

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100925\
 Data File : VL043098.D
 Acq On : 09 Oct 2025 21:14
 Operator : SY/MD
 Sample : Q3320-02DL 40X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Quant Time: Oct 09 22:21:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL100225AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Oct 03 08:23:34 2025
 Response via : Initial Calibration

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

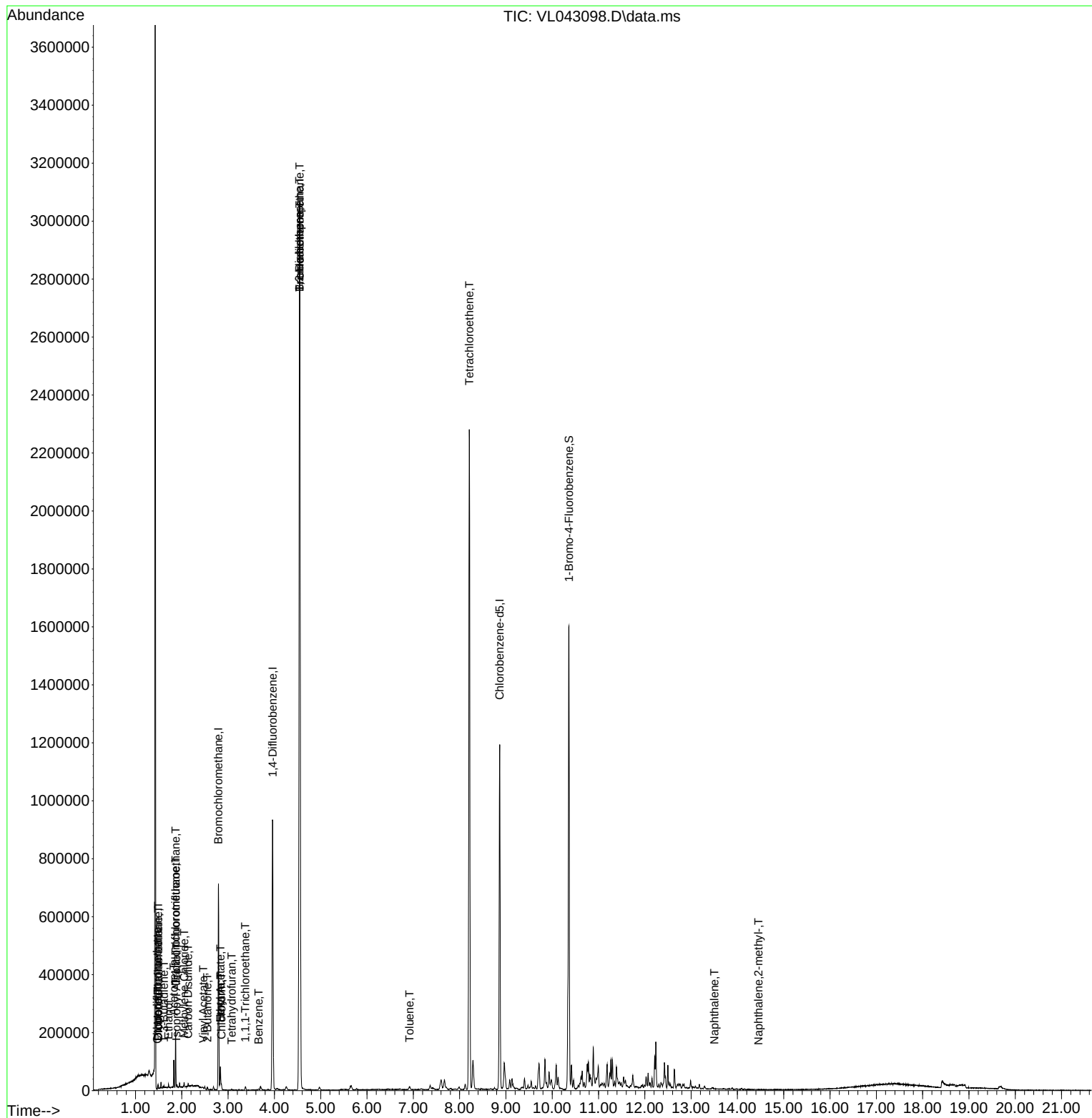
Internal Standards						
1) Bromochloromethane	2.790	49	204982	10.000	ppbv	0.02
33) 1,4-Difluorobenzene	3.962	114	521167	10.000	ppbv	0.02
55) Chlorobenzene-d5	8.866	117	475558	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.361	95	400781	11.699	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	117.000%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.492	85	2438	0.071	ppbv #	82
3) Chlorodifluoromethane	1.470	51	1746	0.052	ppbv	94
8) Dichlorotetrafluoroethane	1.492	85	2438	0.086	ppbv #	14
9) Propene	1.480	41	1926	0.143	ppbv	95
11) Trichlorofluoromethane	1.868	101	53062	1.495	ppbv	99
12) 1,1,2-Trichlorotrifluo...	1.868	101	53062	1.898	ppbv #	13
13) Ethanol	1.713	45	3851	6.616	ppbv #	31
15) Acetone	1.826	43	40043	1.395	ppbv	95
16) 1,3-Butadiene	1.615	39	606	0.051	ppbv #	11
19) Isopropyl Alcohol	1.881	45	2579	0.188	ppbv #	1
20) Methylene Chloride	2.052	84	2635	0.210	ppbv #	79
23) Vinyl Acetate	2.463	43	386	0.063	ppbv #	27
25) Ethyl Acetate	2.836	43	11158	0.155	ppbv #	78
26) Hexane	2.836	57	14629	0.528	ppbv #	30
27) Carbon Disulfide	2.137	76	5715	0.175	ppbv #	1
29) Chloroform	2.855	83	6862	0.145	ppbv	93
32) 1,1,1-Trichloroethane	3.373	97	4915	0.107	ppbv	98
34) 2-Butanone	2.551	43	5295	0.150	ppbv	97
36) Benzene	3.658	78	1733	0.035	ppbv #	77
38) Trichloroethene	4.545	130	859704	41.447	ppbv	95
39) 1,2-Dichloropropane	4.541	63	4633	0.251	ppbv #	1
41) Tetrahydrofuran	3.075	42	838	0.046	ppbv #	87
42) Bromodichloromethane	4.545	83	12281	0.295	ppbv #	84
52) Tetrachloroethene	8.209	164	396570	21.510	ppbv	99
53) Toluene	6.917	91	6881	0.137	ppbv	99
79) Naphthalene	13.504	128	83	0.235	ppbv #	70
80) Naphthalene,2-methyl-	14.455	142	195	0.669	ppbv #	53

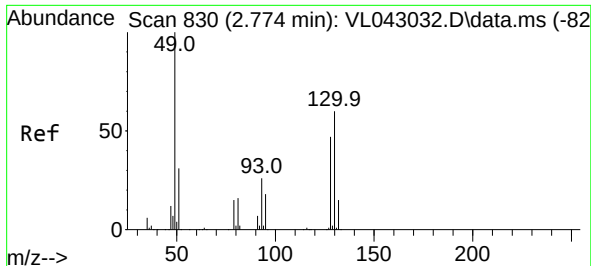
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100925\
Data File : VL043098.D
Acq On : 09 Oct 2025 21:14
Operator : SY/MD
Sample : Q3320-02DL 40X
Misc : 400mL/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SV1DL

Quant Time: Oct 09 22:21:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL100225AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
QLast Update : Fri Oct 03 08:23:34 2025
Response via : Initial Calibration

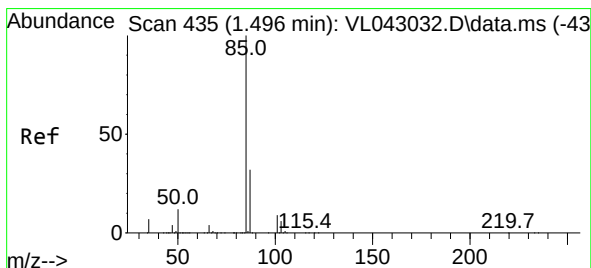
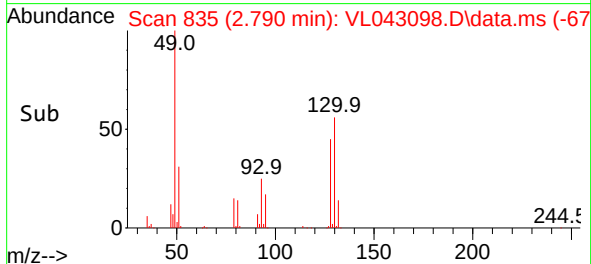
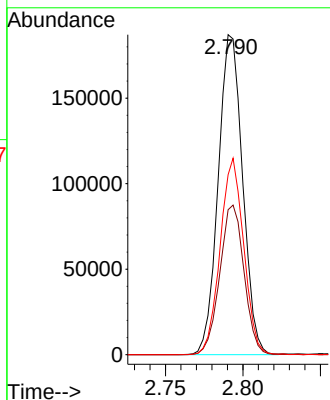
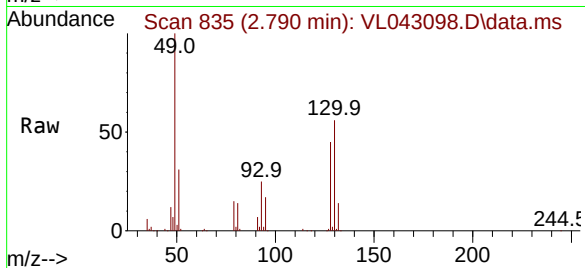




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.790 min Scan# 81
Delta R.T. 0.016 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

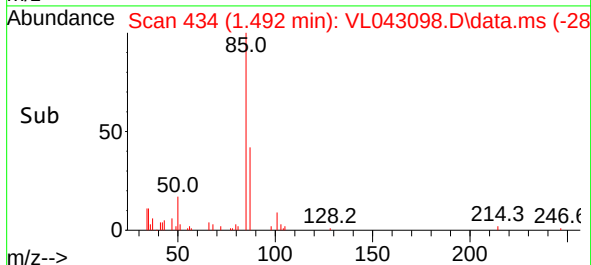
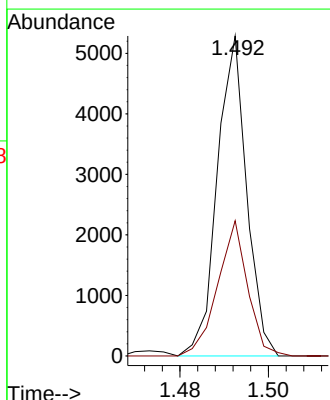
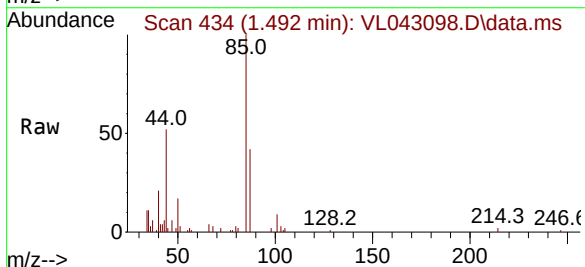
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

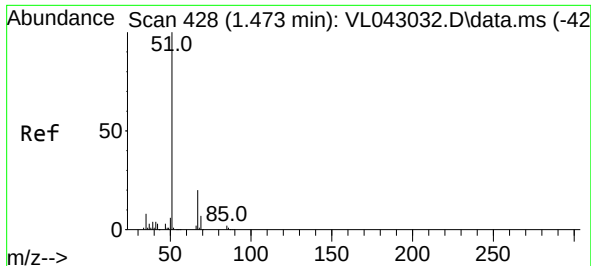
Tgt Ion: 49 Resp: 204982
Ion Ratio Lower Upper
49 100
128 46.6 24.1 72.2
130 59.4 31.4 94.3



#2
Dichlorodifluoromethane
Concen: 0.071 ppbv
RT: 1.492 min Scan# 434
Delta R.T. -0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 85 Resp: 2438
Ion Ratio Lower Upper
85 100
87 42.3 25.8 38.6#

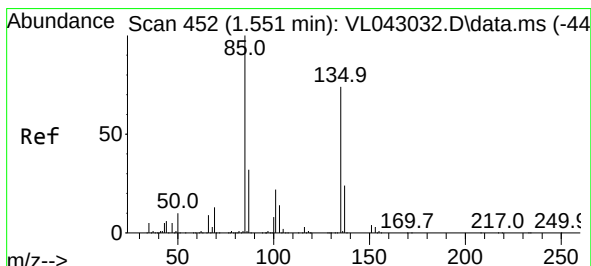
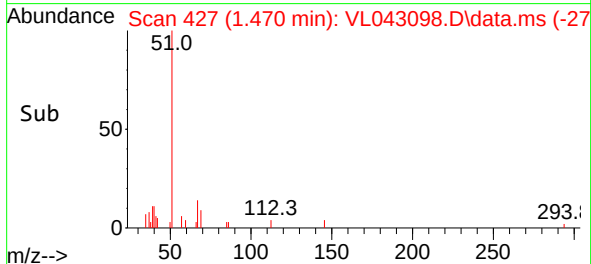
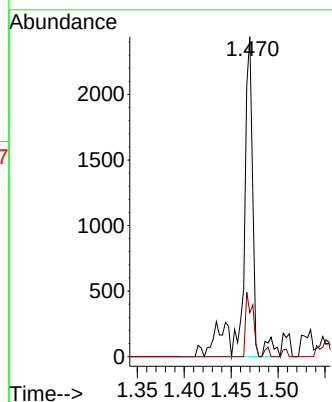
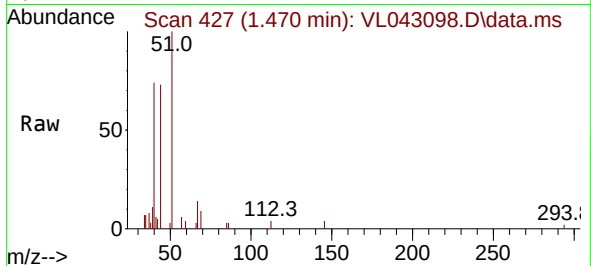




#3
Chlorodifluoromethane
Concen: 0.052 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

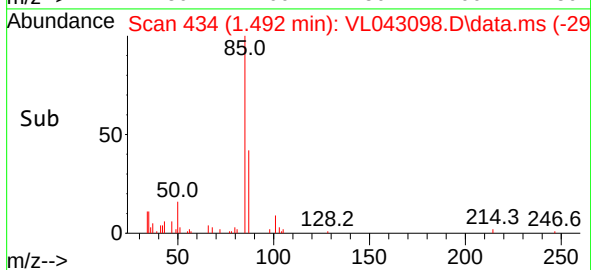
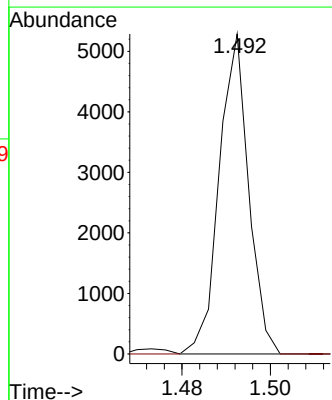
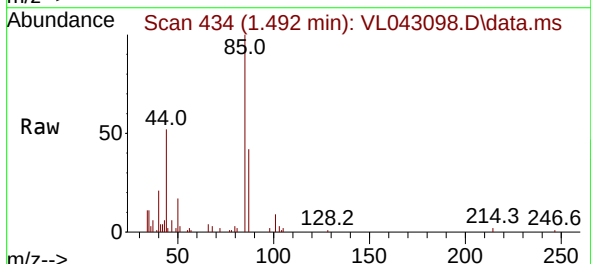
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

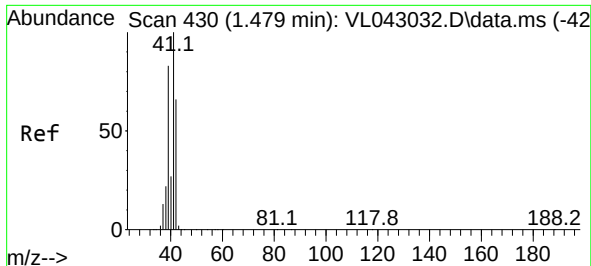
Tgt Ion: 51 Resp: 1746
Ion Ratio Lower Upper
51 100
67 16.0 15.1 22.7



#8
Dichlorotetrafluoroethane
Concen: 0.086 ppbv
RT: 1.492 min Scan# 434
Delta R.T. -0.058 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 85 Resp: 2438
Ion Ratio Lower Upper
85 100
135 0.0 56.3 84.5#





#9

Propene

Concen: 0.143 ppbv

RT: 1.480 min Scan# 41

Delta R.T. 0.000 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Instrument :

MSVOA_L

ClientSampleId :

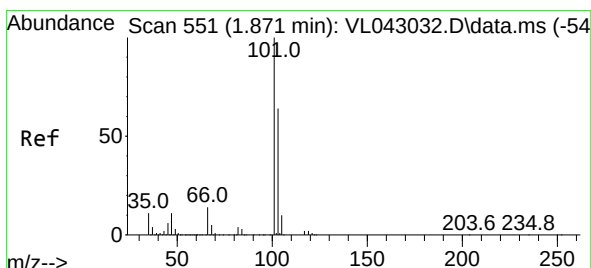
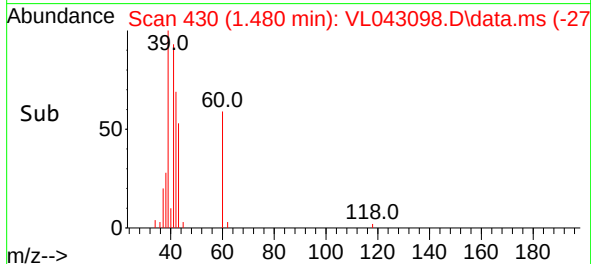
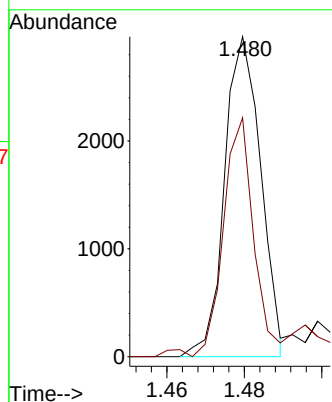
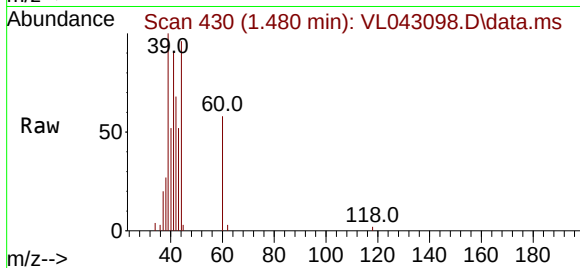
SV1DL

Tgt Ion: 41 Resp: 1926

Ion Ratio Lower Upper

41 100

42 70.3 53.3 79.9



#11

Trichlorofluoromethane

Concen: 1.495 ppbv

RT: 1.868 min Scan# 550

Delta R.T. -0.003 min

Lab File: VL043098.D

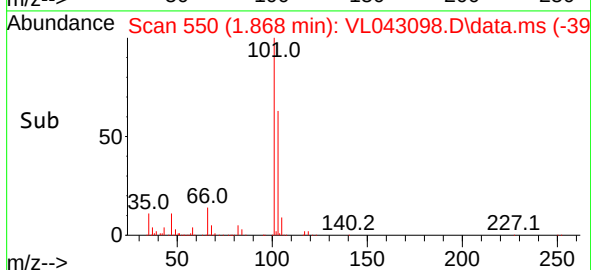
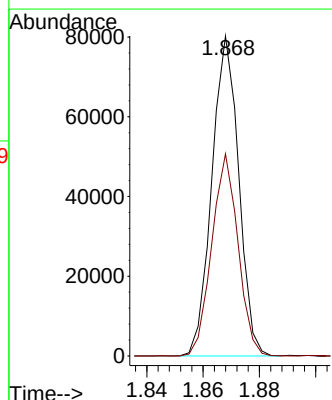
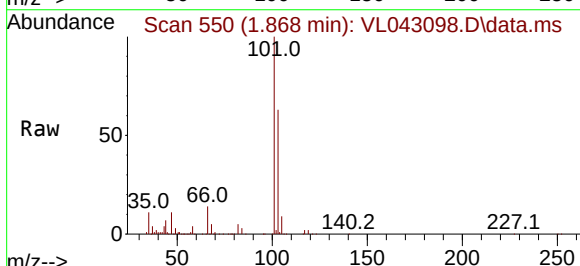
Acq: 09 Oct 2025 21:14

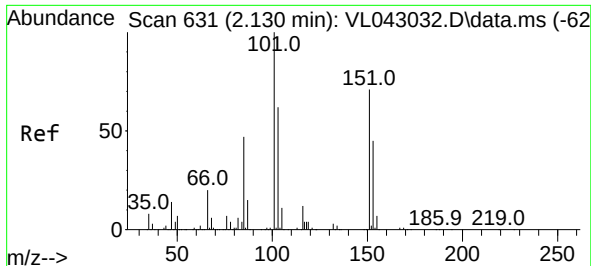
Tgt Ion: 101 Resp: 53062

Ion Ratio Lower Upper

101 100

103 63.2 51.1 76.7

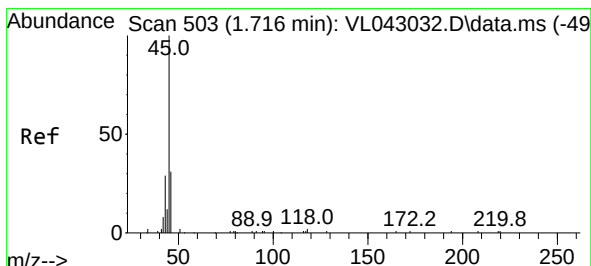
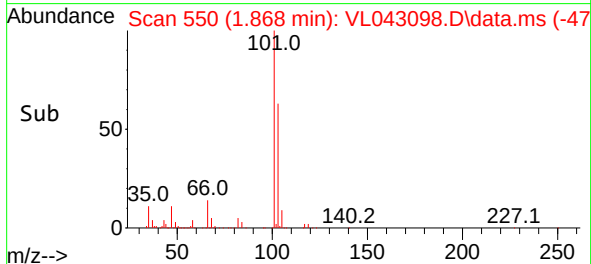
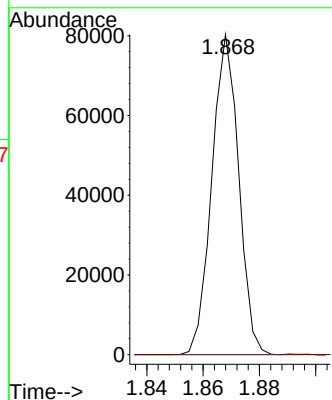
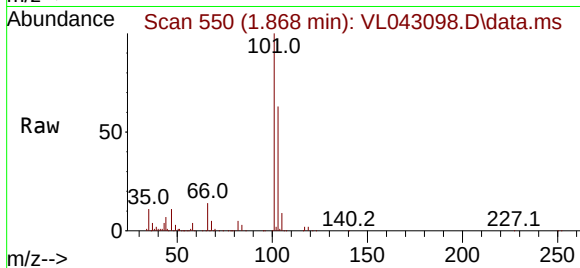




#12
1,1,2-Trichlorotrifluoroethane
Concen: 1.898 ppbv
RT: 1.868 min Scan# 51
Delta R.T. -0.262 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

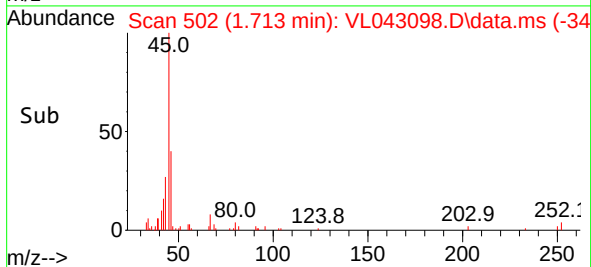
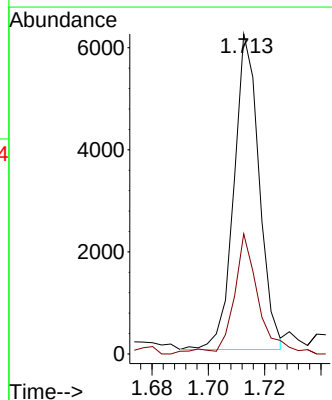
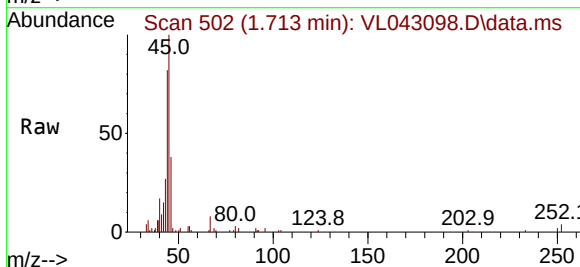
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

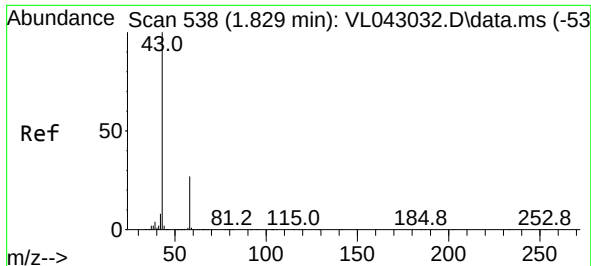
Tgt Ion:101 Resp: 53062
Ion Ratio Lower Upper
101 100
151 0.0 58.1 87.1#



#13
Ethanol
Concen: 6.616 ppbv
RT: 1.713 min Scan# 502
Delta R.T. -0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 45 Resp: 3851
Ion Ratio Lower Upper
45 100
46 0.0 17.8 71.4#

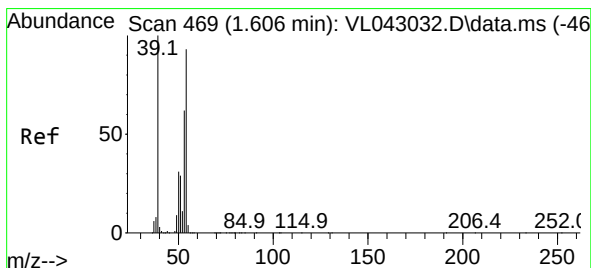
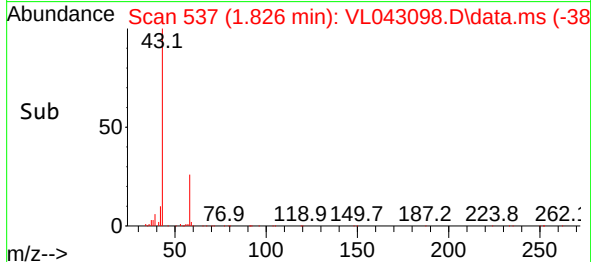
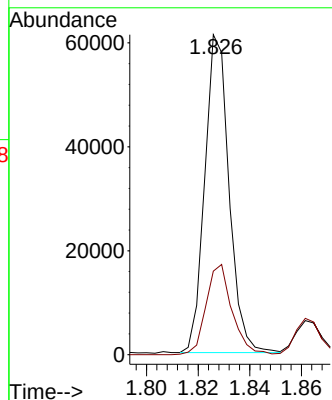
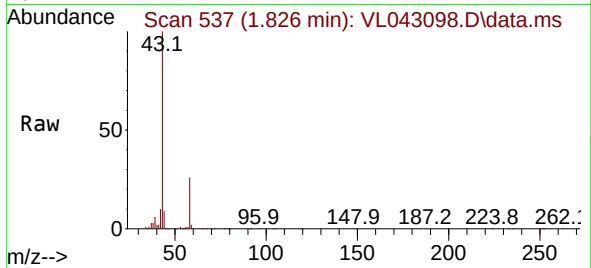




#15
Acetone
Concen: 1.395 ppbv
RT: 1.826 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

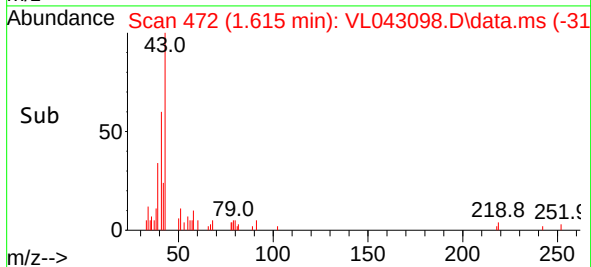
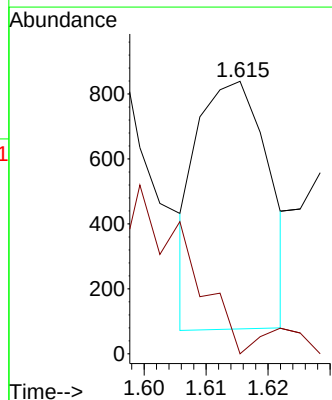
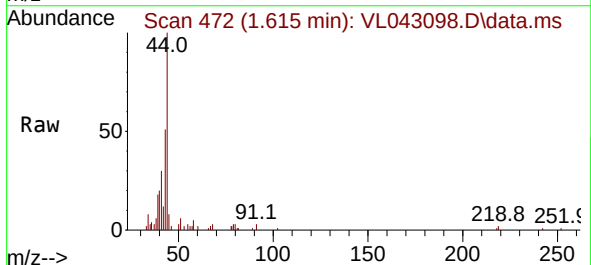
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

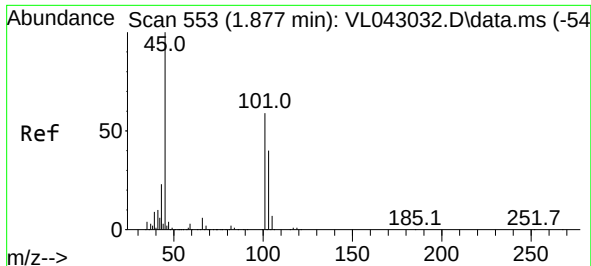
Tgt Ion: 43 Resp: 40043
Ion Ratio Lower Upper
43 100
58 30.4 22.2 33.4



#16
1,3-Butadiene
Concen: 0.051 ppbv
RT: 1.615 min Scan# 472
Delta R.T. 0.010 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 39 Resp: 606
Ion Ratio Lower Upper
39 100
54 0.0 61.4 92.2#

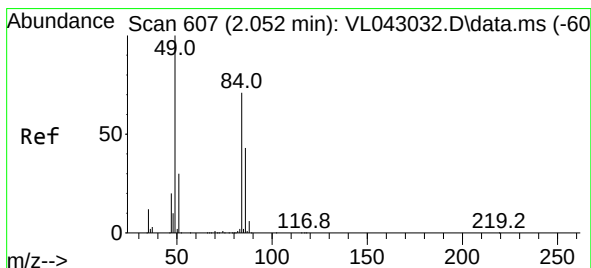
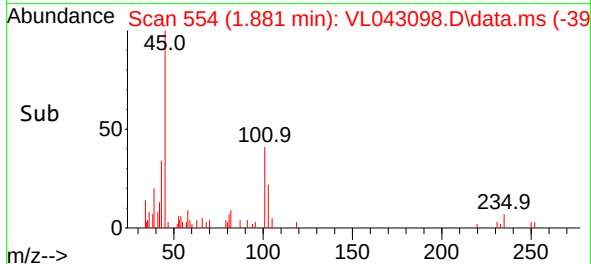
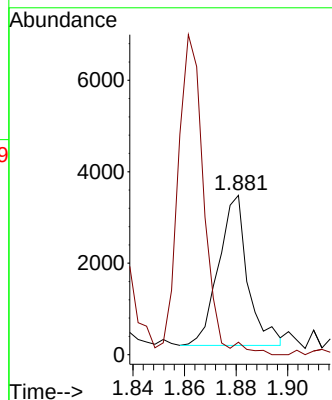
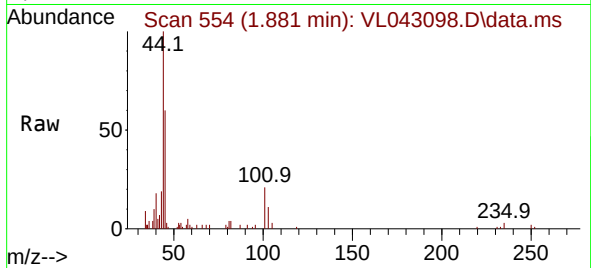




#19
Isopropyl Alcohol
Concen: 0.188 ppbv
RT: 1.881 min Scan# 554
Delta R.T. 0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

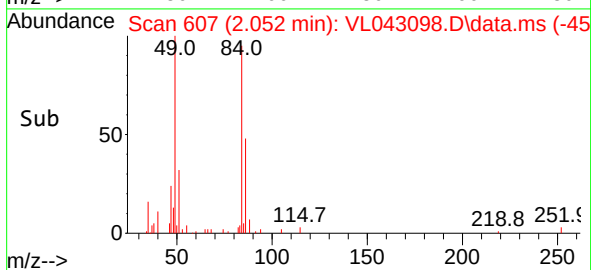
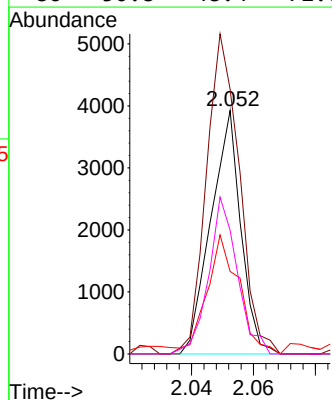
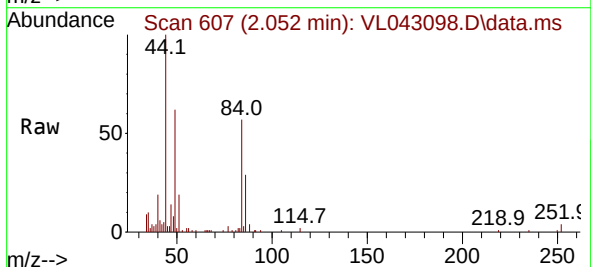
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

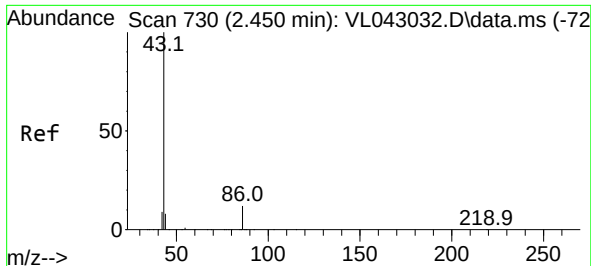
Tgt Ion: 45 Resp: 2579
Ion Ratio Lower Upper
45 100
58 186.2 42.3 63.5#



#20
Methylene Chloride
Concen: 0.210 ppbv
RT: 2.052 min Scan# 607
Delta R.T. 0.000 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 84 Resp: 2635
Ion Ratio Lower Upper
84 100
49 108.7 112.5 168.7#
51 33.9 34.2 51.2#
86 50.8 48.4 72.6

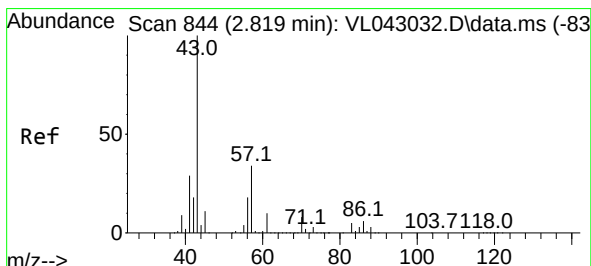
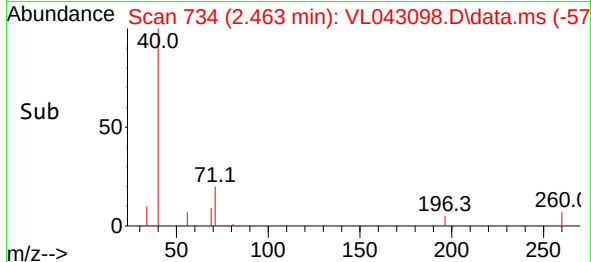
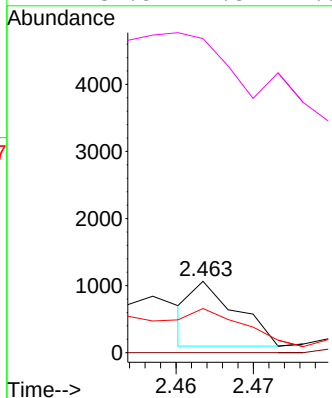
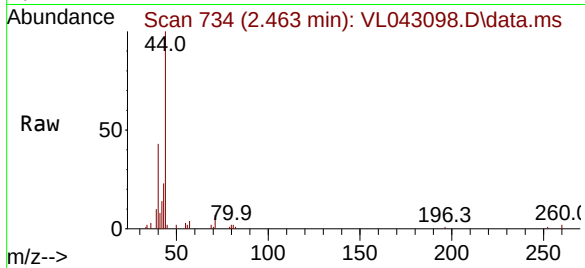




#23
 Vinyl Acetate
 Concen: 0.063 ppbv
 RT: 2.463 min Scan# 71
 Delta R.T. 0.013 min
 Lab File: VL043098.D
 Acq: 09 Oct 2025 21:14

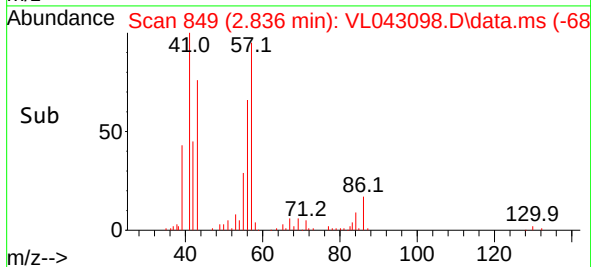
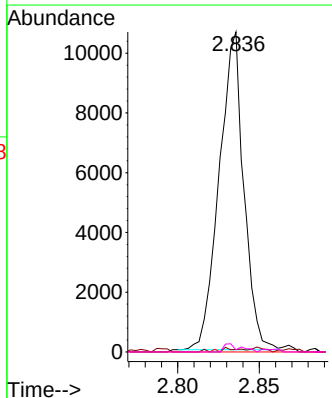
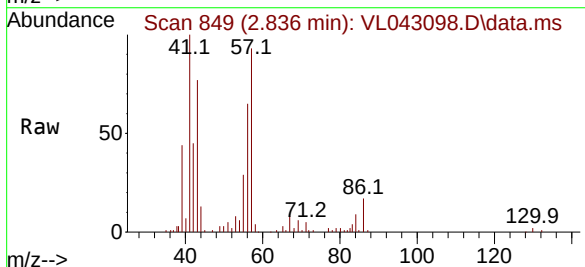
Instrument :
 MSVOA_1
 ClientSampleId :
 SV1DL

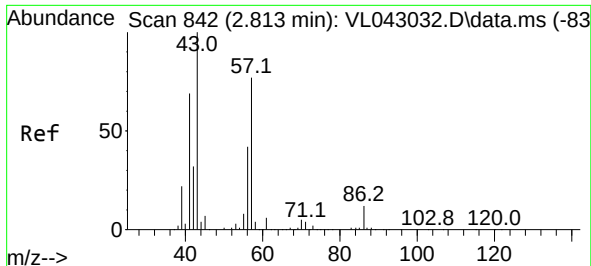
Tgt Ion:	43	Resp:	386
Ion	Ratio	Lower	Upper
43	100		
86	0.0	7.5	11.3#
42	38.7	8.4	12.6#
44	52.8	7.8	11.8#



#25
 Ethyl Acetate
 Concen: 0.155 ppbv
 RT: 2.836 min Scan# 849
 Delta R.T. 0.016 min
 Lab File: VL043098.D
 Acq: 09 Oct 2025 21:14

Tgt Ion:	43	Resp:	11158
Ion	Ratio	Lower	Upper
43	100		
45	2.3	8.3	12.5#
61	0.0	7.5	11.3#
70	2.3	6.8	10.2#

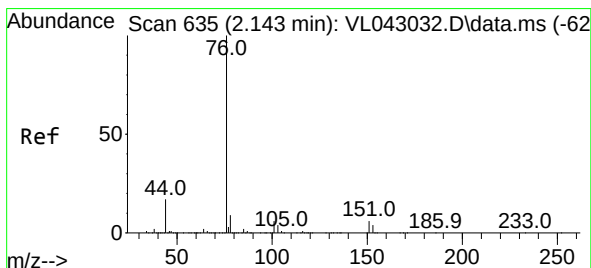
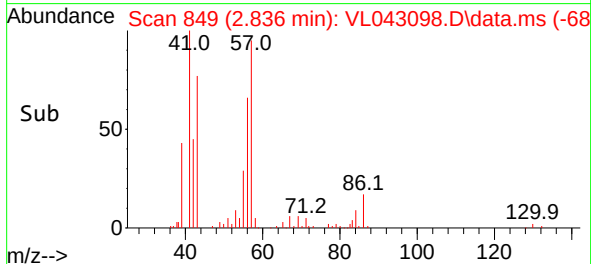
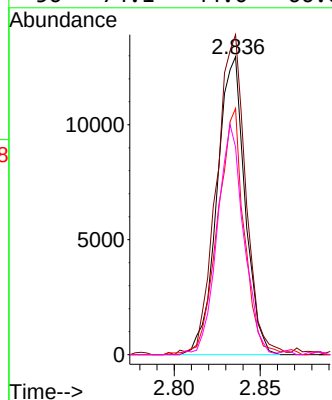
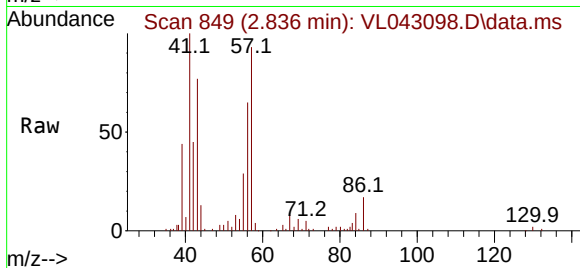




#26
Hexane
Concen: 0.528 ppbv
RT: 2.836 min Scan# 842
Delta R.T. 0.023 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

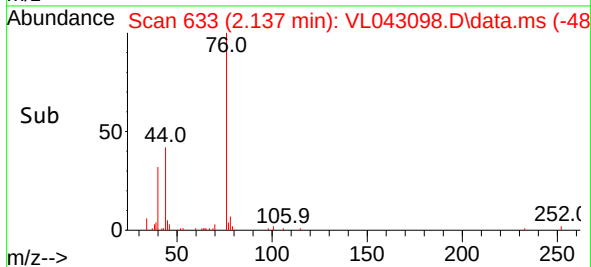
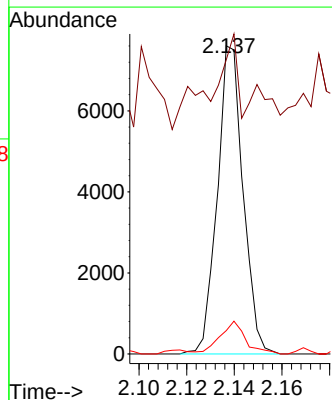
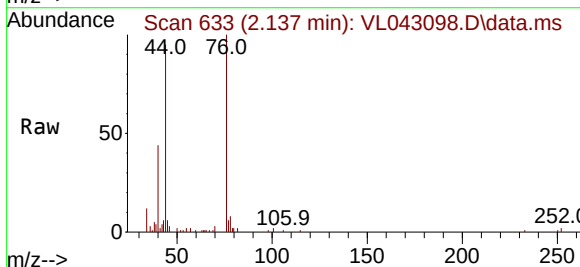
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

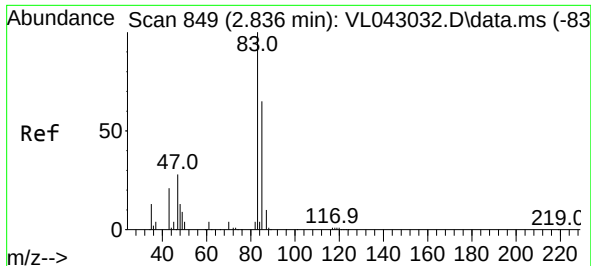
Tgt Ion: 57 Resp: 14629
Ion Ratio Lower Upper
57 100
41 114.4 76.1 114.1#
43 79.3 201.4 302.0#
56 74.1 44.0 66.0#



#27
Carbon Disulfide
Concen: 0.175 ppbv
RT: 2.137 min Scan# 633
Delta R.T. -0.006 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 76 Resp: 5715
Ion Ratio Lower Upper
76 100
44 236.3 14.0 21.0#
78 12.7 9.4 14.0





#29

Chloroform

Concen: 0.145 ppbv

RT: 2.855 min Scan# 81

Delta R.T. 0.020 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Instrument :

MSVOA_L

ClientSampleId :

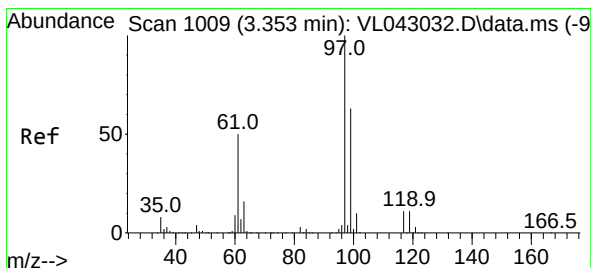
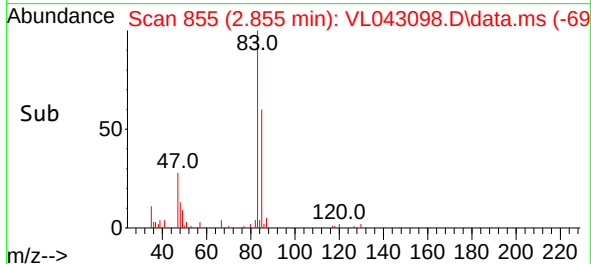
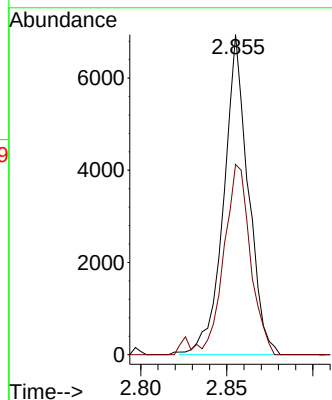
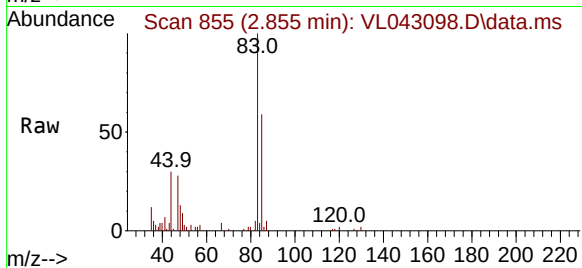
SV1DL

Tgt Ion: 83 Resp: 6862

Ion Ratio Lower Upper

83 100

85 59.4 52.0 78.0



#32

1,1,1-Trichloroethane

Concen: 0.107 ppbv

RT: 3.373 min Scan# 1015

Delta R.T. 0.020 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

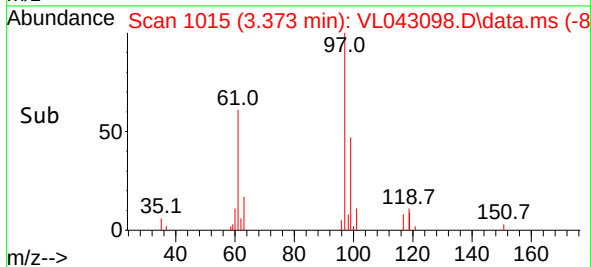
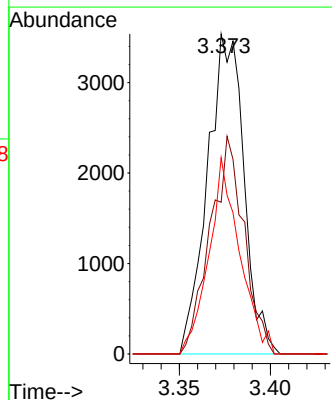
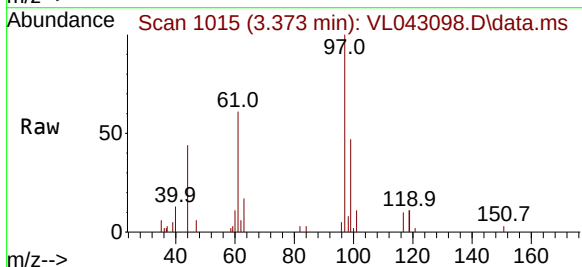
Tgt Ion: 97 Resp: 4915

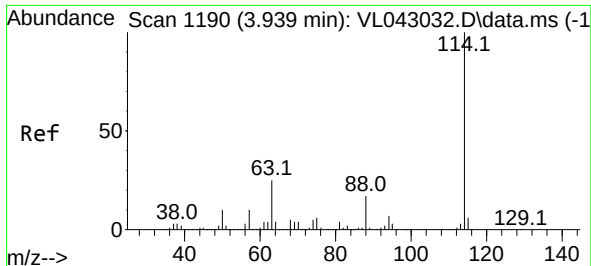
Ion Ratio Lower Upper

97 100

99 63.0 51.2 76.8

61 52.0 40.1 60.1

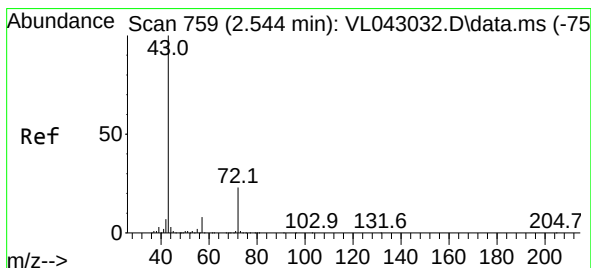
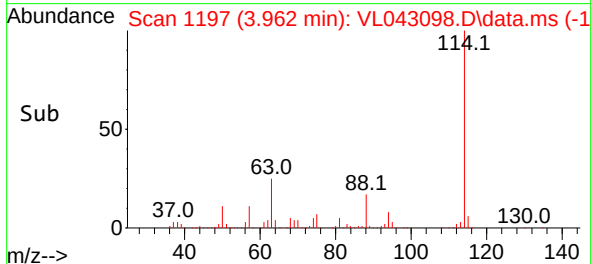
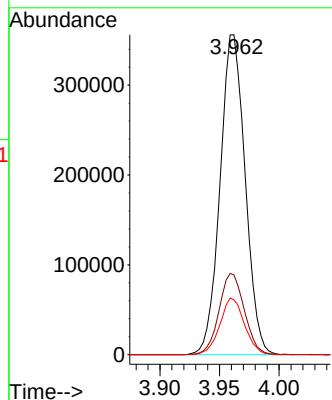
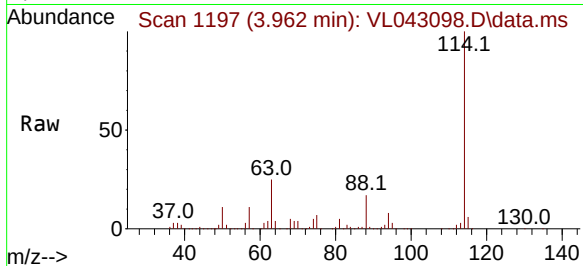




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.962 min Scan# 1190
 Delta R.T. 0.023 min
 Lab File: VL043098.D
 Acq: 09 Oct 2025 21:14

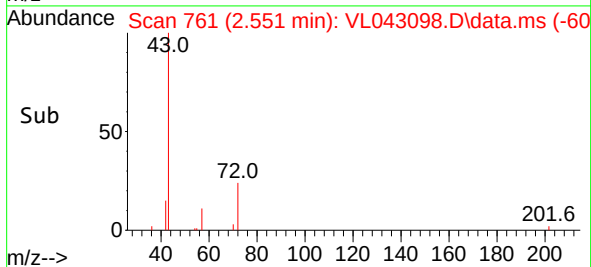
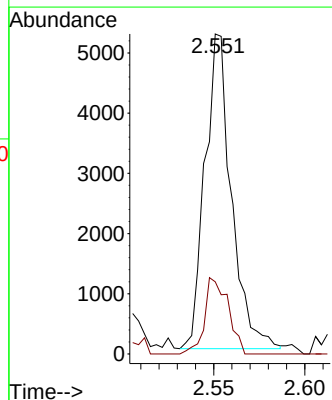
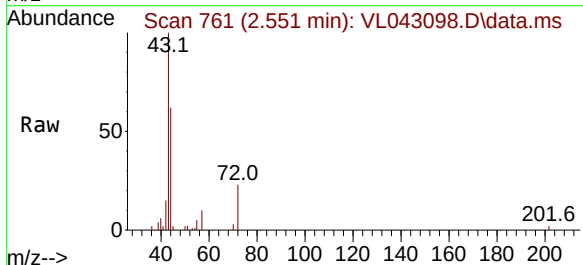
Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

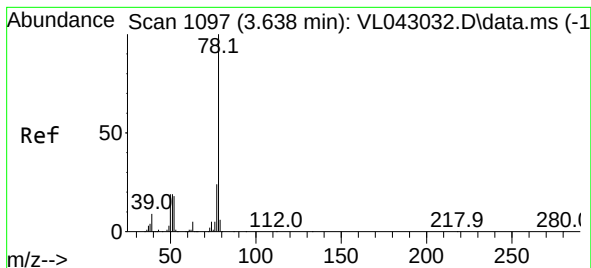
Tgt Ion:114 Resp: 521167
 Ion Ratio Lower Upper
 114 100
 63 25.6 19.4 29.2
 88 17.3 13.9 20.9



#34
 2-Butanone
 Concen: 0.150 ppbv
 RT: 2.551 min Scan# 761
 Delta R.T. 0.007 min
 Lab File: VL043098.D
 Acq: 09 Oct 2025 21:14

Tgt Ion: 43 Resp: 5295
 Ion Ratio Lower Upper
 43 100
 72 21.5 18.4 27.6





#36

Benzene

Concen: 0.035 ppbv

RT: 3.658 min Scan# 1103

Delta R.T. 0.020 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

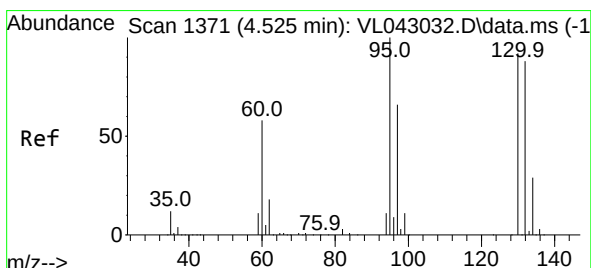
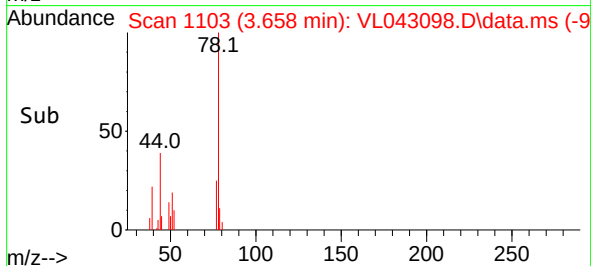
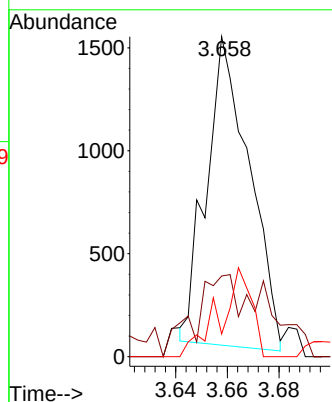
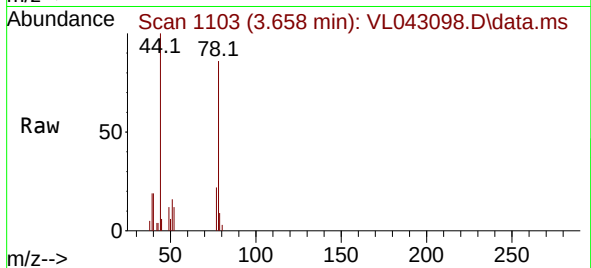
Tgt Ion: 78 Resp: 1733

Ion Ratio Lower Upper

78 100

77 14.5 19.2 28.8#

50 6.7 14.9 22.3#



#38

Trichloroethene

Concen: 41.447 ppbv

RT: 4.545 min Scan# 1377

Delta R.T. 0.020 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Tgt Ion:130 Resp: 859704

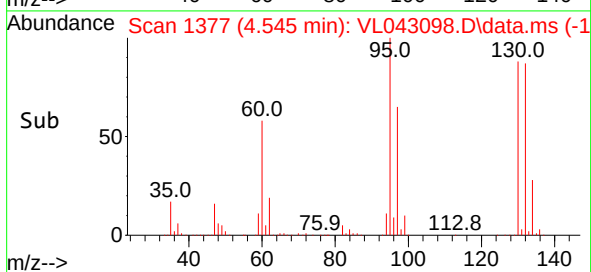
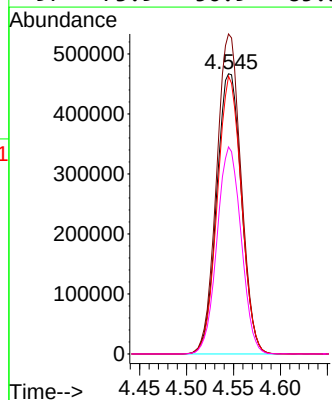
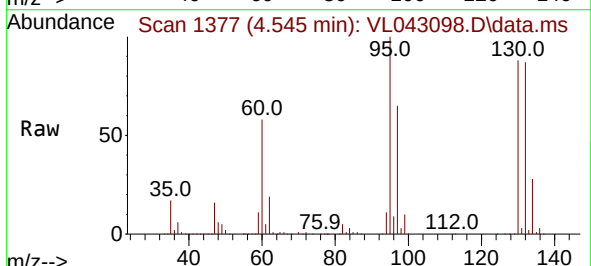
Ion Ratio Lower Upper

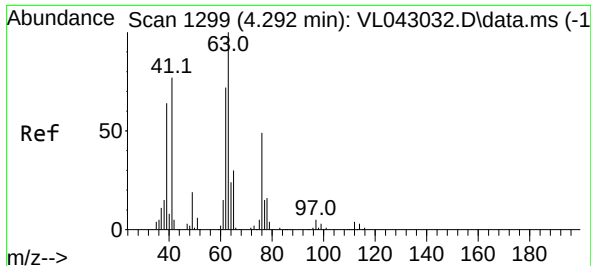
130 100

95 114.2 86.4 129.6

132 99.2 75.7 113.5

97 73.9 56.9 85.3





#39

1,2-Dichloropropane

Concen: 0.251 ppbv

RT: 4.541 min Scan# 11

Delta R.T. 0.249 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

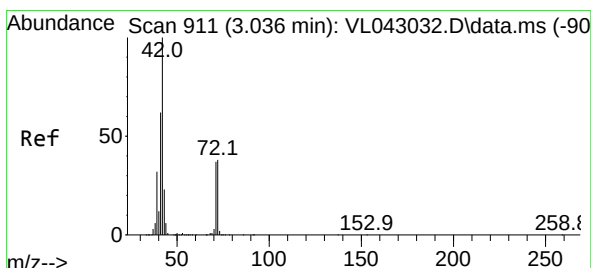
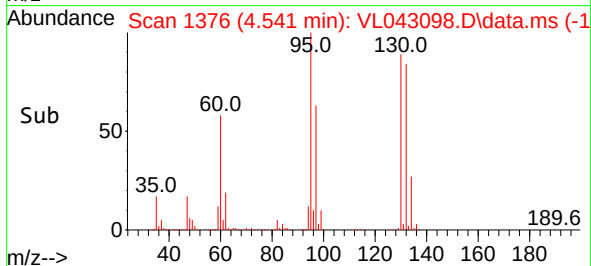
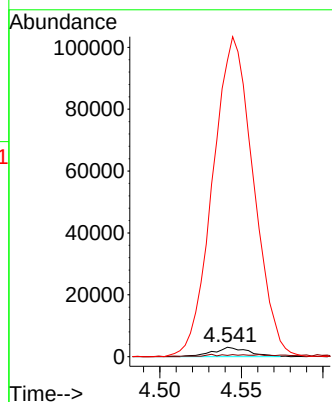
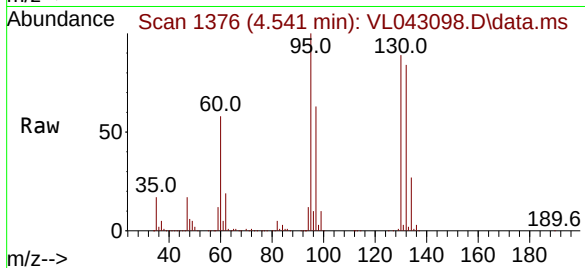
Tgt Ion: 63 Resp: 4633

Ion Ratio Lower Upper

63 100

41 8.6 61.6 92.4#

62 3046.5 58.1 87.1#



#41

Tetrahydrofuran

Concen: 0.046 ppbv

RT: 3.075 min Scan# 923

Delta R.T. 0.039 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

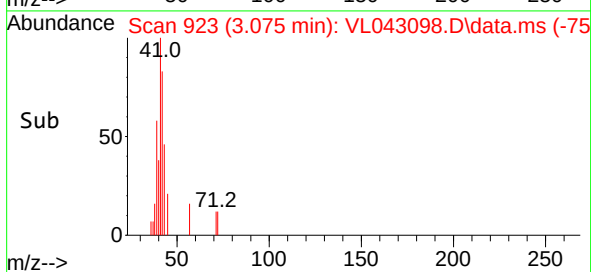
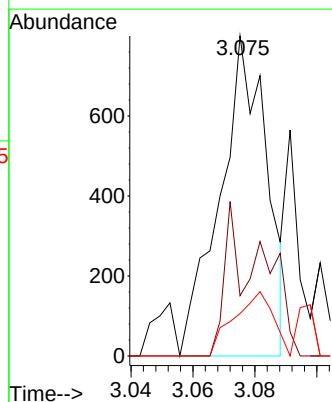
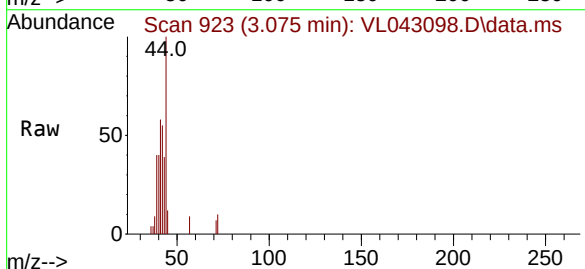
Tgt Ion: 42 Resp: 838

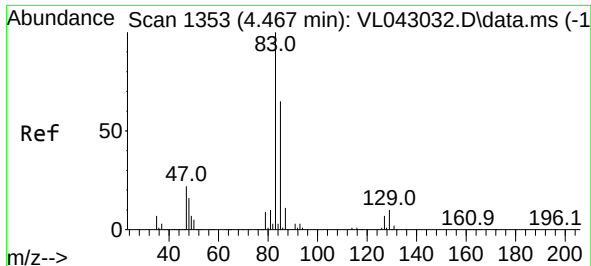
Ion Ratio Lower Upper

42 100

72 37.7 31.0 46.6

71 22.8 29.8 44.6#

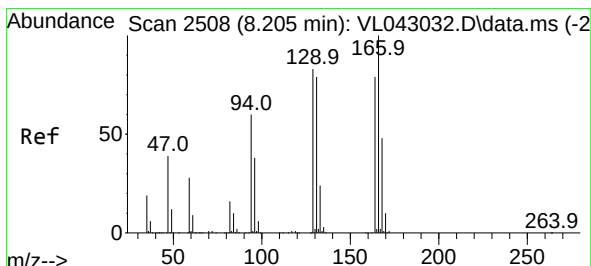
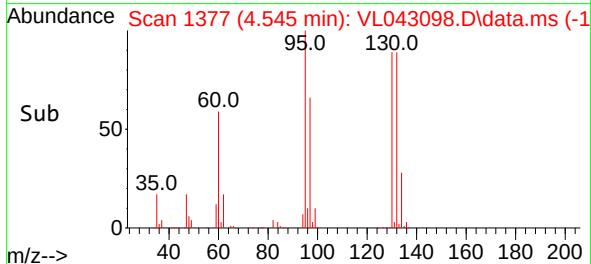
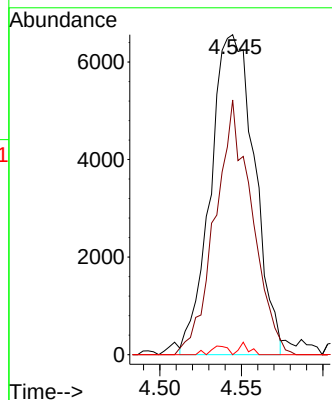
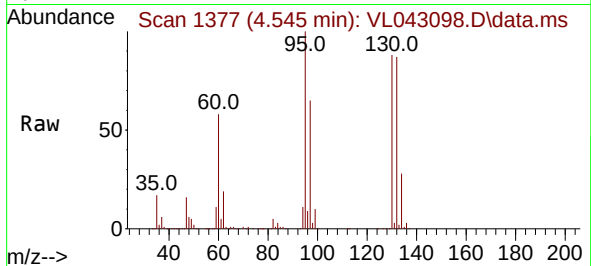




#42
Bromodichloromethane
Concen: 0.295 ppbv
RT: 4.545 min Scan# 11
Delta R.T. 0.078 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

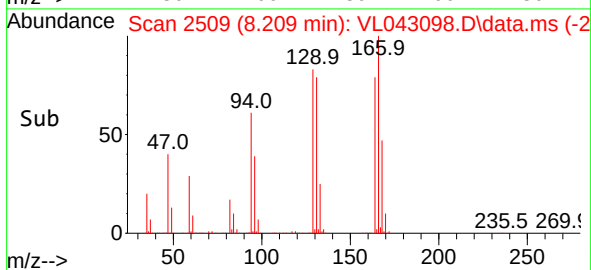
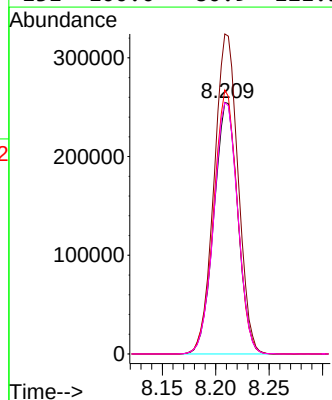
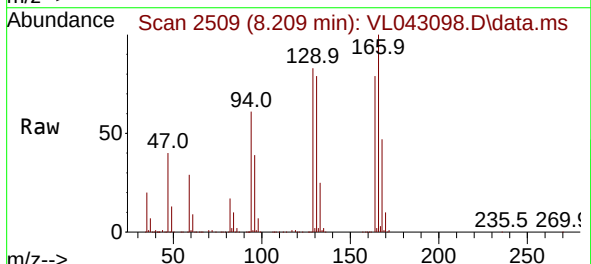
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

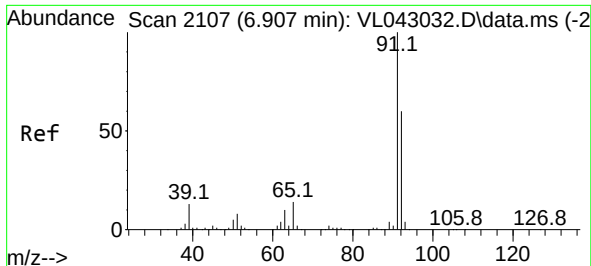
Tgt Ion: 83 Resp: 12281
Ion Ratio Lower Upper
83 100
85 78.3 51.8 77.8#
127 4.7 5.9 8.9#



#52
Tetrachloroethene
Concen: 21.510 ppbv
RT: 8.209 min Scan# 2509
Delta R.T. 0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 164 Resp: 396570
Ion Ratio Lower Upper
164 100
166 127.2 101.8 152.8
129 105.0 84.5 126.7
131 100.0 80.9 121.3

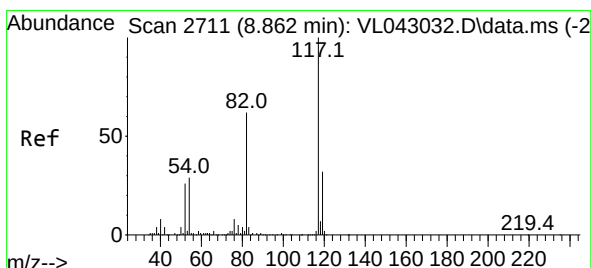
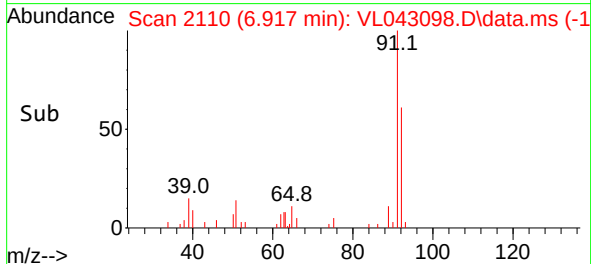
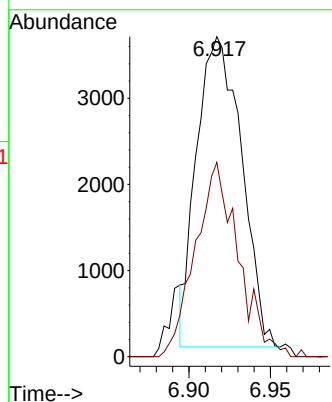
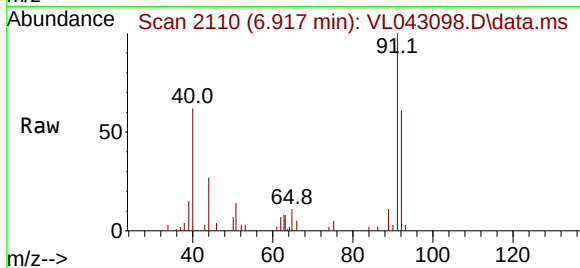




#53
Toluene
Concen: 0.137 ppbv
RT: 6.917 min Scan# 2110
Delta R.T. 0.010 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

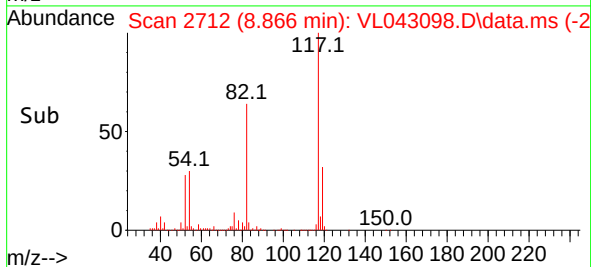
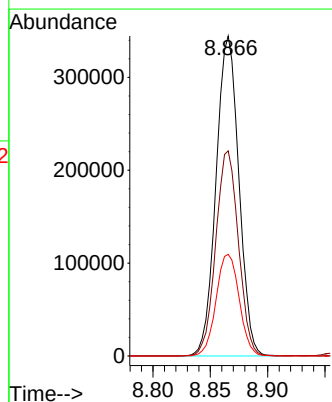
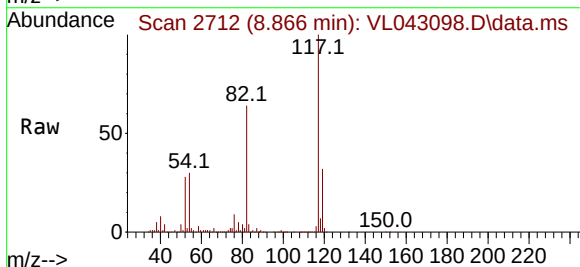
Instrument :
MSVOA_L
ClientSampleId :
SV1DL

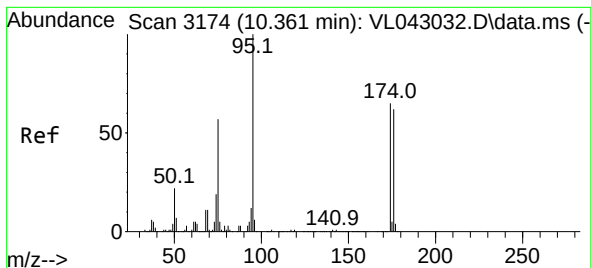
Tgt Ion: 91 Resp: 6881
Ion Ratio Lower Upper
91 100
92 60.4 47.8 71.6



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.866 min Scan# 2712
Delta R.T. 0.003 min
Lab File: VL043098.D
Acq: 09 Oct 2025 21:14

Tgt Ion: 117 Resp: 475558
Ion Ratio Lower Upper
117 100
82 64.0 53.0 79.6
119 32.3 25.4 38.2





#68

1-Bromo-4-Fluorobenzene

Concen: 11.699 ppbv

RT: 10.361 min Scan# 3174

Delta R.T. 0.000 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

Instrument :

MSVOA_L

ClientSampleId :

SV1DL

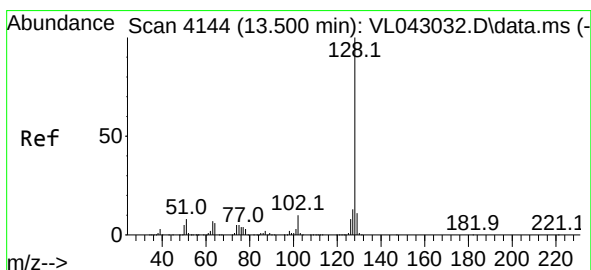
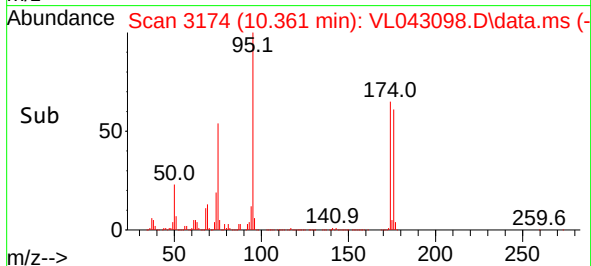
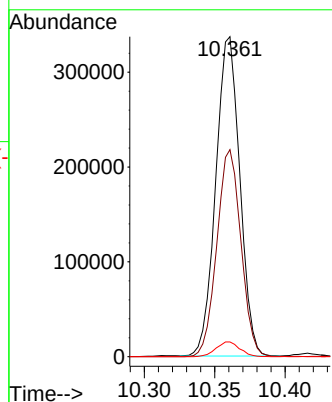
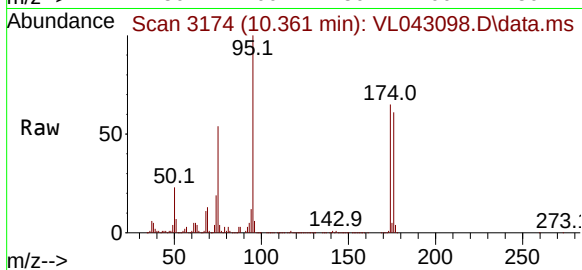
Tgt Ion: 95 Resp: 400781

Ion Ratio Lower Upper

95 100

174 65.1 52.3 78.5

175 4.6 3.8 5.8



#79

Naphthalene

Concen: 0.235 ppbv

RT: 13.504 min Scan# 4145

Delta R.T. 0.004 min

Lab File: VL043098.D

Acq: 09 Oct 2025 21:14

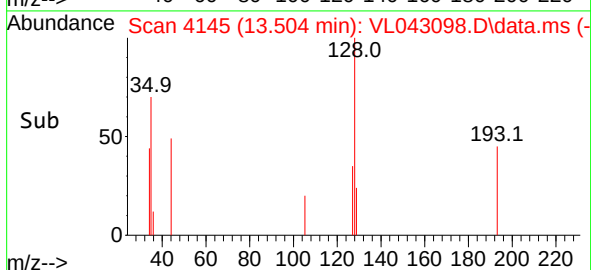
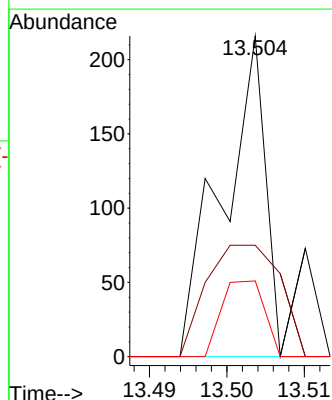
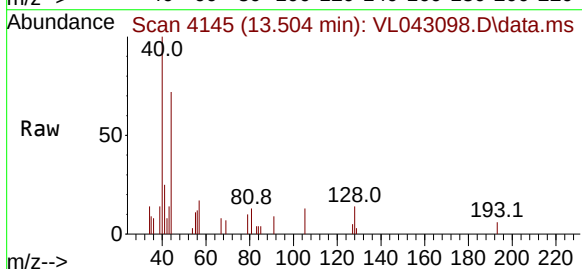
Tgt Ion: 128 Resp: 83

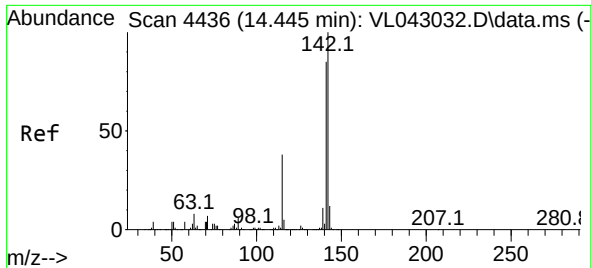
Ion Ratio Lower Upper

128 100

127 28.1 10.6 16.0#

129 19.1 8.8 13.2#





#80
 Naphthalene, 2-methyl-
 Concen: 0.669 ppbv
 RT: 14.455 min Scan# 4439
 Delta R.T. 0.010 min
 Lab File: VL043098.D
 Acq: 09 Oct 2025 21:14

Instrument :
 MSVOA_L
 ClientSampleId :
 SV1DL

Tgt Ion	Ratio	Lower	Upper
142	100		
141	23.1	66.6	100.0#
115	35.9	30.1	45.1

