

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL120225\
 Data File : VL043297.D
 Acq On : 02 Dec 2025 14:13
 Operator : SY/MD
 Sample : Q3744-02DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

Quant Time: Dec 03 00:06:40 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL111825AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Nov 19 01:11:25 2025
 Response via : Initial Calibration

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

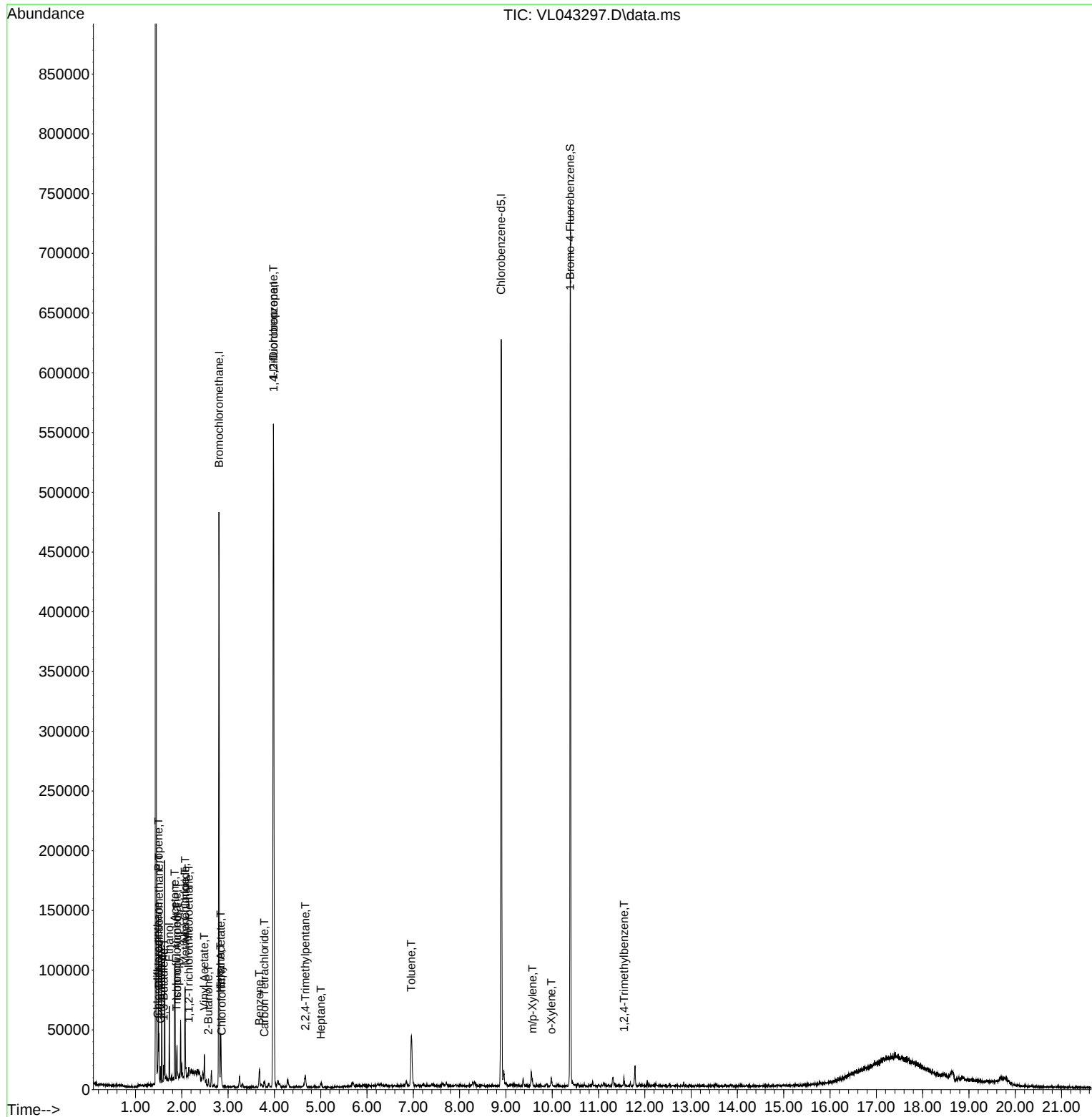
Internal Standards						
1) Bromochloromethane	2.803	49	126695	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.981	114	324631	10.000	ppbv	0.03
55) Chlorobenzene-d5	8.898	117	245976	10.000	ppbv	0.03
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.390	95	174187	9.661	ppbv	0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	96.600%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.505	85	8894	0.498	ppbv	96
3) Chlorodifluoromethane	1.483	51	8549	0.486	ppbv #	86
4) Chloromethane	1.541	50	3081	0.461	ppbv	99
9) Propene	1.495	41	11018	1.476	ppbv #	1
10) Heptane	5.004	43	752	0.034	ppbv #	28
11) Trichlorofluoromethane	1.887	101	4667	0.270	ppbv	90
12) 1,1,2-Trichlorotrifluo...	2.152	101	1043	0.077	ppbv	96
13) Ethanol	1.732	45	22363	8.522	ppbv	100
15) Acetone	1.845	43	46253	2.628	ppbv	92
16) 1,3-Butadiene	1.609	39	1690	0.215	ppbv #	55
19) Isopropyl Alcohol	1.897	45	10365	1.042	ppbv #	6
20) Methylene Chloride	2.075	84	6739	0.558	ppbv	92
21) Allyl Chloride	2.068	41	581	0.049	ppbv #	18
23) Vinyl Acetate	2.486	43	6948	0.327	ppbv #	52
25) Ethyl Acetate	2.842	43	8114	0.214	ppbv #	87
26) Hexane	2.839	57	8694	0.522	ppbv #	45
29) Chloroform	2.861	83	972	0.041	ppbv	91
34) 2-Butanone	2.573	43	3262	0.142	ppbv	95
35) Carbon Tetrachloride	3.784	117	1978	0.080	ppbv #	84
36) Benzene	3.674	78	8289	0.267	ppbv	97
39) 1,2-Dichloropropane	3.978	63	81094	7.127	ppbv #	23
44) 2,2,4-Trimethylpentane	4.667	57	5460	0.102	ppbv #	43
53) Toluene	6.956	91	29890	0.812	ppbv	96
59) m/p-Xylene	9.574	91	1297	0.034	ppbv #	31
60) o-Xylene	9.979	91	2682	0.071	ppbv	96
74) 1,2,4-Trimethylbenzene	11.548	105	1990	0.047	ppbv #	45

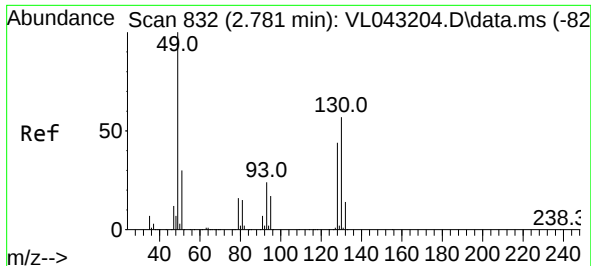
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Dec 03 00:06:40 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL11825AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
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Response via : Initial Calibration

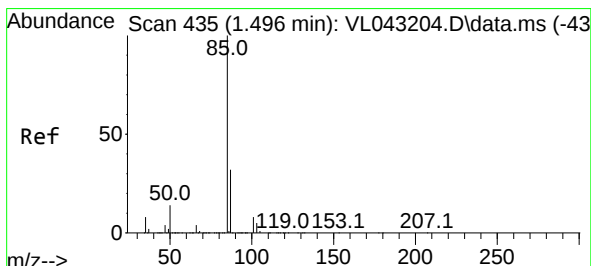
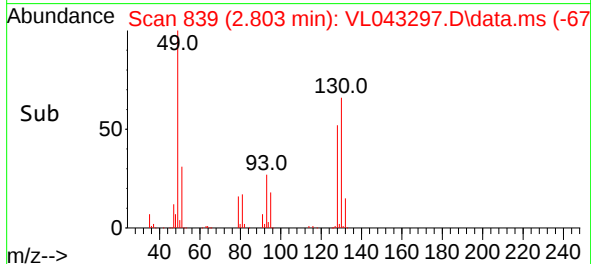
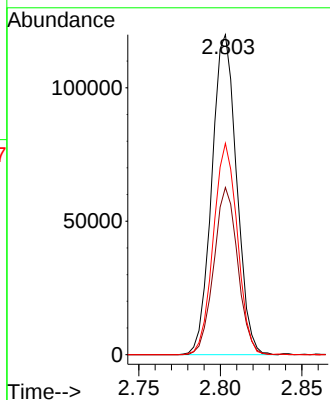
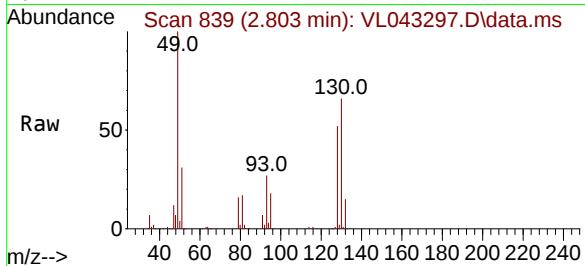




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.803 min Scan# 81
Delta R.T. 0.022 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

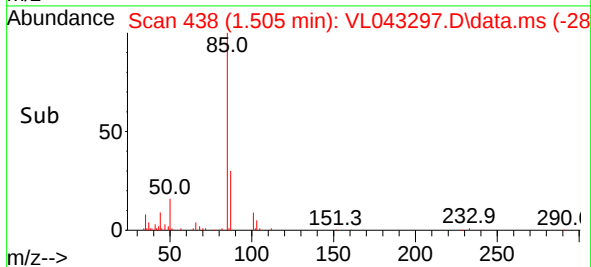
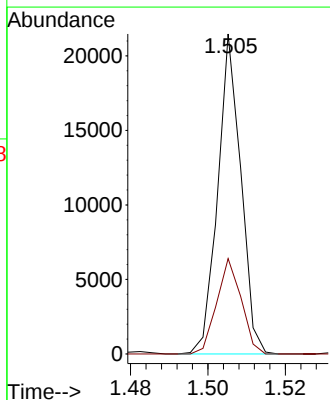
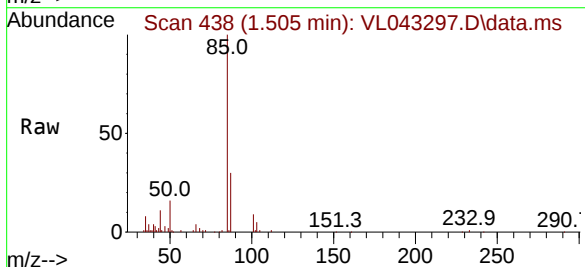
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

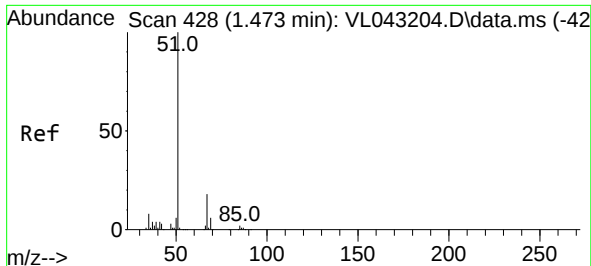
Tgt Ion: 49 Resp: 126695
Ion Ratio Lower Upper
49 100
128 50.5 23.0 69.0
130 64.0 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.498 ppbv
RT: 1.505 min Scan# 438
Delta R.T. 0.009 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 85 Resp: 8894
Ion Ratio Lower Upper
85 100
87 29.8 25.4 38.2

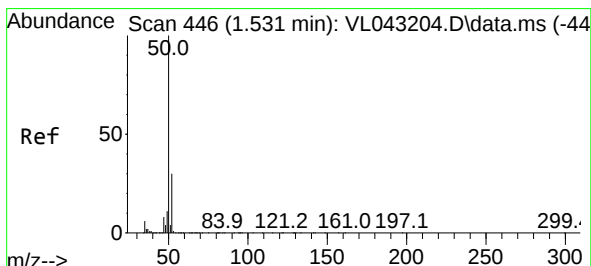
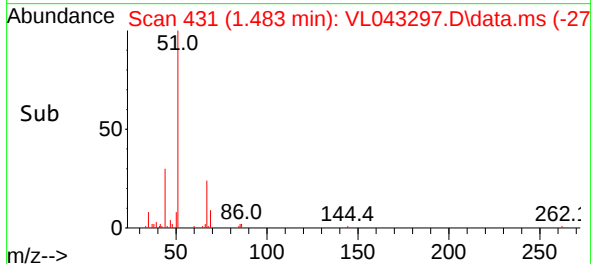
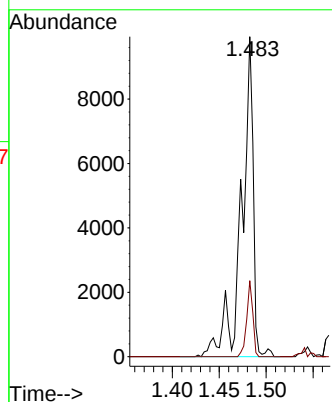
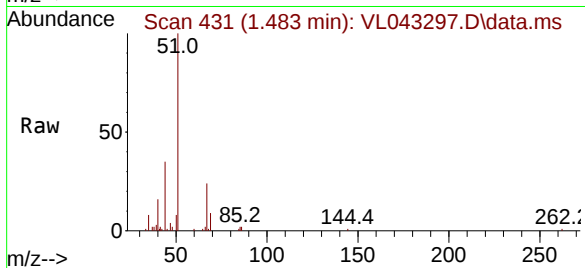




#3
Chlorodifluoromethane
Concen: 0.486 ppbv
RT: 1.483 min Scan# 41
Delta R.T. 0.009 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

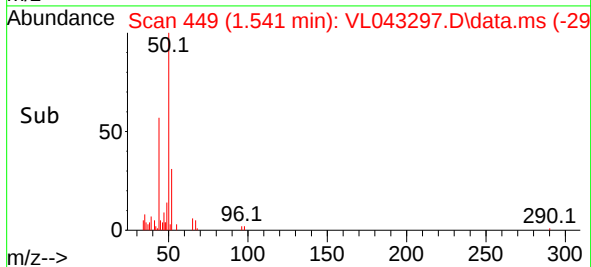
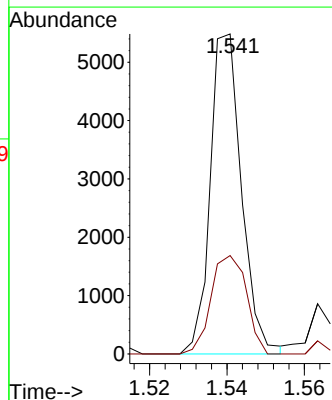
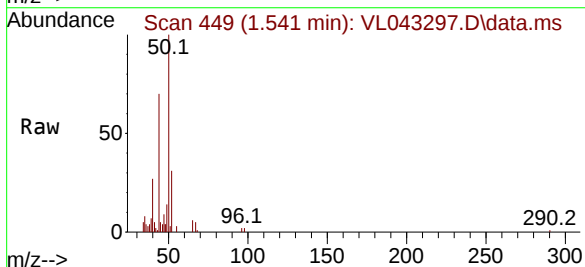
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

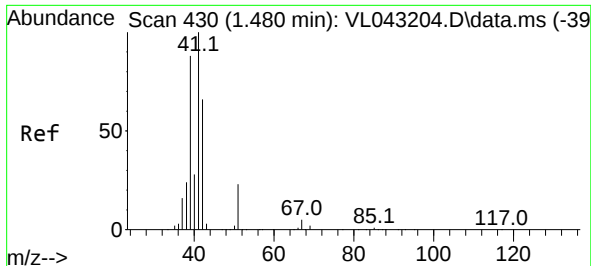
Tgt Ion: 51 Resp: 8549
Ion Ratio Lower Upper
51 100
67 12.4 14.9 22.3#



#4
Chloromethane
Concen: 0.461 ppbv
RT: 1.541 min Scan# 449
Delta R.T. 0.009 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 50 Resp: 3081
Ion Ratio Lower Upper
50 100
52 30.8 24.1 36.1

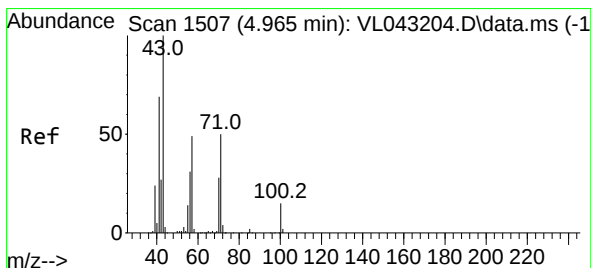
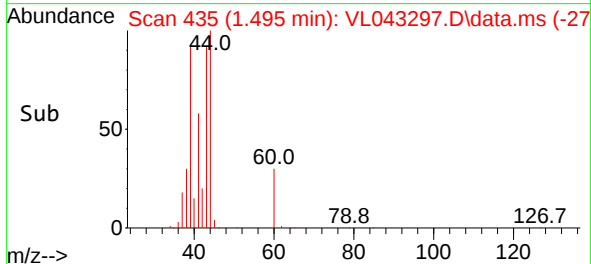
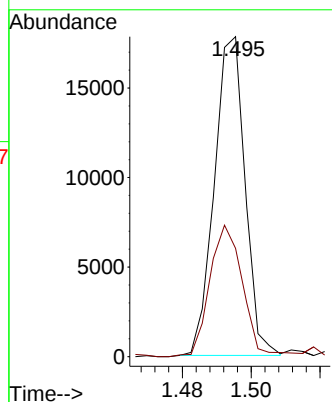
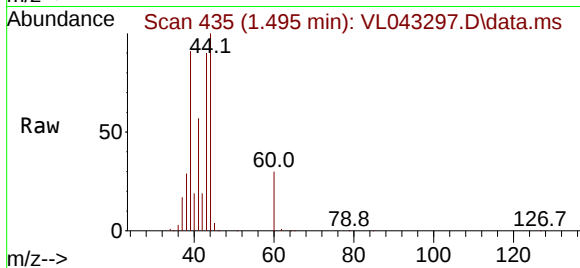




#9
Propene
Concen: 1.476 ppbv
RT: 1.495 min Scan# 41
Delta R.T. 0.016 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

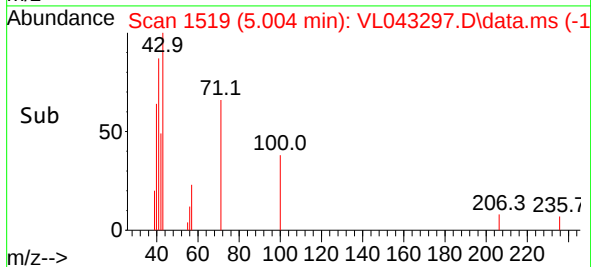
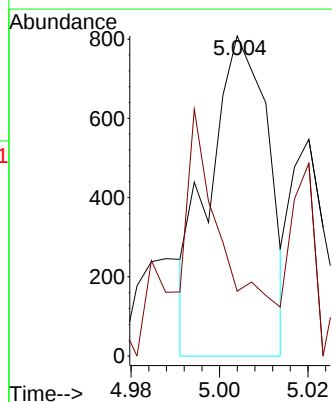
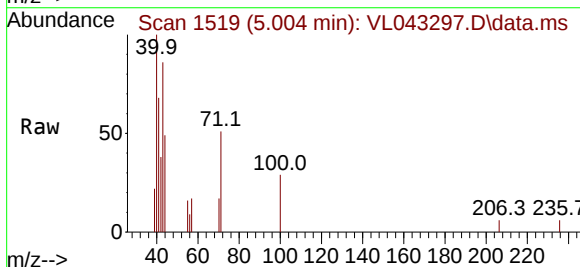
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

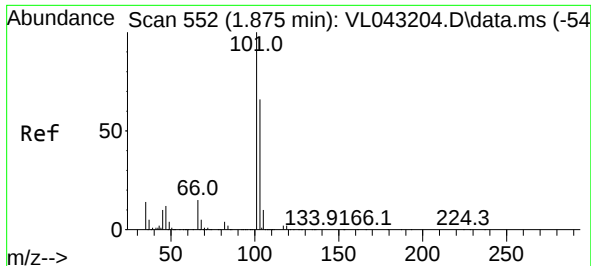
Tgt Ion: 41 Resp: 11018
Ion Ratio Lower Upper
41 100
42 46.4 3.7 5.5#



#10
Heptane
Concen: 0.034 ppbv
RT: 5.004 min Scan# 1519
Delta R.T. 0.038 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 43 Resp: 752
Ion Ratio Lower Upper
43 100
57 0.0 39.7 59.5#

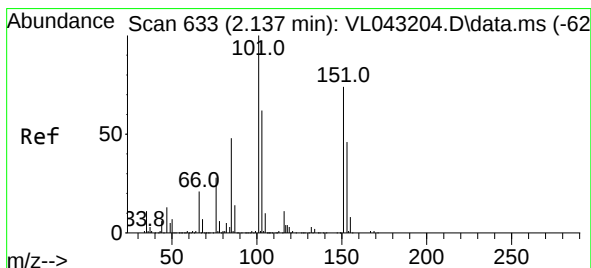
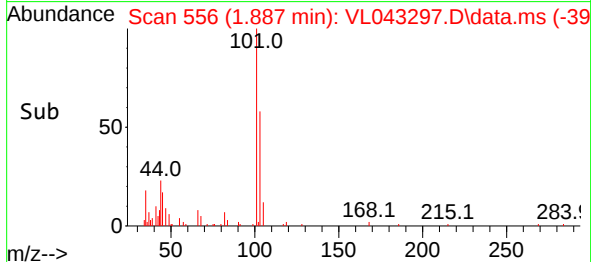
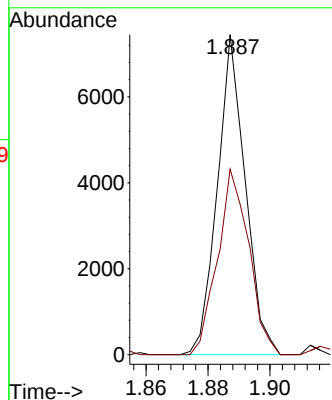
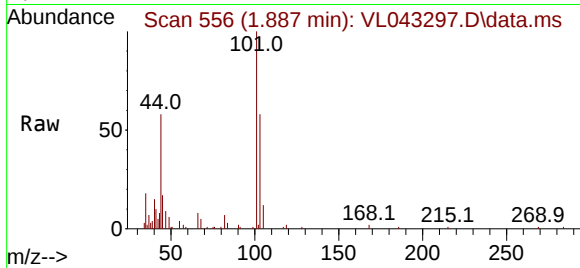




#11
 Trichlorofluoromethane
 Concen: 0.270 ppbv
 RT: 1.887 min Scan# 511
 Delta R.T. 0.013 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

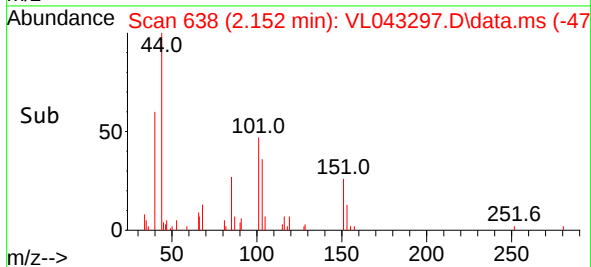
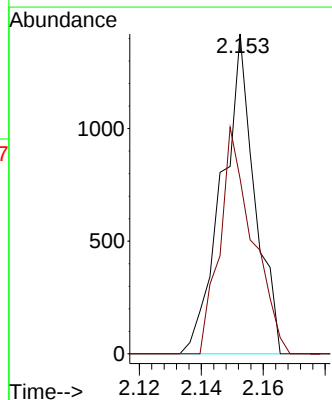
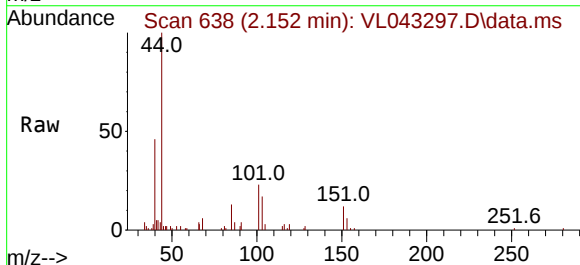
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

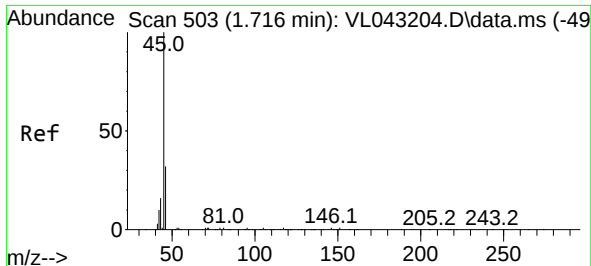
Tgt Ion:101 Resp: 4667
 Ion Ratio Lower Upper
 101 100
 103 57.9 52.6 79.0



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.077 ppbv
 RT: 2.152 min Scan# 638
 Delta R.T. 0.016 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Tgt Ion:101 Resp: 1043
 Ion Ratio Lower Upper
 101 100
 151 70.9 59.2 88.8

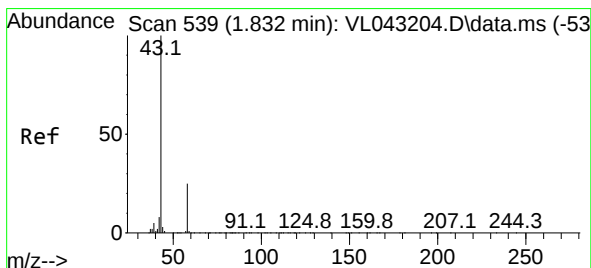
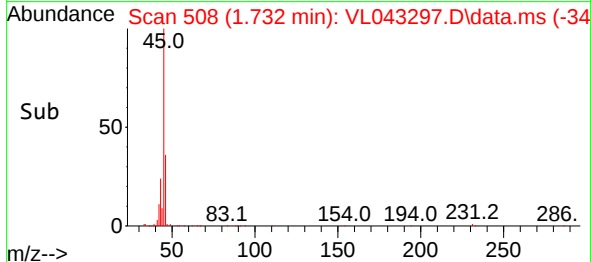
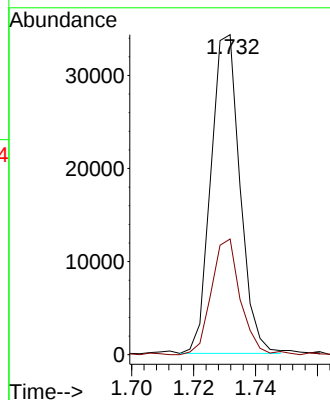
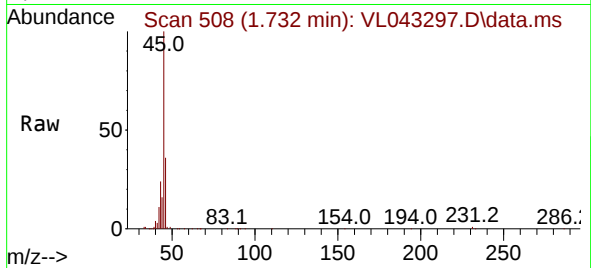




#13
 Ethanol
 Concen: 8.522 ppbv
 RT: 1.732 min Scan# 503
 Delta R.T. 0.016 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

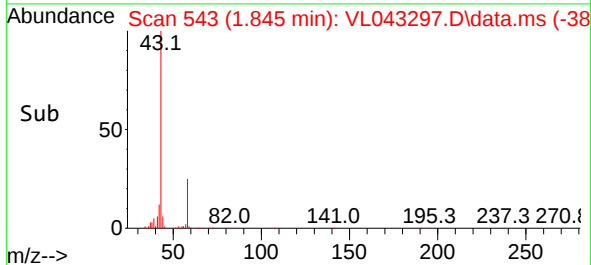
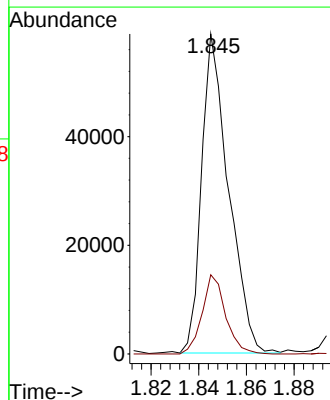
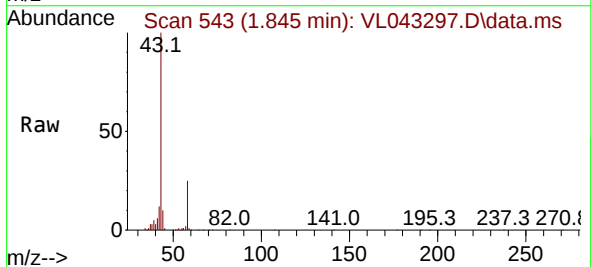
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

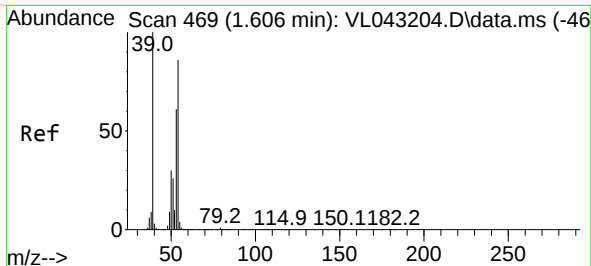
Tgt Ion: 45 Resp: 22363
 Ion Ratio Lower Upper
 45 100
 46 37.2 15.0 59.8



#15
 Acetone
 Concen: 2.628 ppbv
 RT: 1.845 min Scan# 543
 Delta R.T. 0.013 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Tgt Ion: 43 Resp: 46253
 Ion Ratio Lower Upper
 43 100
 58 21.6 20.7 31.1

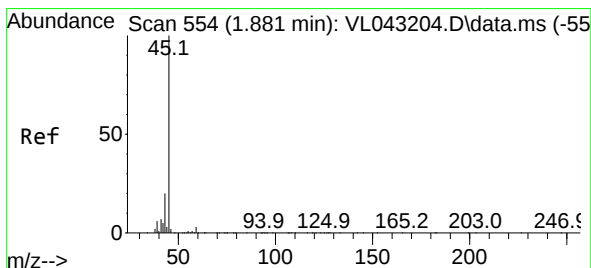
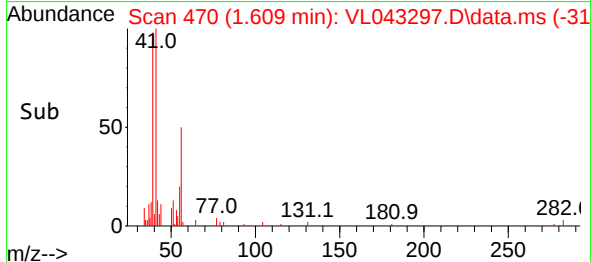
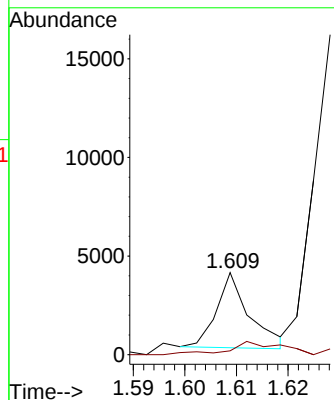
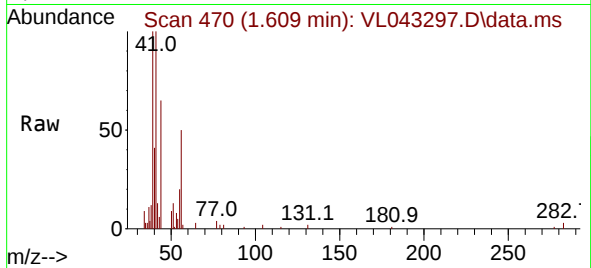




#16
1,3-Butadiene
Concen: 0.215 ppbv
RT: 1.609 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

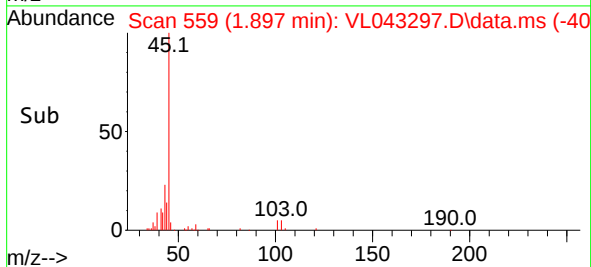
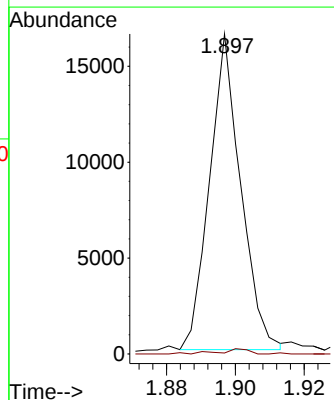
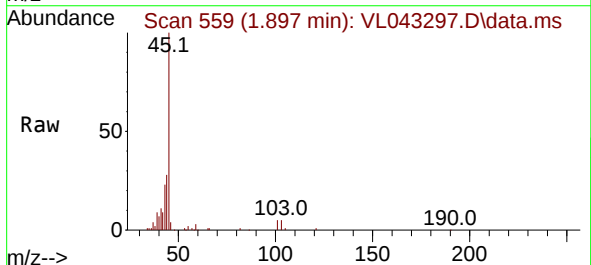
Instrument :
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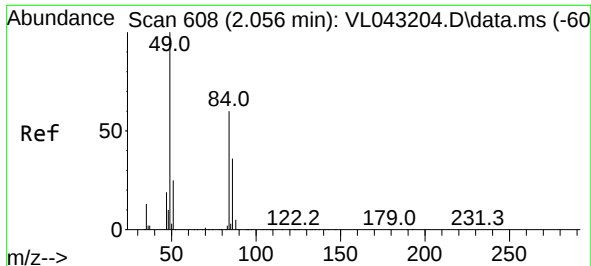
Tgt Ion: 39 Resp: 1690
Ion Ratio Lower Upper
39 100
54 36.3 59.4 89.2#



#19
Isopropyl Alcohol
Concen: 1.042 ppbv
RT: 1.897 min Scan# 559
Delta R.T. 0.016 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 45 Resp: 10365
Ion Ratio Lower Upper
45 100
58 96.4 31.3 46.9#





#20

Methylene Chloride

Concen: 0.558 ppbv

RT: 2.075 min Scan# 614

Delta R.T. 0.019 min

Lab File: VL043297.D

Acq: 02 Dec 2025 14:13

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

Tgt Ion: 84 Resp: 6739

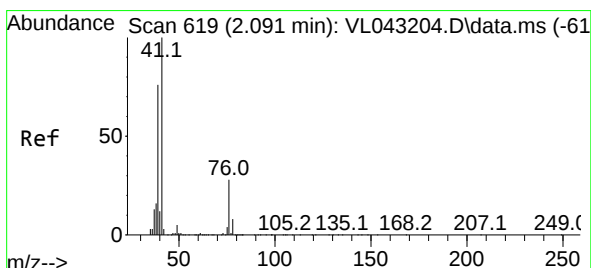
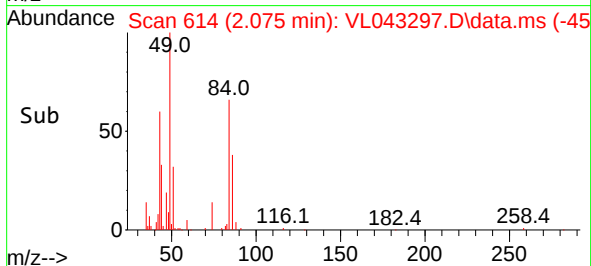
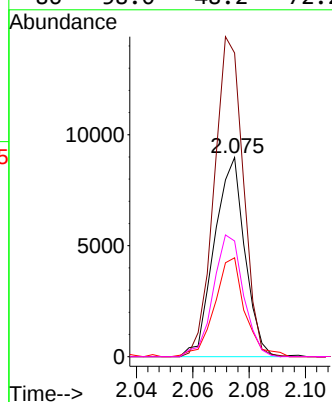
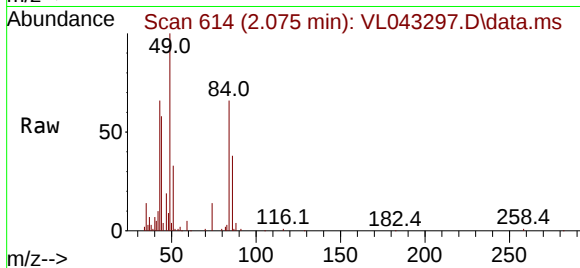
Ion Ratio Lower Upper

84 100

49 152.4 132.9 199.3

51 48.8 34.8 52.2

86 58.0 48.2 72.2



#21

Allyl Chloride

Concen: 0.049 ppbv

RT: 2.068 min Scan# 612

Delta R.T. -0.023 min

Lab File: VL043297.D

Acq: 02 Dec 2025 14:13

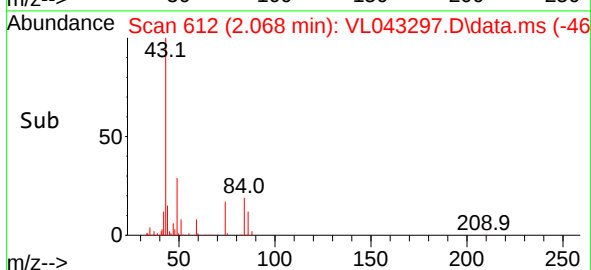
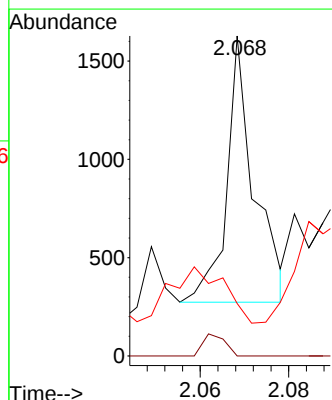
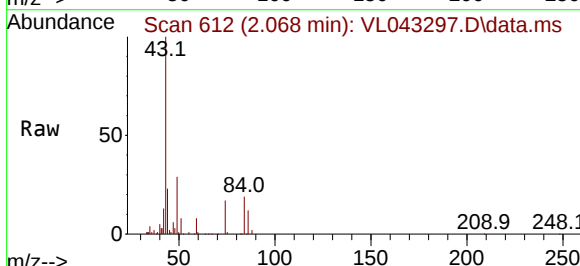
Tgt Ion: 41 Resp: 581

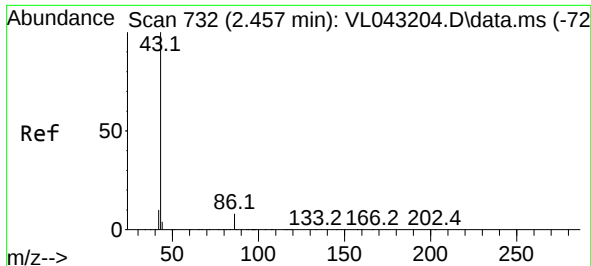
Ion Ratio Lower Upper

41 100

76 6.5 22.1 33.1#

39 159.2 61.0 91.4#

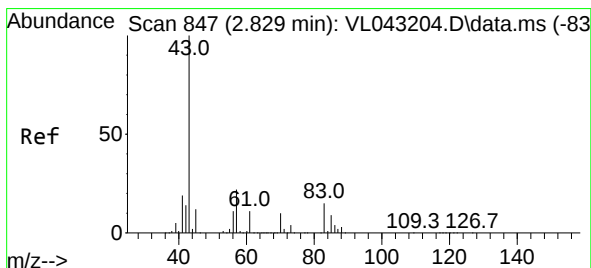
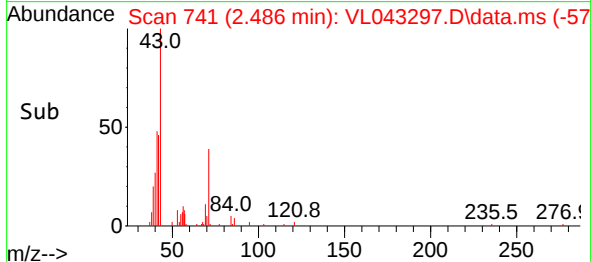
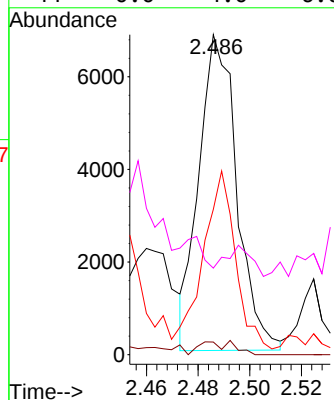
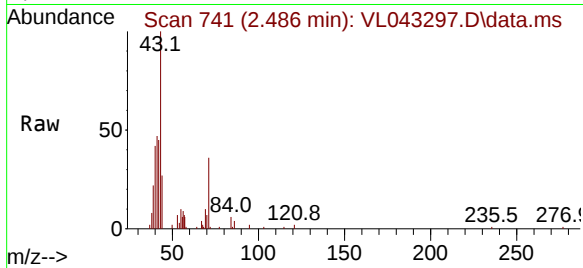




#23
 Vinyl Acetate
 Concen: 0.327 ppbv
 RT: 2.486 min Scan# 741
 Delta R.T. 0.029 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

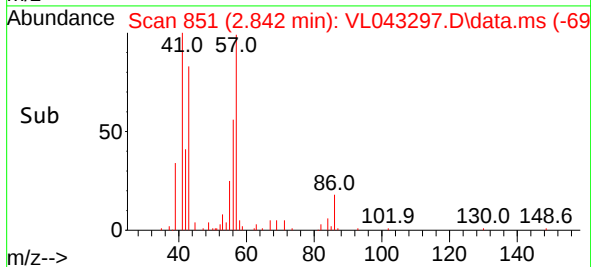
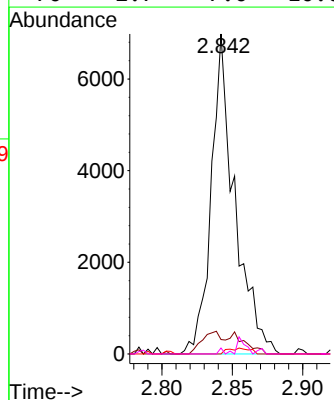
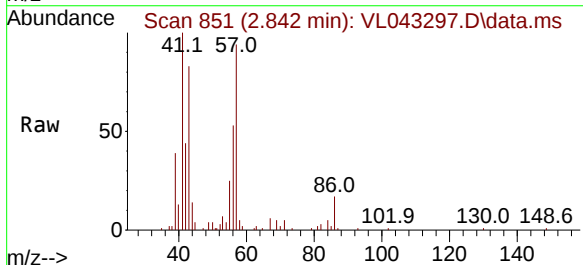
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

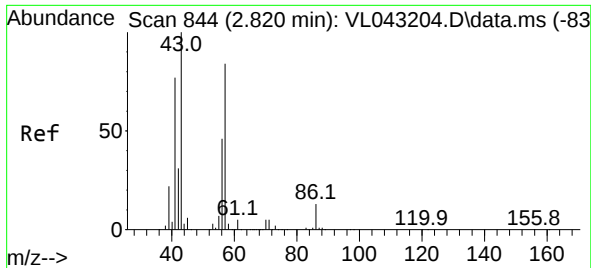
Tgt Ion:	43	Resp:	6948
Ion	Ratio	Lower	Upper
43	100		
86	4.2	6.2	9.2#
42	44.8	8.0	12.0#
44	0.0	4.0	6.0#



#25
 Ethyl Acetate
 Concen: 0.214 ppbv
 RT: 2.842 min Scan# 851
 Delta R.T. 0.013 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Tgt Ion:	43	Resp:	8114
Ion	Ratio	Lower	Upper
43	100		
45	11.2	8.1	12.1
61	1.7	7.0	10.4#
70	2.7	7.0	10.6#

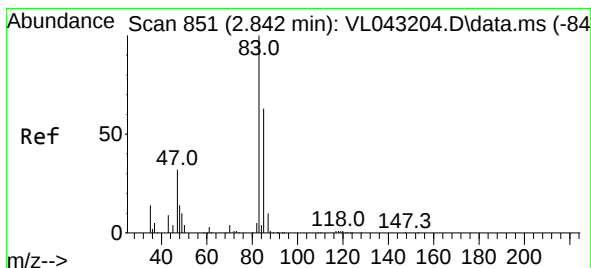
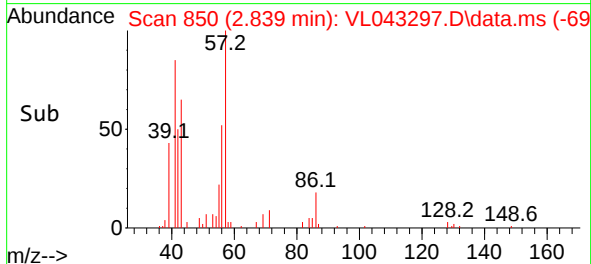
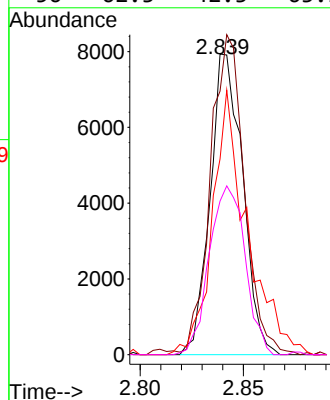
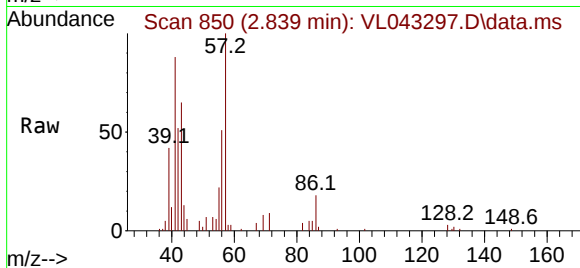




#26
Hexane
Concen: 0.522 ppbv
RT: 2.839 min Scan# 81
Delta R.T. 0.019 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

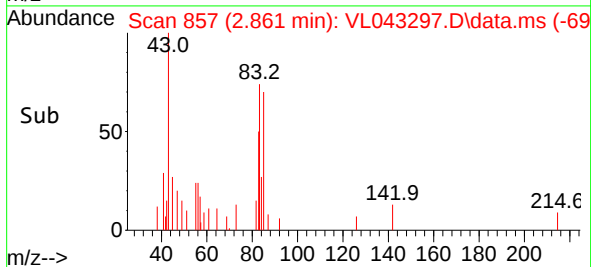
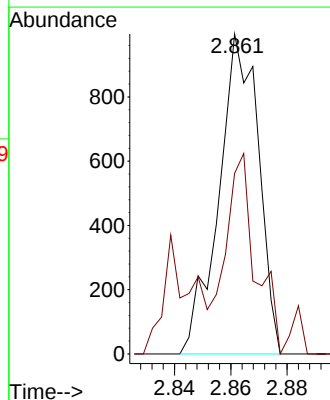
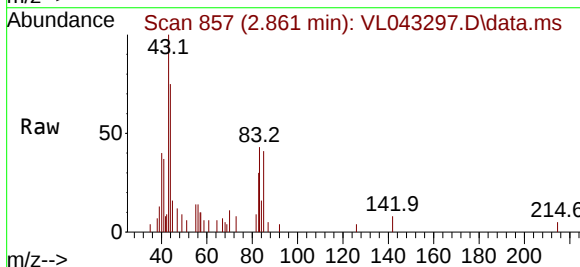
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

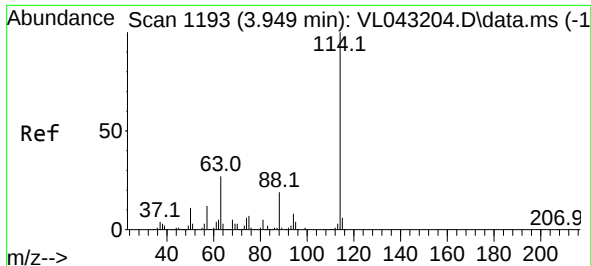
Tgt Ion: 57	Resp: 8694
Ion Ratio	Lower Upper
57 100	
41 112.2	74.6 111.8#
43 93.3	179.0 268.4#
56 62.3	42.3 63.5



#29
Chloroform
Concen: 0.041 ppbv
RT: 2.861 min Scan# 857
Delta R.T. 0.019 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 83	Resp: 972
Ion Ratio	Lower Upper
83 100	
85 56.4	50.5 75.7

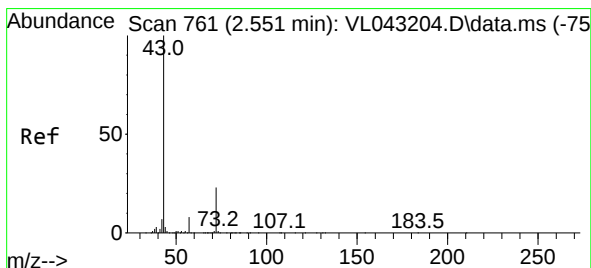
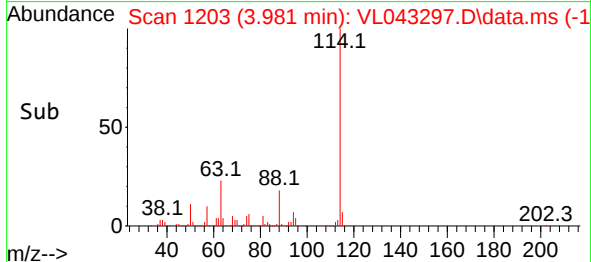
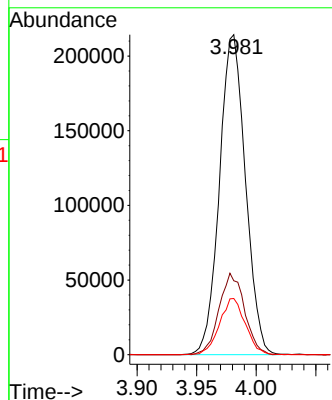
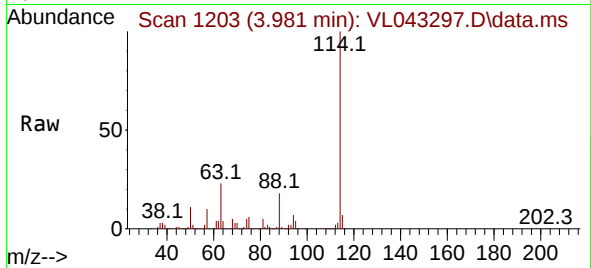




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.981 min Scan# 1193
 Delta R.T. 0.032 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

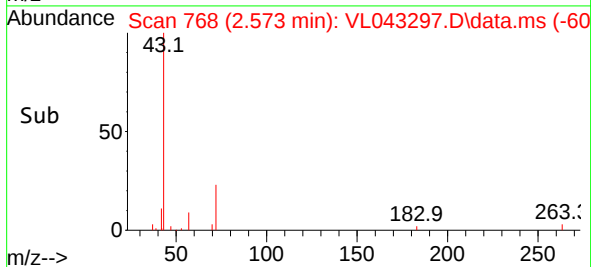
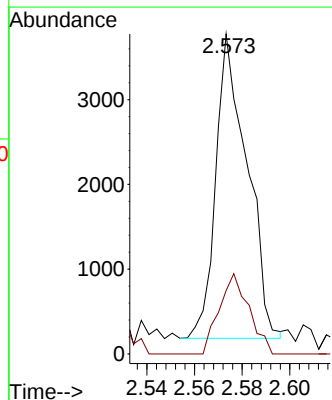
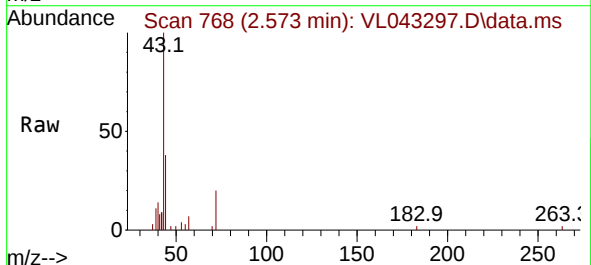
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DUP

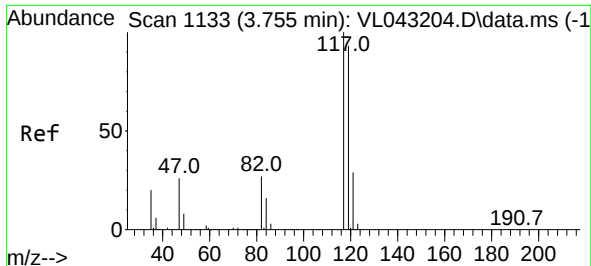
Tgt Ion:114 Resp: 324631
 Ion Ratio Lower Upper
 114 100
 63 25.1 21.0 31.6
 88 17.4 14.9 22.3



#34
 2-Butanone
 Concen: 0.142 ppbv
 RT: 2.573 min Scan# 768
 Delta R.T. 0.022 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Tgt Ion: 43 Resp: 3262
 Ion Ratio Lower Upper
 43 100
 72 25.1 18.1 27.1

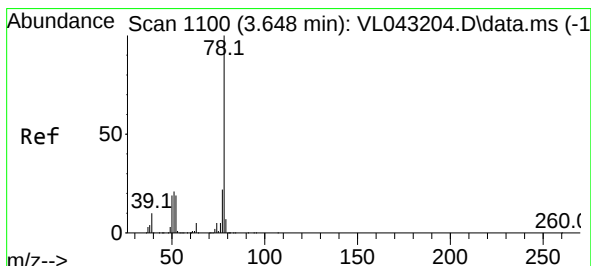
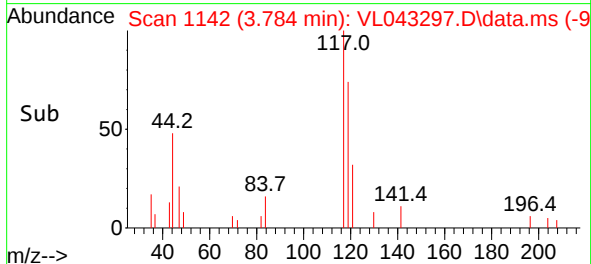
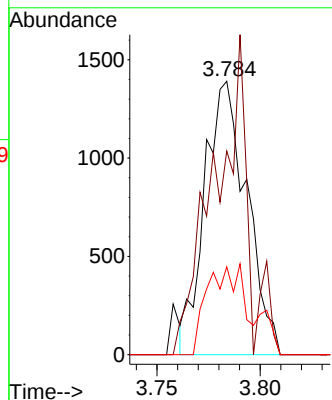
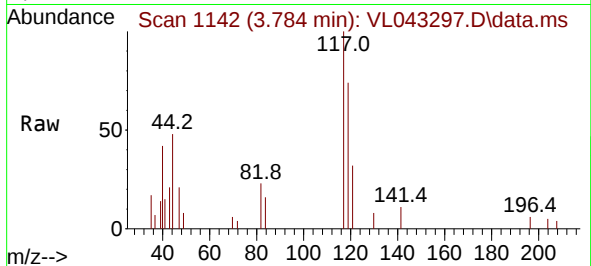




#35
Carbon Tetrachloride
Concen: 0.080 ppbv
RT: 3.784 min Scan# 1133
Delta R.T. 0.029 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

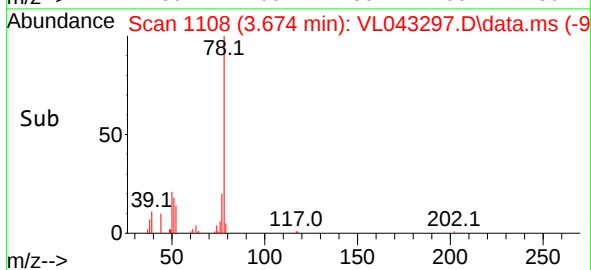
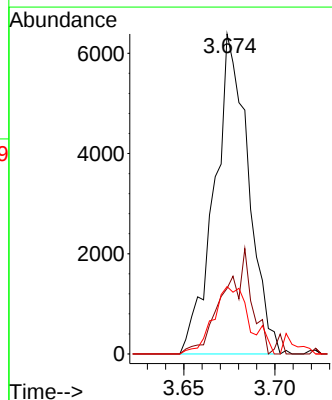
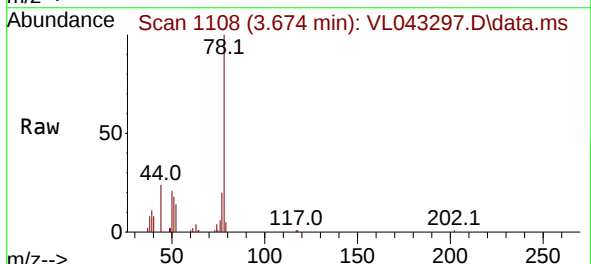
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

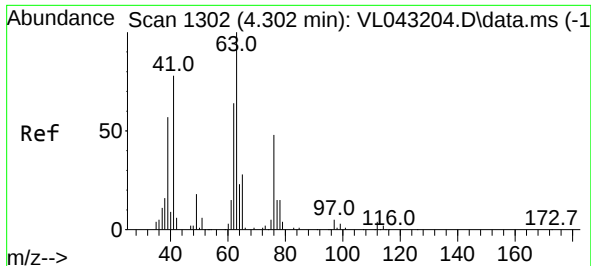
Tgt Ion:117 Resp: 1978
Ion Ratio Lower Upper
117 100
119 74.5 74.6 112.0#
121 32.1 23.2 34.8



#36
Benzene
Concen: 0.267 ppbv
RT: 3.674 min Scan# 1108
Delta R.T. 0.026 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 78 Resp: 8289
Ion Ratio Lower Upper
78 100
77 20.5 17.5 26.3
50 21.0 15.5 23.3





#39

1,2-Dichloropropane

Concen: 7.127 ppbv

RT: 3.978 min Scan# 1410

Delta R.T. -0.324 min

Lab File: VL043297.D

Acq: 02 Dec 2025 14:13

Instrument :

MSVOA_L

ClientSampleId :

IA1DUP

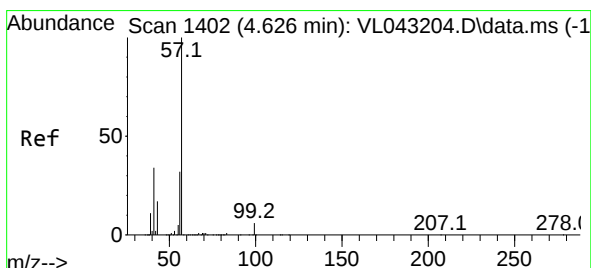
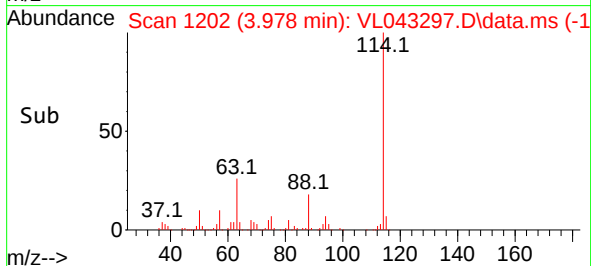
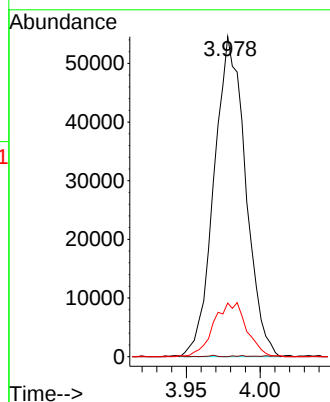
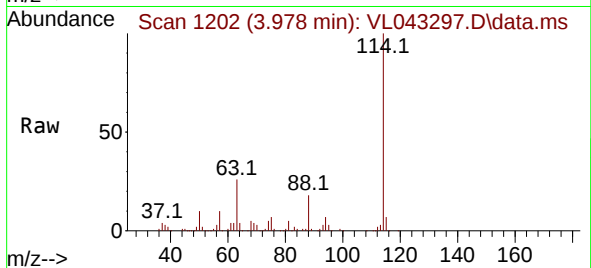
Tgt Ion: 63 Resp: 81094

Ion Ratio Lower Upper

63 100

41 0.0 62.6 93.8#

62 16.5 51.0 76.6#



#44

2,2,4-Trimethylpentane

Concen: 0.102 ppbv

RT: 4.667 min Scan# 1415

Delta R.T. 0.042 min

Lab File: VL043297.D

Acq: 02 Dec 2025 14:13

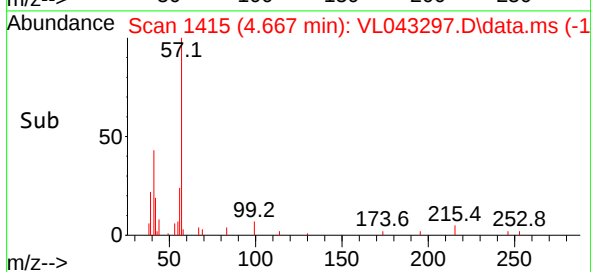
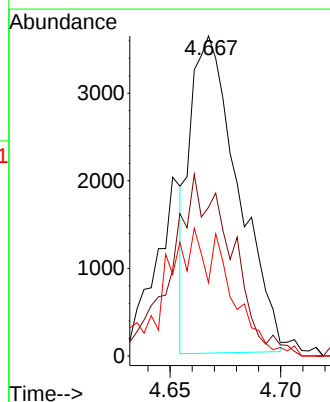
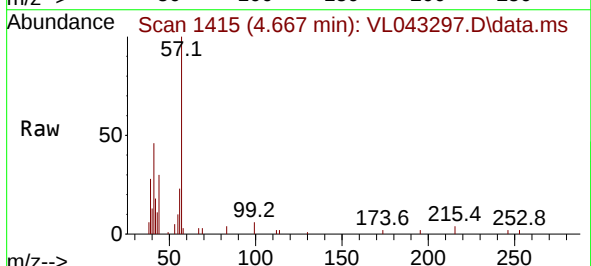
Tgt Ion: 57 Resp: 5460

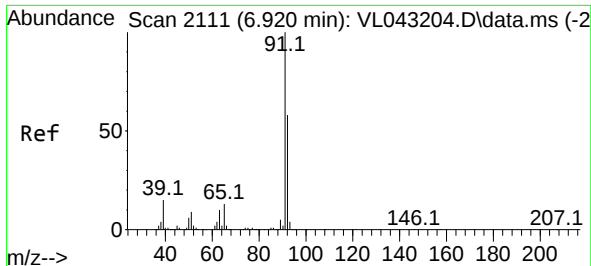
Ion Ratio Lower Upper

57 100

41 74.4 28.0 42.0#

56 56.9 25.6 38.4#

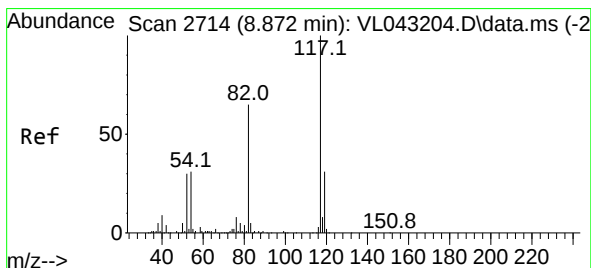
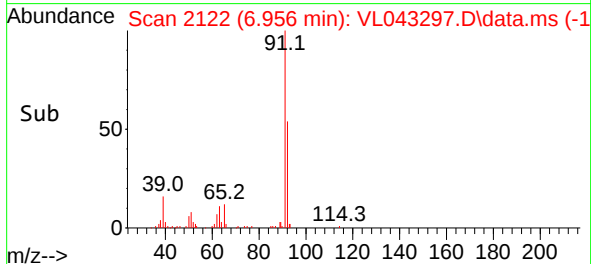
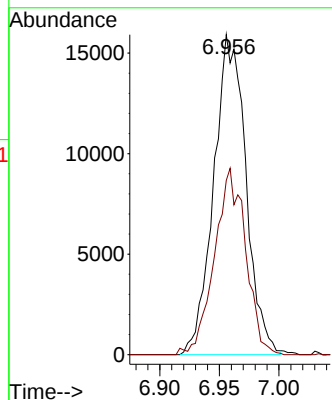
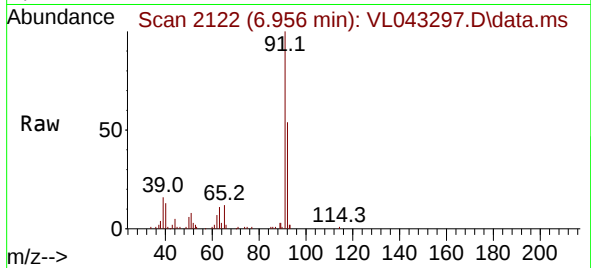




#53
Toluene
Concen: 0.812 ppbv
RT: 6.956 min Scan# 2111
Delta R.T. 0.035 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

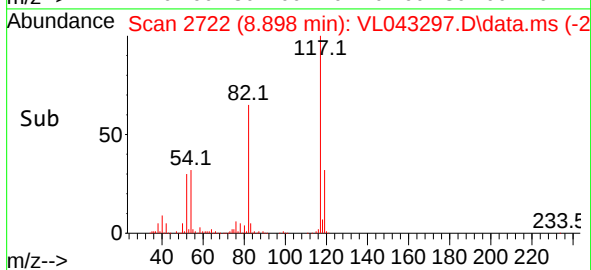
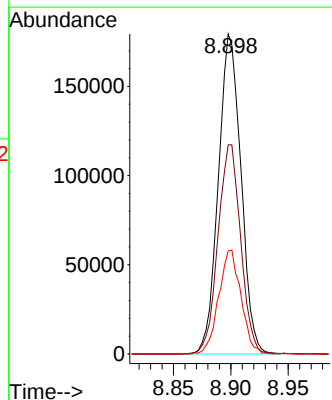
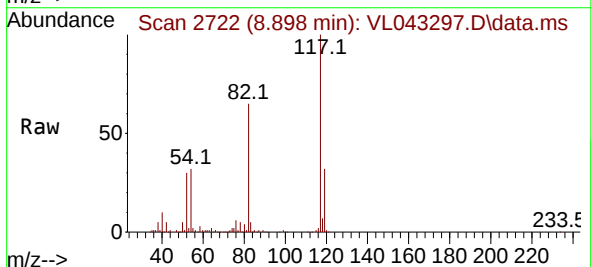
Instrument :
MSVOA_L
ClientSampleId :
IA1DUP

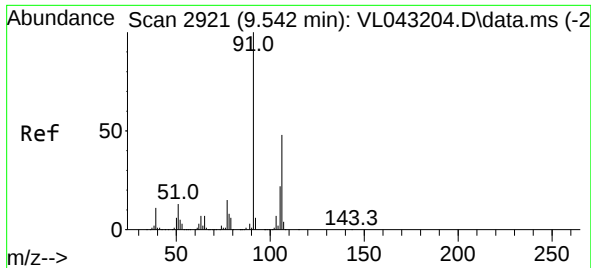
Tgt Ion: 91 Resp: 29890
Ion Ratio Lower Upper
91 100
92 56.4 47.4 71.0



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.898 min Scan# 2722
Delta R.T. 0.026 min
Lab File: VL043297.D
Acq: 02 Dec 2025 14:13

Tgt Ion: 117 Resp: 245976
Ion Ratio Lower Upper
117 100
82 65.7 56.1 84.1
119 32.0 25.0 37.6





#59

m/p-Xylene

Concen: 0.034 ppbv

RT: 9.574 min Scan# 2921

Delta R.T. 0.032 min

Lab File: VL043297.D

Acq: 02 Dec 2025 14:13

Instrument :

MSVOA_1

ClientSampleId :

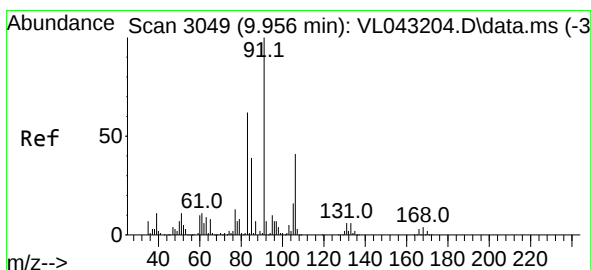
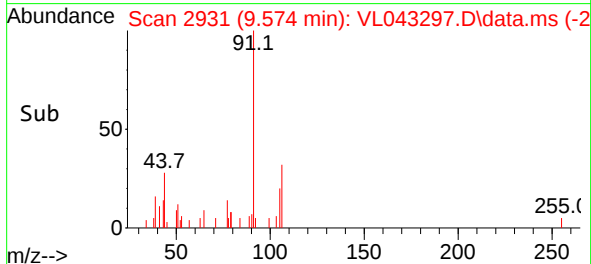
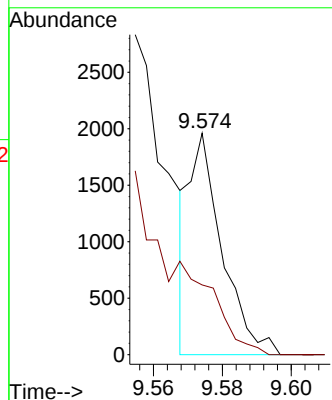
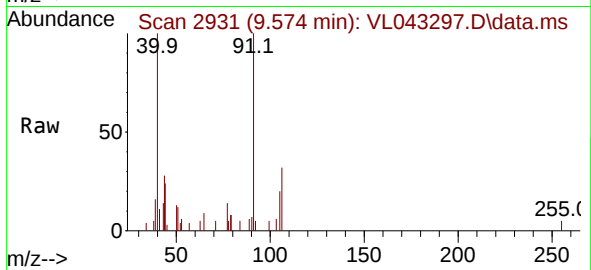
IA1DUP

Tgt Ion: 91 Resp: 1297

Ion Ratio Lower Upper

91 100

106 0.0 36.1 54.1#



#60

o-Xylene

Concen: 0.071 ppbv

RT: 9.979 min Scan# 3056

Delta R.T. 0.022 min

Lab File: VL043297.D

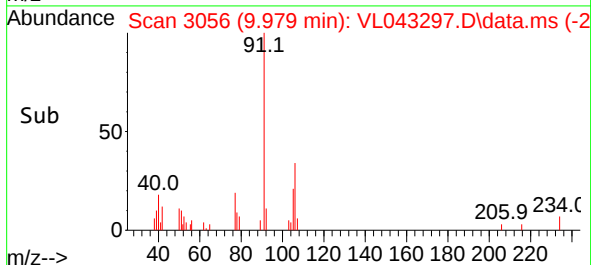
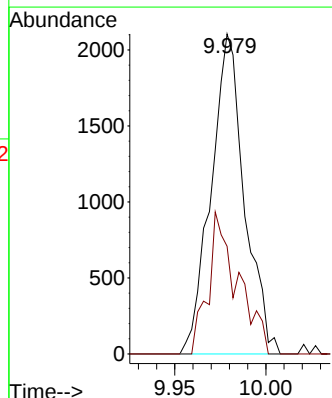
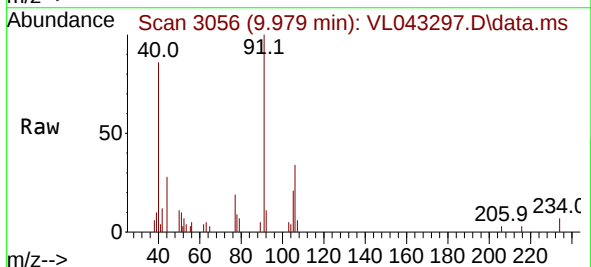
Acq: 02 Dec 2025 14:13

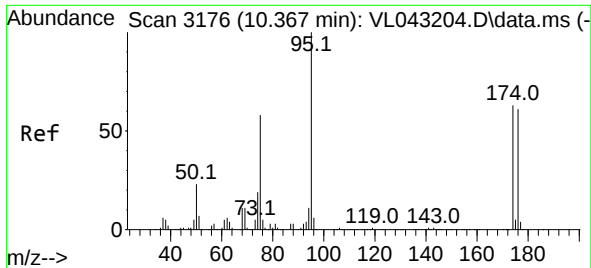
Tgt Ion: 91 Resp: 2682

Ion Ratio Lower Upper

91 100

106 39.4 20.9 62.8

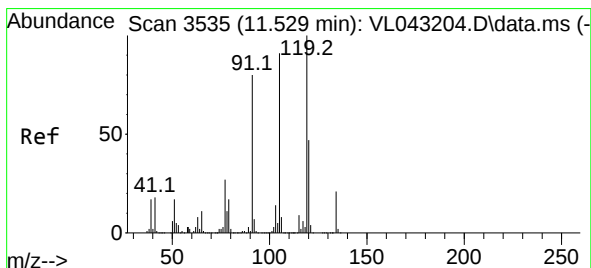
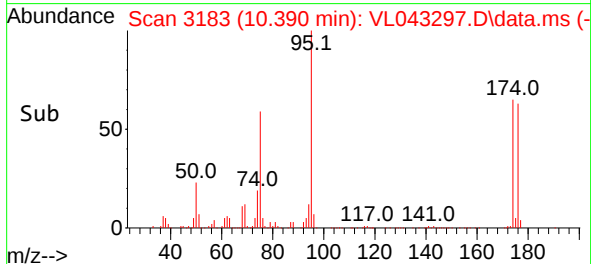
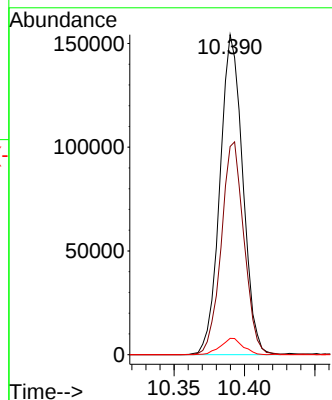
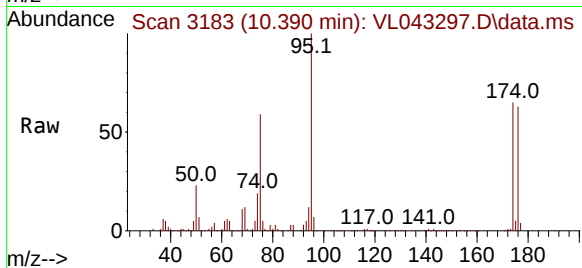




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.661 ppbv
 RT: 10.390 min Scan# 3176
 Delta R.T. 0.022 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Instrument :
 MSVOA_1
 ClientSampleId :
 IA1DUP

Tgt Ion: 95 Resp: 174187
 Ion Ratio Lower Upper
 95 100
 174 66.5 50.2 75.2
 175 5.0 4.1 6.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.047 ppbv
 RT: 11.548 min Scan# 3541
 Delta R.T. 0.019 min
 Lab File: VL043297.D
 Acq: 02 Dec 2025 14:13

Tgt Ion: 105 Resp: 1990
 Ion Ratio Lower Upper
 105 100
 120 32.9 41.7 62.5#
 91 14.2 70.0 105.0#
 77 12.6 23.8 35.8#

