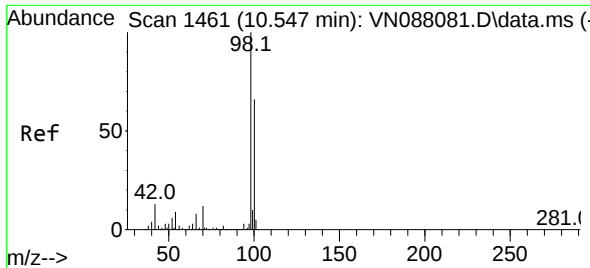
Ion Ratio Lower Upper

113 100

111 104.4 82.8 124.2

192 16.7 12.8 19.2

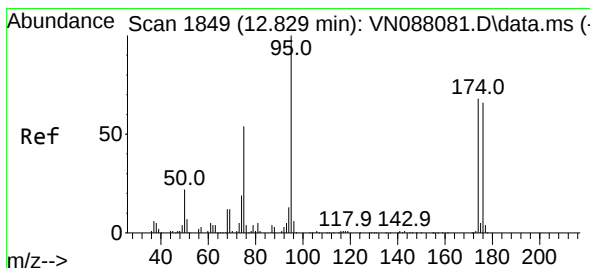
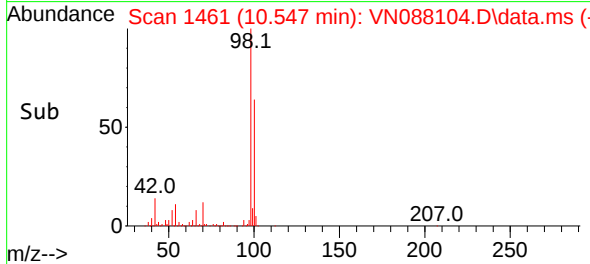
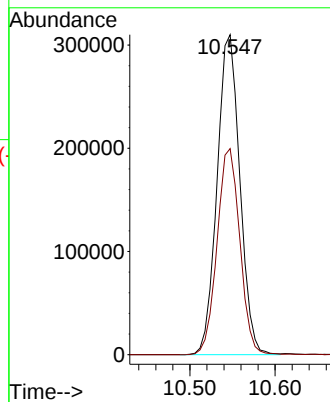
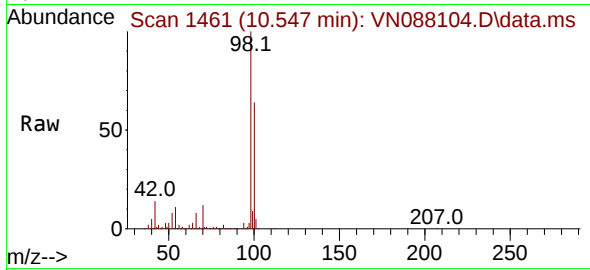




#50
Toluene-d8
Concen: 49.901 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

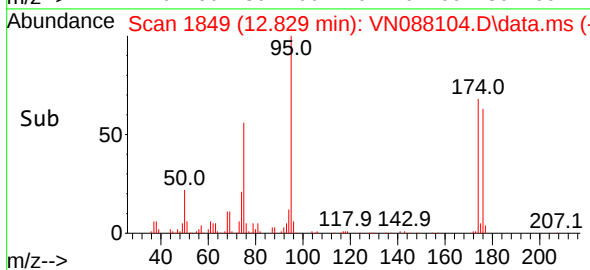
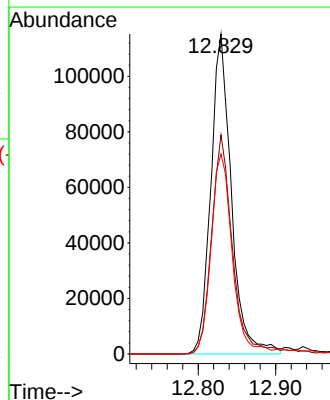
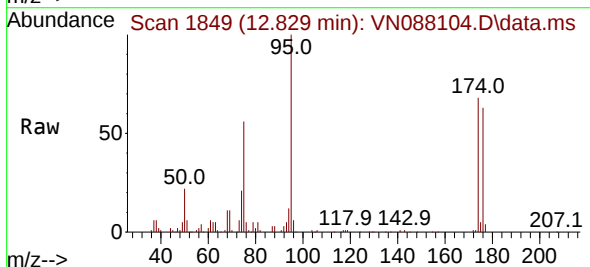
Instrument :
MSVOA_N
ClientSampleId :
VN1027WBL01

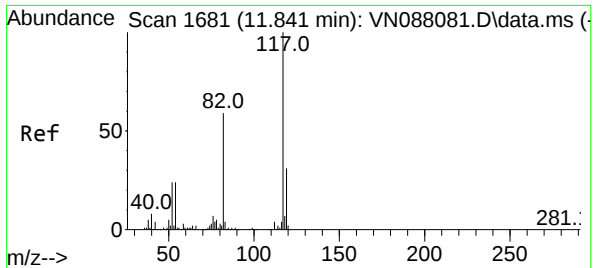
Tgt Ion: 98 Resp: 576347
Ion Ratio Lower Upper
98 100
100 64.4 52.8 79.2



#62
4-Bromofluorobenzene
Concen: 51.945 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

Tgt Ion: 95 Resp: 211880
Ion Ratio Lower Upper
95 100
174 70.5 0.0 138.4
176 64.4 0.0 132.6

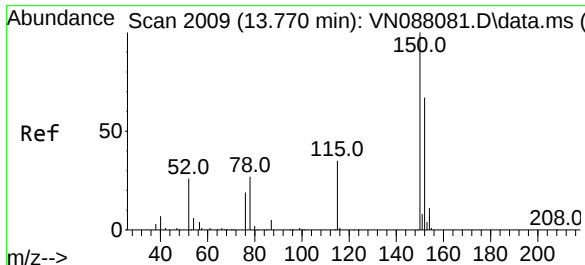
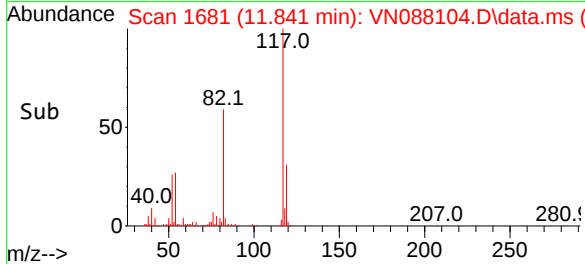
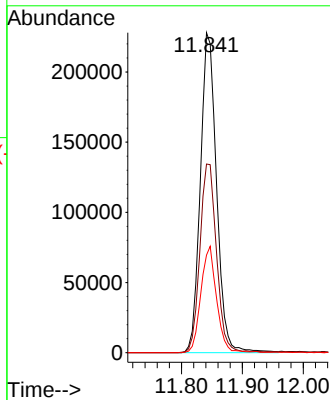
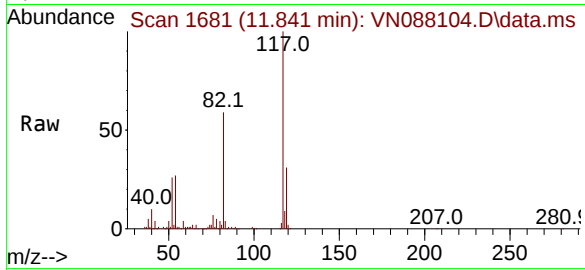




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.841 min Scan# 11
Delta R.T. -0.000 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

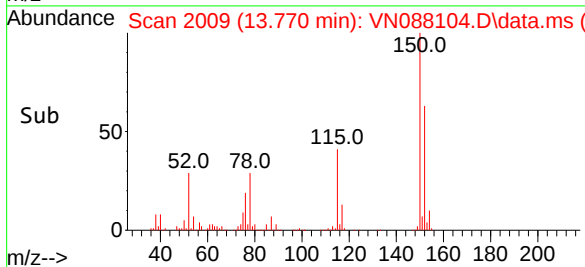
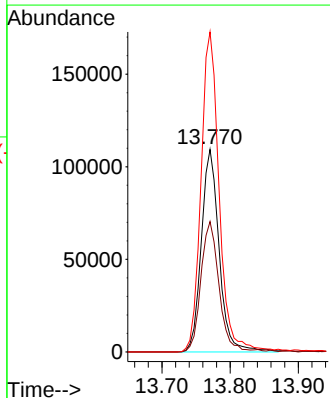
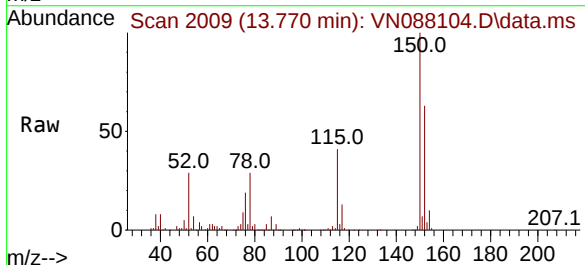
Instrument :
MSVOA_N
ClientSampleId :
VN1027WBL01

Tgt Ion	Ratio	Lower	Upper
117	100		
82	59.0	47.4	71.2
119	30.5	24.3	36.5



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088104.D
Acq: 27 Oct 2025 11:34

Tgt Ion	Ratio	Lower	Upper
152	100		
115	65.5	32.3	96.8
150	160.9	0.0	351.0



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected:	
Project: RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID: VN1028WBL01	SDG No.:	Q3468
Lab Sample ID: VN1028WBL01	Matrix:	Water
Analytical Method: 8260D	% Solid:	0
Sample Wt/Vol: 5 mL	Test:	VOCMS Group1
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/28/25 11:17	VN102825
71-43-2	Benzene	1.00	U	1	0.15	1.00	ug/L	10/28/25 11:17	VN102825
108-88-3	Toluene	1.00	U	1	0.14	1.00	ug/L	10/28/25 11:17	VN102825
100-41-4	Ethyl Benzene	1.00	U	1	0.13	1.00	ug/L	10/28/25 11:17	VN102825
179601-23-1	m/p-Xylenes	2.00	U	1	0.24	2.00	ug/L	10/28/25 11:17	VN102825
1330-20-7	Total Xylenes	3.00	U	1	0.36	3.00	ug/L	10/28/25 11:17	VN102825
95-47-6	o-Xylene	1.00	U	1	0.12	1.00	ug/L	10/28/25 11:17	VN102825
98-82-8	Isopropylbenzene	1.00	U	1	0.12	1.00	ug/L	10/28/25 11:17	VN102825
103-65-1	n-propylbenzene	1.00	U	1	0.13	1.00	ug/L	10/28/25 11:17	VN102825
108-67-8	1,3,5-Trimethylbenzene	1.00	U	1	0.15	1.00	ug/L	10/28/25 11:17	VN102825
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/28/25 11:17	VN102825
95-63-6	1,2,4-Trimethylbenzene	1.00	U	1	0.14	1.00	ug/L	10/28/25 11:17	VN102825
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/28/25 11:17	VN102825
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/28/25 11:17	VN102825
104-51-8	n-Butylbenzene	1.00	U	1	0.15	1.00	ug/L	10/28/25 11:17	VN102825
91-20-3	Naphthalene	1.00	U	1	0.20	1.00	ug/L	10/28/25 11:17	VN102825
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	54.8			74 - 125	110%	SPK: 50		
1868-53-7	Dibromofluoromethane	46.8			75 - 124	94%	SPK: 50		
2037-26-5	Toluene-d8	44.8			86 - 113	90%	SPK: 50		
460-00-4	4-Bromofluorobenzene	48.3			77 - 121	97%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	231000							
540-36-3	1,4-Difluorobenzene	517000							
3114-55-4	Chlorobenzene-d5	484000							
3855-82-1	1,4-Dichlorobenzene-d4	238000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088129.D
 Acq On : 28 Oct 2025 11:17
 Operator : JC\MD
 Sample : VN1028WBL01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1028WBL01

Quant Time: Oct 29 02:18:10 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	231261	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	516618	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	484454	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.771	152	238378	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	219109	54.791	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	=	109.580%
35) Dibromofluoromethane	8.153	113	162498	46.820	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	93.640%
50) Toluene-d8	10.547	98	598983	44.790	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	=	89.580%
62) 4-Bromofluorobenzene	12.829	95	227915	48.258	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	=	96.520%

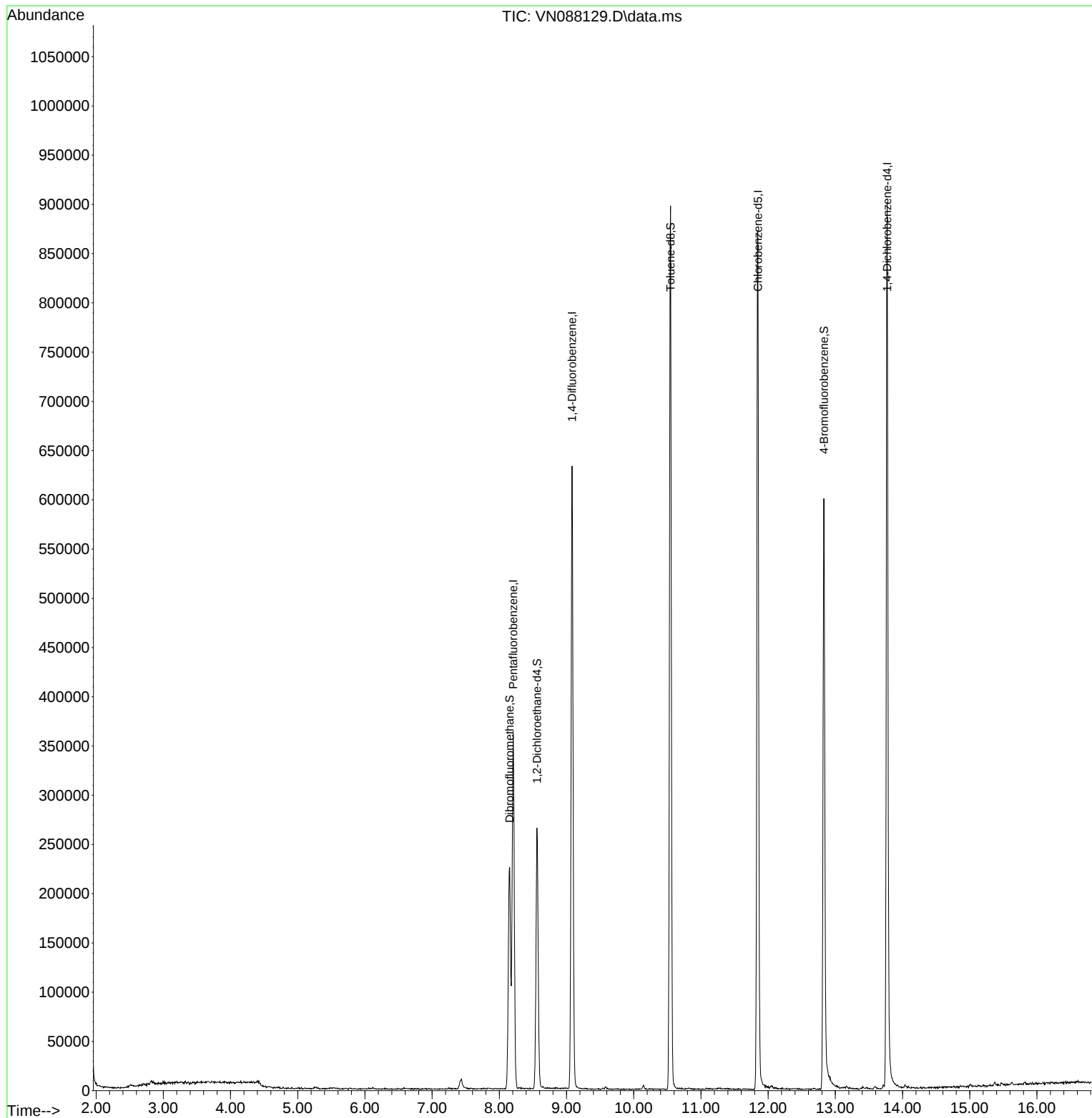
Target Compounds	Qvalue

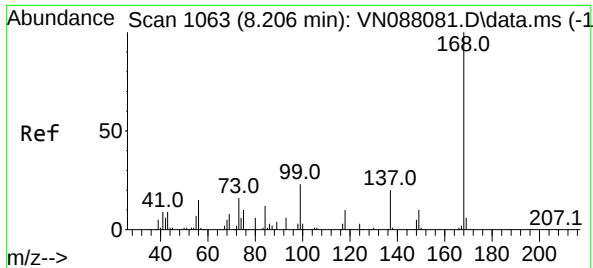
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088129.D
Acq On : 28 Oct 2025 11:17
Operator : JC\MD
Sample : VN1028WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1028WBL01

Quant Time: Oct 29 02:18:10 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

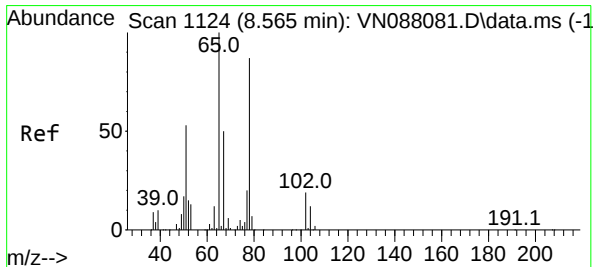
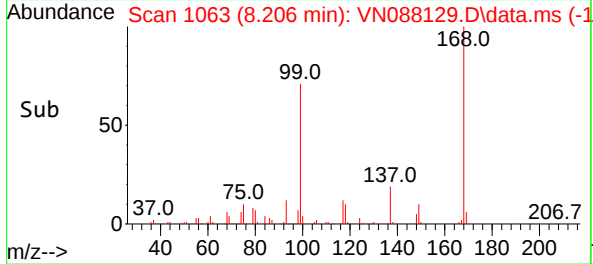
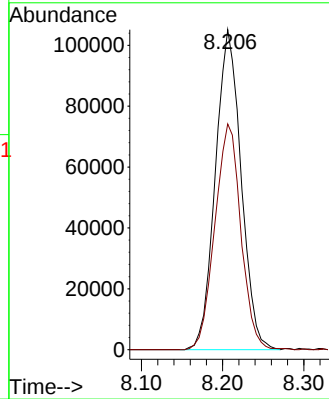
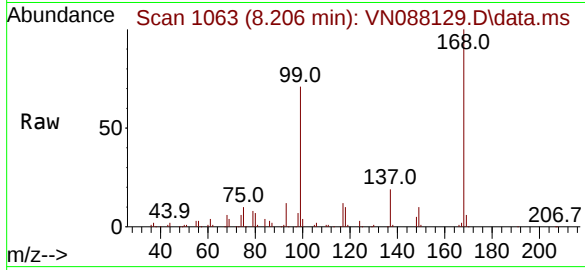




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

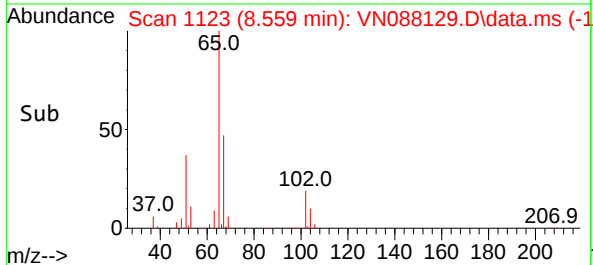
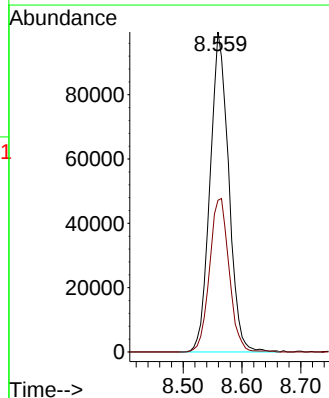
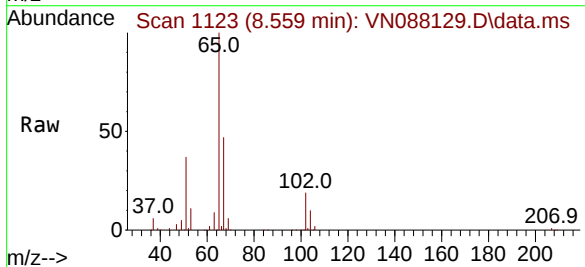
Instrument :
MSVOA_N
ClientSampleId :
VN1028WBL01

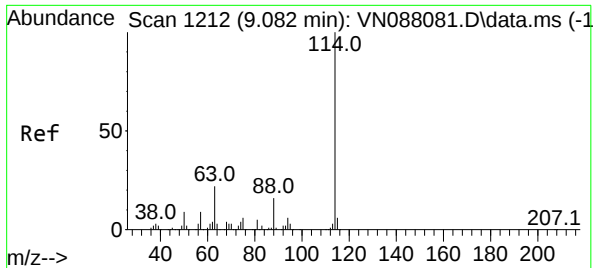
Tgt Ion:168 Resp: 231261
Ion Ratio Lower Upper
168 100
99 70.5 57.2 85.8



#33
1,2-Dichloroethane-d4
Concen: 54.791 ug/l
RT: 8.559 min Scan# 1123
Delta R.T. 0.000 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

Tgt Ion: 65 Resp: 219109
Ion Ratio Lower Upper
65 100
67 50.4 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.083 min Scan# 11

Delta R.T. 0.000 min

Lab File: VN088129.D

Acq: 28 Oct 2025 11:17

Instrument :

MSVOA_N

ClientSampleId :

VN1028WBL01

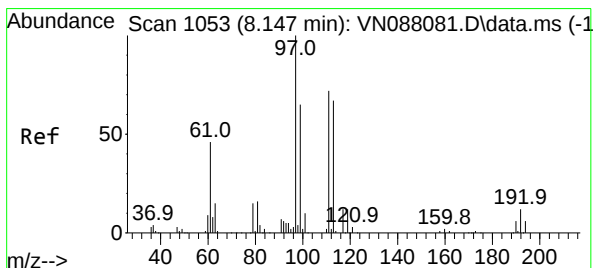
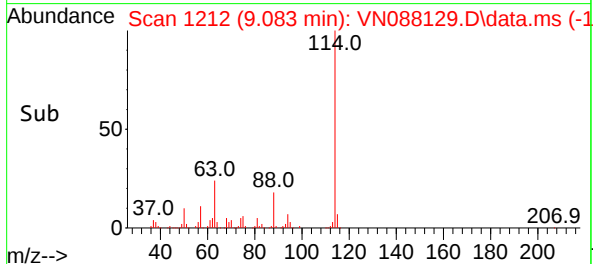
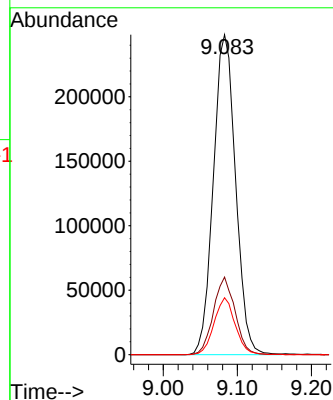
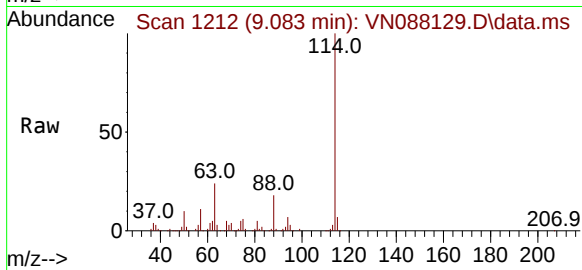
Tgt Ion:114 Resp: 516618

Ion Ratio Lower Upper

114 100

63 24.3 0.0 45.2

88 17.8 0.0 33.4



#35

Dibromofluoromethane

Concen: 46.820 ug/l

RT: 8.153 min Scan# 1054

Delta R.T. 0.000 min

Lab File: VN088129.D

Acq: 28 Oct 2025 11:17

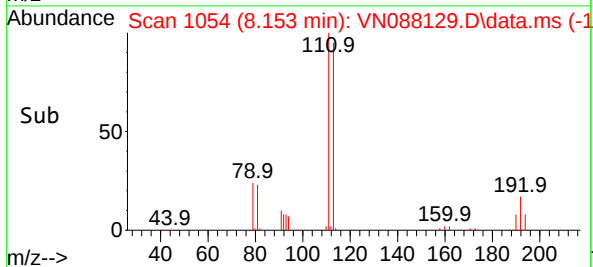
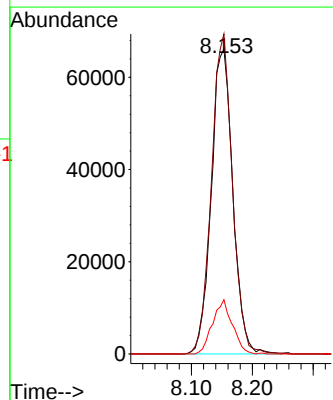
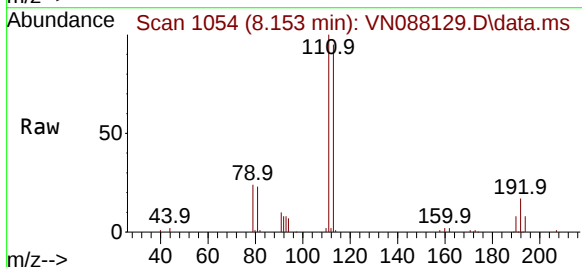
Tgt Ion:113 Resp: 162498

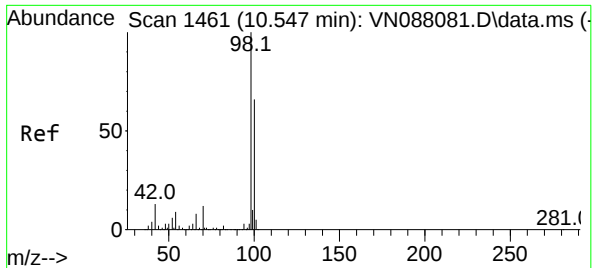
Ion Ratio Lower Upper

113 100

111 102.4 82.8 124.2

192 16.4 12.8 19.2

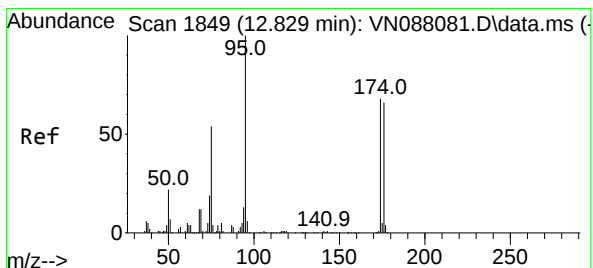
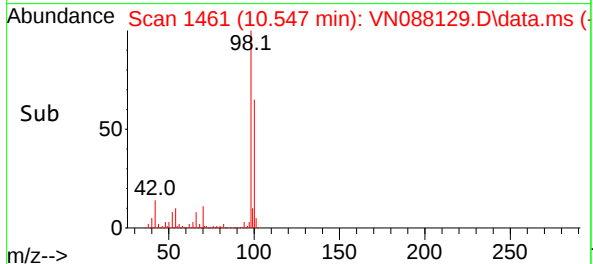
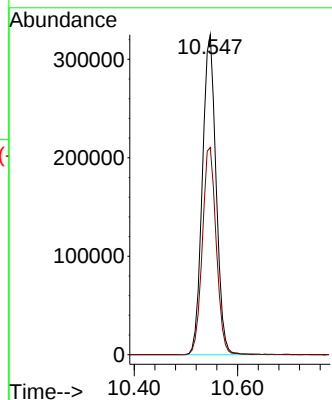
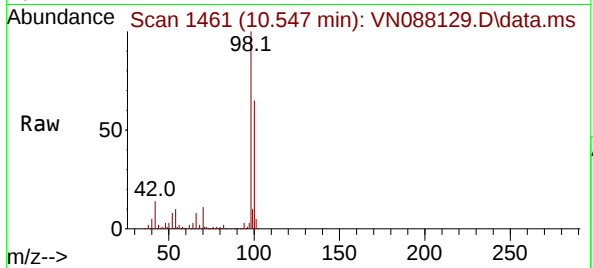




#50
Toluene-d8
Concen: 44.790 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. 0.000 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

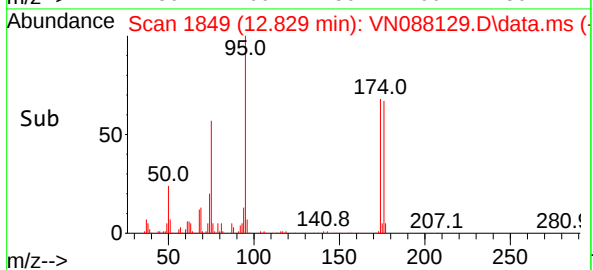
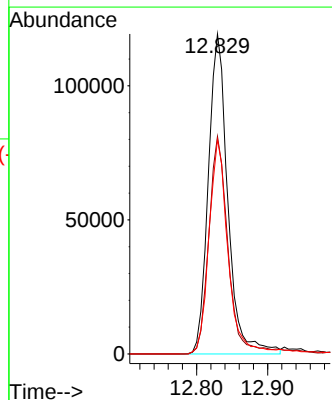
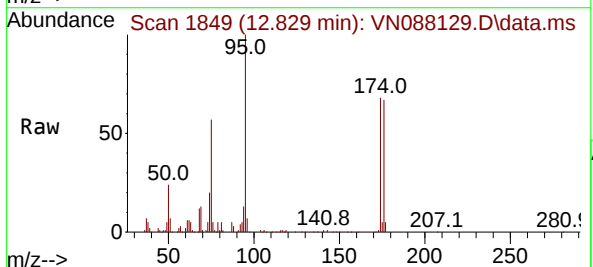
Instrument :
MSVOA_N
ClientSampleId :
VN1028WBL01

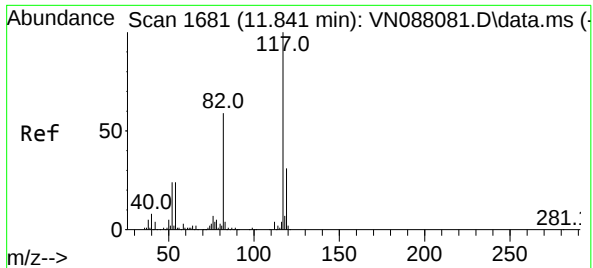
Tgt Ion: 98 Resp: 598983
Ion Ratio Lower Upper
98 100
100 65.5 52.8 79.2



#62
4-Bromofluorobenzene
Concen: 48.258 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

Tgt Ion: 95 Resp: 227915
Ion Ratio Lower Upper
95 100
174 68.5 0.0 138.4
176 66.9 0.0 132.6

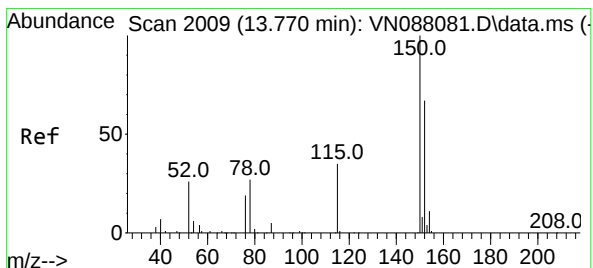
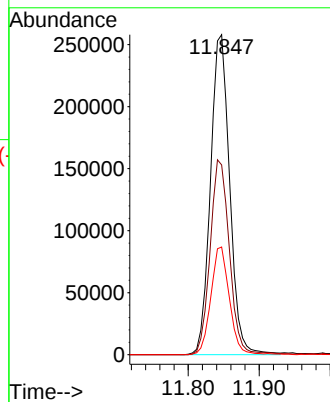
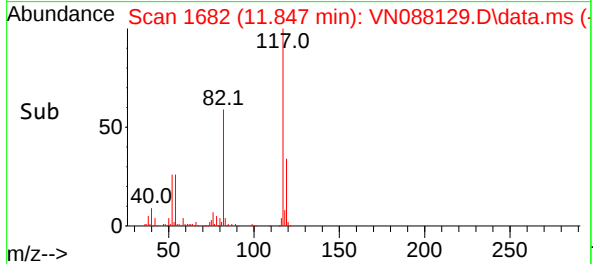
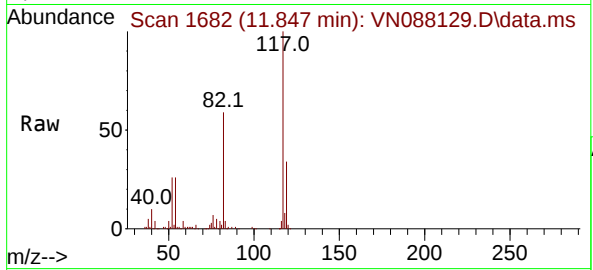




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 11
Delta R.T. 0.006 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

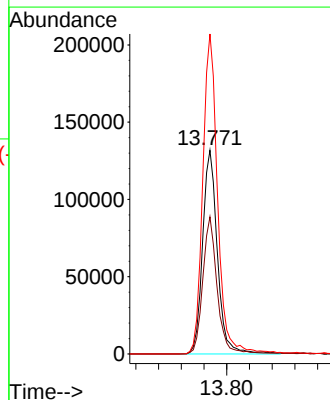
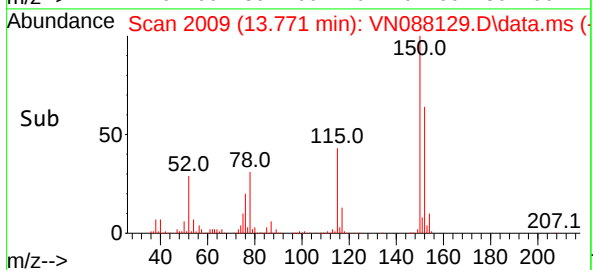
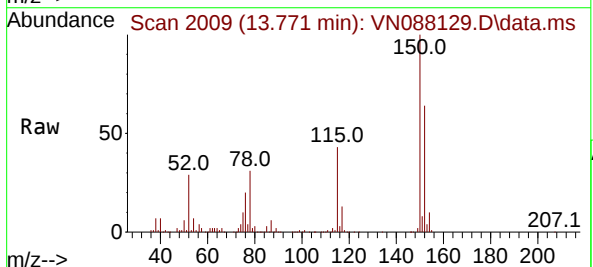
Instrument :
MSVOA_N
ClientSampleId :
VN1028WBL01

Tgt Ion:117 Resp: 484454
Ion Ratio Lower Upper
117 100
82 59.3 47.4 71.2
119 33.6 24.3 36.5



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.771 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088129.D
Acq: 28 Oct 2025 11:17

Tgt Ion:152 Resp: 238378
Ion Ratio Lower Upper
152 100
115 65.4 32.3 96.8
150 157.8 0.0 351.0





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	VN1029WBL01	SDG No.:	Q3468
Lab Sample ID:	VN1029WBL01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	1.00	U	1	0.16	1.00	ug/L	10/29/25 11:06	VN102925
71-43-2	Benzene	1.00	U	1	0.15	1.00	ug/L	10/29/25 11:06	VN102925
108-88-3	Toluene	1.00	U	1	0.14	1.00	ug/L	10/29/25 11:06	VN102925
100-41-4	Ethyl Benzene	1.00	U	1	0.13	1.00	ug/L	10/29/25 11:06	VN102925
179601-23-1	m/p-Xylenes	2.00	U	1	0.24	2.00	ug/L	10/29/25 11:06	VN102925
1330-20-7	Total Xylenes	3.00	U	1	0.36	3.00	ug/L	10/29/25 11:06	VN102925
95-47-6	o-Xylene	1.00	U	1	0.12	1.00	ug/L	10/29/25 11:06	VN102925
98-82-8	Isopropylbenzene	1.00	U	1	0.12	1.00	ug/L	10/29/25 11:06	VN102925
103-65-1	n-propylbenzene	1.00	U	1	0.13	1.00	ug/L	10/29/25 11:06	VN102925
108-67-8	1,3,5-Trimethylbenzene	1.00	U	1	0.15	1.00	ug/L	10/29/25 11:06	VN102925
98-06-6	tert-Butylbenzene	1.00	U	1	0.14	1.00	ug/L	10/29/25 11:06	VN102925
95-63-6	1,2,4-Trimethylbenzene	1.00	U	1	0.14	1.00	ug/L	10/29/25 11:06	VN102925
135-98-8	sec-Butylbenzene	1.00	U	1	0.13	1.00	ug/L	10/29/25 11:06	VN102925
99-87-6	p-Isopropyltoluene	1.00	U	1	0.13	1.00	ug/L	10/29/25 11:06	VN102925
104-51-8	n-Butylbenzene	1.00	U	1	0.15	1.00	ug/L	10/29/25 11:06	VN102925
91-20-3	Naphthalene	1.00	U	1	0.20	1.00	ug/L	10/29/25 11:06	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	54.5			74 - 125	109%	SPK: 50		
1868-53-7	Dibromofluoromethane	46.6			75 - 124	93%	SPK: 50		
2037-26-5	Toluene-d8	44.5			86 - 113	89%	SPK: 50		
460-00-4	4-Bromofluorobenzene	48.1			77 - 121	96%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	220000							
540-36-3	1,4-Difluorobenzene	495000							
3114-55-4	Chlorobenzene-d5	464000							
3855-82-1	1,4-Dichlorobenzene-d4	222000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088149.D
 Acq On : 29 Oct 2025 11:06
 Operator : JC\MD
 Sample : VN1029WBL01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1029WBL01

Quant Time: Oct 30 04:02:25 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	220088	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	494622	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	463889	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	222427	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	207466	54.513	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	=	109.020%
35) Dibromofluoromethane	8.153	113	154801	46.586	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	93.180%
50) Toluene-d8	10.547	98	569614	44.488	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	=	88.980%
62) 4-Bromofluorobenzene	12.829	95	217445	48.088	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	=	96.180%

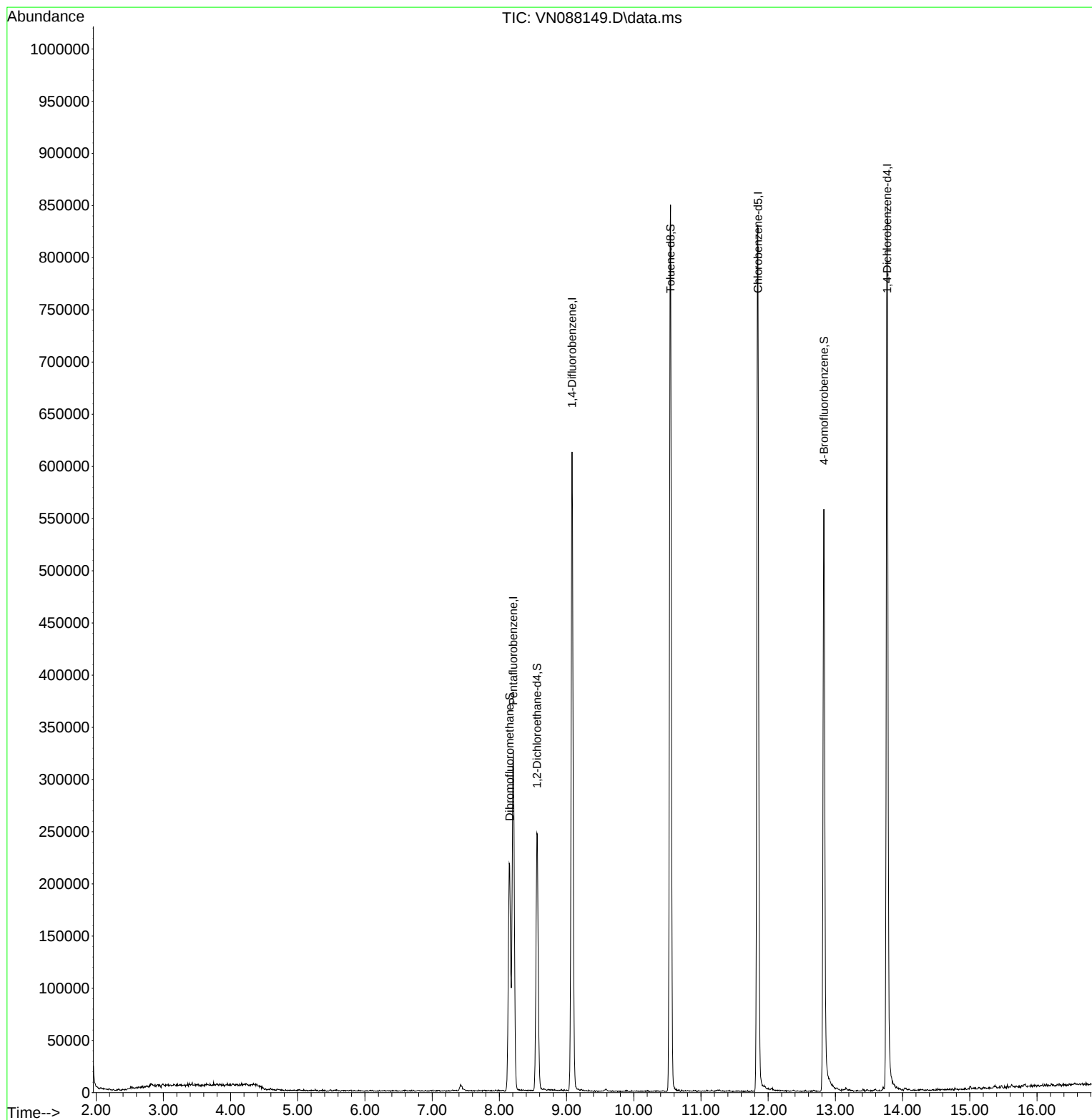
Target Compounds	Qvalue

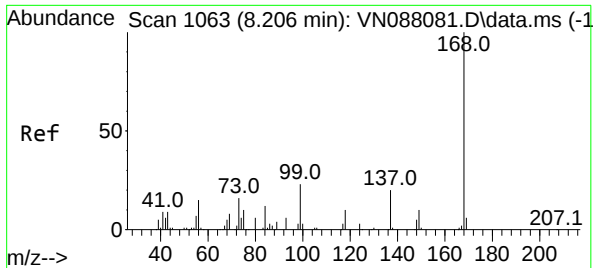
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088149.D
Acq On : 29 Oct 2025 11:06
Operator : JC\MD
Sample : VN1029WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1029WBL01

Quant Time: Oct 30 04:02:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

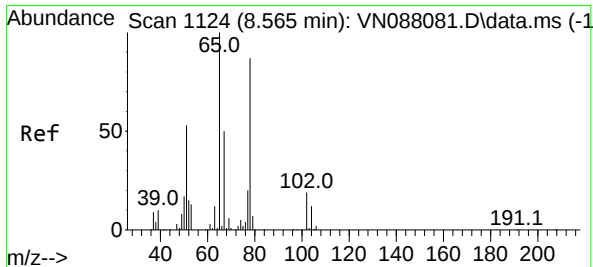
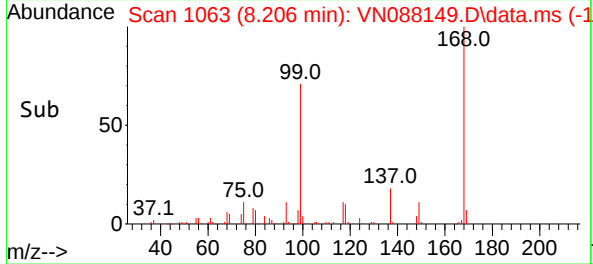
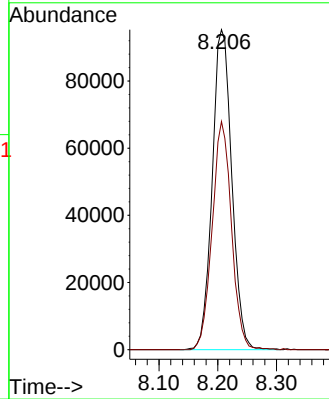
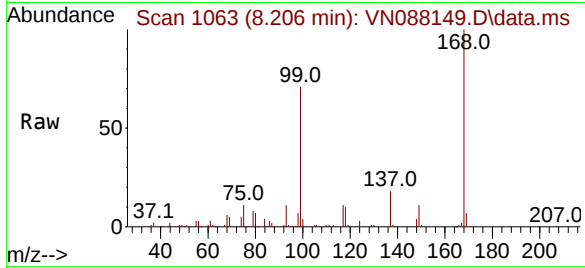




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.206 min Scan# 1063
Delta R.T. 0.000 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

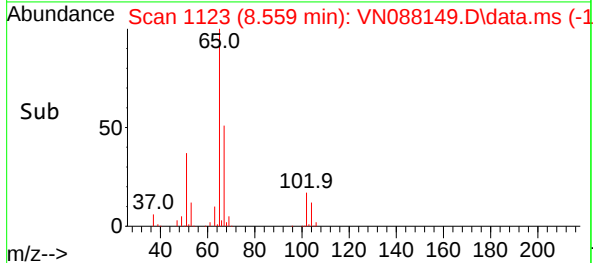
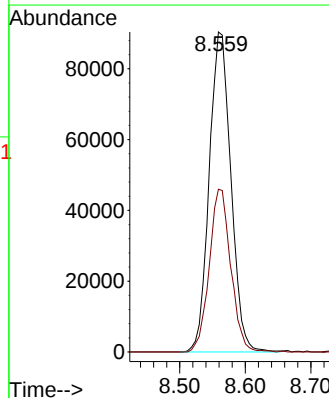
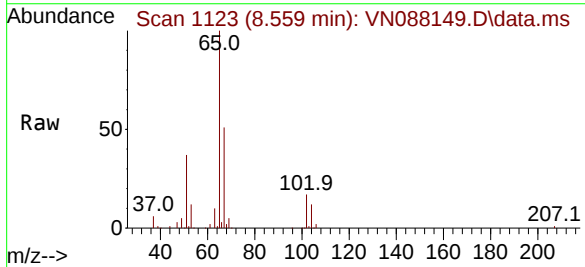
Instrument :
MSVOA_N
ClientSampleId :
VN1029WBL01

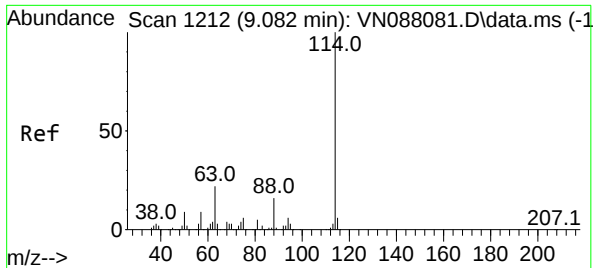
Tgt Ion:168 Resp: 220088
Ion Ratio Lower Upper
168 100
99 71.3 57.2 85.8



#33
1,2-Dichloroethane-d4
Concen: 54.513 ug/l
RT: 8.559 min Scan# 1123
Delta R.T. -0.000 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

Tgt Ion: 65 Resp: 207466
Ion Ratio Lower Upper
65 100
67 50.4 0.0 100.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 9.083 min Scan# 11

Delta R.T. -0.000 min

Lab File: VN088149.D

Acq: 29 Oct 2025 11:06

Instrument :

MSVOA_N

ClientSampleId :

VN1029WBL01

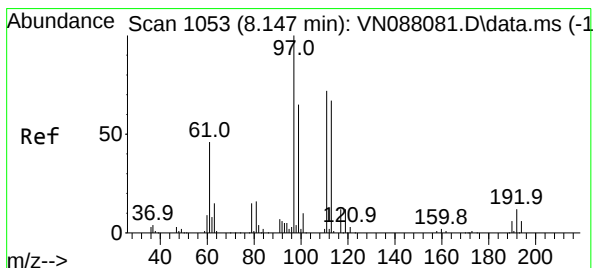
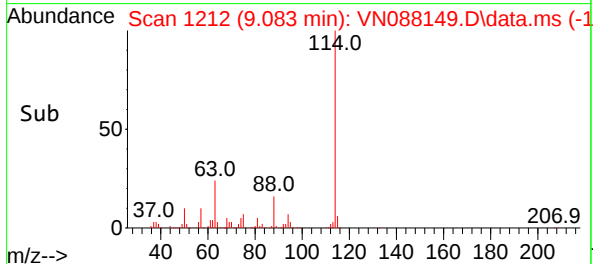
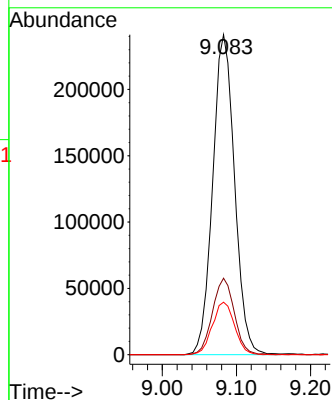
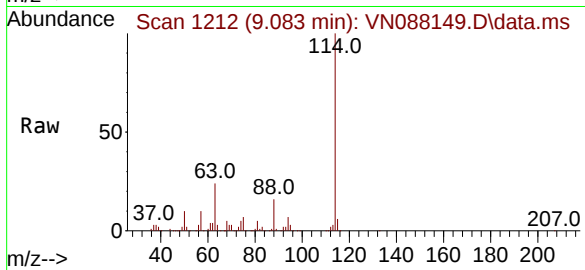
Tgt Ion:114 Resp: 494622

Ion Ratio Lower Upper

114 100

63 23.9 0.0 45.2

88 16.4 0.0 33.4



#35

Dibromofluoromethane

Concen: 46.586 ug/l

RT: 8.153 min Scan# 1054

Delta R.T. -0.000 min

Lab File: VN088149.D

Acq: 29 Oct 2025 11:06

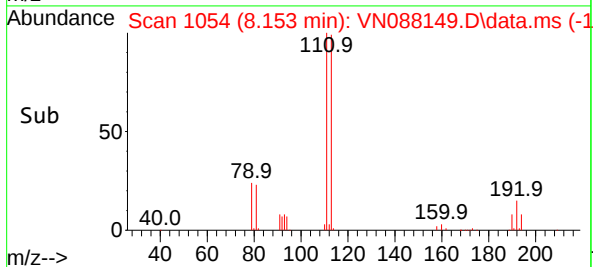
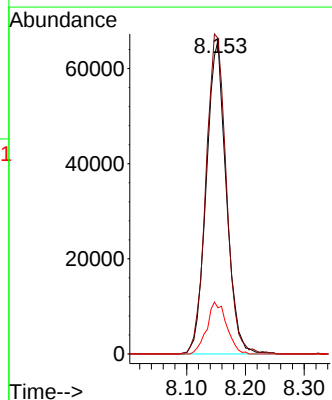
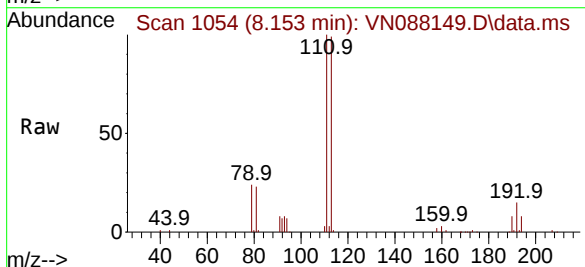
Tgt Ion:113 Resp: 154801

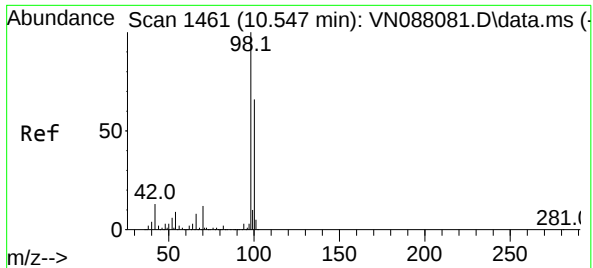
Ion Ratio Lower Upper

113 100

111 104.5 82.8 124.2

192 16.5 12.8 19.2

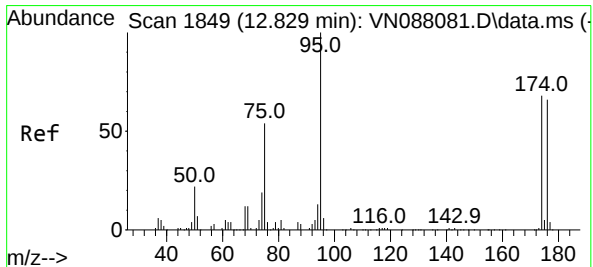
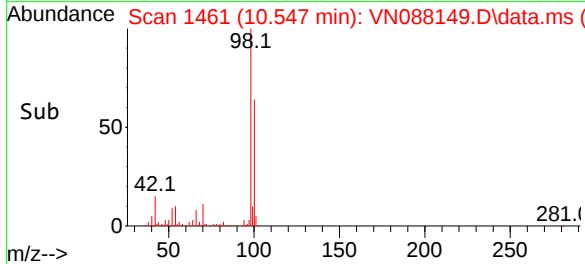
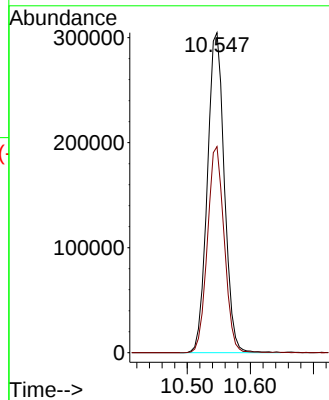
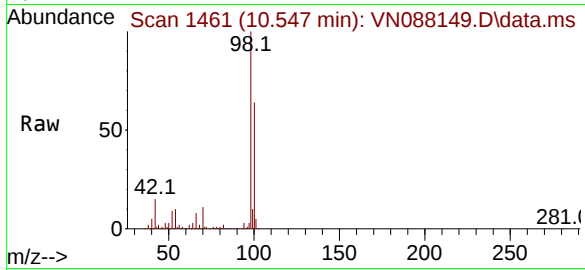




#50
Toluene-d8
Concen: 44.488 ug/l
RT: 10.547 min Scan# 1461
Delta R.T. -0.000 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

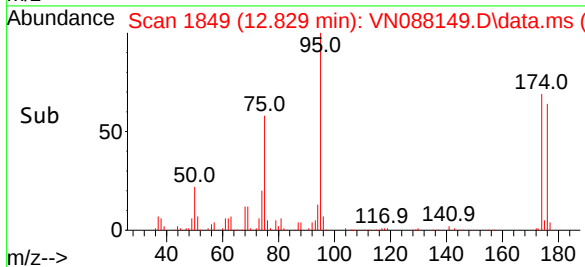
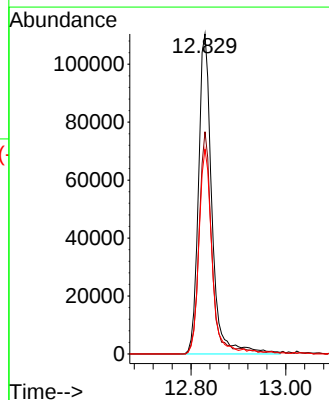
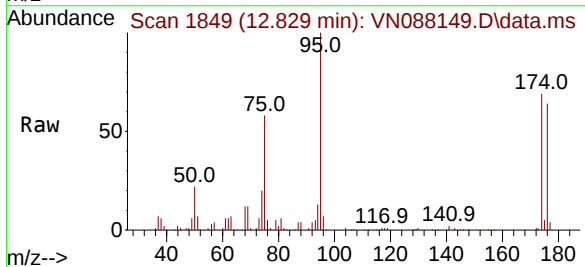
Instrument :
MSVOA_N
ClientSampleId :
VN1029WBL01

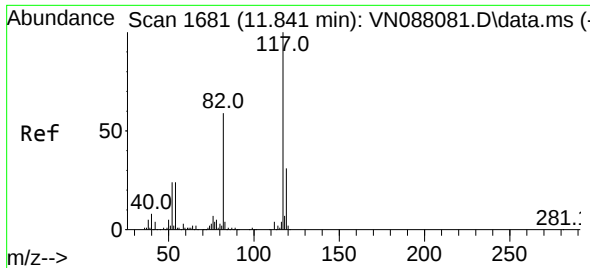
Tgt Ion: 98 Resp: 569614
Ion Ratio Lower Upper
98 100
100 63.7 52.8 79.2



#62
4-Bromofluorobenzene
Concen: 48.088 ug/l
RT: 12.829 min Scan# 1849
Delta R.T. 0.006 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

Tgt Ion: 95 Resp: 217445
Ion Ratio Lower Upper
95 100
174 63.9 0.0 138.4
176 61.6 0.0 132.6

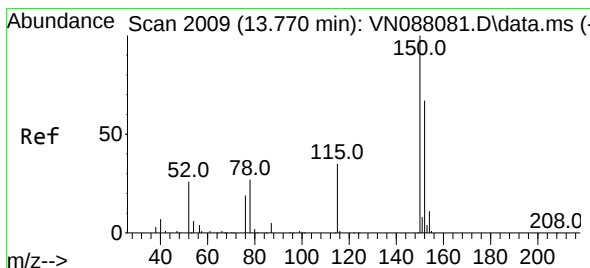
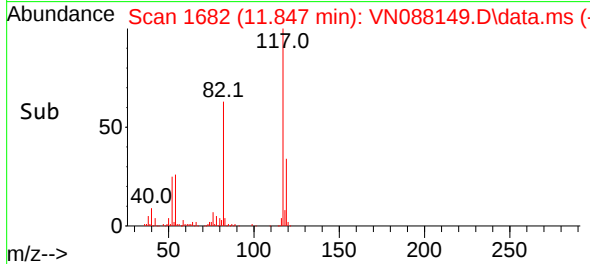
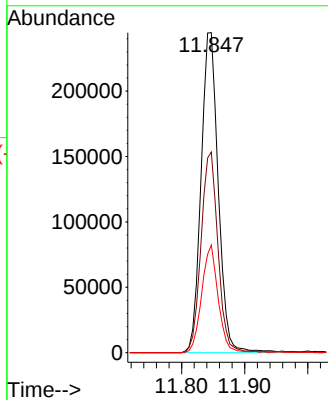
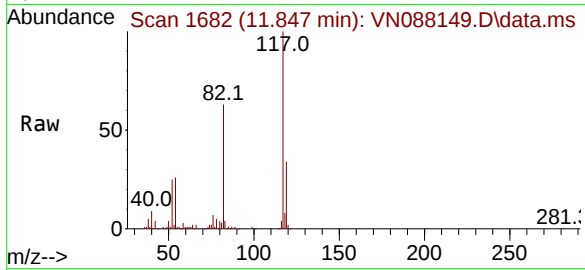




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.847 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

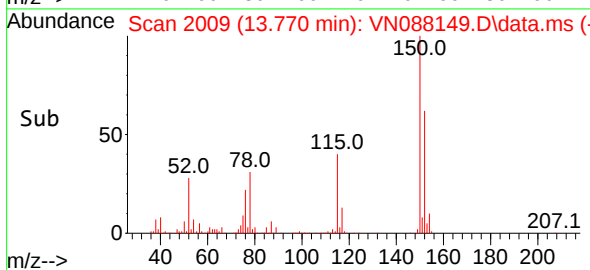
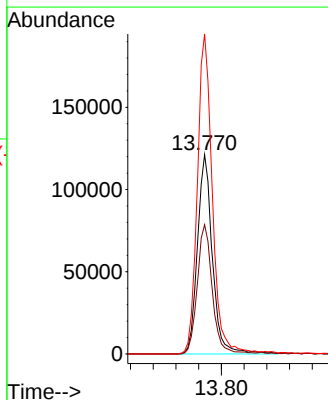
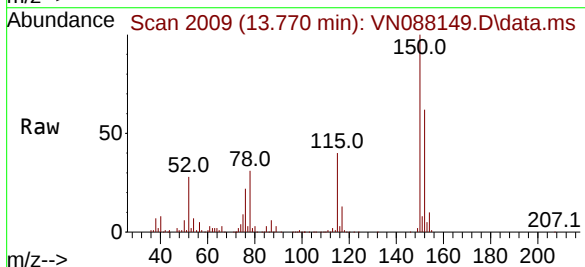
Instrument :
MSVOA_N
ClientSampleId :
VN1029WBL01

Tgt Ion	Ratio	Lower	Upper
117	100		
82	62.7	47.4	71.2
119	33.7	24.3	36.5



#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.770 min Scan# 2009
Delta R.T. 0.006 min
Lab File: VN088149.D
Acq: 29 Oct 2025 11:06

Tgt Ion	Ratio	Lower	Upper
152	100		
115	64.8	32.3	96.8
150	160.0	0.0	351.0



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected:	
Project: RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID: VN1027WBS01	SDG No.:	Q3468
Lab Sample ID: VN1027WBS01	Matrix:	Water
Analytical Method: 8260D	% Solid:	0
Sample Wt/Vol: 5 mL	Test:	VOCMS Group1
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	21.8		1	0.16	1.00	ug/L	10/27/25 11:55	VN102725
71-43-2	Benzene	21.8		1	0.15	1.00	ug/L	10/27/25 11:55	VN102725
108-88-3	Toluene	21.5		1	0.14	1.00	ug/L	10/27/25 11:55	VN102725
100-41-4	Ethyl Benzene	20.9		1	0.13	1.00	ug/L	10/27/25 11:55	VN102725
179601-23-1	m/p-Xylenes	42.1		1	0.24	2.00	ug/L	10/27/25 11:55	VN102725
1330-20-7	Total Xylenes	63.3		1	0.36	3.00	ug/L	10/27/25 11:55	VN102725
95-47-6	o-Xylene	21.2		1	0.12	1.00	ug/L	10/27/25 11:55	VN102725
98-82-8	Isopropylbenzene	20.1		1	0.12	1.00	ug/L	10/27/25 11:55	VN102725
103-65-1	n-propylbenzene	20.4		1	0.13	1.00	ug/L	10/27/25 11:55	VN102725
108-67-8	1,3,5-Trimethylbenzene	20.3		1	0.15	1.00	ug/L	10/27/25 11:55	VN102725
98-06-6	tert-Butylbenzene	19.5		1	0.14	1.00	ug/L	10/27/25 11:55	VN102725
95-63-6	1,2,4-Trimethylbenzene	20.6		1	0.14	1.00	ug/L	10/27/25 11:55	VN102725
135-98-8	sec-Butylbenzene	19.9		1	0.13	1.00	ug/L	10/27/25 11:55	VN102725
99-87-6	p-Isopropyltoluene	20.5		1	0.13	1.00	ug/L	10/27/25 11:55	VN102725
104-51-8	n-Butylbenzene	20.1		1	0.15	1.00	ug/L	10/27/25 11:55	VN102725
91-20-3	Naphthalene	19.9		1	0.20	1.00	ug/L	10/27/25 11:55	VN102725
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	56.2			74 - 125	112%	SPK: 50		
1868-53-7	Dibromofluoromethane	53.2			75 - 124	106%	SPK: 50		
2037-26-5	Toluene-d8	51.1			86 - 113	102%	SPK: 50		
460-00-4	4-Bromofluorobenzene	52.6			77 - 121	105%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	301000							
540-36-3	1,4-Difluorobenzene	564000							
3114-55-4	Chlorobenzene-d5	505000							
3855-82-1	1,4-Dichlorobenzene-d4	257000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088105.D
 Acq On : 27 Oct 2025 11:55
 Operator : JC\MD
 Sample : VN1027WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1027WBS01

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/28/2025
 Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:22:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	300941	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	563874	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	505093	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	256562	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.565	65	292467	56.202	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 112.400%			
35) Dibromofluoromethane	8.147	113	201534	53.201	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 106.400%			
50) Toluene-d8	10.547	98	745408	51.068	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 102.140%			
62) 4-Bromofluorobenzene	12.829	95	271139	52.599	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 105.200%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.142	85	70657	20.814	ug/l	97
3) Chloromethane	2.383	50	85119	21.314	ug/l	98
4) Vinyl Chloride	2.536	62	91995	21.142	ug/l	100
5) Bromomethane	2.983	94	52750	20.268	ug/l	100
6) Chloroethane	3.142	64	58867	18.777	ug/l	100
7) Trichlorofluoromethane	3.512	101	136634	19.687	ug/l	99
8) Diethyl Ether	3.959	74	52943	20.525	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.377	101	72457	20.232	ug/l	97
10) Methyl Iodide	4.583	142	63251	20.612	ug/l	92
11) Tert butyl alcohol	5.524	59	102660	114.510	ug/l	99
12) 1,1-Dichloroethene	4.342	96	72424	19.147	ug/l	97
13) Acrolein	4.183	56	131856	130.754	ug/l	99
14) Allyl chloride	5.012	41	135015	20.365	ug/l	95
15) Acrylonitrile	5.712	53	271724	111.268	ug/l	100
16) Acetone	4.424	43	272627	104.280	ug/l	99
17) Carbon Disulfide	4.706	76	228511	19.874	ug/l	100
18) Methyl Acetate	5.024	43	120917	22.592	ug/l	97
19) Methyl tert-butyl Ether	5.789	73	302666	21.789	ug/l	98
20) Methylene Chloride	5.271	84	94419	23.618	ug/l	97
21) trans-1,2-Dichloroethene	5.783	96	83955	20.221	ug/l	99
22) Diisopropyl ether	6.659	45	307416	22.048	ug/l	95
23) Vinyl Acetate	6.594	43	1424145	113.392	ug/l	97
24) 1,1-Dichloroethane	6.553	63	171245	22.172	ug/l	97
25) 2-Butanone	7.471	43	383491	111.307	ug/l	99
26) 2,2-Dichloropropane	7.471	77	152872	21.781	ug/l	98
27) cis-1,2-Dichloroethene	7.471	96	101089	21.150	ug/l	95
28) Bromochloromethane	7.794	49	91201	24.991	ug/l	98
29) Tetrahydrofuran	7.830	42	252484	112.448	ug/l	98
30) Chloroform	7.947	83	174874	22.664	ug/l	98
31) Cyclohexane	8.241	56	153037	21.009	ug/l	99
32) 1,1,1-Trichloroethane	8.147	97	150009	21.829	ug/l	96
36) 1,1-Dichloropropene	8.353	75	120548	21.795	ug/l	99
37) Ethyl Acetate	7.547	43	156235	21.888	ug/l	98
38) Carbon Tetrachloride	8.341	117	127037	22.238	ug/l	100
39) Methylcyclohexane	9.577	83	141080	19.844	ug/l	98
40) Benzene	8.588	78	366941	21.784	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088105.D
 Acq On : 27 Oct 2025 11:55
 Operator : JC\MD
 Sample : VN1027WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1027WBS01

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/28/2025
 Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:22:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	83450	22.213	ug/l	98
42) 1,2-Dichloroethane	8.653	62	145750	24.352	ug/l	98
43) Isopropyl Acetate	8.671	43	249652	22.762	ug/l	98
44) Trichloroethene	9.335	130	83048	21.093	ug/l	98
45) 1,2-Dichloropropane	9.606	63	93135	21.901	ug/l	97
46) Dibromomethane	9.688	93	67628	22.297	ug/l	98
47) Bromodichloromethane	9.865	83	138182	22.756	ug/l	98
48) Methyl methacrylate	9.665	41	116857	23.077	ug/l	97
49) 1,4-Dioxane	9.682	88	27524	437.028	ug/l #	87
51) 4-Methyl-2-Pentanone	10.424	43	756352	116.567	ug/l	100
52) Toluene	10.612	92	223155	21.487	ug/l	97
53) t-1,3-Dichloropropene	10.818	75	141361	21.872	ug/l	97
54) cis-1,3-Dichloropropene	10.294	75	152892	22.294	ug/l	96
55) 1,1,2-Trichloroethane	11.000	97	87269	22.149	ug/l	98
56) Ethyl methacrylate	10.859	69	134518	21.574	ug/l	97
57) 1,3-Dichloropropane	11.141	76	154575	22.319	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	327194	100.882	ug/l	99
59) 2-Hexanone	11.176	43	492033	114.310	ug/l	99
60) Dibromochloromethane	11.335	129	96318	21.507	ug/l	100
61) 1,2-Dibromoethane	11.447	107	89527	22.078	ug/l	98
64) Tetrachloroethene	11.082	164	69633	20.900	ug/l	89
65) Chlorobenzene	11.871	112	244731	21.338	ug/l	98
66) 1,1,1,2-Tetrachloroethane	11.941	131	81619	21.722	ug/l	98
67) Ethyl Benzene	11.941	91	421252	20.925	ug/l	99
68) m/p-Xylenes	12.053	106	317335	42.070	ug/l	100
69) o-Xylene	12.376	106	151783	21.227	ug/l	99
70) Styrene	12.394	104	254839	21.855	ug/l	98
71) Bromoform	12.559	173	61158	21.810	ug/l #	99
73) Isopropylbenzene	12.671	105	397427	20.084	ug/l	100
74) N-amyl acetate	12.629	43	128367m	22.852	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.918	83	132181	21.456	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	112443m	19.169	ug/l	
77) Bromobenzene	12.959	156	92521	21.683	ug/l	97
78) n-propylbenzene	13.012	91	492713	20.404	ug/l	100
79) 2-Chlorotoluene	13.100	91	294890	21.413	ug/l	99
80) 1,3,5-Trimethylbenzene	13.153	105	333799	20.311	ug/l	98
81) trans-1,4-Dichloro-2-b...	12.718	75	38179	18.156	ug/l	91
82) 4-Chlorotoluene	13.200	91	303454	20.367	ug/l	100
83) tert-Butylbenzene	13.418	119	286500	19.516	ug/l	99
84) 1,2,4-Trimethylbenzene	13.459	105	339120	20.625	ug/l	99
85) sec-Butylbenzene	13.594	105	429310	19.904	ug/l	100
86) p-Isopropyltoluene	13.706	119	354614	20.495	ug/l	98
87) 1,3-Dichlorobenzene	13.712	146	177044	20.784	ug/l	100
88) 1,4-Dichlorobenzene	13.788	146	184081	20.120	ug/l	98
89) n-Butylbenzene	14.035	91	344021	20.072	ug/l	99
90) Hexachloroethane	14.312	117	66650	19.892	ug/l	96
91) 1,2-Dichlorobenzene	14.082	146	169616	20.657	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.694	75	30171	21.041	ug/l	96
93) 1,2,4-Trichlorobenzene	15.370	180	102766	20.665	ug/l	97
94) Hexachlorobutadiene	15.470	225	38748	20.924	ug/l	99
95) Naphthalene	15.617	128	338638	19.878	ug/l	99
96) 1,2,3-Trichlorobenzene	15.811	180	97739	20.498	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088105.D
Acq On : 27 Oct 2025 11:55
Operator : JC\MD
Sample : VN1027WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1027WBS01

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/28/2025
Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:22:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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

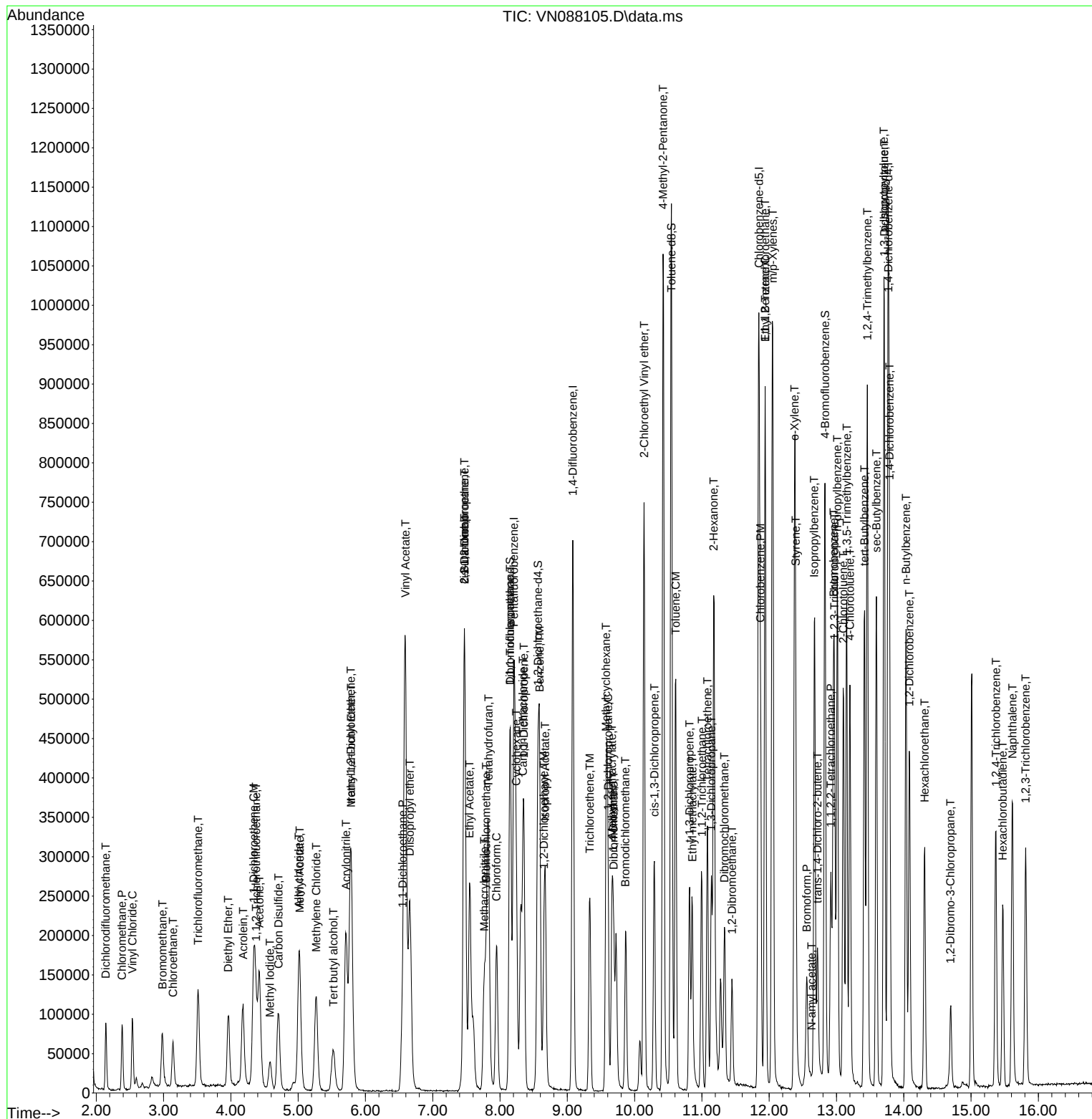
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088105.D
Acq On : 27 Oct 2025 11:55
Operator : JC\MD
Sample : VN1027WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1027WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/28/2025
Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:22:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	VN1028WBS02	SDG No.:	Q3468
Lab Sample ID:	VN1028WBS02	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	21.2		1	0.16	1.00	ug/L	10/28/25 12:14	VN102825
71-43-2	Benzene	21.7		1	0.15	1.00	ug/L	10/28/25 12:14	VN102825
108-88-3	Toluene	21.5		1	0.14	1.00	ug/L	10/28/25 12:14	VN102825
100-41-4	Ethyl Benzene	22.0		1	0.13	1.00	ug/L	10/28/25 12:14	VN102825
179601-23-1	m/p-Xylenes	43.2		1	0.24	2.00	ug/L	10/28/25 12:14	VN102825
1330-20-7	Total Xylenes	65.3		1	0.36	3.00	ug/L	10/28/25 12:14	VN102825
95-47-6	o-Xylene	22.1		1	0.12	1.00	ug/L	10/28/25 12:14	VN102825
98-82-8	Isopropylbenzene	21.3		1	0.12	1.00	ug/L	10/28/25 12:14	VN102825
103-65-1	n-propylbenzene	21.7		1	0.13	1.00	ug/L	10/28/25 12:14	VN102825
108-67-8	1,3,5-Trimethylbenzene	21.9		1	0.15	1.00	ug/L	10/28/25 12:14	VN102825
98-06-6	tert-Butylbenzene	21.1		1	0.14	1.00	ug/L	10/28/25 12:14	VN102825
95-63-6	1,2,4-Trimethylbenzene	22.0		1	0.14	1.00	ug/L	10/28/25 12:14	VN102825
135-98-8	sec-Butylbenzene	21.6		1	0.13	1.00	ug/L	10/28/25 12:14	VN102825
99-87-6	p-Isopropyltoluene	22.5		1	0.13	1.00	ug/L	10/28/25 12:14	VN102825
104-51-8	n-Butylbenzene	21.5		1	0.15	1.00	ug/L	10/28/25 12:14	VN102825
91-20-3	Naphthalene	20.8		1	0.20	1.00	ug/L	10/28/25 12:14	VN102825
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	48.6			74 - 125	97%	SPK: 50		
1868-53-7	Dibromofluoromethane	47.6			75 - 124	95%	SPK: 50		
2037-26-5	Toluene-d8	46.6			86 - 113	93%	SPK: 50		
460-00-4	4-Bromofluorobenzene	47.9			77 - 121	96%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	325000							
540-36-3	1,4-Difluorobenzene	591000							
3114-55-4	Chlorobenzene-d5	518000							
3855-82-1	1,4-Dichlorobenzene-d4	258000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088131.D
 Acq On : 28 Oct 2025 12:14
 Operator : JC\MD
 Sample : VN1028WBS02
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1028WBS02

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:19:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	325166	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	590689	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	518318	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	257534	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.559	65	273190	48.586	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	=	97.180%
35) Dibromofluoromethane	8.147	113	189017	47.632	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	95.260%
50) Toluene-d8	10.547	98	712359	46.588	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	=	93.180%
62) 4-Bromofluorobenzene	12.829	95	258768	47.920	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	=	95.840%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.142	85	77690	21.181	ug/l	99
3) Chloromethane	2.383	50	85838	19.893	ug/l	95
4) Vinyl Chloride	2.536	62	98275	20.902	ug/l	96
5) Bromomethane	2.977	94	51181	18.200	ug/l	100
6) Chloroethane	3.136	64	61088	18.034	ug/l	98
7) Trichlorofluoromethane	3.512	101	148941	19.862	ug/l	98
8) Diethyl Ether	3.959	74	53342	19.139	ug/l	92
9) 1,1,2-Trichlorotrifluo...	4.365	101	79588	20.568	ug/l	97
10) Methyl Iodide	4.583	142	65792	20.000	ug/l	95
11) Tert butyl alcohol	5.530	59	111178	114.772	ug/l	99
12) 1,1-Dichloroethene	4.336	96	77317	18.918	ug/l	96
13) Acrolein	4.171	56	114071	104.690	ug/l	99
14) Allyl chloride	5.018	41	147339	20.568	ug/l	98
15) Acrylonitrile	5.700	53	284665	107.883	ug/l	98
16) Acetone	4.424	43	295453	104.592	ug/l	99
17) Carbon Disulfide	4.706	76	239613	19.287	ug/l	96
18) Methyl Acetate	5.024	43	127029	21.965	ug/l	99
19) Methyl tert-butyl Ether	5.783	73	318362	21.211	ug/l	96
20) Methylene Chloride	5.259	84	95365	22.128	ug/l	96
21) trans-1,2-Dichloroethene	5.771	96	88610	19.752	ug/l	98
22) Diisopropyl ether	6.659	45	325063	21.577	ug/l	99
23) Vinyl Acetate	6.588	43	1478290	108.934	ug/l	98
24) 1,1-Dichloroethane	6.547	63	180290	21.604	ug/l	96
25) 2-Butanone	7.471	43	403726	108.450	ug/l	99
26) 2,2-Dichloropropane	7.477	77	160728	21.194	ug/l	98
27) cis-1,2-Dichloroethene	7.471	96	104108	20.159	ug/l	91
28) Bromochloromethane	7.794	49	71770	18.201	ug/l	97
29) Tetrahydrofuran	7.824	42	260635	107.430	ug/l	98
30) Chloroform	7.947	83	177987	21.349	ug/l	98
31) Cyclohexane	8.235	56	166823	21.195	ug/l	99
32) 1,1,1-Trichloroethane	8.147	97	157809	21.253	ug/l	95
36) 1,1-Dichloropropene	8.359	75	129330	22.321	ug/l	99
37) Ethyl Acetate	7.547	43	153324	20.505	ug/l	97
38) Carbon Tetrachloride	8.341	117	133965	22.386	ug/l	99
39) Methylcyclohexane	9.577	83	155944	20.939	ug/l	98
40) Benzene	8.588	78	382335	21.667	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
 Data File : VN088131.D
 Acq On : 28 Oct 2025 12:14
 Operator : JC\MD
 Sample : VN1028WBS02
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1028WBS02

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/29/2025
 Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:19:17 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	79477	20.195	ug/l	94
42) 1,2-Dichloroethane	8.653	62	148298	23.653	ug/l	98
43) Isopropyl Acetate	8.671	43	254024	22.109	ug/l	98
44) Trichloroethene	9.335	130	87325	21.172	ug/l	94
45) 1,2-Dichloropropane	9.606	63	97153	21.808	ug/l	94
46) Dibromomethane	9.688	93	70617	22.226	ug/l	98
47) Bromodichloromethane	9.871	83	141673	22.272	ug/l	95
48) Methyl methacrylate	9.665	41	118598	22.358	ug/l	98
49) 1,4-Dioxane	9.682	88	32376	490.732	ug/l #	95
51) 4-Methyl-2-Pentanone	10.424	43	775284	114.061	ug/l	99
52) Toluene	10.612	92	234045	21.513	ug/l	97
53) t-1,3-Dichloropropene	10.818	75	144181	21.296	ug/l	100
54) cis-1,3-Dichloropropene	10.294	75	156786	21.824	ug/l	99
55) 1,1,2-Trichloroethane	10.994	97	89511	21.686	ug/l	95
56) Ethyl methacrylate	10.859	69	141312	21.634	ug/l	98
57) 1,3-Dichloropropane	11.141	76	158867	21.898	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	348254	102.500	ug/l	99
59) 2-Hexanone	11.176	43	505757	112.165	ug/l	97
60) Dibromochloromethane	11.341	129	97503	20.783	ug/l	100
61) 1,2-Dibromoethane	11.447	107	90122	21.216	ug/l	100
64) Tetrachloroethene	11.082	164	70978	20.760	ug/l	93
65) Chlorobenzene	11.871	112	249179	21.172	ug/l	100
66) 1,1,1,2-Tetrachloroethane	11.935	131	84133	21.819	ug/l	97
67) Ethyl Benzene	11.941	91	454481	21.999	ug/l	99
68) m/p-Xylenes	12.053	106	334254	43.182	ug/l	100
69) o-Xylene	12.376	106	161967	22.073	ug/l	98
70) Styrene	12.394	104	263534	22.024	ug/l	97
71) Bromoform	12.559	173	60295	20.954	ug/l #	98
73) Isopropylbenzene	12.676	105	423716	21.332	ug/l	100
74) N-amyl acetate	12.600	43	106092m	18.815	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.917	83	133928	21.657	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	115512m	19.618	ug/l	
77) Bromobenzene	12.959	156	93515	21.833	ug/l	98
78) n-propylbenzene	13.012	91	526032	21.701	ug/l	99
79) 2-Chlorotoluene	13.106	91	311766	22.553	ug/l	97
80) 1,3,5-Trimethylbenzene	13.153	105	360921	21.879	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.717	75	35250	16.700	ug/l #	94
82) 4-Chlorotoluene	13.200	91	326837	21.854	ug/l	98
83) tert-Butylbenzene	13.417	119	310595	21.077	ug/l	99
84) 1,2,4-Trimethylbenzene	13.459	105	363876	22.047	ug/l	99
85) sec-Butylbenzene	13.594	105	467526	21.594	ug/l	99
86) p-Isopropyltoluene	13.706	119	390138	22.463	ug/l	99
87) 1,3-Dichlorobenzene	13.712	146	184656	21.596	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	193366	21.055	ug/l	99
89) n-Butylbenzene	14.035	91	369331	21.468	ug/l	98
90) Hexachloroethane	14.312	117	67538	20.081	ug/l	97
91) 1,2-Dichlorobenzene	14.088	146	176669	21.434	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	14.700	75	30996	21.535	ug/l	91
93) 1,2,4-Trichlorobenzene	15.370	180	108720	21.780	ug/l	96
94) Hexachlorobutadiene	15.470	225	41569	22.362	ug/l	98
95) Naphthalene	15.617	128	355769	20.805	ug/l	98
96) 1,2,3-Trichlorobenzene	15.811	180	102773	21.473	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102825\
Data File : VN088131.D
Acq On : 28 Oct 2025 12:14
Operator : JC\MD
Sample : VN1028WBS02
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1028WBS02

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:19:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

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

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

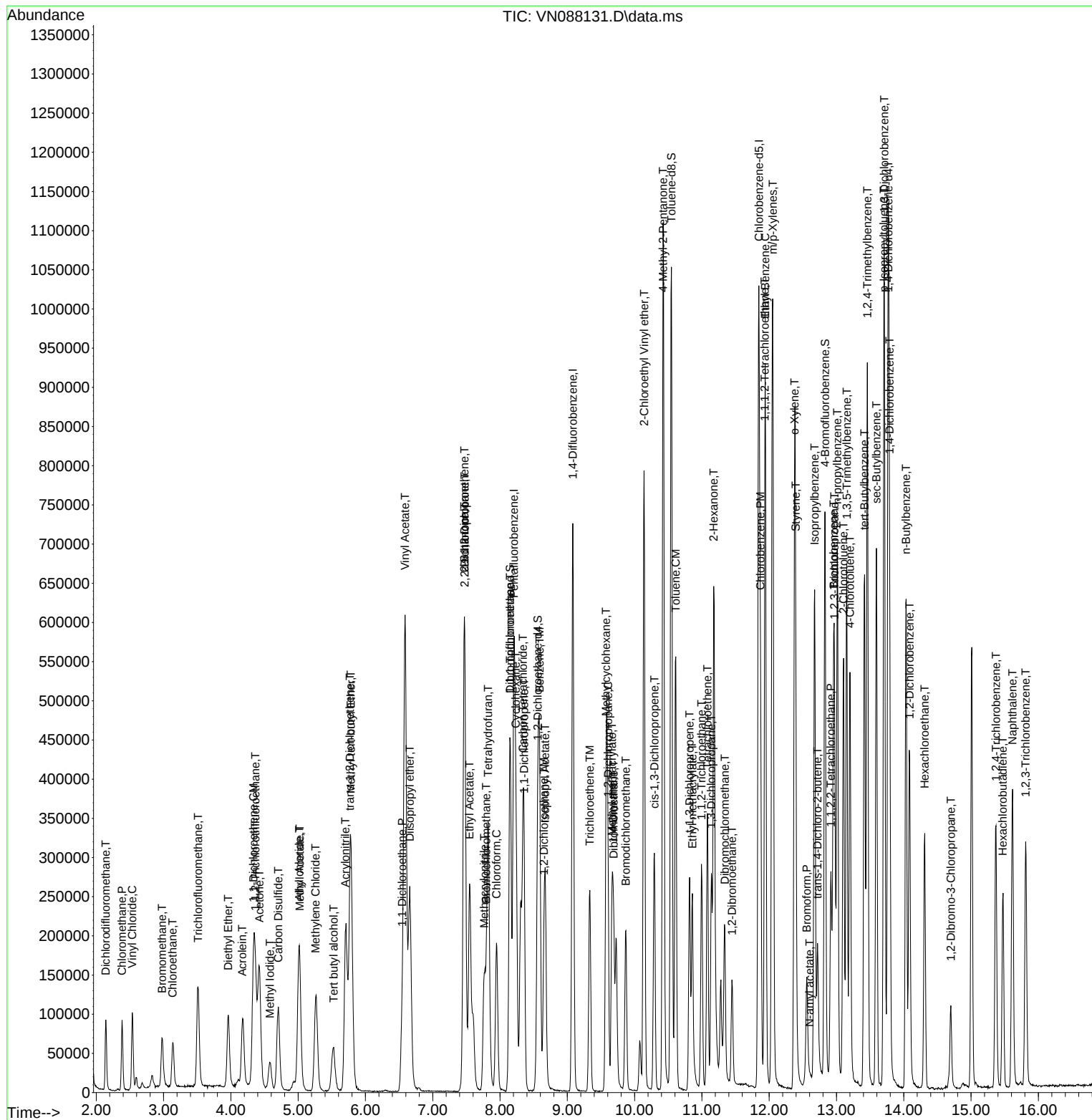
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Data File : VN088131.D  
Acq On    : 28 Oct 2025  12:14  
Operator  : JC\MD  
Sample    : VN1028WBS02  
Misc      : 5.0mL/MSVOA_N/WATER  
ALS Vial  : 7      Sample Multiplier: 1
```

Instrument :
MSVOA_N
ClientSampleId :
VN1028WBS02

Manual Integrations APPROVED

Reviewed By :John Carlone 10/29/2025
Supervised By :Semsettin Yesilyurt 10/29/2025

Quant Time: Oct 29 02:19:17 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration





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

Report of Analysis

Client:	LiRo Engineers, Inc.	Date Collected:	
Project:	RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID:	VN1029WBS01	SDG No.:	Q3468
Lab Sample ID:	VN1029WBS01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOCMS Group1
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	19.6		1	0.16	1.00	ug/L	10/29/25 11:27	VN102925
71-43-2	Benzene	19.2		1	0.15	1.00	ug/L	10/29/25 11:27	VN102925
108-88-3	Toluene	18.6		1	0.14	1.00	ug/L	10/29/25 11:27	VN102925
100-41-4	Ethyl Benzene	18.2		1	0.13	1.00	ug/L	10/29/25 11:27	VN102925
179601-23-1	m/p-Xylenes	35.7		1	0.24	2.00	ug/L	10/29/25 11:27	VN102925
1330-20-7	Total Xylenes	54.0		1	0.36	3.00	ug/L	10/29/25 11:27	VN102925
95-47-6	o-Xylene	18.3		1	0.12	1.00	ug/L	10/29/25 11:27	VN102925
98-82-8	Isopropylbenzene	17.1		1	0.12	1.00	ug/L	10/29/25 11:27	VN102925
103-65-1	n-propylbenzene	17.0		1	0.13	1.00	ug/L	10/29/25 11:27	VN102925
108-67-8	1,3,5-Trimethylbenzene	17.8		1	0.15	1.00	ug/L	10/29/25 11:27	VN102925
98-06-6	tert-Butylbenzene	16.2		1	0.14	1.00	ug/L	10/29/25 11:27	VN102925
95-63-6	1,2,4-Trimethylbenzene	17.8		1	0.14	1.00	ug/L	10/29/25 11:27	VN102925
135-98-8	sec-Butylbenzene	16.3		1	0.13	1.00	ug/L	10/29/25 11:27	VN102925
99-87-6	p-Isopropyltoluene	17.2		1	0.13	1.00	ug/L	10/29/25 11:27	VN102925
104-51-8	n-Butylbenzene	16.6		1	0.15	1.00	ug/L	10/29/25 11:27	VN102925
91-20-3	Naphthalene	17.3		1	0.20	1.00	ug/L	10/29/25 11:27	VN102925
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	50.6			74 - 125	101%	SPK: 50		
1868-53-7	Dibromofluoromethane	45.9			75 - 124	92%	SPK: 50		
2037-26-5	Toluene-d8	44.0			86 - 113	88%	SPK: 50		
460-00-4	4-Bromofluorobenzene	44.4			77 - 121	89%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	235000							
540-36-3	1,4-Difluorobenzene	450000							
3114-55-4	Chlorobenzene-d5	401000							
3855-82-1	1,4-Dichlorobenzene-d4	206000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088150.D
 Acq On : 29 Oct 2025 11:27
 Operator : JC\MD
 Sample : VN1029WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1029WBS01

Quant Time: Oct 30 04:02:46 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	234631	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.082	114	449642	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	401244	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.770	152	206462	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.559	65	205166	50.568	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 101.140%	
35) Dibromofluoromethane	8.147	113	138604	45.884	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 91.760%	
50) Toluene-d8	10.547	98	512650	44.045	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 88.080%	
62) 4-Bromofluorobenzene	12.829	95	182674	44.440	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 88.880%	

Target Compounds					Qvalue	
2) Dichlorodifluoromethane	2.148	85	47824	18.070	ug/l	96
3) Chloromethane	2.383	50	55464	17.813	ug/l	95
4) Vinyl Chloride	2.536	62	62863	18.530	ug/l	100
5) Bromomethane	2.977	94	35750	17.618	ug/l	98
6) Chloroethane	3.136	64	42665	17.455	ug/l	94
7) Trichlorofluoromethane	3.512	101	91494	16.909	ug/l	95
8) Diethyl Ether	3.965	74	38034	18.912	ug/l	96
9) 1,1,2-Trichlorotrifluo...	4.365	101	48821	17.485	ug/l	96
10) Methyl Iodide	4.583	142	33588	15.382	ug/l #	94
11) Tert butyl alcohol	5.518	59	70273	100.537	ug/l	98
12) 1,1-Dichloroethene	4.342	96	51033	17.305	ug/l	91
13) Acrolein	4.177	56	110903	141.057	ug/l	99
14) Allyl chloride	5.018	41	96611	18.690	ug/l	98
15) Acrylonitrile	5.706	53	199107	104.574	ug/l	98
16) Acetone	4.424	43	199066	97.662	ug/l	99
17) Carbon Disulfide	4.706	76	149827	16.713	ug/l	97
18) Methyl Acetate	5.018	43	90835	21.768	ug/l	99
19) Methyl tert-butyl Ether	5.789	73	212086	19.583	ug/l	99
20) Methylene Chloride	5.265	84	66437	21.390	ug/l	97
21) trans-1,2-Dichloroethene	5.771	96	57971	17.909	ug/l	97
22) Diisopropyl ether	6.659	45	221667	20.391	ug/l	99
23) Vinyl Acetate	6.589	43	1003011	102.430	ug/l	98
24) 1,1-Dichloroethane	6.553	63	122584	20.357	ug/l	98
25) 2-Butanone	7.471	43	283937	105.702	ug/l	92
26) 2,2-Dichloropropane	7.471	77	98270	17.958	ug/l	98
27) cis-1,2-Dichloroethene	7.471	96	71627	19.221	ug/l	93
28) Bromochloromethane	7.800	49	54469	19.144	ug/l	98
29) Tetrahydrofuran	7.824	42	179635	102.613	ug/l	97
30) Chloroform	7.947	83	123867	20.590	ug/l	95
31) Cyclohexane	8.241	56	104220	18.351	ug/l	95
32) 1,1,1-Trichloroethane	8.147	97	103790	19.371	ug/l	95
36) 1,1-Dichloropropene	8.353	75	82863	18.787	ug/l	99
37) Ethyl Acetate	7.553	43	114376	20.095	ug/l	97
38) Carbon Tetrachloride	8.341	117	82416	18.092	ug/l	99
39) Methylcyclohexane	9.582	83	88172	15.553	ug/l	99
40) Benzene	8.588	78	257553	19.174	ug/l	94

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
 Data File : VN088150.D
 Acq On : 29 Oct 2025 11:27
 Operator : JC\MD
 Sample : VN1029WBS01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1029WBS01

Quant Time: Oct 30 04:02:46 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.759	41	59917	20.001	ug/l	99
42) 1,2-Dichloroethane	8.653	62	103408	21.667	ug/l	99
43) Isopropyl Acetate	8.677	43	174159	19.913	ug/l	99
44) Trichloroethene	9.335	130	57414	18.287	ug/l	92
45) 1,2-Dichloropropane	9.600	63	69173	20.398	ug/l	98
46) Dibromomethane	9.688	93	48975	20.250	ug/l	99
47) Bromodichloromethane	9.865	83	98967	20.438	ug/l	96
48) Methyl methacrylate	9.665	41	83368	20.646	ug/l	98
49) 1,4-Dioxane	9.682	88	21857	435.215	ug/l #	94
51) 4-Methyl-2-Pentanone	10.424	43	554577	107.184	ug/l	98
52) Toluene	10.606	92	153656	18.554	ug/l	100
53) t-1,3-Dichloropropene	10.812	75	98287	19.071	ug/l	97
54) cis-1,3-Dichloropropene	10.294	75	104220	19.057	ug/l	97
55) 1,1,2-Trichloroethane	10.994	97	62209	19.800	ug/l	93
56) Ethyl methacrylate	10.853	69	95912	19.290	ug/l	96
57) 1,3-Dichloropropane	11.141	76	111967	20.274	ug/l	100
58) 2-Chloroethyl Vinyl ether	10.141	63	293277	113.397	ug/l	100
59) 2-Hexanone	11.176	43	332546	96.885	ug/l	98
60) Dibromochloromethane	11.335	129	68747	19.251	ug/l	95
61) 1,2-Dibromoethane	11.447	107	60560	18.728	ug/l	97
64) Tetrachloroethene	11.082	164	46483	17.563	ug/l	94
65) Chlorobenzene	11.871	112	170854	18.753	ug/l	94
66) 1,1,1,2-Tetrachloroethane	11.941	131	56904	19.064	ug/l	99
67) Ethyl Benzene	11.941	91	290536	18.167	ug/l	99
68) m/p-Xylenes	12.053	106	214108	35.731	ug/l	100
69) o-Xylene	12.376	106	104120	18.330	ug/l	98
70) Styrene	12.394	104	176043	19.005	ug/l	98
71) Bromoform	12.559	173	39152	17.576	ug/l #	98
73) Isopropylbenzene	12.676	105	272805	17.132	ug/l	99
75) 1,1,2,2-Tetrachloroethane	12.918	83	94709	19.104	ug/l	99
76) 1,2,3-Trichloropropane	12.970	75	91210m	19.323	ug/l	
77) Bromobenzene	12.959	156	64733	18.852	ug/l	98
78) n-propylbenzene	13.012	91	331205	17.044	ug/l	100
79) 2-Chlorotoluene	13.106	91	204184	18.425	ug/l	96
80) 1,3,5-Trimethylbenzene	13.153	105	235234	17.787	ug/l	99
81) trans-1,4-Dichloro-2-b...	12.723	75	22552	13.327	ug/l #	91
82) 4-Chlorotoluene	13.200	91	213326	17.792	ug/l	100
83) tert-Butylbenzene	13.412	119	191887	16.243	ug/l	99
84) 1,2,4-Trimethylbenzene	13.459	105	235014	17.761	ug/l	100
85) sec-Butylbenzene	13.594	105	282361	16.268	ug/l	100
86) p-Isopropyltoluene	13.706	119	239150	17.176	ug/l	98
87) 1,3-Dichlorobenzene	13.712	146	121368	17.705	ug/l	99
88) 1,4-Dichlorobenzene	13.788	146	128925	17.511	ug/l	98
89) n-Butylbenzene	14.035	91	228392	16.560	ug/l	100
90) Hexachloroethane	14.312	117	42260	15.673	ug/l	99
91) 1,2-Dichlorobenzene	14.082	146	117242	17.743	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	14.700	75	20684	17.925	ug/l	94
93) 1,2,4-Trichlorobenzene	15.370	180	68089	17.015	ug/l	98
94) Hexachlorobutadiene	15.470	225	26232	17.603	ug/l	97
95) Naphthalene	15.617	128	237100	17.295	ug/l	99
96) 1,2,3-Trichlorobenzene	15.817	180	65984	17.197	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088150.D
Acq On : 29 Oct 2025 11:27
Operator : JC\MD
Sample : VN1029WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1029WBS01

Quant Time: Oct 30 04:02:46 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration

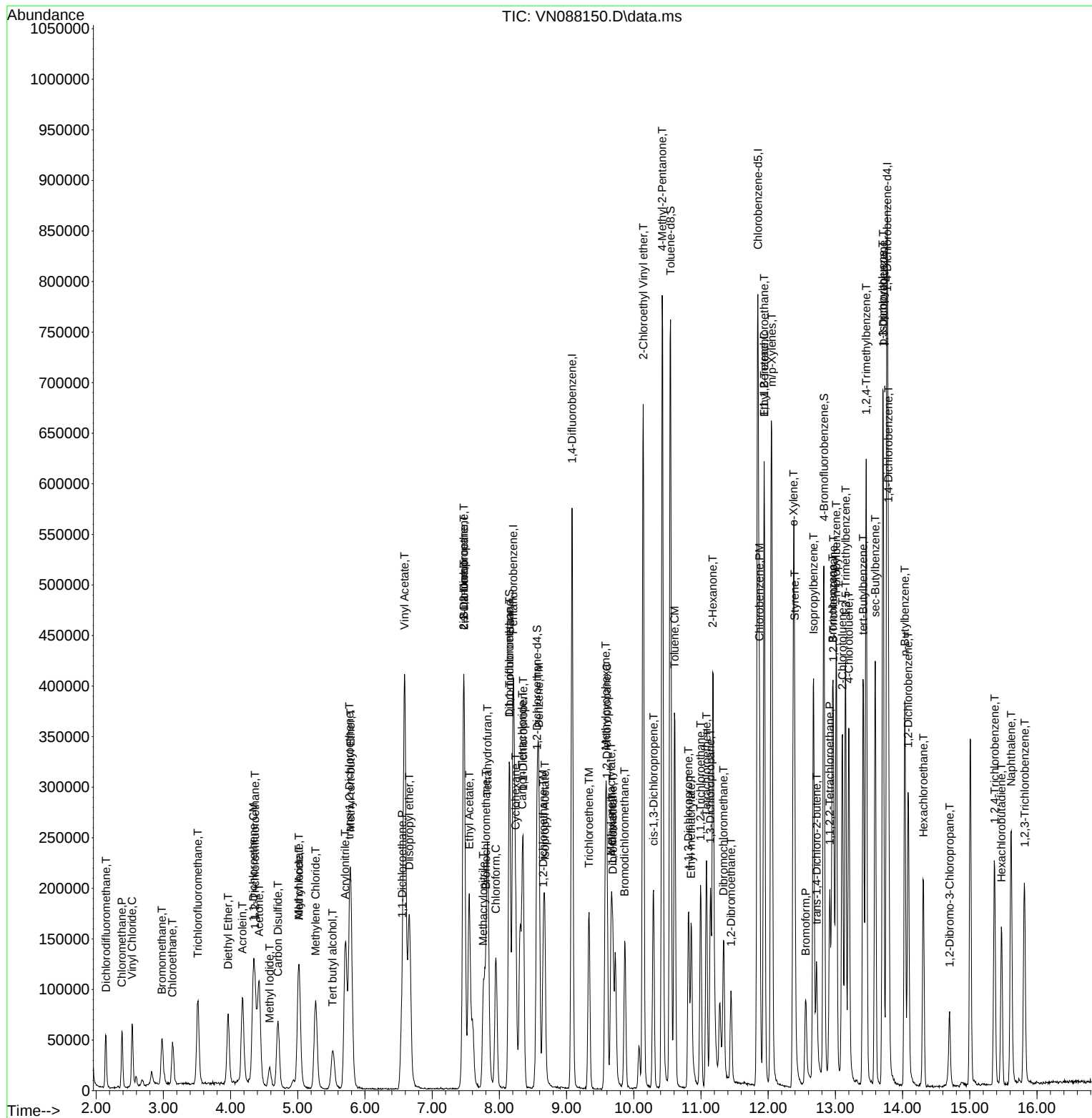
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102925\
Data File : VN088150.D
Acq On : 29 Oct 2025 11:27
Operator : JC\MD
Sample : VN1029WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1029WBS01

Quant Time: Oct 30 04:02:46 2025
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Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration



Report of Analysis

Client: LiRo Engineers, Inc.	Date Collected:	
Project: RFK Bridge RMB-Randall Island	Date Received:	
Client Sample ID: VN1027WBSD01	SDG No.:	Q3468
Lab Sample ID: VN1027WBSD01	Matrix:	Water
Analytical Method: 8260D	% Solid:	0
Sample Wt/Vol: 5 mL	Test:	VOCMS Group1
Level: LOW		
Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS									
1634-04-4	Methyl tert-butyl Ether	21.8		1	0.16	1.00	ug/L	10/27/25 12:29	VN102725
71-43-2	Benzene	21.8		1	0.15	1.00	ug/L	10/27/25 12:29	VN102725
108-88-3	Toluene	21.6		1	0.14	1.00	ug/L	10/27/25 12:29	VN102725
100-41-4	Ethyl Benzene	21.4		1	0.13	1.00	ug/L	10/27/25 12:29	VN102725
179601-23-1	m/p-Xylenes	42.3		1	0.24	2.00	ug/L	10/27/25 12:29	VN102725
1330-20-7	Total Xylenes	63.7		1	0.36	3.00	ug/L	10/27/25 12:29	VN102725
95-47-6	o-Xylene	21.4		1	0.12	1.00	ug/L	10/27/25 12:29	VN102725
98-82-8	Isopropylbenzene	20.6		1	0.12	1.00	ug/L	10/27/25 12:29	VN102725
103-65-1	n-propylbenzene	21.0		1	0.13	1.00	ug/L	10/27/25 12:29	VN102725
108-67-8	1,3,5-Trimethylbenzene	21.3		1	0.15	1.00	ug/L	10/27/25 12:29	VN102725
98-06-6	tert-Butylbenzene	20.1		1	0.14	1.00	ug/L	10/27/25 12:29	VN102725
95-63-6	1,2,4-Trimethylbenzene	21.2		1	0.14	1.00	ug/L	10/27/25 12:29	VN102725
135-98-8	sec-Butylbenzene	20.5		1	0.13	1.00	ug/L	10/27/25 12:29	VN102725
99-87-6	p-Isopropyltoluene	21.0		1	0.13	1.00	ug/L	10/27/25 12:29	VN102725
104-51-8	n-Butylbenzene	20.9		1	0.15	1.00	ug/L	10/27/25 12:29	VN102725
91-20-3	Naphthalene	21.1		1	0.20	1.00	ug/L	10/27/25 12:29	VN102725
SURROGATES									
17060-07-0	1,2-Dichloroethane-d4	56.4			74 - 125	113%	SPK: 50		
1868-53-7	Dibromofluoromethane	53.0			75 - 124	106%	SPK: 50		
2037-26-5	Toluene-d8	51.0			86 - 113	102%	SPK: 50		
460-00-4	4-Bromofluorobenzene	52.9			77 - 121	106%	SPK: 50		
INTERNAL STANDARDS									
		Area Count							
363-72-4	Pentafluorobenzene	294000							
540-36-3	1,4-Difluorobenzene	538000							
3114-55-4	Chlorobenzene-d5	483000							
3855-82-1	1,4-Dichlorobenzene-d4	242000							

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088106.D
 Acq On : 27 Oct 2025 12:29
 Operator : JC\MD
 Sample : VN1027WBSD01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1027WBSD01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/28/2025
 Supervised By : Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:23:34 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	8.206	168	293635	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.083	114	537984	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.847	117	482887	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.771	152	241641	50.000	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	8.559	65	286315	56.388	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	= 112.780%	
35) Dibromofluoromethane	8.147	113	191693	53.039	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	= 106.080%	
50) Toluene-d8	10.547	98	709565	50.952	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	= 101.900%	
62) 4-Bromofluorobenzene	12.829	95	260025	52.870	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	= 105.740%	

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	2.142	85	71261	21.515	ug/l	100
3) Chloromethane	2.383	50	82410	21.149	ug/l	94
4) Vinyl Chloride	2.536	62	88801	20.915	ug/l	99
5) Bromomethane	2.983	94	51246	20.180	ug/l	97
6) Chloroethane	3.142	64	57847	18.911	ug/l	98
7) Trichlorofluoromethane	3.518	101	132934	19.631	ug/l	99
8) Diethyl Ether	3.959	74	53161	21.123	ug/l	96
9) 1,1,2-Trichlorotrifluo...	4.371	101	70709	20.235	ug/l	98
10) Methyl Iodide	4.589	142	66091	21.775	ug/l	97
11) Tert butyl alcohol	5.512	59	108104	123.582	ug/l	97
12) 1,1-Dichloroethene	4.336	96	69616	18.863	ug/l	99
13) Acrolein	4.177	56	129096	131.202	ug/l	99
14) Allyl chloride	5.012	41	135399	20.931	ug/l	98
15) Acrylonitrile	5.712	53	274230	115.088	ug/l	97
16) Acetone	4.424	43	266262	104.380	ug/l	98
17) Carbon Disulfide	4.700	76	223663	19.936	ug/l	99
18) Methyl Acetate	5.018	43	120505	23.075	ug/l	98
19) Methyl tert-butyl Ether	5.783	73	295383	21.793	ug/l	98
20) Methylene Chloride	5.265	84	91370	23.430	ug/l	95
21) trans-1,2-Dichloroethene	5.777	96	78762	19.442	ug/l	98
22) Diisopropyl ether	6.659	45	306895	22.558	ug/l	95
23) Vinyl Acetate	6.589	43	1414608	115.435	ug/l	99
24) 1,1-Dichloroethane	6.559	63	166720	22.123	ug/l	98
25) 2-Butanone	7.471	43	378924	112.718	ug/l	98
26) 2,2-Dichloropropane	7.477	77	143368	20.935	ug/l	98
27) cis-1,2-Dichloroethene	7.477	96	97110	20.823	ug/l	93
28) Bromochloromethane	7.800	49	89712	25.194	ug/l	100
29) Tetrahydrofuran	7.824	42	246891	112.693	ug/l	97
30) Chloroform	7.947	83	165210	21.944	ug/l	99
31) Cyclohexane	8.241	56	151540	21.321	ug/l	95
32) 1,1,1-Trichloroethane	8.147	97	144935	21.615	ug/l	95
36) 1,1-Dichloropropene	8.353	75	112263	21.273	ug/l	98
37) Ethyl Acetate	7.547	43	154256	22.651	ug/l	98
38) Carbon Tetrachloride	8.347	117	118077	21.664	ug/l	96
39) Methylcyclohexane	9.583	83	138896	20.477	ug/l	96
40) Benzene	8.588	78	350057	21.781	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
 Data File : VN088106.D
 Acq On : 27 Oct 2025 12:29
 Operator : JC\MD
 Sample : VN1027WBSD01
 Misc : 5.0mL/MSVOA_N/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_N
 ClientSampleId :
 VN1027WBSD01

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/28/2025
 Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:23:34 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
 Quant Title : SW846 8260
 QLast Update : Sat Oct 25 00:15:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	7.765	41	77520	21.628	ug/l	97
42) 1,2-Dichloroethane	8.653	62	139879	24.496	ug/l	99
43) Isopropyl Acetate	8.671	43	244736	23.387	ug/l	99
44) Trichloroethene	9.335	130	80145	21.335	ug/l	100
45) 1,2-Dichloropropane	9.600	63	92446	22.785	ug/l	97
46) Dibromomethane	9.688	93	69022	23.852	ug/l	98
47) Bromodichloromethane	9.871	83	134451	23.207	ug/l	98
48) Methyl methacrylate	9.665	41	114540	23.708	ug/l	98
49) 1,4-Dioxane	9.677	88	30609	509.401	ug/l #	93
51) 4-Methyl-2-Pentanone	10.424	43	749132	121.010	ug/l	100
52) Toluene	10.612	92	213928	21.590	ug/l	98
53) t-1,3-Dichloropropene	10.818	75	139103	22.559	ug/l	99
54) cis-1,3-Dichloropropene	10.294	75	146812	22.437	ug/l	99
55) 1,1,2-Trichloroethane	10.994	97	83503	22.213	ug/l	99
56) Ethyl methacrylate	10.859	69	140931	23.690	ug/l	98
57) 1,3-Dichloropropane	11.141	76	153031	23.160	ug/l	99
58) 2-Chloroethyl Vinyl ether	10.141	63	325457	105.175	ug/l	100
59) 2-Hexanone	11.177	43	497859	121.230	ug/l	97
60) Dibromochloromethane	11.341	129	94099	22.023	ug/l	99
61) 1,2-Dibromoethane	11.447	107	87889	22.717	ug/l	100
64) Tetrachloroethene	11.082	164	68115	21.385	ug/l	97
65) Chlorobenzene	11.871	112	232930	21.243	ug/l	99
66) 1,1,1,2-Tetrachloroethane	11.941	131	80083	22.293	ug/l	98
67) Ethyl Benzene	11.941	91	410996	21.354	ug/l	100
68) m/p-Xylenes	12.047	106	304906	42.281	ug/l	100
69) o-Xylene	12.376	106	146136	21.377	ug/l	99
70) Styrene	12.388	104	246549	22.117	ug/l	97
71) Bromoform	12.559	173	60938	22.731	ug/l #	96
73) Isopropylbenzene	12.676	105	384577	20.635	ug/l	100
74) N-amyl acetate	12.606	43	118608m	22.419	ug/l	
75) 1,1,2,2-Tetrachloroethane	12.918	83	129987	22.402	ug/l	99
76) 1,2,3-Trichloropropane	12.971	75	111389m	20.162	ug/l	
77) Bromobenzene	12.959	156	90382	22.489	ug/l	99
78) n-propylbenzene	13.012	91	477927	21.014	ug/l	100
79) 2-Chlorotoluene	13.106	91	285224	21.990	ug/l	97
80) 1,3,5-Trimethylbenzene	13.153	105	329515	21.289	ug/l	100
81) trans-1,4-Dichloro-2-b...	12.718	75	37323	18.845	ug/l	95
82) 4-Chlorotoluene	13.200	91	294217	20.967	ug/l	98
83) tert-Butylbenzene	13.418	119	277442	20.066	ug/l	97
84) 1,2,4-Trimethylbenzene	13.459	105	328873	21.236	ug/l	99
85) sec-Butylbenzene	13.594	105	417041	20.529	ug/l	99
86) p-Isopropyltoluene	13.706	119	341638	20.964	ug/l	98
87) 1,3-Dichlorobenzene	13.712	146	172884	21.549	ug/l	100
88) 1,4-Dichlorobenzene	13.788	146	179380	20.817	ug/l	98
89) n-Butylbenzene	14.035	91	337732	20.922	ug/l	99
90) Hexachloroethane	14.306	117	63496	20.120	ug/l	95
91) 1,2-Dichlorobenzene	14.082	146	168164	21.745	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	14.694	75	31995	23.691	ug/l	90
93) 1,2,4-Trichlorobenzene	15.370	180	100963	21.556	ug/l	99
94) Hexachlorobutadiene	15.476	225	38434	22.036	ug/l	98
95) Naphthalene	15.612	128	337829	21.055	ug/l	100
96) 1,2,3-Trichlorobenzene	15.812	180	95974	21.371	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN102725\
Data File : VN088106.D
Acq On : 27 Oct 2025 12:29
Operator : JC\MD
Sample : VN1027WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN1027WBSD01

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/28/2025
Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:23:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 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_N\Data\VN102725\
Data File : VN088106.D
Acq On    : 27 Oct 2025  12:29
Operator  : JC\MD
Sample    : VN1027WBSD01
Misc      : 5.0mL/MSVOA_N/WATER
ALS Vial  : 8      Sample Multiplier: 1

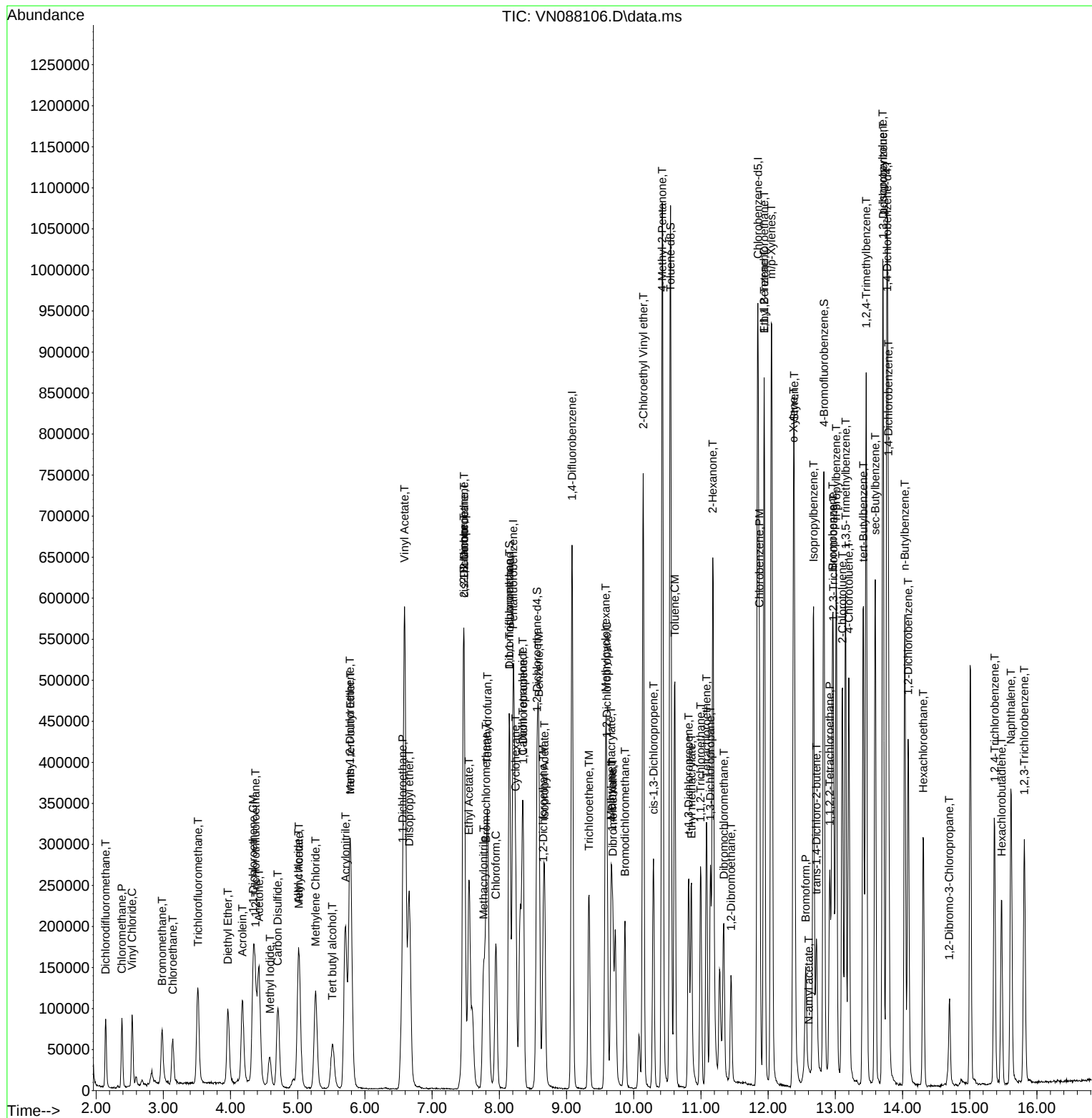
```

Instrument :
MSVOA_N
ClientSampleId :
VN1027WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/28/2025
Supervised By :Semsettin Yesilyurt 10/28/2025

Quant Time: Oct 28 01:23:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N102325W.M
Quant Title : SW846 8260
QLast Update : Sat Oct 25 00:15:22 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:	VN102325	Instrument	MSVOA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC001	VN088078.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	1,4-Dichlorobenzene	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	1,4-Dioxane	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	2-Butanone	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	2-Hexanone	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	Allyl chloride	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	Ethyl Acetate	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	Ethyl methacrylate	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	Methyl methacrylate	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC001	VN088078.D	trans-1,2-Dichloroethene	JOHN	10/24/2025 8:16:14 AM	MMDadoda	10/27/2025 7:55:28 AM	Peak Integrated by Software
VSTDICC005	VN088079.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:20 AM	MMDadoda	10/27/2025 7:55:32 AM	Peak Integrated by Software
VSTDICC005	VN088079.D	N-amyl acetate	JOHN	10/24/2025 8:16:20 AM	MMDadoda	10/27/2025 7:55:32 AM	Peak Integrated by Software
VSTDICC005	VN088079.D	trans-1,4-Dichloro-2-butene	JOHN	10/24/2025 8:16:20 AM	MMDadoda	10/27/2025 7:55:32 AM	Peak Integrated by Software

Manual Integration Report

Sequence:

VN102325

Instrument

MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDIC020	VN088080.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:24 AM	MMDadoda	10/27/2025 7:55:36 AM	Peak Integrated by Software
VSTDIC020	VN088080.D	N-amyl acetate	JOHN	10/24/2025 8:16:24 AM	MMDadoda	10/27/2025 7:55:36 AM	Peak Integrated by Software
VSTDICCC050	VN088081.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:29 AM	MMDadoda	10/27/2025 7:55:41 AM	Peak Integrated by Software
VSTDICCC050	VN088081.D	N-amyl acetate	JOHN	10/24/2025 8:16:29 AM	MMDadoda	10/27/2025 7:55:41 AM	Peak Integrated by Software
VSTDIC100	VN088082.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:34 AM	MMDadoda	10/27/2025 7:55:57 AM	Peak Integrated by Software
VSTDIC150	VN088083.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:39 AM	MMDadoda	10/27/2025 7:55:46 AM	Peak Integrated by Software
VSTDICV050	VN088085.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:16:44 AM	MMDadoda	10/27/2025 7:55:49 AM	Peak Integrated by Software

Manual Integration Report

Sequence:	VN102725	Instrument	MSVOA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VN088102.D	1,2,3-Trichloropropane	JOHN	10/28/2025 7:58:22 AM	sam	10/28/2025 1:18:56 PM	Peak Integrated by Software
VSTDCCC050	VN088102.D	N-amyl acetate	JOHN	10/28/2025 7:58:22 AM	sam	10/28/2025 1:18:56 PM	Peak Integrated by Software
VN1027WBS01	VN088105.D	1,2,3-Trichloropropane	JOHN	10/28/2025 7:58:27 AM	sam	10/28/2025 1:19:00 PM	Peak Integrated by Software
VN1027WBS01	VN088105.D	N-amyl acetate	JOHN	10/28/2025 7:58:27 AM	sam	10/28/2025 1:19:00 PM	Peak Integrated by Software
VN1027WBSD0 1	VN088106.D	1,2,3-Trichloropropane	JOHN	10/28/2025 7:58:31 AM	sam	10/28/2025 1:19:28 PM	Peak Integrated by Software
VN1027WBSD0 1	VN088106.D	N-amyl acetate	JOHN	10/28/2025 7:58:31 AM	sam	10/28/2025 1:19:28 PM	Peak Integrated by Software
VSTDCCC050	VN088125.D	1,2,3-Trichloropropane	JOHN	10/28/2025 7:59:11 AM	sam	10/28/2025 1:19:10 PM	Peak Integrated by Software
VSTDCCC050	VN088125.D	N-amyl acetate	JOHN	10/28/2025 7:59:11 AM	sam	10/28/2025 1:19:10 PM	Peak Integrated by Software

Manual Integration Report

Sequence:	VN102825	Instrument	MSVOA_n
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VN088127.D	1,2,3-Trichloropropane	JOHN	10/29/2025 8:12:12 AM	sam	10/29/2025 11:43:04 AM	Peak Integrated by Software
VSTDCCC050	VN088127.D	N-amyl acetate	JOHN	10/29/2025 8:12:12 AM	sam	10/29/2025 11:43:04 AM	Peak Integrated by Software
VN1028WBS02	VN088131.D	1,2,3-Trichloropropane	JOHN	10/29/2025 8:12:22 AM	sam	10/29/2025 11:43:20 AM	Peak Integrated by Software
VN1028WBS02	VN088131.D	N-amyl acetate	JOHN	10/29/2025 8:12:22 AM	sam	10/29/2025 11:43:20 AM	Peak Integrated by Software
Q3468-03	VN088135.D	1,3,5-Trimethylbenzene	JOHN	10/29/2025 8:12:39 AM	sam	10/29/2025 11:43:51 AM	Peak Integrated by Software
Q3468-03	VN088135.D	Methylcyclohexane	JOHN	10/29/2025 8:12:39 AM	sam	10/29/2025 11:43:51 AM	Peak Integrated by Software
Q3468-03	VN088135.D	n-Butylbenzene	JOHN	10/29/2025 8:12:39 AM	sam	10/29/2025 11:43:51 AM	Peak Integrated by Software
Q3468-03	VN088135.D	Naphthalene	JOHN	10/29/2025 8:12:39 AM	sam	10/29/2025 11:43:51 AM	Peak Integrated by Software
Q3468-03	VN088135.D	p-Isopropyltoluene	JOHN	10/29/2025 8:12:39 AM	sam	10/29/2025 11:43:51 AM	Peak Integrated by Software
Q3468-06	VN088136.D	Naphthalene	JOHN	10/29/2025 8:12:43 AM	sam	10/29/2025 11:44:26 AM	Peak Integrated by Software
Q3468-02	VN088138.D	n-Butylbenzene	JOHN	10/29/2025 8:12:52 AM	sam	10/29/2025 11:44:32 AM	Peak Integrated by Software
Q3468-02	VN088138.D	Naphthalene	JOHN	10/29/2025 8:12:52 AM	sam	10/29/2025 11:44:32 AM	Peak Integrated by Software
VSTDCCC050	VN088145.D	1,2,3-Trichloropropane	JOHN	10/29/2025 8:13:11 AM	sam	10/29/2025 11:43:26 AM	Peak Integrated by Software



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

Manual Integration Report

Sequence:

VN102825

Instrument

MSVOA_n

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:

VN102925

Instrument

MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VN088147.D	1,2,3-Trichloropropane	sam	10/30/2025 11:34:54 AM	 	 	Peak Integrated by Software
VN1029WBS01	VN088150.D	1,2,3-Trichloropropane	sam	10/30/2025 11:34:10 AM	 	 	Peak Integrated by Software
Q3468-01	VN088154.D	1,3,5-Trimethylbenzene	sam	10/30/2025 11:34:21 AM	 	 	Peak Integrated by Software
Q3468-01	VN088154.D	Cyclohexane	sam	10/30/2025 11:34:21 AM	 	 	Peak Integrated by Software
VSTDCCC050	VN088171.D	1,2,3-Trichloropropane	sam	10/30/2025 11:34:27 AM	 	 	Peak Integrated by Software

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN102325

Review By	John Carlone	Review On	10/24/2025 8:16:57 AM
Supervise By	Maresh Dadoda	Supervise On	10/27/2025 2:53:14 PM
SubDirectory	VN102325	HP Acquire Method	HP Processing Method 82N102325W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP135909		
Initial Calibration Stds	VP135921,VP135922,VP135923,VP135924,VP135925,VP135926		
CCC			
Internal Standard/PEM			
ICV/I.BLK	VP135927		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN088077.D	23 Oct 2025 09:09	JC\MD	Ok
2	VSTDIC001	VN088078.D	23 Oct 2025 09:42	JC\MD	Ok,M
3	VSTDIC005	VN088079.D	23 Oct 2025 10:38	JC\MD	Ok,M
4	VSTDIC020	VN088080.D	23 Oct 2025 10:59	JC\MD	Ok,M
5	VSTDIC050	VN088081.D	23 Oct 2025 11:20	JC\MD	Ok,M
6	VSTDIC100	VN088082.D	23 Oct 2025 11:41	JC\MD	Ok,M
7	VSTDIC150	VN088083.D	23 Oct 2025 12:02	JC\MD	Ok,M
8	IBLK	VN088084.D	23 Oct 2025 12:23	JC\MD	Ok
9	VSTDICV050	VN088085.D	23 Oct 2025 14:54	JC\MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN102725

Review By	John Carlone	Review On	10/28/2025 8:12:39 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/28/2025 1:20:10 PM
SubDirectory	VN102725	HP Acquire Method	HP Processing Method 82N102325W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135937		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135938,VP135939		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN088101.D	27 Oct 2025 09:58	JC\MD	Ok
2	VSTDCCC050	VN088102.D	27 Oct 2025 10:40	JC\MD	Ok,M
3	VN1027MBL01	VN088103.D	27 Oct 2025 11:14	JC\MD	Ok
4	VN1027WBL01	VN088104.D	27 Oct 2025 11:34	JC\MD	Ok
5	VN1027WBS01	VN088105.D	27 Oct 2025 11:55	JC\MD	Ok,M
6	VN1027WBSD01	VN088106.D	27 Oct 2025 12:29	JC\MD	Ok,M
7	Q3454-01	VN088107.D	27 Oct 2025 12:50	JC\MD	Ok
8	Q3464-01RE	VN088108.D	27 Oct 2025 13:10	JC\MD	Confirms
9	Q3464-02RE	VN088109.D	27 Oct 2025 13:31	JC\MD	Confirms
10	PB170240TB	VN088110.D	27 Oct 2025 13:52	JC\MD	Ok
11	Q3449-06	VN088111.D	27 Oct 2025 14:13	JC\MD	Ok
12	Q3439-04	VN088112.D	27 Oct 2025 14:34	JC\MD	Ok,M
13	Q3439-08	VN088113.D	27 Oct 2025 14:54	JC\MD	Ok
14	Q3440-04	VN088114.D	27 Oct 2025 15:15	JC\MD	Ok,M
15	Q3451-04	VN088115.D	27 Oct 2025 15:36	JC\MD	Ok
16	Q3451-08	VN088116.D	27 Oct 2025 15:56	JC\MD	Ok
17	Q3452-04	VN088117.D	27 Oct 2025 16:17	JC\MD	Ok
18	Q3426-02	VN088118.D	27 Oct 2025 16:37	JC\MD	Ok
19	Q3426-03	VN088119.D	27 Oct 2025 16:58	JC\MD	Ok,M
20	Q3426-04	VN088120.D	27 Oct 2025 17:19	JC\MD	Ok
21	Q3426-01	VN088121.D	27 Oct 2025 17:39	JC\MD	Dilution

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN102725

Review By	John Carlone	Review On	10/28/2025 8:12:39 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/28/2025 1:20:10 PM
SubDirectory	VN102725	HP Acquire Method	HP Processing Method 82N102325W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135937		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135938,VP135939		

22	Q3468-01	VN088122.D	27 Oct 2025 18:00	JC\MD	ReRun
23	Q3468-03	VN088123.D	27 Oct 2025 18:21	JC\MD	Not Ok
24	Q3468-04	VN088124.D	27 Oct 2025 18:41	JC\MD	Ok
25	VSTDCCC050	VN088125.D	27 Oct 2025 19:22	JC\MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN102825

Review By	John Carlone	Review On	10/29/2025 8:47:48 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/29/2025 11:44:52 AM
SubDirectory	VN102825	HP Acquire Method	HP Processing Method 82N102325W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135951		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135952,VP135953		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN088126.D	28 Oct 2025 09:26	JC\MD	Ok
2	VSTDCCC050	VN088127.D	28 Oct 2025 10:23	JC\MD	Ok,M
3	VN1028MBL01	VN088128.D	28 Oct 2025 10:57	JC\MD	Ok
4	VN1028WBL01	VN088129.D	28 Oct 2025 11:17	JC\MD	Ok
5	VN1028WBS01	VN088130.D	28 Oct 2025 11:38	JC\MD	Not Ok
6	VN1028WBS02	VN088131.D	28 Oct 2025 12:14	JC\MD	Ok,M
7	Q3426-01DL	VN088132.D	28 Oct 2025 12:35	JC\MD	Ok
8	VN1028WBSD01	VN088133.D	28 Oct 2025 12:56	JC\MD	Not Ok
9	Q3468-01	VN088134.D	28 Oct 2025 13:17	JC\MD	ReRun
10	Q3468-03	VN088135.D	28 Oct 2025 13:38	JC\MD	Ok,M
11	Q3468-06	VN088136.D	28 Oct 2025 13:59	JC\MD	Dilution
12	Q3468-06DL	VN088137.D	28 Oct 2025 14:20	JC\MD	ReRun
13	Q3468-02	VN088138.D	28 Oct 2025 14:40	JC\MD	Dilution
14	Q3468-02DL	VN088139.D	28 Oct 2025 15:01	JC\MD	Not Ok
15	Q3468-02DL	VN088140.D	28 Oct 2025 15:22	JC\MD	ReRun
16	IBLK	VN088141.D	28 Oct 2025 15:43	JC\MD	Ok
17	VN1028WBSD02	VN088142.D	28 Oct 2025 16:03	JC\MD	Ok,M
18	Q3477-03	VN088143.D	28 Oct 2025 16:24	JC\MD	Ok
19	Q3468-05	VN088144.D	28 Oct 2025 16:45	JC\MD	ReRun
20	VSTDCCC050	VN088145.D	28 Oct 2025 17:06	JC\MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QCBatch ID # VN102925

Review By	Review On
Supervise By	Supervise On
SubDirectory VN102925	HP Acquire Method HP Processing Method 82N102325W.M
STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135961
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135962,VP135963

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN088146.D	29 Oct 2025 09:07	JC\MD	Ok
2	VSTDCCC050	VN088147.D	29 Oct 2025 10:24	JC\MD	Ok,NS
3	VN1029MBL01	VN088148.D	29 Oct 2025 10:45	JC\MD	Ok
4	VN1029WBL01	VN088149.D	29 Oct 2025 11:06	JC\MD	Ok
5	VN1029WBS01	VN088150.D	29 Oct 2025 11:27	JC\MD	Ok,NS
6	VN1029WBSD01	VN088151.D	29 Oct 2025 12:01	JC\MD	Ok,NS
7	Q3468-02DL	VN088152.D	29 Oct 2025 12:21	JC\MD	Ok
8	Q3468-06DL	VN088153.D	29 Oct 2025 12:42	JC\MD	Ok
9	Q3468-01	VN088154.D	29 Oct 2025 13:03	JC\MD	Ok,NS
10	Q3468-05RE	VN088155.D	29 Oct 2025 13:24	JC\MD	Not Ok
11	PB170296TB	VN088156.D	29 Oct 2025 13:44	JC\MD	Ok
12	Q3477-02	VN088157.D	29 Oct 2025 14:05	JC\MD	Ok
13	Q3480-02	VN088158.D	29 Oct 2025 14:26	JC\MD	ReRun
14	VN1029MBS01	VN088159.D	29 Oct 2025 14:47	JC\MD	Ok,NS
15	VN1029MBSD01	VN088160.D	29 Oct 2025 15:07	JC\MD	Ok,NS
16	Q3472-04	VN088161.D	29 Oct 2025 15:28	JC\MD	Ok,NS
17	Q3472-10	VN088162.D	29 Oct 2025 15:48	JC\MD	Ok
18	Q3472-12	VN088163.D	29 Oct 2025 16:09	JC\MD	Ok
19	Q3472-14	VN088164.D	29 Oct 2025 16:30	JC\MD	Ok
20	Q3472-08	VN088165.D	29 Oct 2025 16:50	JC\MD	Ok,NS
21	Q3472-06	VN088166.D	29 Oct 2025 17:11	JC\MD	Ok

Instrument ID: **MSVOA_N**

Daily Analysis Runlog For Sequence/QC Batch ID # VN102925

Review By	Review On
Supervise By	Supervise On
SubDirectory VN102925	HP Acquire Method HP Processing Method 82N102325W.M
STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135961
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135962,VP135963

22	IBLK	VN088167.D	29 Oct 2025 17:32	JC\MD	Not Ok
23	IBLK	VN088168.D	29 Oct 2025 17:52	JC\MD	Ok
24	IBLK	VN088169.D	29 Oct 2025 18:13	JC\MD	Ok
25	Q3468-05	VN088170.D	29 Oct 2025 18:33	JC\MD	Ok
26	VSTDCCC050	VN088171.D	29 Oct 2025 18:54	JC\MD	Ok,NS

M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102325

Review By	John Carlone	Review On	10/24/2025 8:16:57 AM
Supervise By	Maresh Dadoda	Supervise On	10/27/2025 2:53:14 PM
SubDirectory	VN102325	HP Acquire Method	HP Processing Method 82N102325W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135909 VP135921,VP135922,VP135923,VP135924,VP135925,VP135926 VP135927

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN088077.D	23 Oct 2025 09:09		JC\MD	Ok
2	VSTDICC001	VSTDICC001	VN088078.D	23 Oct 2025 09:42	COM.#74 Peak not detected in 1PPB	JC\MD	Ok,M
3	VSTDICC005	VSTDICC005	VN088079.D	23 Oct 2025 10:38		JC\MD	Ok,M
4	VSTDICC020	VSTDICC020	VN088080.D	23 Oct 2025 10:59		JC\MD	Ok,M
5	VSTDICCC050	VSTDICCC050	VN088081.D	23 Oct 2025 11:20	Method failed for Comp. #74	JC\MD	Ok,M
6	VSTDICC100	VSTDICC100	VN088082.D	23 Oct 2025 11:41		JC\MD	Ok,M
7	VSTDICC150	VSTDICC150	VN088083.D	23 Oct 2025 12:02		JC\MD	Ok,M
8	IBLK	IBLK	VN088084.D	23 Oct 2025 12:23		JC\MD	Ok
9	VSTDICV050	ICVVN102325	VN088085.D	23 Oct 2025 14:54		JC\MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102725

Review By	John Carlone	Review On	10/28/2025 8:12:39 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/28/2025 1:20:10 PM
SubDirectory	VN102725	HP Acquire Method	HP Processing Method 82N102325W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135937
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135938,VP135939

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN088101.D	27 Oct 2025 09:58		JC\MD	Ok
2	VSTDCCC050	VSTDCCC050	VN088102.D	27 Oct 2025 10:40	pH#Lot#V12668	JC\MD	Ok,M
3	VN1027MBL01	VN1027MBL01	VN088103.D	27 Oct 2025 11:14		JC\MD	Ok
4	VN1027WBL01	VN1027WBL01	VN088104.D	27 Oct 2025 11:34		JC\MD	Ok
5	VN1027WBS01	VN1027WBS01	VN088105.D	27 Oct 2025 11:55	BS Failed High For Com.#30,47	JC\MD	Ok,M
6	VN1027WBSD01	VN1027WBSD01	VN088106.D	27 Oct 2025 12:29	BSD Failed High For Comp.#47	JC\MD	Ok,M
7	Q3454-01	101625	VN088107.D	27 Oct 2025 12:50	vial A pH<2 foamy sample	JC\MD	Ok
8	Q3464-01RE	MW2RE	VN088108.D	27 Oct 2025 13:10	vial B pH<2 BS Failed High	JC\MD	Confirms
9	Q3464-02RE	MW3RE	VN088109.D	27 Oct 2025 13:31	vial B pH<2 BS,BSD Failed High	JC\MD	Confirms
10	PB170240TB	PB170240TB	VN088110.D	27 Oct 2025 13:52		JC\MD	Ok
11	Q3449-06	CF-620-COMP-41	VN088111.D	27 Oct 2025 14:13	vial A pH#5.0	JC\MD	Ok
12	Q3439-04	TP-9	VN088112.D	27 Oct 2025 14:34	vial A pH#5.0	JC\MD	Ok,M
13	Q3439-08	TP-10	VN088113.D	27 Oct 2025 14:54	vial A pH#5.0	JC\MD	Ok
14	Q3440-04	JB-2	VN088114.D	27 Oct 2025 15:15	vial A pH#5.0	JC\MD	Ok,M
15	Q3451-04	TP-11	VN088115.D	27 Oct 2025 15:36	vial A pH#5.0	JC\MD	Ok
16	Q3451-08	TP-12	VN088116.D	27 Oct 2025 15:56	vial A pH#5.0	JC\MD	Ok
17	Q3452-04	JB-1	VN088117.D	27 Oct 2025 16:17	vial A pH#5.0	JC\MD	Ok

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102725

Review By	John Carlone	Review On	10/28/2025 8:12:39 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/28/2025 1:20:10 PM
SubDirectory	VN102725	HP Acquire Method	HP Processing Method 82N102325W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135937		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135938,VP135939		

18	Q3426-02	TWP3	VN088118.D	27 Oct 2025 16:37	vial A pH<2	JC\MD	Ok
19	Q3426-03	TWP5	VN088119.D	27 Oct 2025 16:58	vial A pH<2	JC\MD	Ok,M
20	Q3426-04	MW2	VN088120.D	27 Oct 2025 17:19	vial A pH<2	JC\MD	Ok
21	Q3426-01	TWP2	VN088121.D	27 Oct 2025 17:39	vial A pH<2 Surrogate Fail;Need 5X Dilution	JC\MD	Dilution
22	Q3468-01	MW-06	VN088122.D	27 Oct 2025 18:00	vial A pH<2 E flag of previous sample	JC\MD	ReRun
23	Q3468-03	MW-10	VN088123.D	27 Oct 2025 18:21	vial A pH<2 Confirm Concentration	JC\MD	Not Ok
24	Q3468-04	MW-11	VN088124.D	27 Oct 2025 18:41	vial A pH<2	JC\MD	Ok
25	VSTDCCC050	VSTDCCC050EC	VN088125.D	27 Oct 2025 19:22		JC\MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102825

Review By	John Carlone	Review On	10/29/2025 8:47:48 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/29/2025 11:44:52 AM
SubDirectory	VN102825	HP Acquire Method	HP Processing Method 82N102325W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135951
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135952,VP135953

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN088126.D	28 Oct 2025 09:26		JC\MD	Ok
2	VSTDCCC050	VSTDCCC050	VN088127.D	28 Oct 2025 10:23	pH#Lot#V12668	JC\MD	Ok,M
3	VN1028MBL01	VN1028MBL01	VN088128.D	28 Oct 2025 10:57		JC\MD	Ok
4	VN1028WBL01	VN1028WBL01	VN088129.D	28 Oct 2025 11:17		JC\MD	Ok
5	VN1028WBS01	VN1028WBS01	VN088130.D	28 Oct 2025 11:38	Recovery fail	JC\MD	Not Ok
6	VN1028WBS02	VN1028WBS02	VN088131.D	28 Oct 2025 12:14	BS Failed High For Com.#67,69	JC\MD	Ok,M
7	Q3426-01DL	TWP2DL	VN088132.D	28 Oct 2025 12:35	vial B pH<2	JC\MD	Ok
8	VN1028WBSD01	VN1028WBSD01	VN088133.D	28 Oct 2025 12:56	Recovery fail	JC\MD	Not Ok
9	Q3468-01	MW-06	VN088134.D	28 Oct 2025 13:17	vial B pH<2 BS Failed High	JC\MD	ReRun
10	Q3468-03	MW-10	VN088135.D	28 Oct 2025 13:38	vial B pH<2	JC\MD	Ok,M
11	Q3468-06	MW-12	VN088136.D	28 Oct 2025 13:59	Need 10X; BS Failed High	JC\MD	Dilution
12	Q3468-06DL	MW-12DL	VN088137.D	28 Oct 2025 14:20	vial B pH<2 BS Failed High	JC\MD	ReRun
13	Q3468-02	MW-08	VN088138.D	28 Oct 2025 14:40	vial A pH<2 Need 5X; BS Failed High	JC\MD	Dilution
14	Q3468-02DL	MW-08DL	VN088139.D	28 Oct 2025 15:01	Run @ Lower Dilution	JC\MD	Not Ok
15	Q3468-02DL	MW-08DL	VN088140.D	28 Oct 2025 15:22	vial B pH<2 BS Failed High	JC\MD	ReRun
16	IBLK	IBLK	VN088141.D	28 Oct 2025 15:43		JC\MD	Ok
17	VN1028WBSD02	VN1028WBSD02	VN088142.D	28 Oct 2025 16:03		JC\MD	Ok,M

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102825

Review By	John Carlone	Review On	10/29/2025 8:47:48 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/29/2025 11:44:52 AM
SubDirectory	VN102825	HP Acquire Method	HP Processing Method 82N102325W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135951
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135952,VP135953

18	Q3477-03	SOUTH-MAHWAH-WA	VN088143.D	28 Oct 2025 16:24	vial A pH<2	JC\MD	Ok
19	Q3468-05	MW-13	VN088144.D	28 Oct 2025 16:45	vial A pH<2 BS Failed High	JC\MD	ReRun
20	VSTDCCC050	VSTDCCC050EC	VN088145.D	28 Oct 2025 17:06		JC\MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102925

Review By	Review On
Supervise By	Supervise On
SubDirectory	VN102925
HP Acquire Method	HP Processing Method
	82N102325W.M
STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135961
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135962,VP135963

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN088146.D	29 Oct 2025 09:07		JC\MD	Ok
2	VSTDCCC050	VSTDCCC050	VN088147.D	29 Oct 2025 10:24		JC\MD	Ok,NS
3	VN1029MBL01	VN1029MBL01	VN088148.D	29 Oct 2025 10:45		JC\MD	Ok
4	VN1029WBL01	VN1029WBL01	VN088149.D	29 Oct 2025 11:06		JC\MD	Ok
5	VN1029WBS01	VN1029WBS01	VN088150.D	29 Oct 2025 11:27		JC\MD	Ok,NS
6	VN1029WBSD01	VN1029WBSD01	VN088151.D	29 Oct 2025 12:01		JC\MD	Ok,NS
7	Q3468-02DL	MW-08DL	VN088152.D	29 Oct 2025 12:21		JC\MD	Ok
8	Q3468-06DL	MW-12DL	VN088153.D	29 Oct 2025 12:42		JC\MD	Ok
9	Q3468-01	MW-06	VN088154.D	29 Oct 2025 13:03		JC\MD	Ok,NS
10	Q3468-05RE	MW-13RE	VN088155.D	29 Oct 2025 13:24	Surrogate Fail	JC\MD	Not Ok
11	PB170296TB	PB170296TB	VN088156.D	29 Oct 2025 13:44		JC\MD	Ok
12	Q3477-02	SOUTH-MAHWAH-SOI	VN088157.D	29 Oct 2025 14:05		JC\MD	Ok
13	Q3480-02	RT3449	VN088158.D	29 Oct 2025 14:26	Surrogate Fail	JC\MD	ReRun
14	VN1029MBS01	VN1029MBS01	VN088159.D	29 Oct 2025 14:47		JC\MD	Ok,NS
15	VN1029MBSD01	VN1029MBSD01	VN088160.D	29 Oct 2025 15:07		JC\MD	Ok,NS
16	Q3472-04	COMP-1	VN088161.D	29 Oct 2025 15:28		JC\MD	Ok,NS
17	Q3472-10	COMP-4	VN088162.D	29 Oct 2025 15:48		JC\MD	Ok
18	Q3472-12	COMP-5	VN088163.D	29 Oct 2025 16:09		JC\MD	Ok

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QC Batch ID # VN102925

Review By	Review On
Supervise By	Supervise On
SubDirectory	VN102925
HP Acquire Method	HP Processing Method
	82N102325W.M
STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135961
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135962,VP135963

19	Q3472-14	155	VN088164.D	29 Oct 2025 16:30	JC\MD	Ok
20	Q3472-08	COMP-3	VN088165.D	29 Oct 2025 16:50	JC\MD	Ok,NS
21	Q3472-06	COMP-2	VN088166.D	29 Oct 2025 17:11	JC\MD	Ok
22	IBLK	IBLK	VN088167.D	29 Oct 2025 17:32	JC\MD	Not Ok
23	IBLK	IBLK	VN088168.D	29 Oct 2025 17:52	JC\MD	Ok
24	IBLK	IBLK	VN088169.D	29 Oct 2025 18:13	JC\MD	Ok
25	Q3468-05	MW-13	VN088170.D	29 Oct 2025 18:33	JC\MD	Ok
26	VSTDCCC050	VSTDCCC050EC	VN088171.D	29 Oct 2025 18:54	JC\MD	Ok,NS

M : Manual Integration



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Lia Environmental Inc.

PROJECT NAME: PMB, Rfk Bridge Road, L.I. Hwy

PO#:

ADDRESS: 690 Decker Avenue

PROJECT NO.: PMB-2023

ADDRESS: SAME

CITY: Buffalo STATE: NY ZIP: 14209

PROJECT MANAGER: Martin Wesołowski

CITY: STATE: ZIP:

ATTENTION: Martin Wesołowski

e-mail: wesołowski@lia.com

ATTENTION: PHONE:

PHONE: 716 970 4273 FAX: 716 882-9640

PHONE: 716 970 9640 FAX: 716 882 9640

ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) _____ DAYS*

HARD COPY (DATA PACKAGE): _____ DAYS*

EDD: _____ DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARD COPY TURNAROUND TIME IS 10 BUSINESS

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data) ☐ Other _____

☐ EDD FORMAT _____

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID PROJECT SAMPLE IDENTIFICATION

SAMPLE MATRIX

SAMPLE TYPE COMP GRAB

SAMPLE COLLECTION DATE TIME

OF BOTTLES

1 2 3 4 5 6 7 8 9

← Specify Preservatives
A-HCl B-HNO3 C-H2SO4 D-NAOH E-ICE F-OTHER

1. MW-06 GW X 10/23/11 11:40 5 X X X

2. MW-08 GW X 10/30 5 X X X

3. MW-10 GW X 12:15 5 X X X

4. MW-11 GW X 12:15 5 X X X

5. MW-13 GW X 9:15 5 X X X

6. MW-12 GW X 13:30 5 X X X

7.

8.

9.

10.

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

RELINQUISHED BY SAMPLER: DATE/TIME: 10-24-11 RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

2.1 °C

RELINQUISHED BY SAMPLER: DATE/TIME: 10-24-11 RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

2.1 °C

RELINQUISHED BY SAMPLER: DATE/TIME: 10-24-11 RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

2.1 °C

RELINQUISHED BY SAMPLER: DATE/TIME: 10-24-11 RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

RECEIVED BY: 10-24-11

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

Conditions of bottles or coolers at receipt: ☐ COMPLAINT ☐ NON COMPLAINT ☐ COOLER TEMP _____ °C

2.1 °C

Shipment Complete ☐ YES ☐ NO

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3468 LIRO01

Order Date : 10/27/2025 11:00:00 AM

Project Mgr :

Client Name : LiRo Engineers, Inc.

Project Name : RFK Bridge RMB-Randall

Report Type : NYS ASP A

Client Contact : Martin Wesolowski

Receive DateTime : 10/25/2025 7:44:00 PM

EDD Type : Excel NY

Invoice Name : LiRo Engineers, Inc.

Purchase Order :

Hard Copy Date :

Invoice Contact : Martin Wesolowski

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3468-01	MW-06	Water	10/23/2025	11:40					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3468-02	MW-08	Water	10/23/2025	10:30					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3468-03	MW-10	Water	10/23/2025	12:15					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3468-04	MW-11	Water	10/23/2025	12:55					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3468-05	MW-13	Water	10/23/2025	09:15					
					VOCMS Group1		8260-Low	10 Bus. Days	
Q3468-06	MW-12	Water	10/23/2025	13:30					
					VOCMS Group1		8260-Low	10 Bus. Days	

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3468	LIRO01	Order Date : 10/27/2025 11:00:00 AM	Project Mgr :
Client Name : LiRo Engineers, Inc.		Project Name : RFK Bridge RMB-Randall	Report Type : NYS ASP A
Client Contact : Martin Wesolowski		Receive DateTime : 10/27/2025 7:44:00 PM	EDD Type : Excel NY
Invoice Name : LiRo Engineers, Inc.		Purchase Order : 24	Hard Copy Date :
Invoice Contact : Martin Wesolowski			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
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Relinquished By : 

Date / Time : 10/27/25 1150

Received By : 

Date / Time : 10/27/25

Storage Area : VOA Refridgerator Room

12:25