

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL100925\
 Data File : VL043091.D
 Acq On : 09 Oct 2025 16:42
 Operator : SY/MD
 Sample : Q3320-10 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV5

Quant Time: Oct 09 22:17:58 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	2.777	49	191333	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.946	114	524109	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.865	117	472709	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.364	95	387710	11.385	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	113.900%

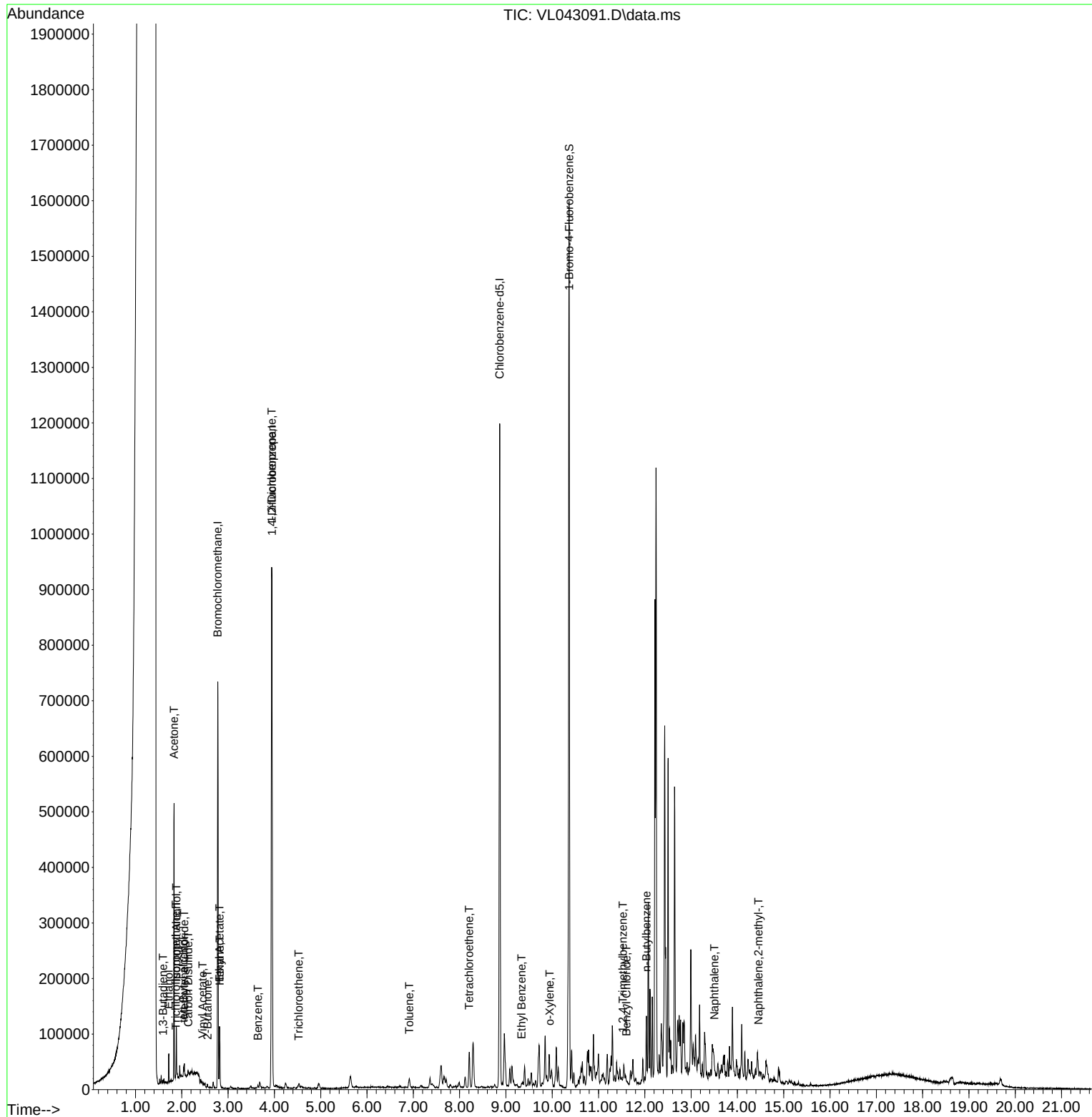
Target Compounds						Qvalue
11) Trichlorofluoromethane	1.871	101	1635	0.049	ppbv	92
13) Ethanol	1.719	45	17143	36.340	ppbv #	31
15) Acetone	1.832	43	205395	7.667	ppbv	99
16) 1,3-Butadiene	1.596	39	616	0.056	ppbv #	58
17) tert-Butyl alcohol	2.039	59	5469	0.193	ppbv #	89
19) Isopropyl Alcohol	1.881	45	37731	2.940	ppbv #	1
20) Methylene Chloride	2.055	84	3291	0.281	ppbv #	85
23) Vinyl Acetate	2.450	43	180	0.032	ppbv #	1
25) Ethyl Acetate	2.816	43	15517	0.231	ppbv #	76
26) Hexane	2.819	57	20181	0.781	ppbv #	32
27) Carbon Disulfide	2.139	76	3152	0.103	ppbv #	1
34) 2-Butanone	2.557	43	2877	0.081	ppbv	94
36) Benzene	3.645	78	2742	0.055	ppbv #	83
38) Trichloroethene	4.522	130	786	0.038	ppbv	90
39) 1,2-Dichloropropane	3.942	63	132515	7.140	ppbv #	22
52) Tetrachloroethene	8.205	164	11379	0.614	ppbv #	82
53) Toluene	6.914	91	10807	0.214	ppbv	94
58) Ethyl Benzene	9.338	91	2730	0.037	ppbv	95
60) o-Xylene	9.946	91	4659	0.076	ppbv	74
66) Benzyl Chloride	11.600	91	101	0.031	ppbv #	57
70) n-Butylbenzene	12.034	91	6548	0.071	ppbv	94
74) 1,2,4-Trimethylbenzene	11.526	105	3145	0.044	ppbv #	46
79) Naphthalene	13.500	128	329	0.240	ppbv #	3
80) Naphthalene,2-methyl-	14.455	142	1146	0.700	ppbv #	56

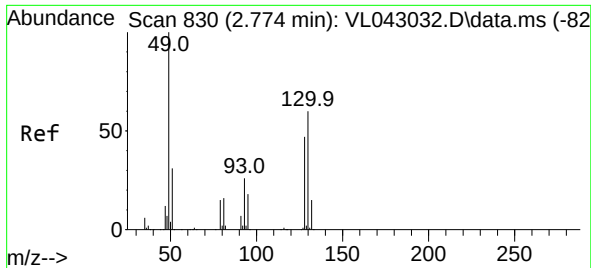
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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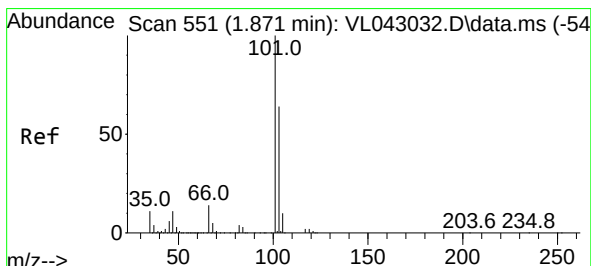
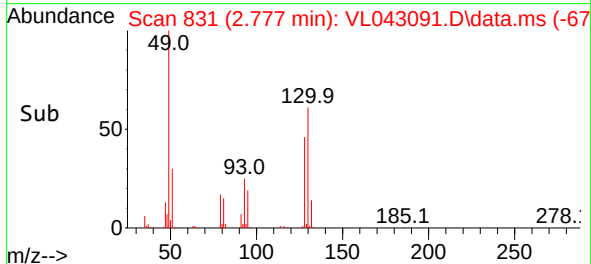
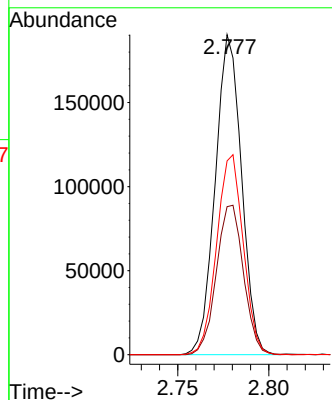
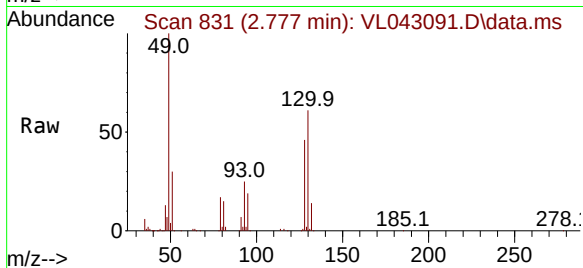




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.777 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

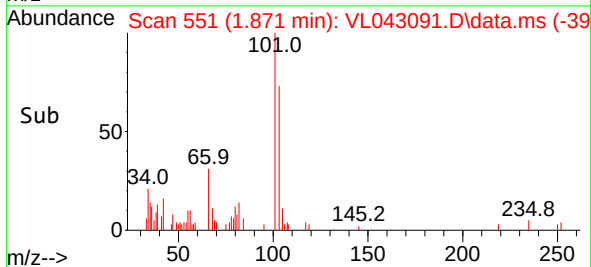
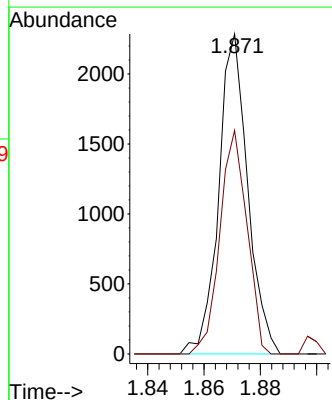
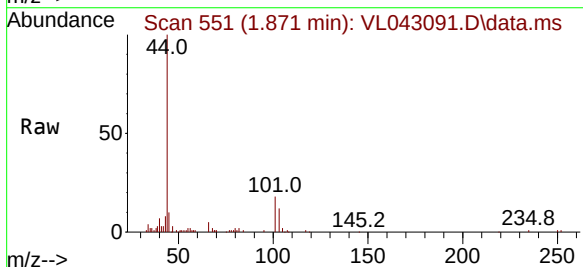
Instrument :
MSVOA_L
ClientSampleId :
SV5

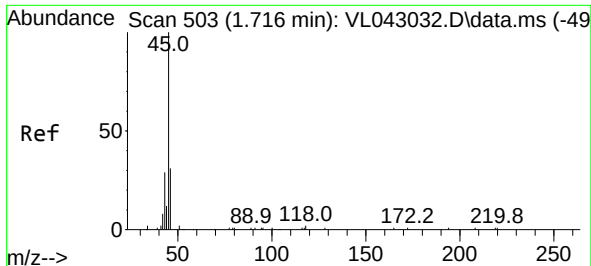
Tgt Ion: 49 Resp: 191333
Ion Ratio Lower Upper
49 100
128 48.1 24.1 72.2
130 63.3 31.4 94.3



#11
Trichlorofluoromethane
Concen: 0.049 ppbv
RT: 1.871 min Scan# 551
Delta R.T. -0.000 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion:101 Resp: 1635
Ion Ratio Lower Upper
101 100
103 69.9 51.1 76.7

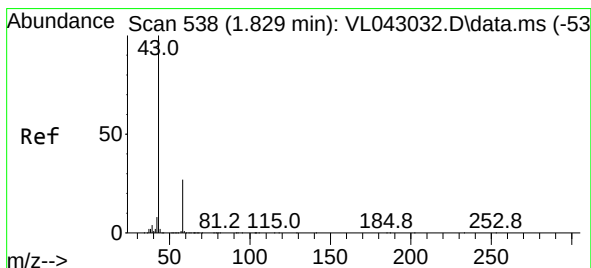
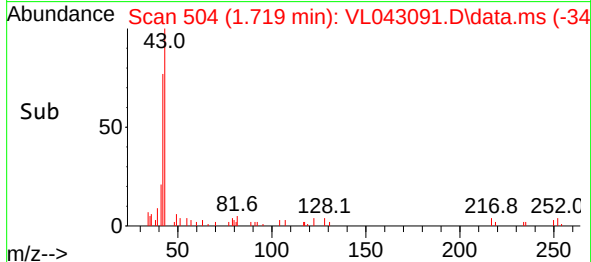
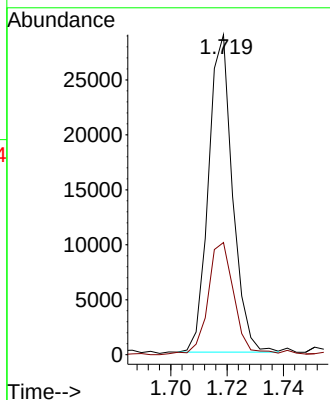
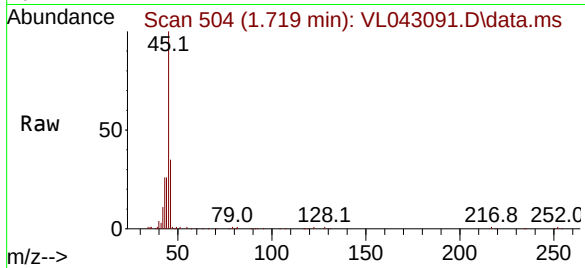




#13
Ethanol
Concen: 36.340 ppbv
RT: 1.719 min Scan# 503
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

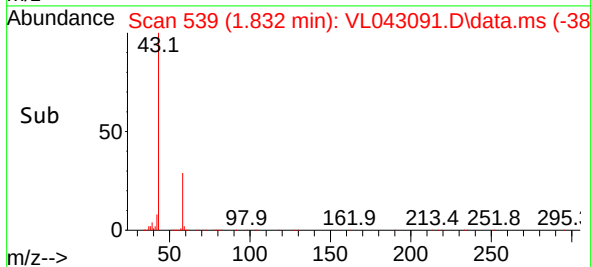
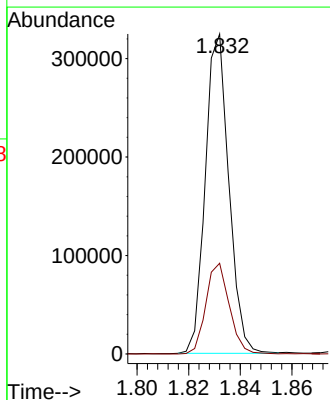
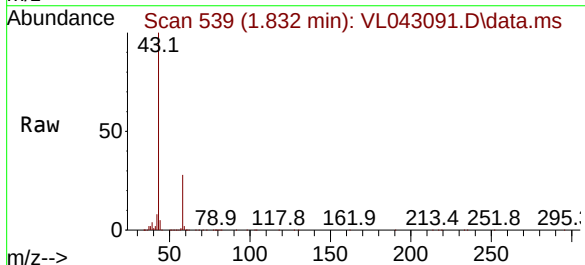
Instrument :
MSVOA_L
ClientSampleId :
SV5

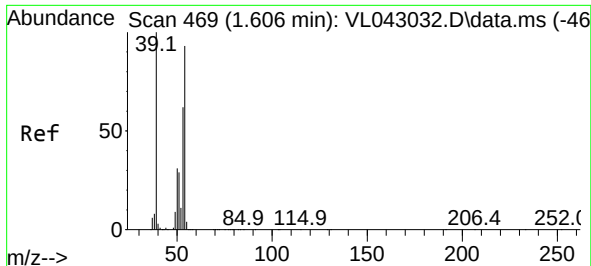
Tgt Ion: 45 Resp: 17143
Ion Ratio Lower Upper
45 100
46 0.0 17.8 71.4#



#15
Acetone
Concen: 7.667 ppbv
RT: 1.832 min Scan# 539
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 43 Resp: 205395
Ion Ratio Lower Upper
43 100
58 28.4 22.2 33.4

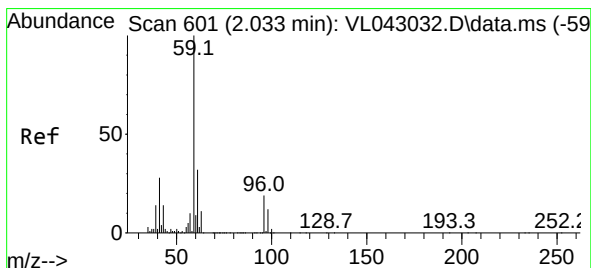
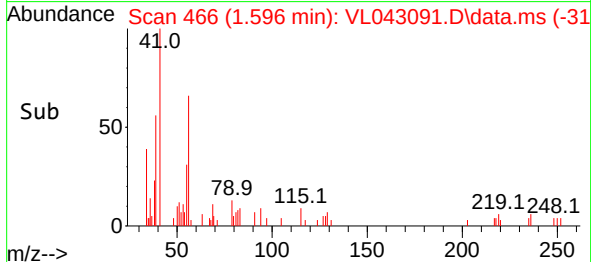
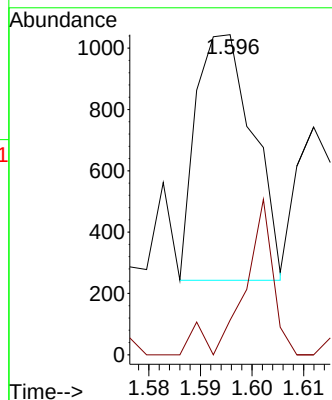
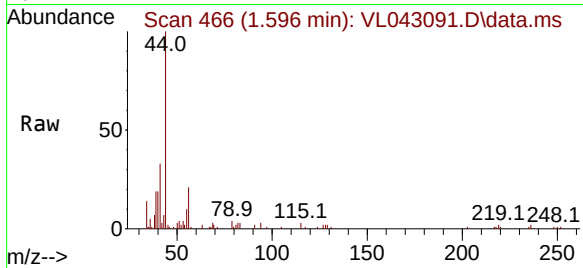




#16
1,3-Butadiene
Concen: 0.056 ppbv
RT: 1.596 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

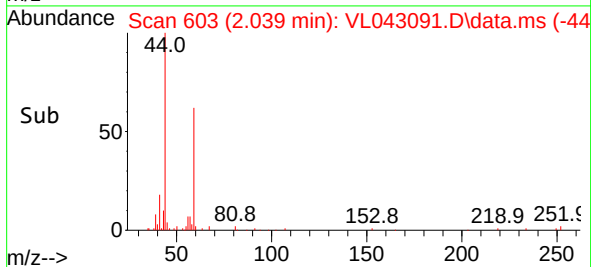
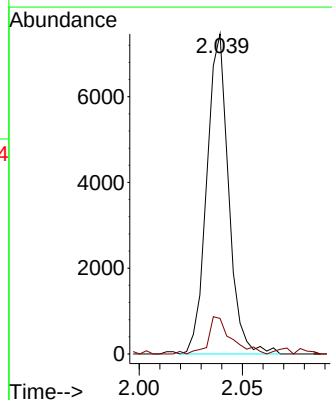
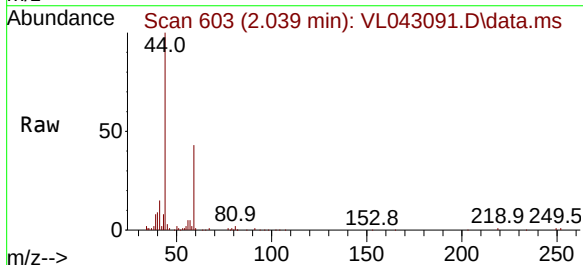
Instrument :
MSVOA_L
ClientSampleId :
SV5

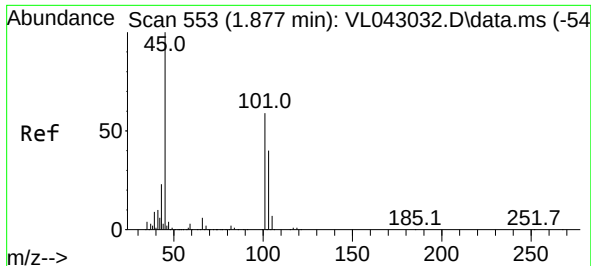
Tgt Ion: 39 Resp: 616
Ion Ratio Lower Upper
39 100
54 40.3 61.4 92.2#



#17
tert-Butyl alcohol
Concen: 0.193 ppbv
RT: 2.039 min Scan# 603
Delta R.T. 0.006 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 59 Resp: 5469
Ion Ratio Lower Upper
59 100
57 14.6 8.5 12.7#

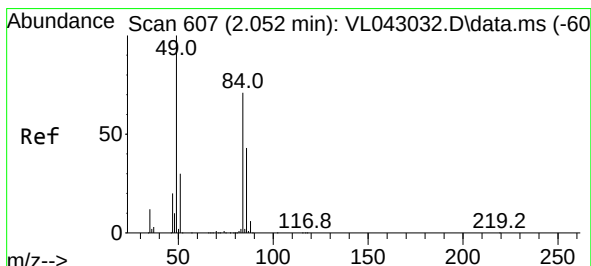
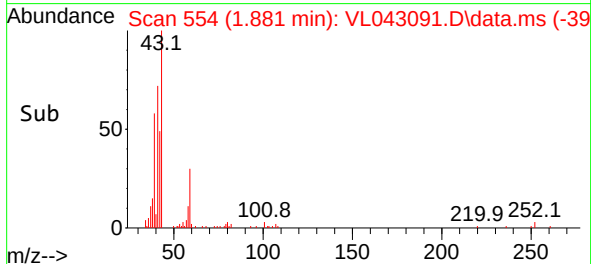
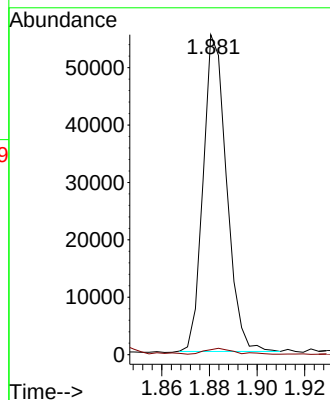
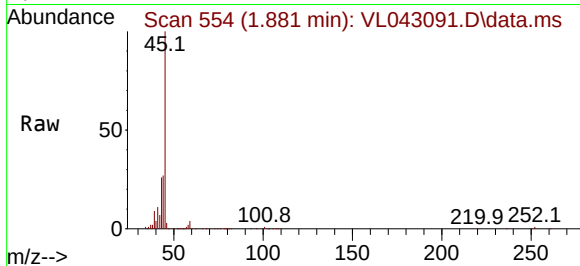




#19
Isopropyl Alcohol
Concen: 2.940 ppbv
RT: 1.881 min Scan# 511
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

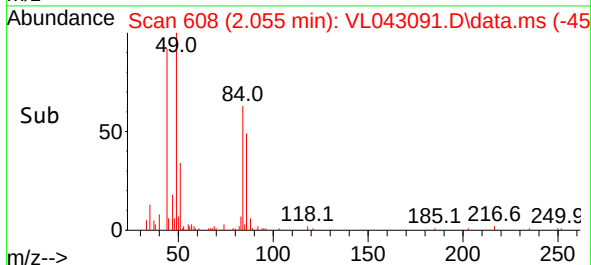
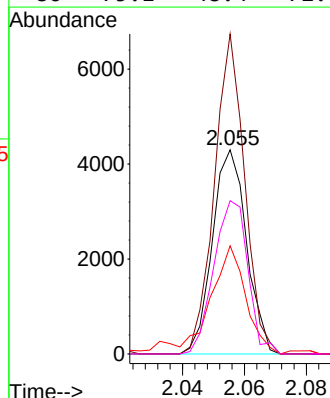
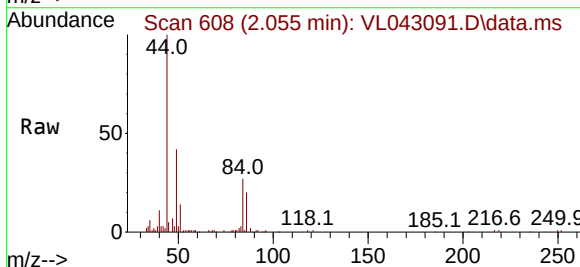
Instrument :
MSVOA_L
ClientSampleId :
SV5

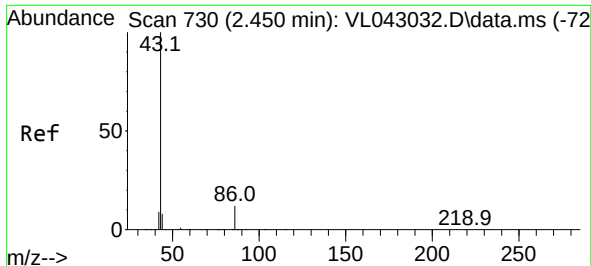
Tgt Ion: 45 Resp: 37731
Ion Ratio Lower Upper
45 100
58 154.8 42.3 63.5#



#20
Methylene Chloride
Concen: 0.281 ppbv
RT: 2.055 min Scan# 608
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 84 Resp: 3291
Ion Ratio Lower Upper
84 100
49 156.7 112.5 168.7
51 53.0 34.2 51.2#
86 75.1 48.4 72.6#

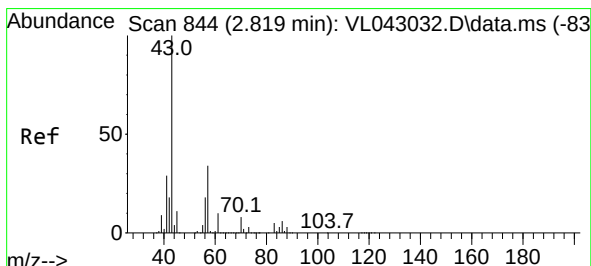
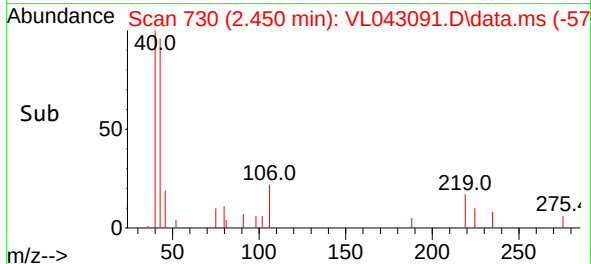
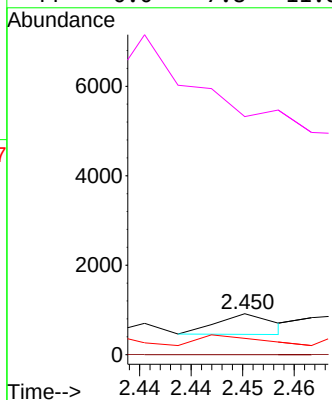
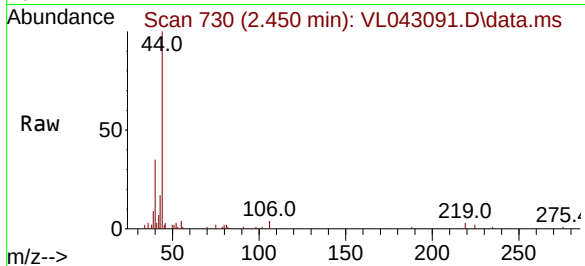




#23
 Vinyl Acetate
 Concen: 0.032 ppbv
 RT: 2.450 min Scan# 71
 Delta R.T. -0.000 min
 Lab File: VL043091.D
 Acq: 09 Oct 2025 16:42

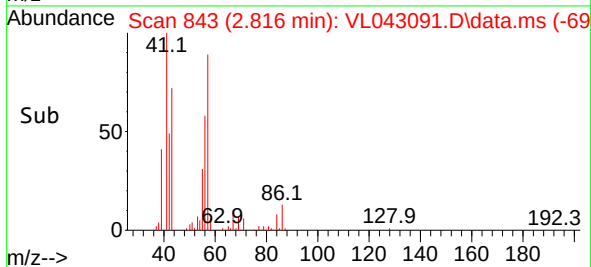
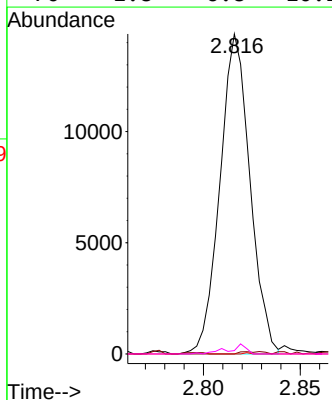
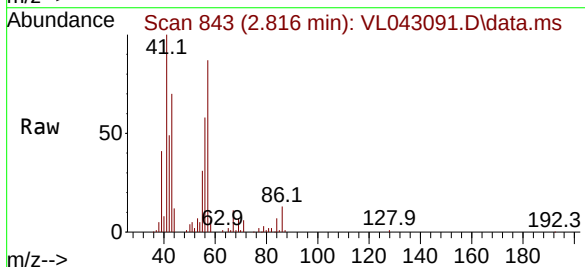
Instrument :
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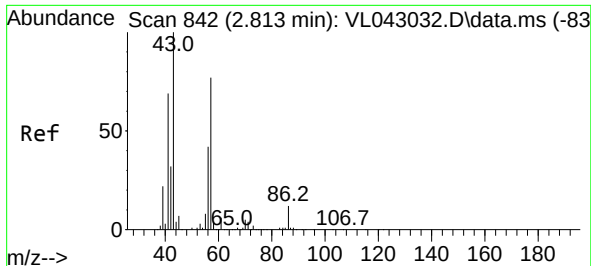
Tgt Ion:	43	Resp:	180
Ion	Ratio	Lower	Upper
43	100		
86	0.0	7.5	11.3#
42	236.4	8.4	12.6#
44	0.0	7.8	11.8#



#25
 Ethyl Acetate
 Concen: 0.231 ppbv
 RT: 2.816 min Scan# 843
 Delta R.T. -0.003 min
 Lab File: VL043091.D
 Acq: 09 Oct 2025 16:42

Tgt Ion:	43	Resp:	15517
Ion	Ratio	Lower	Upper
43	100		
45	0.6	8.3	12.5#
61	0.0	7.5	11.3#
70	1.8	6.8	10.2#

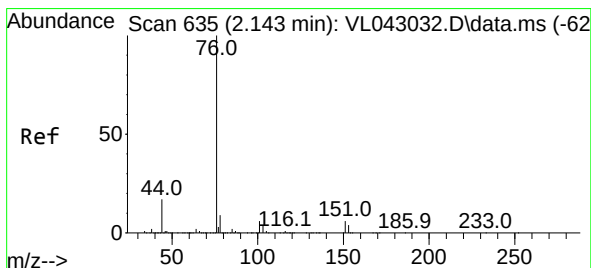
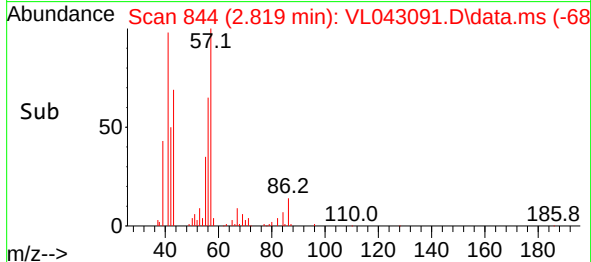
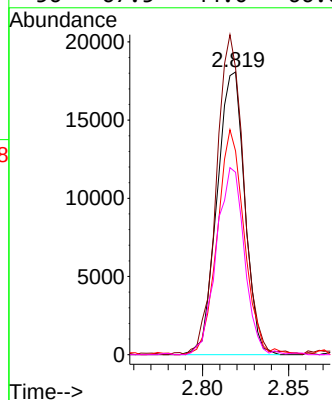
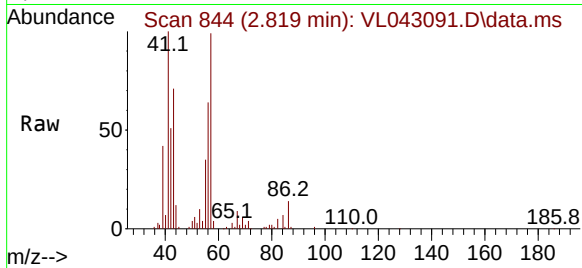




#26
Hexane
Concen: 0.781 ppbv
RT: 2.819 min Scan# 842
Delta R.T. 0.006 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

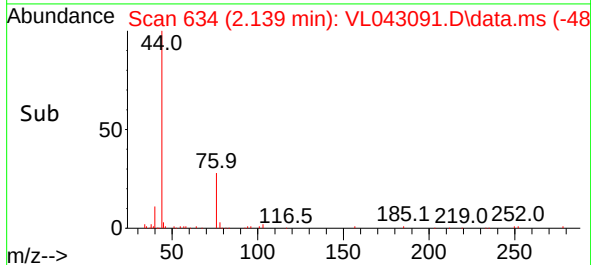
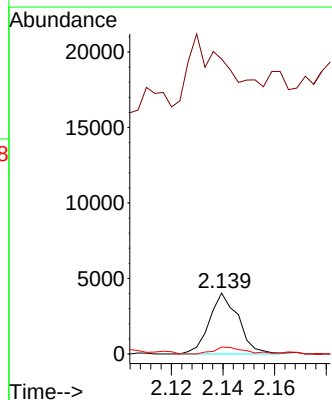
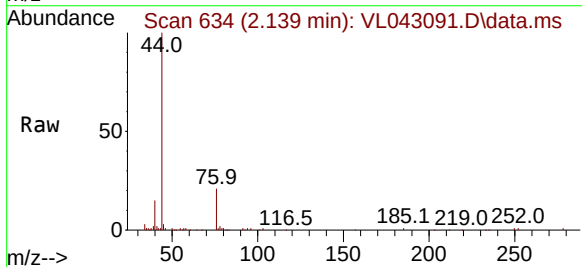
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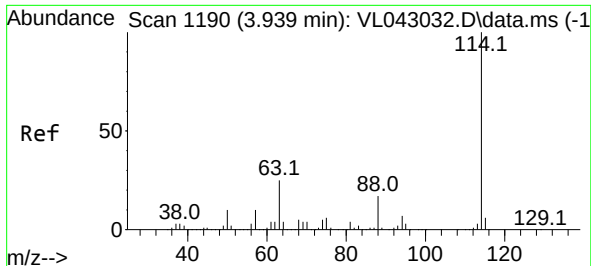
Tgt Ion: 57 Resp: 20181
Ion Ratio Lower Upper
57 100
41 111.9 76.1 114.1
43 78.5 201.4 302.0#
56 67.5 44.0 66.0#



#27
Carbon Disulfide
Concen: 0.103 ppbv
RT: 2.139 min Scan# 634
Delta R.T. -0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 76 Resp: 3152
Ion Ratio Lower Upper
76 100
44 2106.3 14.0 21.0#
78 21.6 9.4 14.0#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.946 min Scan# 1190

Delta R.T. 0.006 min

Lab File: VL043091.D

Acq: 09 Oct 2025 16:42

Instrument :

MSVOA_L

ClientSampleId :

SV5

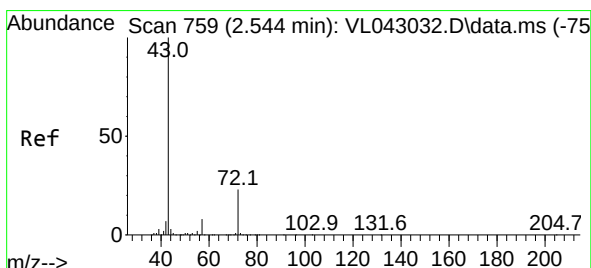
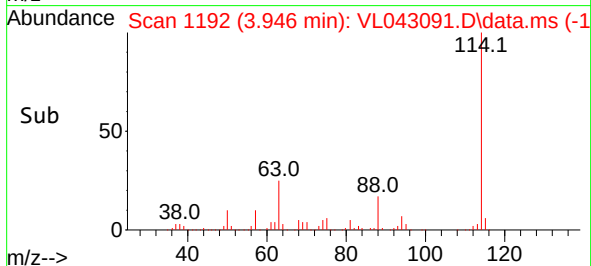
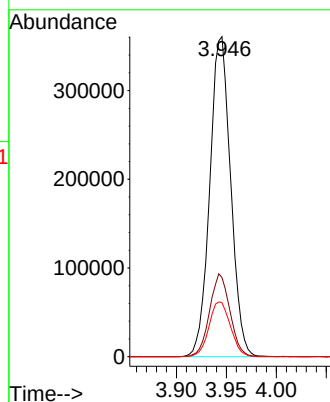
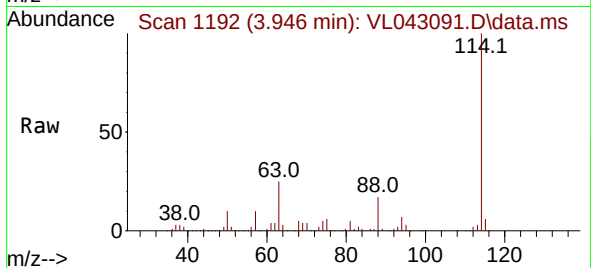
Tgt Ion:114 Resp: 524109

Ion Ratio Lower Upper

114 100

63 25.4 19.4 29.2

88 17.6 13.9 20.9



#34

2-Butanone

Concen: 0.081 ppbv

RT: 2.557 min Scan# 763

Delta R.T. 0.013 min

Lab File: VL043091.D

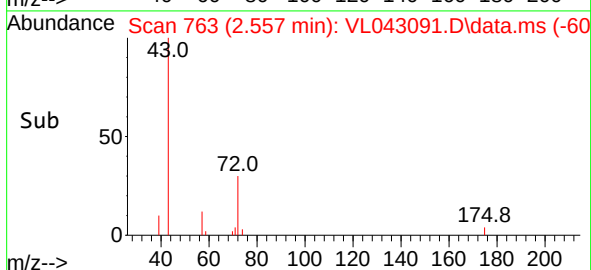
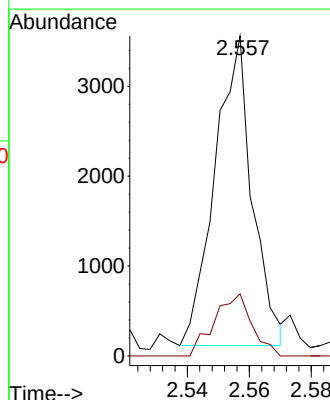
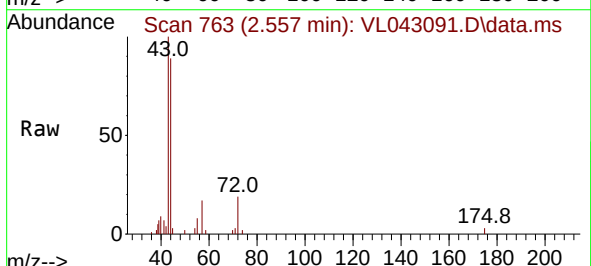
Acq: 09 Oct 2025 16:42

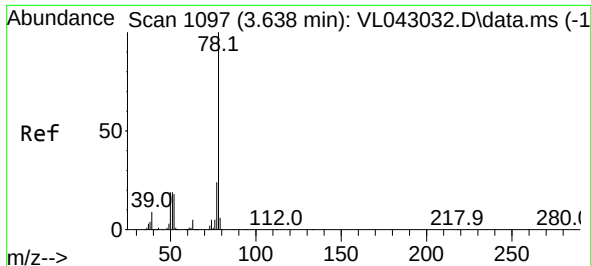
Tgt Ion: 43 Resp: 2877

Ion Ratio Lower Upper

43 100

72 20.2 18.4 27.6

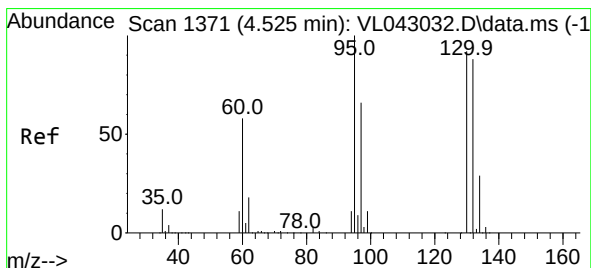
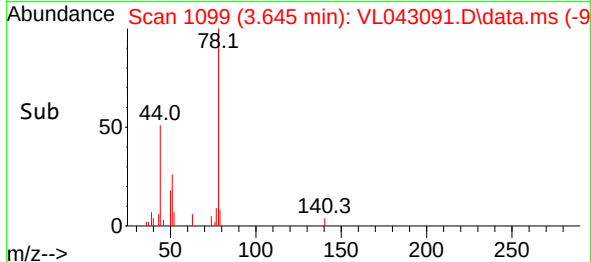
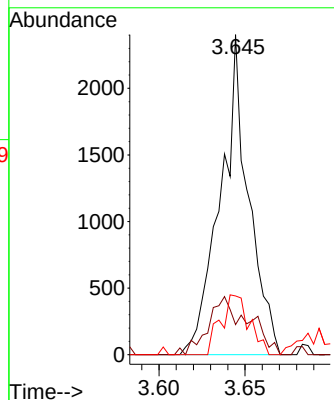
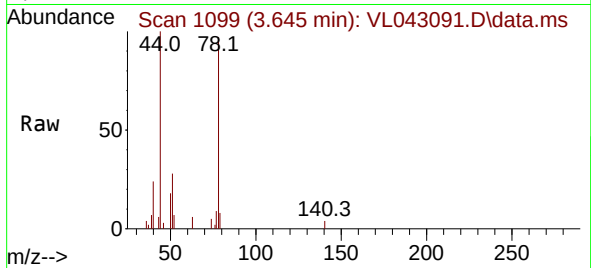




#36
Benzene
Concen: 0.055 ppbv
RT: 3.645 min Scan# 1099
Delta R.T. 0.006 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

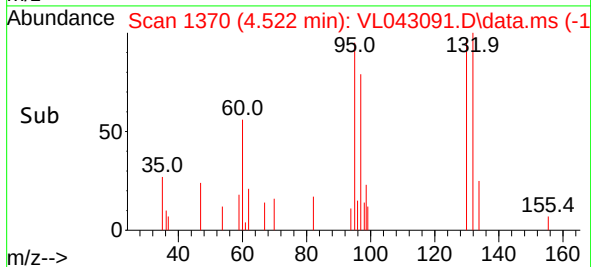
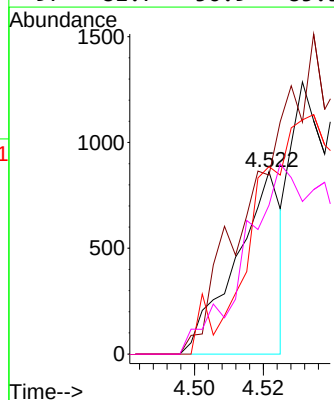
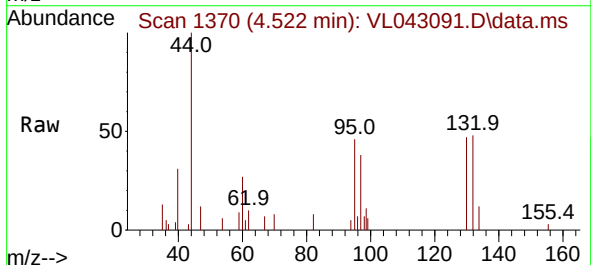
Instrument :
MSVOA_L
ClientSampleId :
SV5

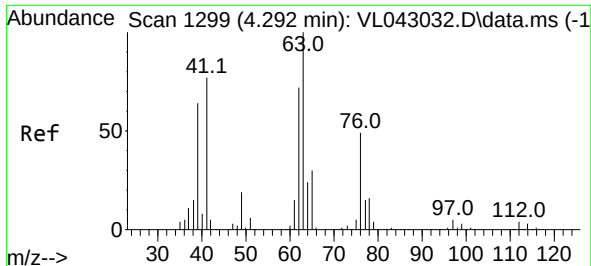
Tgt Ion: 78 Resp: 2742
Ion Ratio Lower Upper
78 100
77 9.4 19.2 28.8#
50 18.4 14.9 22.3



#38
Trichloroethene
Concen: 0.038 ppbv
RT: 4.522 min Scan# 1370
Delta R.T. -0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 130 Resp: 786
Ion Ratio Lower Upper
130 100
95 98.1 86.4 129.6
132 102.8 75.7 113.5
97 81.7 56.9 85.3





#39

1,2-Dichloropropane

Concen: 7.140 ppbv

RT: 3.942 min Scan# 1191

Delta R.T. -0.350 min

Lab File: VL043091.D

Acq: 09 Oct 2025 16:42

Instrument :

MSVOA_L

ClientSampleId :

SV5

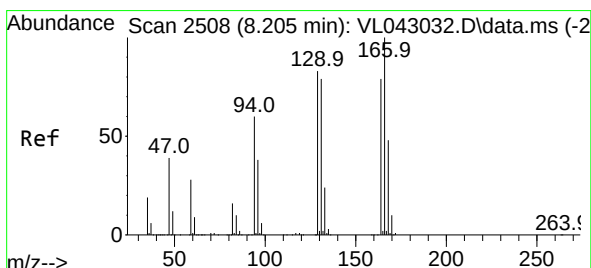
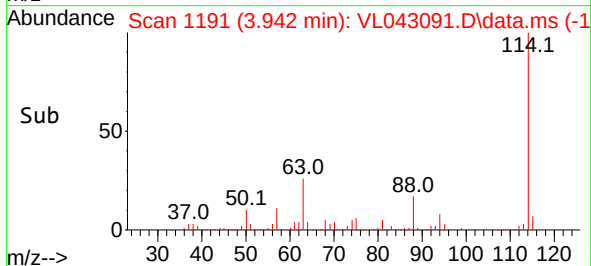
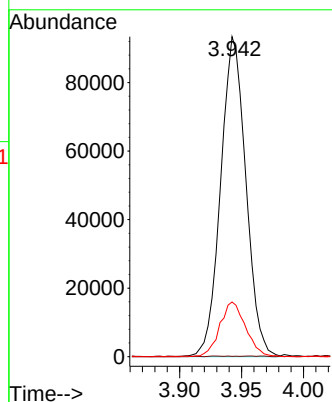
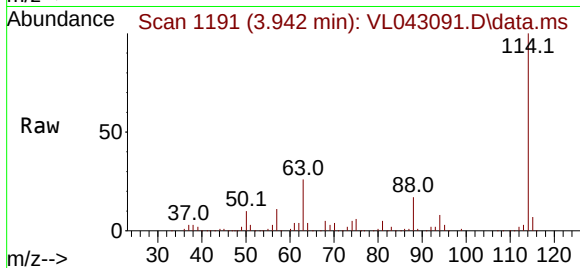
Tgt Ion: 63 Resp: 132515

Ion Ratio Lower Upper

63 100

41 0.1 61.6 92.4#

62 17.1 58.1 87.1#



#52

Tetrachloroethene

Concen: 0.614 ppbv

RT: 8.205 min Scan# 2508

Delta R.T. -0.000 min

Lab File: VL043091.D

Acq: 09 Oct 2025 16:42

Tgt Ion:164 Resp: 11379

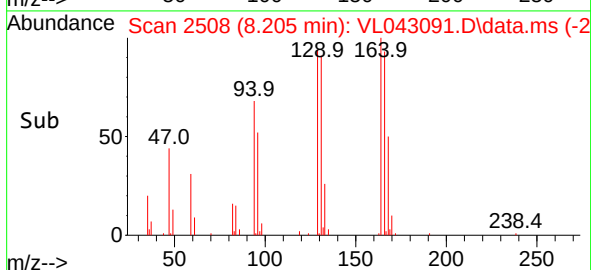
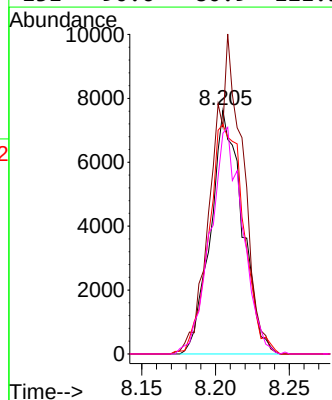
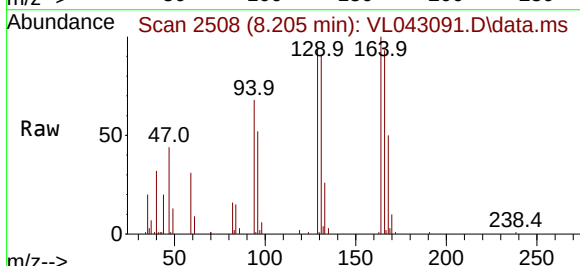
Ion Ratio Lower Upper

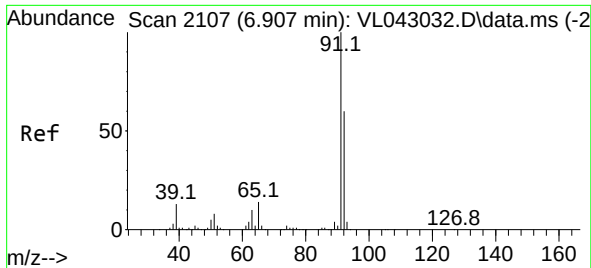
164 100

166 93.2 101.8 152.8#

129 94.3 84.5 126.7

131 90.6 80.9 121.3





#53

Toluene

Concen: 0.214 ppbv

RT: 6.914 min Scan# 2107

Delta R.T. 0.006 min

Lab File: VL043091.D

Acq: 09 Oct 2025 16:42

Instrument :

MSVOA_L

ClientSampleId :

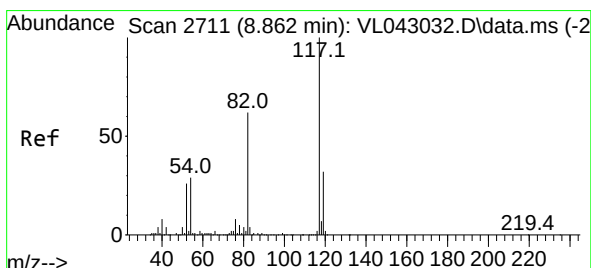
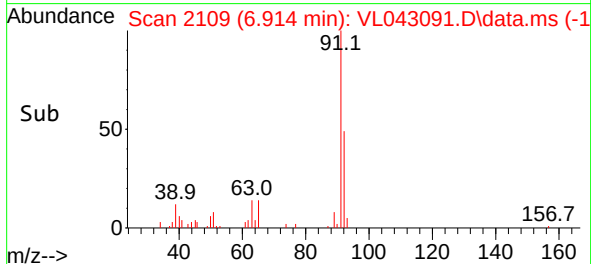
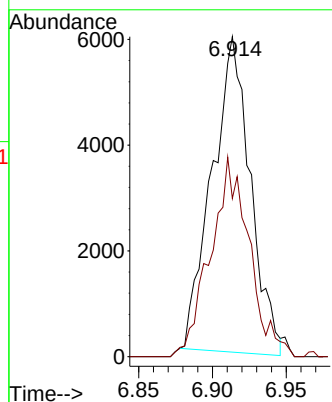
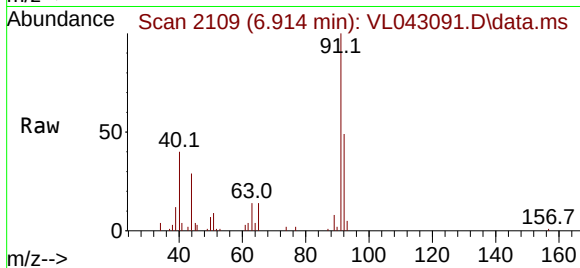
SV5

Tgt Ion: 91 Resp: 10807

Ion Ratio Lower Upper

91 100

92 63.9 47.8 71.6



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.865 min Scan# 2712

Delta R.T. 0.003 min

Lab File: VL043091.D

Acq: 09 Oct 2025 16:42

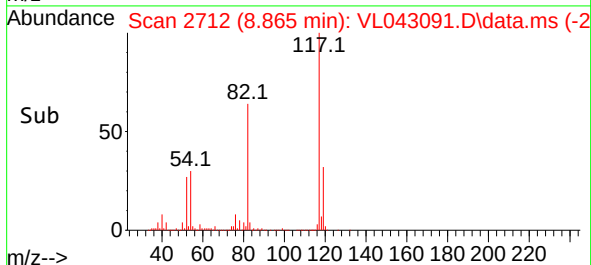
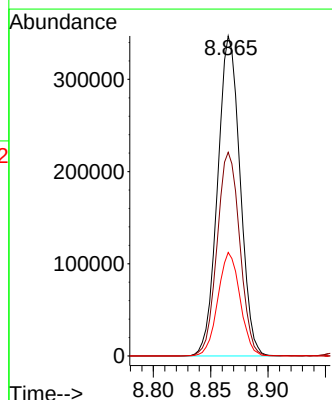
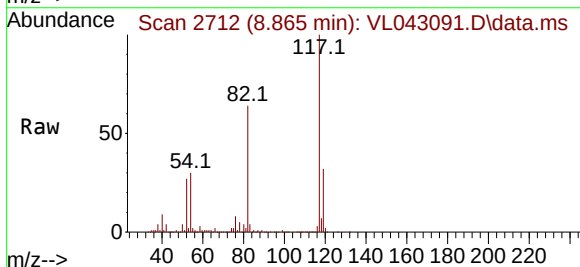
Tgt Ion: 117 Resp: 472709

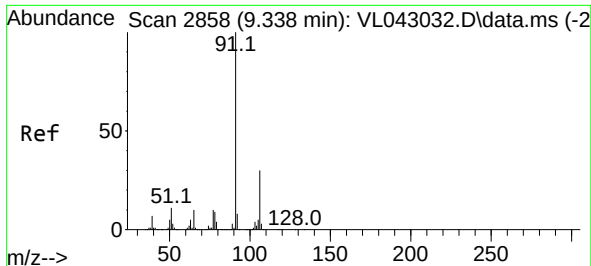
Ion Ratio Lower Upper

117 100

82 64.3 53.0 79.6

119 32.0 25.4 38.2

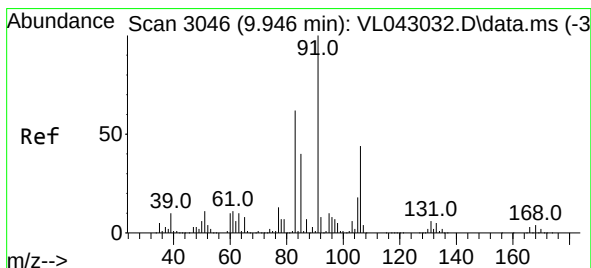
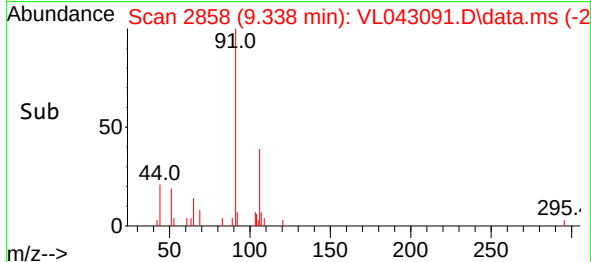
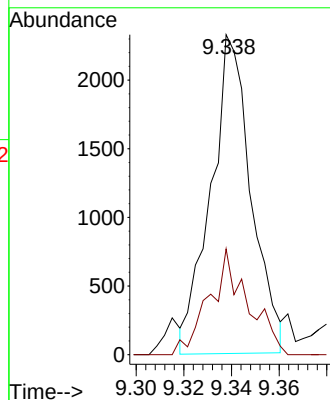
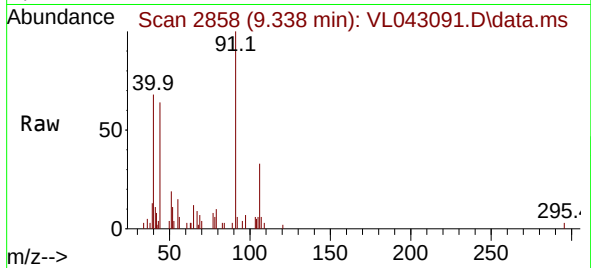




#58
Ethyl Benzene
Concen: 0.037 ppbv
RT: 9.338 min Scan# 21
Delta R.T. -0.000 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

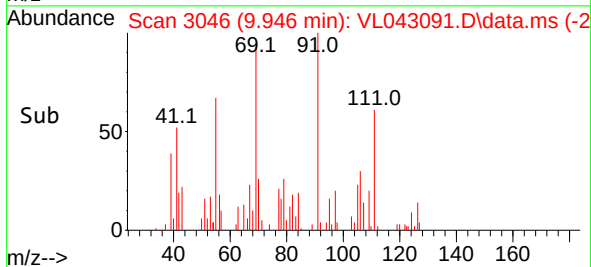
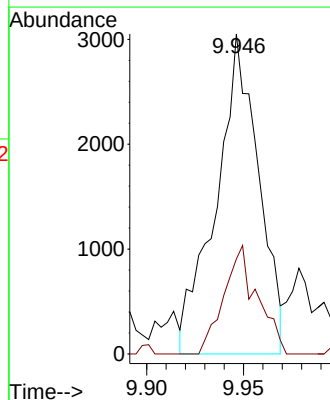
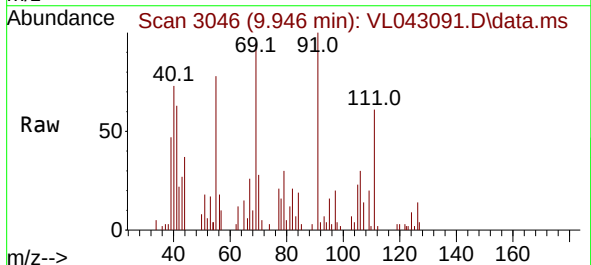
Instrument :
MSVOA_L
ClientSampleId :
SV5

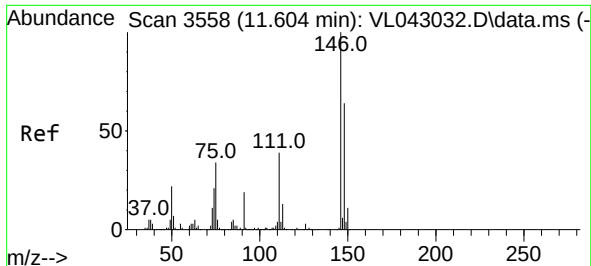
Tgt Ion: 91 Resp: 2730
Ion Ratio Lower Upper
91 100
106 33.1 24.1 36.1



#60
o-Xylene
Concen: 0.076 ppbv
RT: 9.946 min Scan# 3046
Delta R.T. -0.000 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 91 Resp: 4659
Ion Ratio Lower Upper
91 100
106 26.8 21.9 65.5

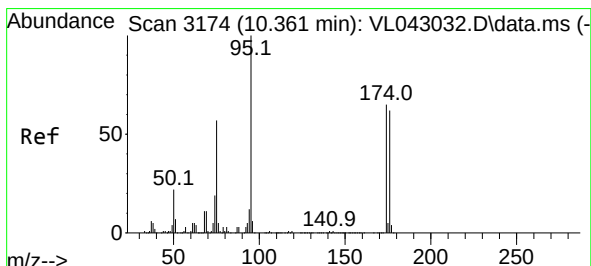
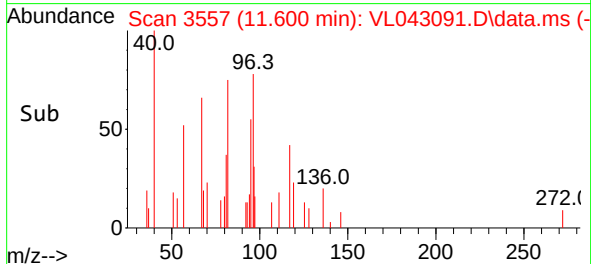
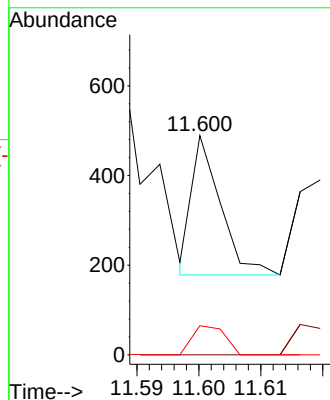
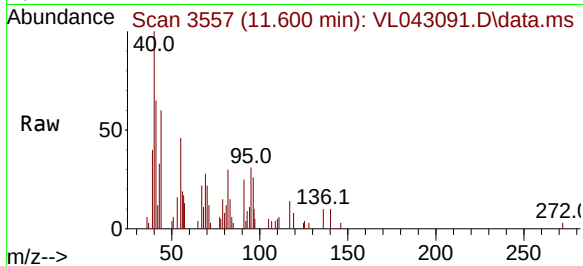




#66
Benzyl Chloride
Concen: 0.031 ppbv
RT: 11.600 min Scan# 3155
Delta R.T. -0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

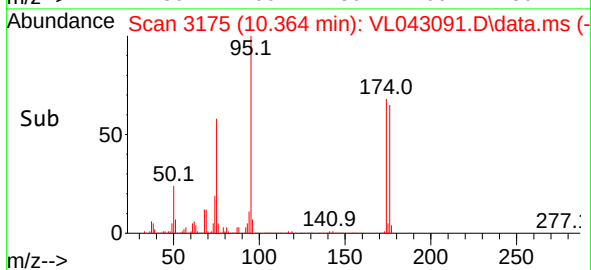
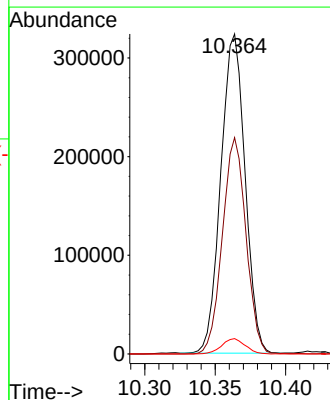
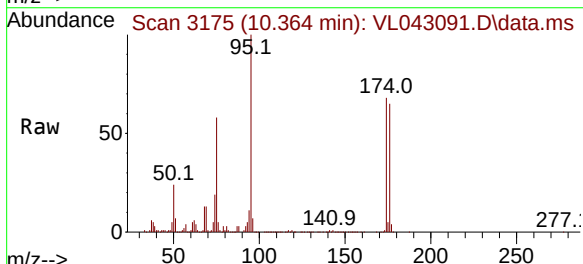
Instrument :
MSVOA_L
ClientSampleId :
SV5

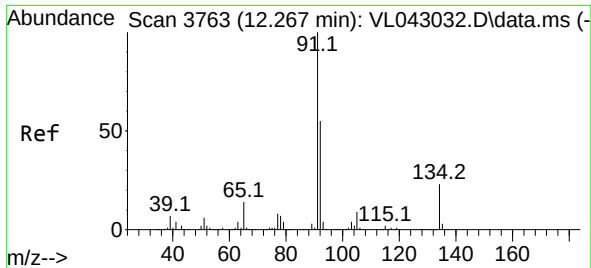
Tgt Ion: 91 Resp: 101
Ion Ratio Lower Upper
91 100
126 0.0 14.2 21.4#
128 23.8 4.8 7.2#



#68
1-Bromo-4-Fluorobenzene
Concen: 11.385 ppbv
RT: 10.364 min Scan# 3175
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion: 95 Resp: 387710
Ion Ratio Lower Upper
95 100
174 66.1 52.3 78.5
175 4.7 3.8 5.8

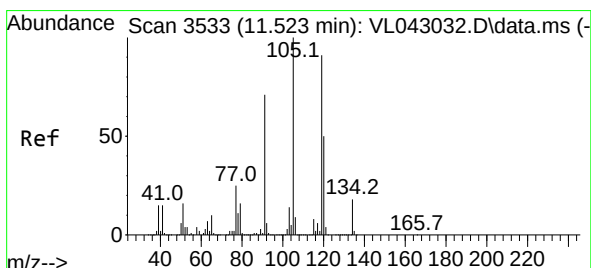
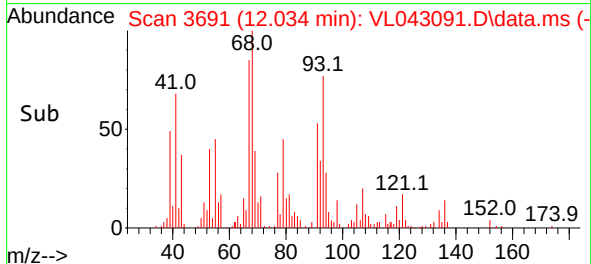
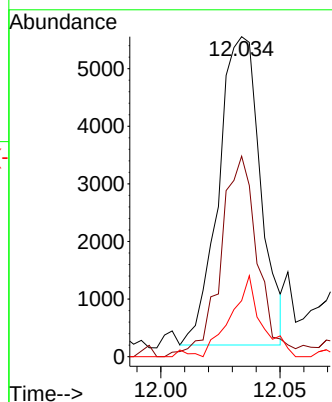
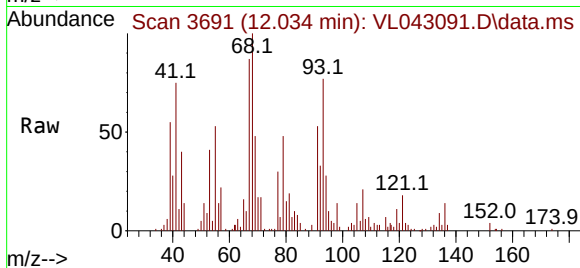




#70
n-Butylbenzene
Concen: 0.071 ppbv
RT: 12.034 min Scan# 3691
Delta R.T. -0.233 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

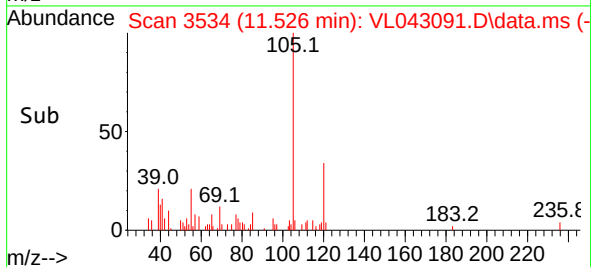
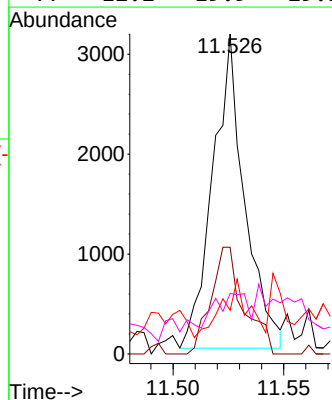
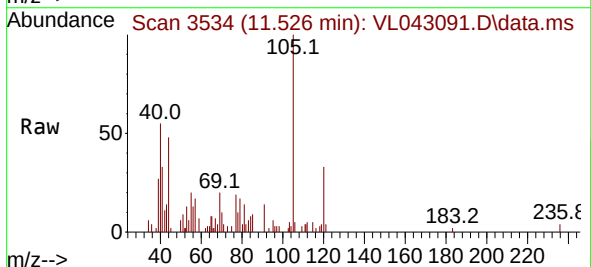
Instrument :
MSVOA_L
ClientSampleId :
SV5

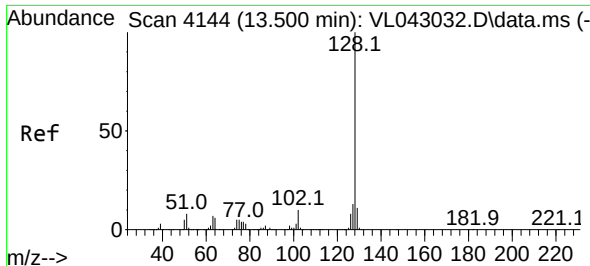
Tgt Ion:	91	Resp:	6548
Ion	Ratio	Lower	Upper
91	100		
92	59.2	43.9	65.9
134	20.4	18.9	28.3



#74
1,2,4-Trimethylbenzene
Concen: 0.044 ppbv
RT: 11.526 min Scan# 3534
Delta R.T. 0.003 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion:	105	Resp:	3145
Ion	Ratio	Lower	Upper
105	100		
120	34.0	39.7	59.5#
91	0.0	56.5	84.7#
77	12.2	19.9	29.9#

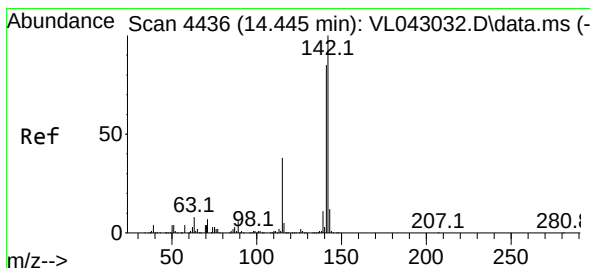
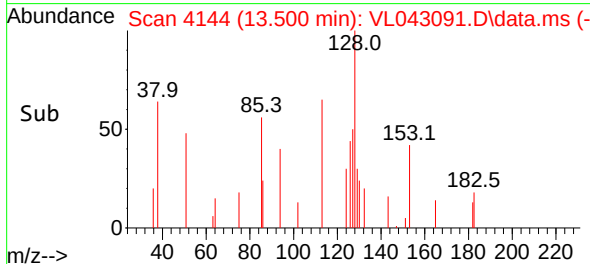
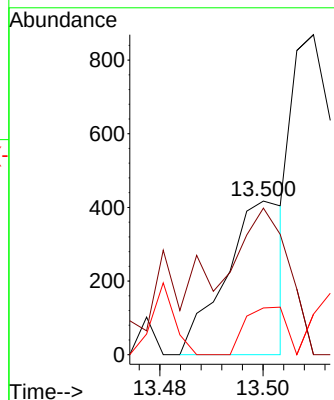
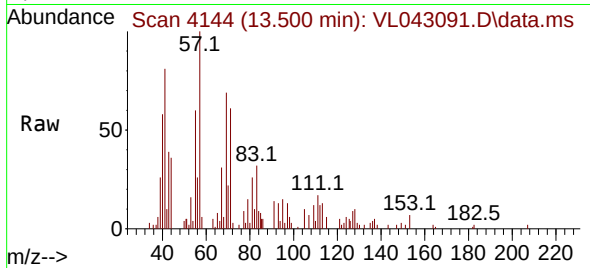




#79
Naphthalene
Concen: 0.240 ppbv
RT: 13.500 min Scan# 4144
Delta R.T. 0.000 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Instrument :
MSVOA_L
ClientSampleId :
SV5

Tgt Ion:128 Resp: 329
Ion Ratio Lower Upper
128 100
127 76.6 10.6 16.0#
129 20.1 8.8 13.2#



#80
Naphthalene,2-methyl-
Concen: 0.700 ppbv
RT: 14.455 min Scan# 4439
Delta R.T. 0.010 min
Lab File: VL043091.D
Acq: 09 Oct 2025 16:42

Tgt Ion:142 Resp: 1146
Ion Ratio Lower Upper
142 100
141 112.0 66.6 100.0#
115 81.2 30.1 45.1#

