

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL111925\
 Data File : VL043241.D
 Acq On : 19 Nov 2025 16:06
 Operator : SY/MD
 Sample : Q3626-07 2X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 12-SG-1

Quant Time: Nov 20 00:06:41 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	2.784	49	103097	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.956	114	289304	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.872	117	221774	10.000	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.371	95	162452	9.993	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.900%

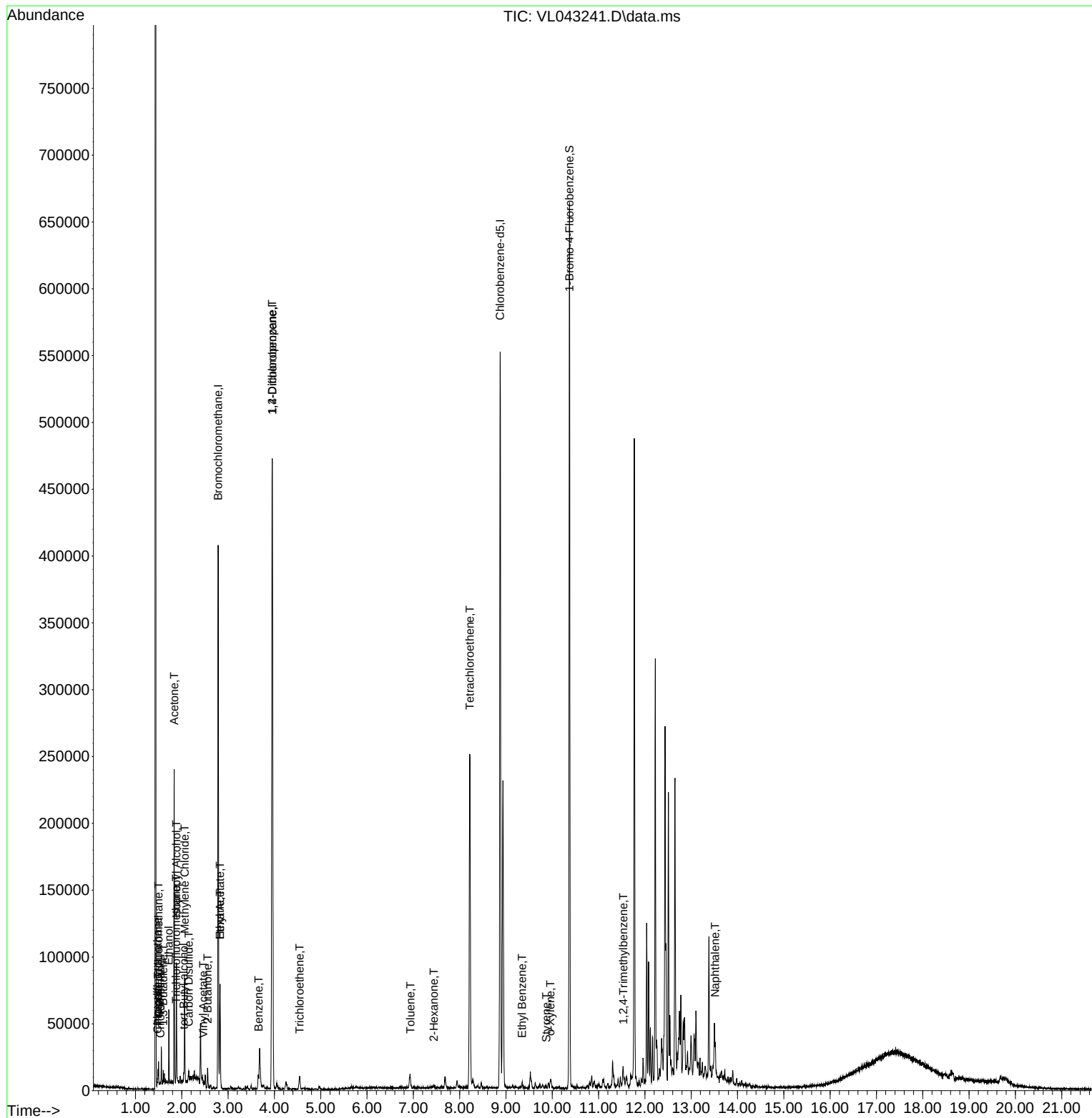
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.499	85	4138	0.285	ppbv	99
3) Chlorodifluoromethane	1.476	51	2988	0.209	ppbv	98
4) Chloromethane	1.535	50	350	0.064	ppbv #	86
9) Propene	1.489	41	1371	0.226	ppbv #	1
11) Trichlorofluoromethane	1.878	101	1898	0.135	ppbv	88
13) Ethanol	1.719	45	19199	8.991	ppbv	94
15) Acetone	1.836	43	103554	7.230	ppbv	100
16) 1,3-Butadiene	1.599	39	1377	0.216	ppbv #	30
17) tert-Butyl alcohol	2.043	59	2769	0.147	ppbv #	91
19) Isopropyl Alcohol	1.884	45	34326	4.241	ppbv #	37
20) Methylene Chloride	2.062	84	11672	2.149	ppbv #	82
23) Vinyl Acetate	2.464	43	564	0.033	ppbv #	87
25) Ethyl Acetate	2.826	43	12641	0.409	ppbv #	80
26) Hexane	2.826	57	17106	1.263	ppbv #	42
27) Carbon Disulfide	2.150	76	3585	0.259	ppbv #	1
34) 2-Butanone	2.557	43	9027	0.442	ppbv	98
36) Benzene	3.658	78	3352	0.121	ppbv #	81
38) Trichloroethene	4.542	130	1590	0.147	ppbv #	76
39) 1,2-Dichloropropane	3.952	63	71940	7.094	ppbv #	25
51) 2-Hexanone	7.442	43	727	0.033	ppbv #	88
52) Tetrachloroethene	8.218	164	42186	4.093	ppbv	92
53) Toluene	6.937	91	2402	0.073	ppbv #	21
58) Ethyl Benzene	9.348	91	2322	0.054	ppbv	93
60) o-Xylene	9.960	91	1690	0.049	ppbv	83
61) Styrene	9.869	104	665	0.044	ppbv #	59
74) 1,2,4-Trimethylbenzene	11.533	105	3032	0.080	ppbv #	45
79) Naphthalene	13.517	128	1140	0.034	ppbv #	73

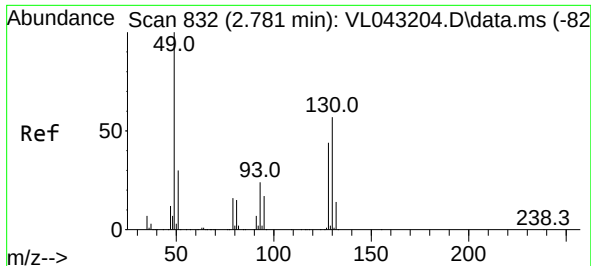
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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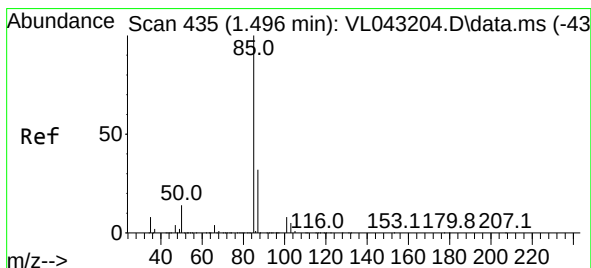
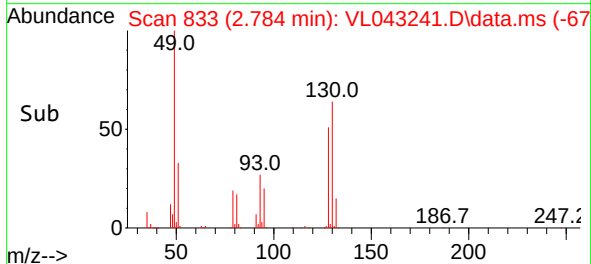
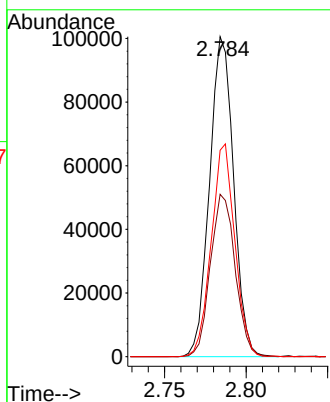
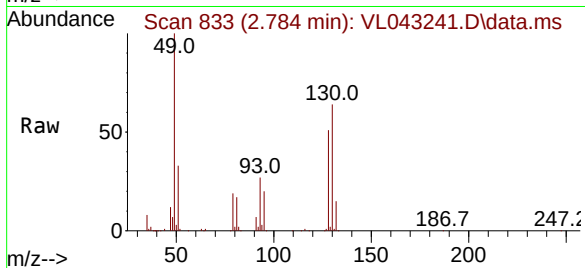




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.784 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

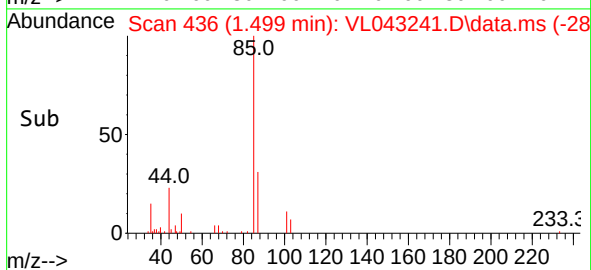
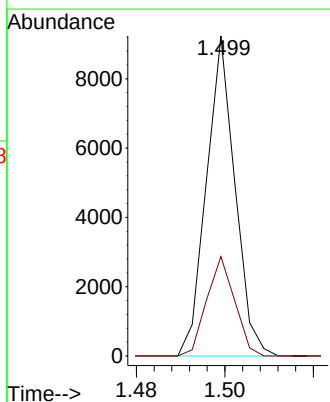
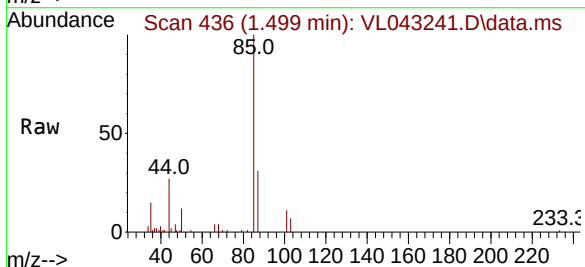
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MSVOA_1
ClientSampleId :
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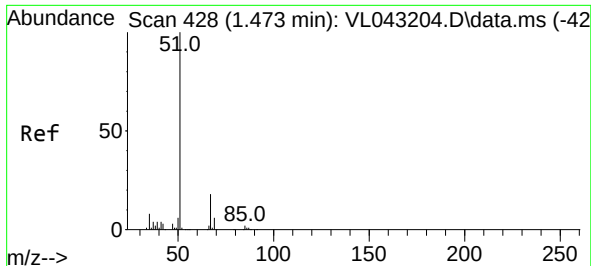
Tgt Ion: 49 Resp: 103097
Ion Ratio Lower Upper
49 100
128 52.4 23.0 69.0
130 65.4 29.9 89.7



#2
Dichlorodifluoromethane
Concen: 0.285 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 85 Resp: 4138
Ion Ratio Lower Upper
85 100
87 31.0 25.4 38.2

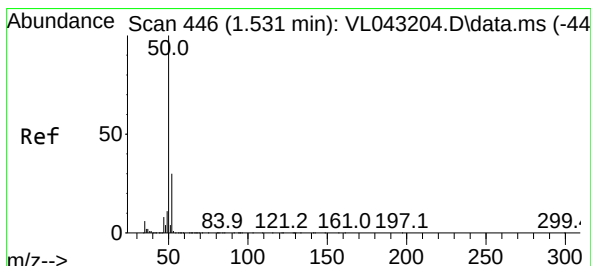
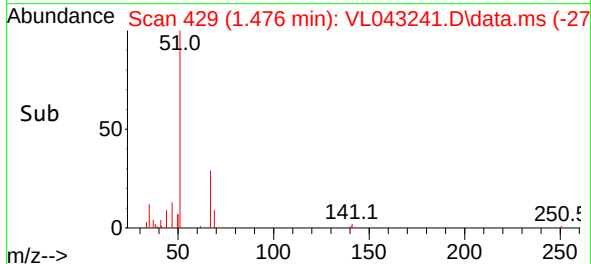
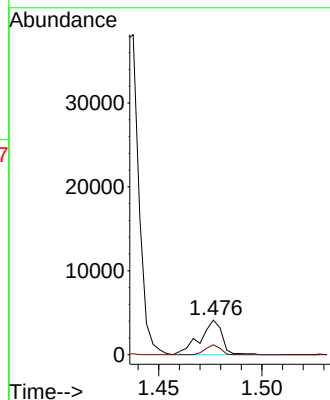
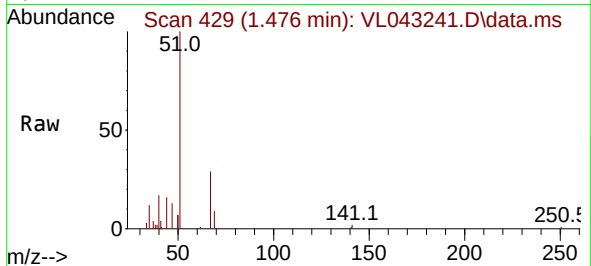




#3
Chlorodifluoromethane
Concen: 0.209 ppbv
RT: 1.476 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

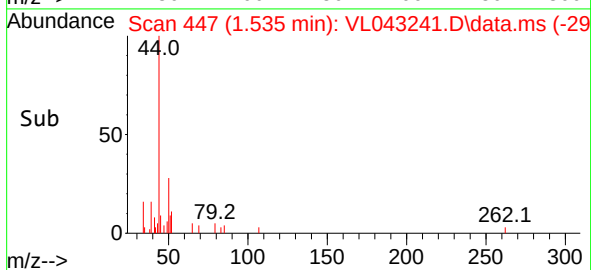
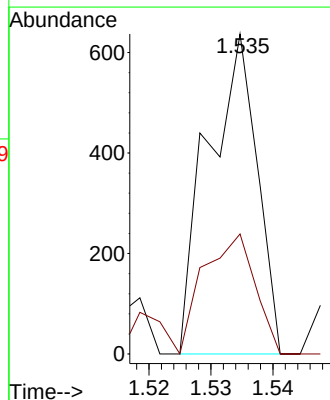
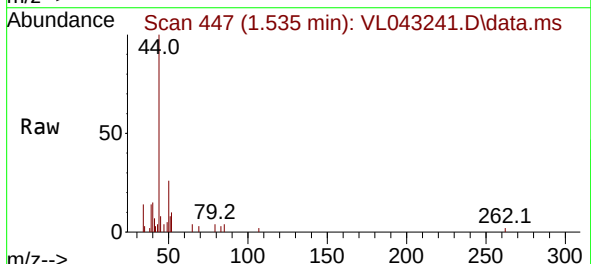
Instrument :
MSVOA_1
ClientSampleId :
12-SG-1

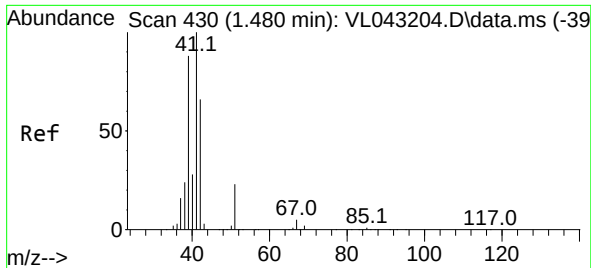
Tgt Ion: 51 Resp: 2988
Ion Ratio Lower Upper
51 100
67 19.5 14.9 22.3



#4
Chloromethane
Concen: 0.064 ppbv
RT: 1.535 min Scan# 447
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 50 Resp: 350
Ion Ratio Lower Upper
50 100
52 37.5 24.1 36.1#





#9

Propene

Concen: 0.226 ppbv

RT: 1.489 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_L

ClientSampleId :

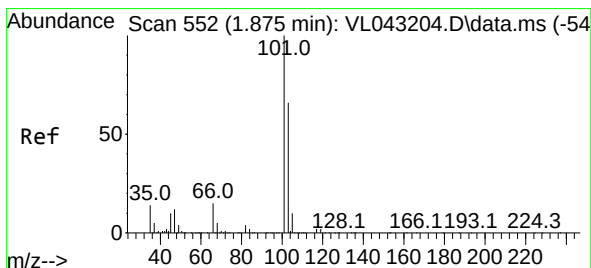
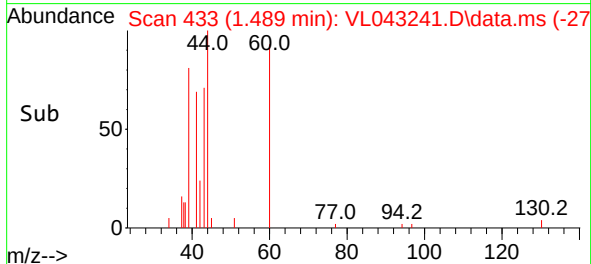
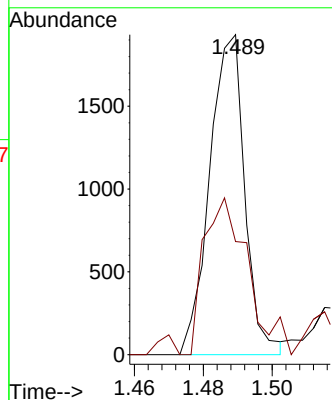
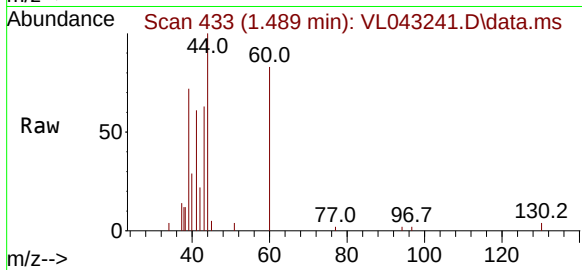
12-SG-1

Tgt Ion: 41 Resp: 1371

Ion Ratio Lower Upper

41 100

42 64.2 3.7 5.5#



#11

Trichlorofluoromethane

Concen: 0.135 ppbv

RT: 1.878 min Scan# 553

Delta R.T. 0.003 min

Lab File: VL043241.D

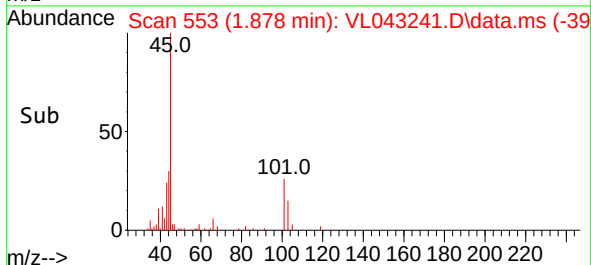
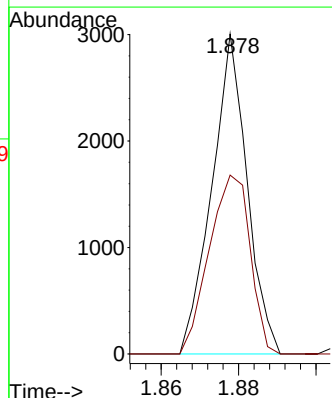
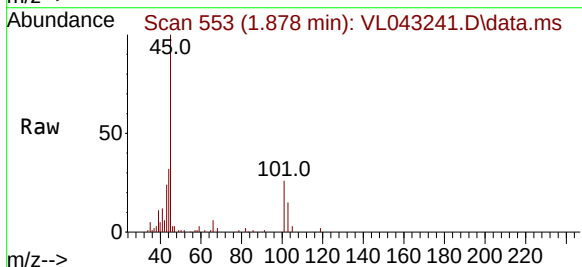
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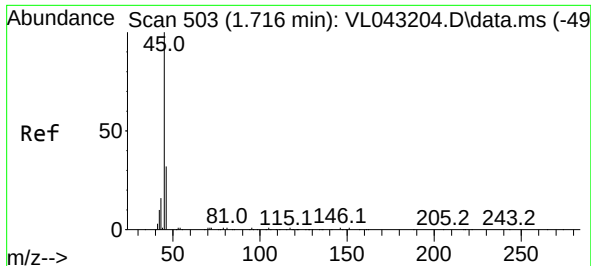
Tgt Ion:101 Resp: 1898

Ion Ratio Lower Upper

101 100

103 55.9 52.6 79.0

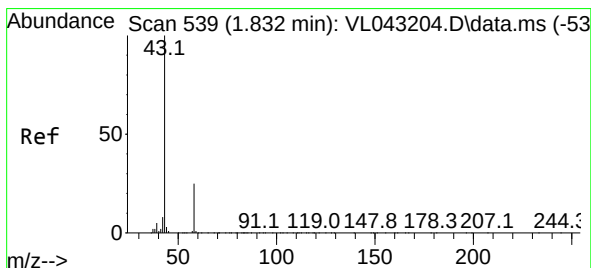
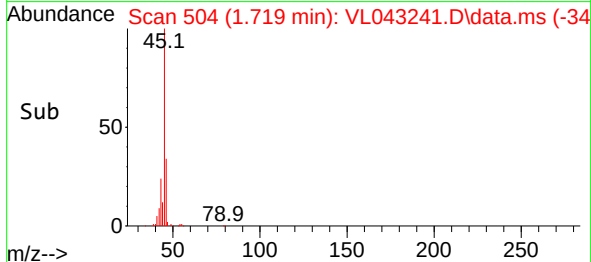
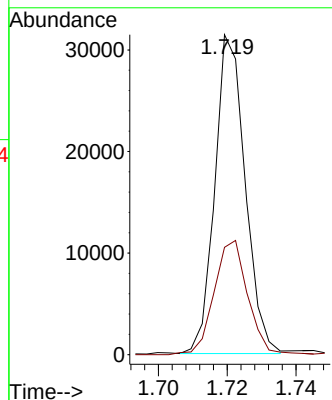
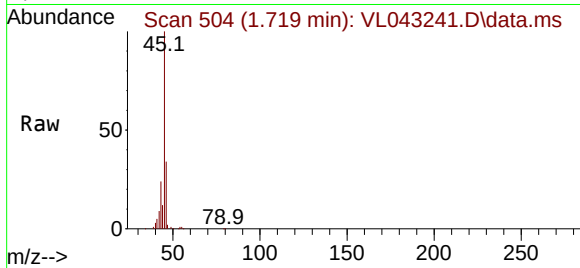




#13
Ethanol
Concen: 8.991 ppbv
RT: 1.719 min Scan# 503
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

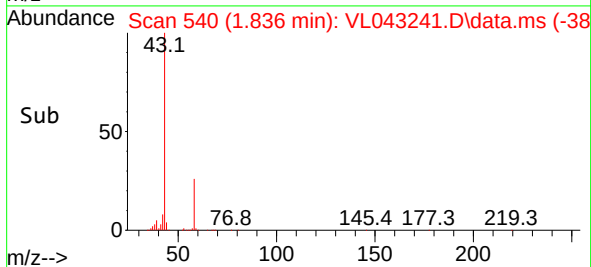
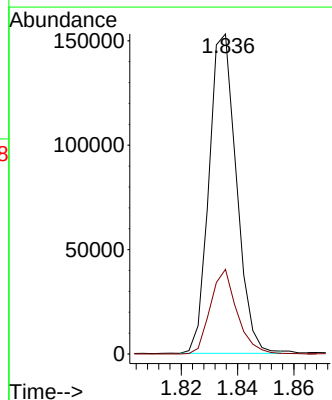
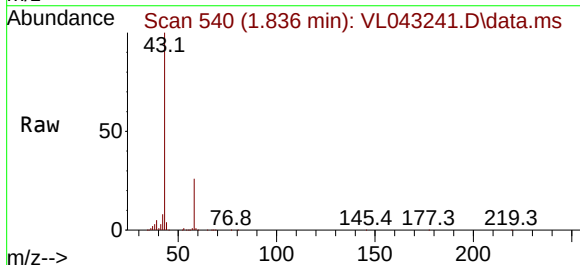
Instrument :
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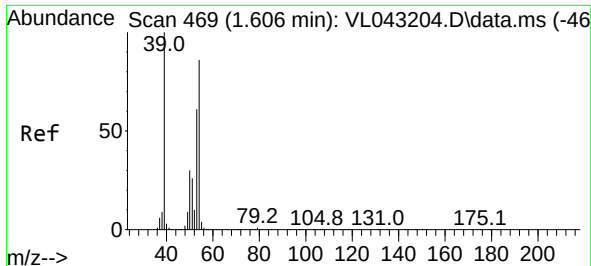
Tgt Ion: 45 Resp: 19199
Ion Ratio Lower Upper
45 100
46 41.0 15.0 59.8



#15
Acetone
Concen: 7.230 ppbv
RT: 1.836 min Scan# 540
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 43 Resp: 103554
Ion Ratio Lower Upper
43 100
58 25.7 20.7 31.1

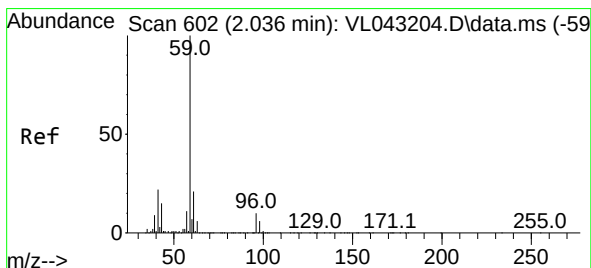
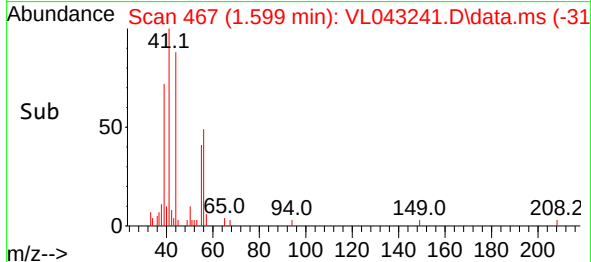
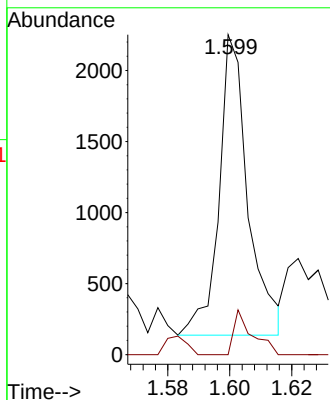
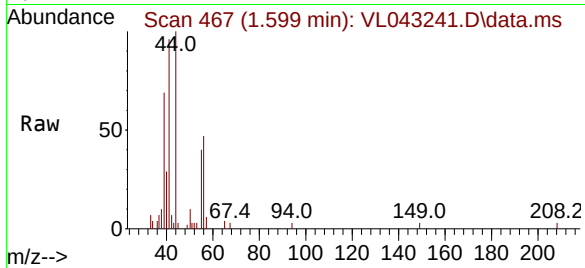




#16
1,3-Butadiene
Concen: 0.216 ppbv
RT: 1.599 min Scan# 41
Delta R.T. -0.006 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

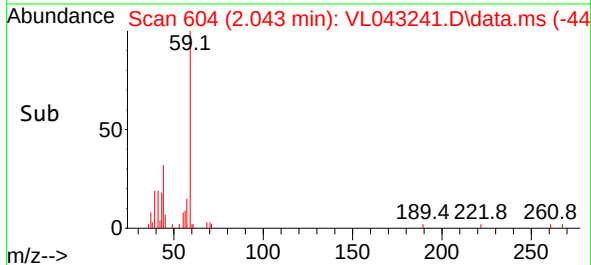
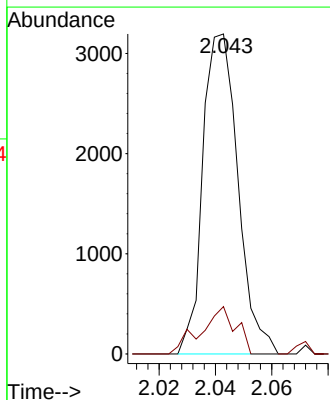
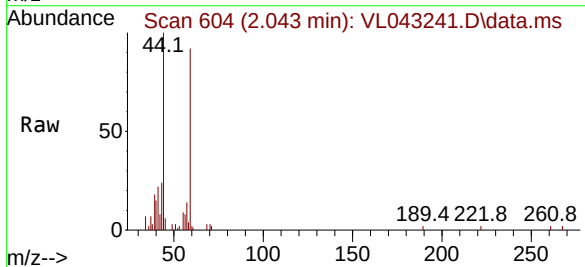
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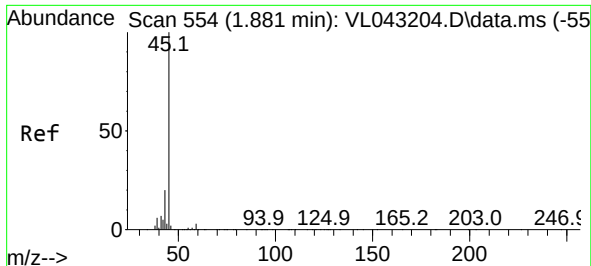
Tgt Ion: 39 Resp: 1377
Ion Ratio Lower Upper
39 100
54 14.8 59.4 89.2#



#17
tert-Butyl alcohol
Concen: 0.147 ppbv
RT: 2.043 min Scan# 604
Delta R.T. 0.007 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 59 Resp: 2769
Ion Ratio Lower Upper
59 100
57 14.7 9.0 13.4#

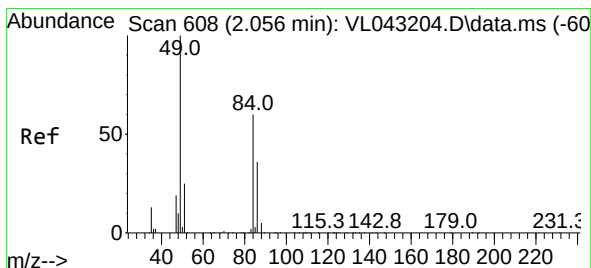
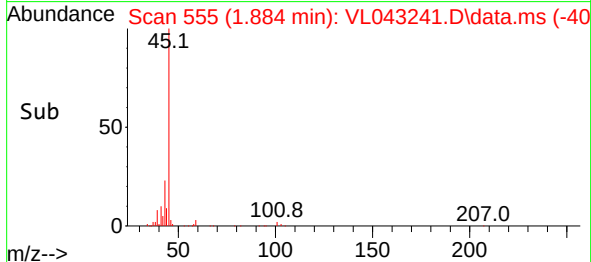
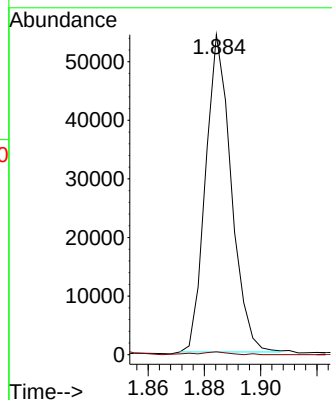
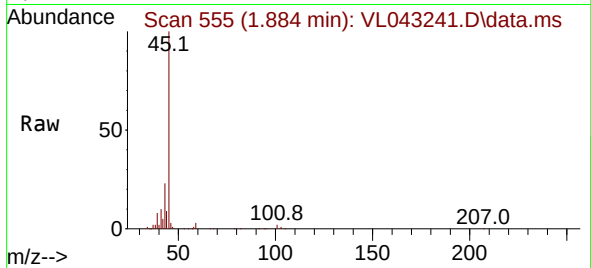




#19
Isopropyl Alcohol
Concen: 4.241 ppbv
RT: 1.884 min Scan# 511
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

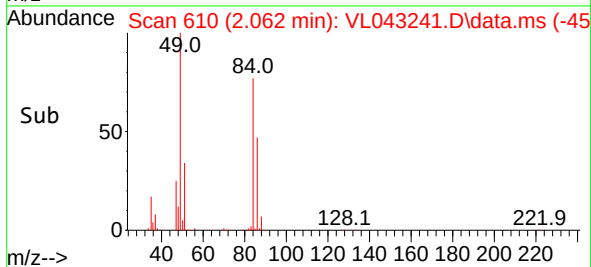
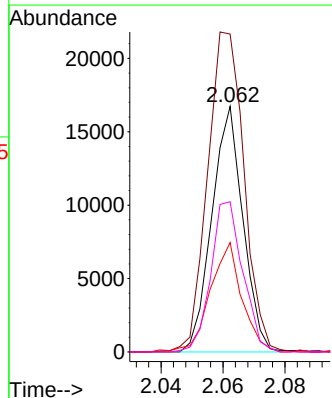
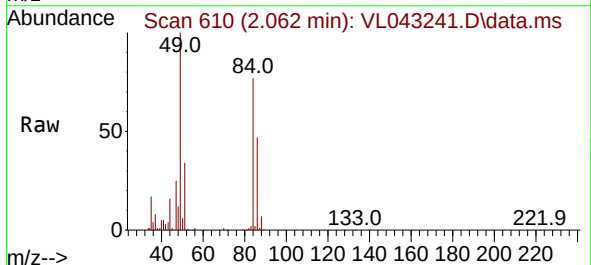
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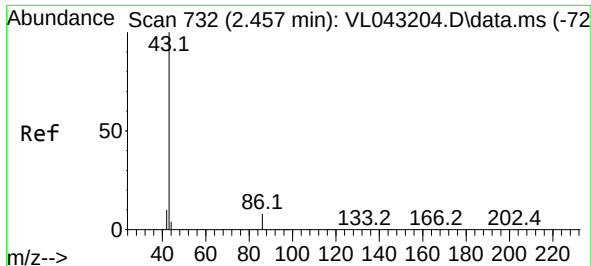
Tgt Ion: 45 Resp: 34326
Ion Ratio Lower Upper
45 100
58 77.7 31.3 46.9#



#20
Methylene Chloride
Concen: 2.149 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.006 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 84 Resp: 11672
Ion Ratio Lower Upper
84 100
49 128.5 132.9 199.3#
51 44.6 34.8 52.2
86 61.2 48.2 72.2

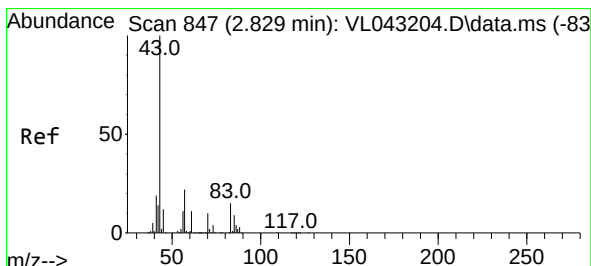
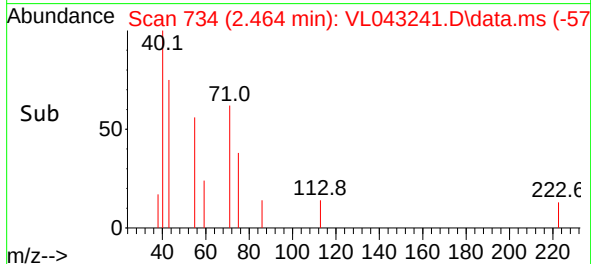
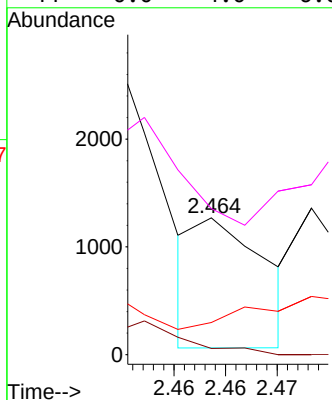
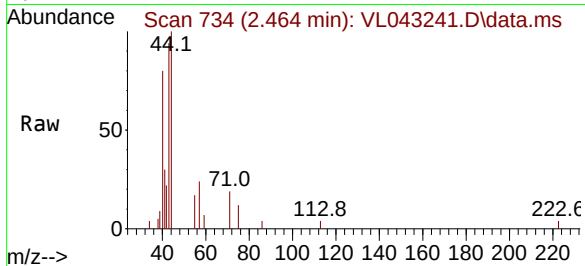




#23
 Vinyl Acetate
 Concen: 0.033 ppbv
 RT: 2.464 min Scan# 71
 Delta R.T. 0.007 min
 Lab File: VL043241.D
 Acq: 19 Nov 2025 16:06

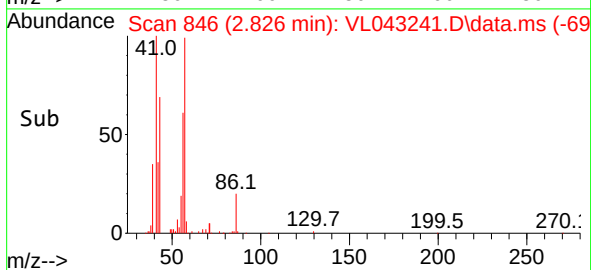
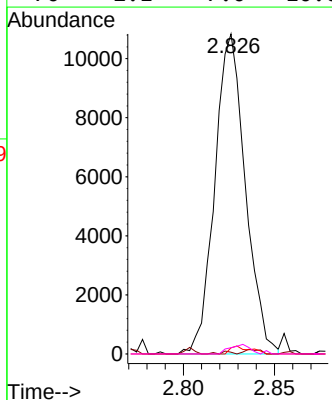
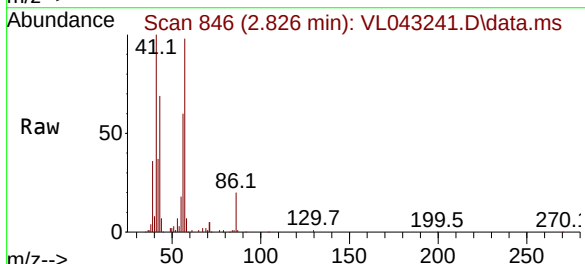
Instrument :
 MSVOA_1
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 12-SG-1

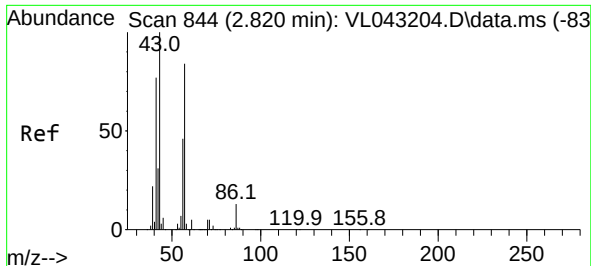
Tgt Ion: 43	Resp: 564
Ion Ratio	Lower Upper
43 100	
86 12.7	6.2 9.2#
42 14.3	8.0 12.0#
44 0.0	4.0 6.0#



#25
 Ethyl Acetate
 Concen: 0.409 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.003 min
 Lab File: VL043241.D
 Acq: 19 Nov 2025 16:06

Tgt Ion: 43	Resp: 12641
Ion Ratio	Lower Upper
43 100	
45 1.9	8.1 12.1#
61 1.6	7.0 10.4#
70 2.1	7.0 10.6#

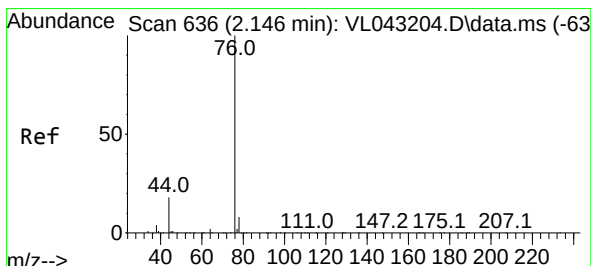
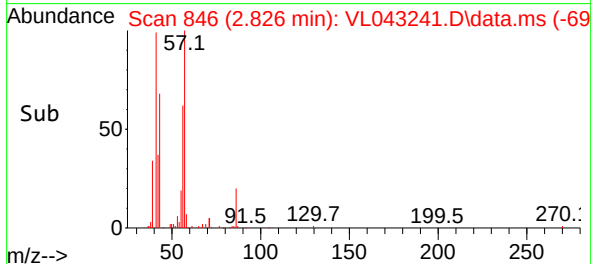
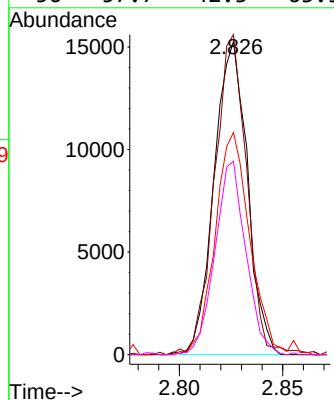
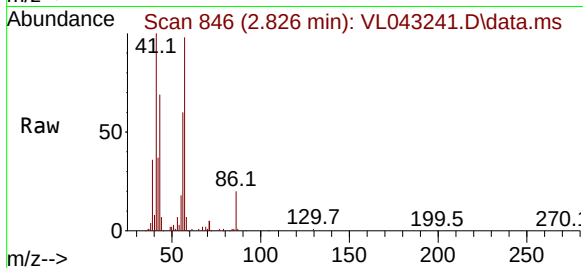




#26
Hexane
Concen: 1.263 ppbv
RT: 2.826 min Scan# 844
Delta R.T. 0.007 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

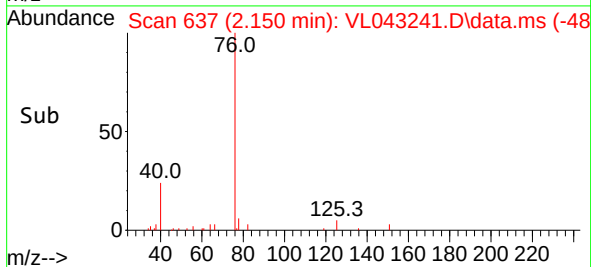
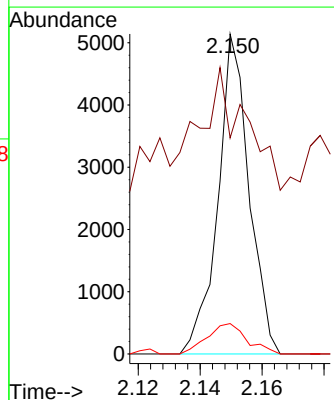
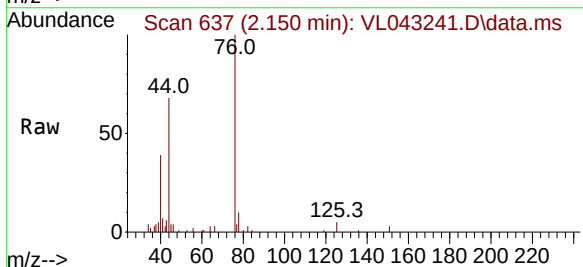
Instrument :
MSVOA_L
ClientSampleId :
12-SG-1

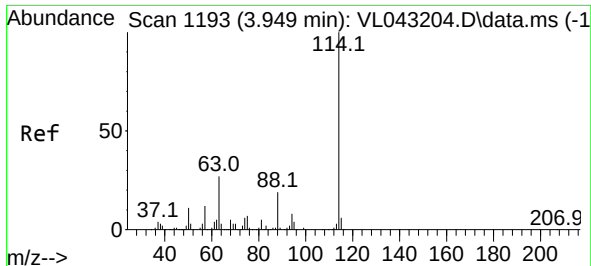
Tgt Ion:	57	Resp:	17106
Ion	Ratio	Lower	Upper
57	100		
41	100.1	74.6	111.8
43	75.2	179.0	268.4#
56	57.7	42.3	63.5



#27
Carbon Disulfide
Concen: 0.259 ppbv
RT: 2.150 min Scan# 637
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion:	76	Resp:	3585
Ion	Ratio	Lower	Upper
76	100		
44	132.4	16.1	24.1#
78	12.9	9.6	14.4





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.956 min Scan# 1195

Delta R.T. 0.007 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_1

ClientSampleId :

12-SG-1

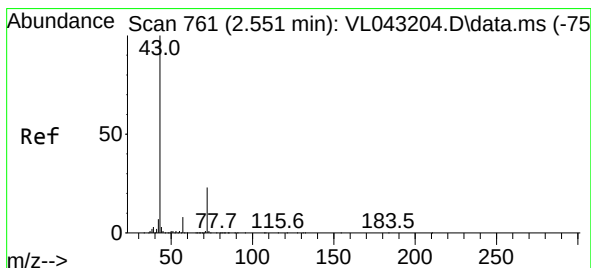
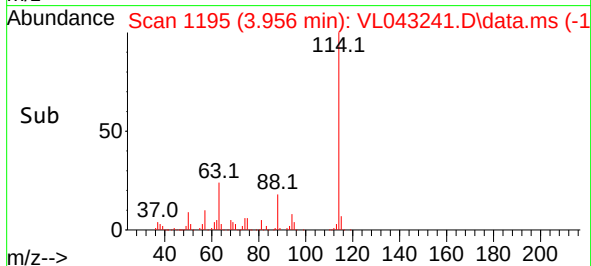
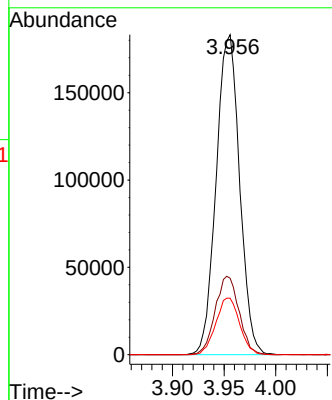
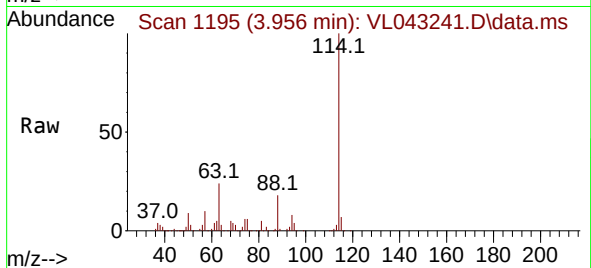
Tgt Ion:114 Resp: 289304

Ion Ratio Lower Upper

114 100

63 24.9 21.0 31.6

88 18.0 14.9 22.3



#34

2-Butanone

Concen: 0.442 ppbv

RT: 2.557 min Scan# 763

Delta R.T. 0.006 min

Lab File: VL043241.D

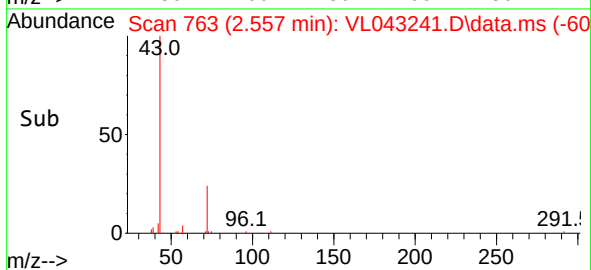
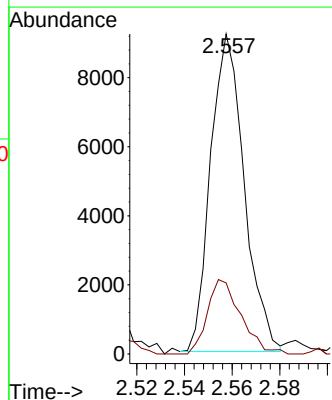
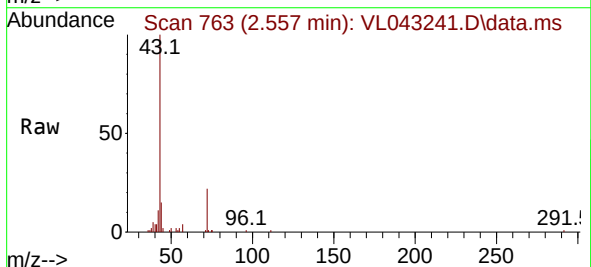
Acq: 19 Nov 2025 16:06

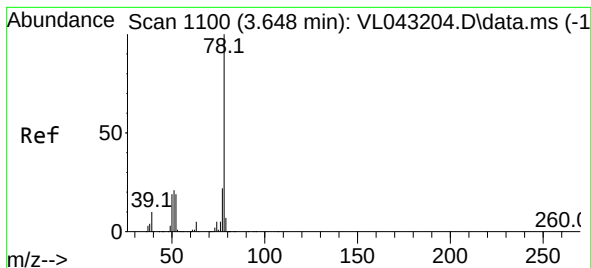
Tgt Ion: 43 Resp: 9027

Ion Ratio Lower Upper

43 100

72 23.8 18.1 27.1





#36

Benzene

Concen: 0.121 ppbv

RT: 3.658 min Scan# 1103

Delta R.T. 0.010 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_1

ClientSampleId :

12-SG-1

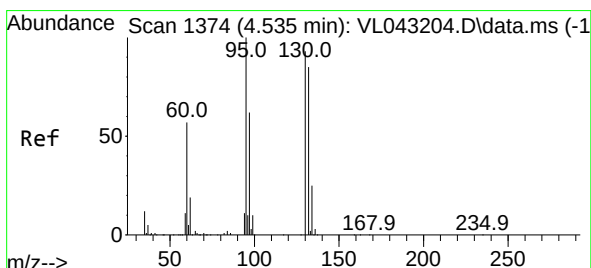
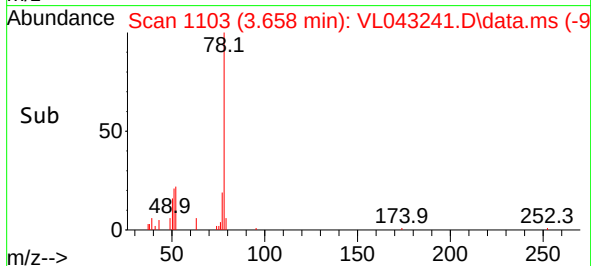
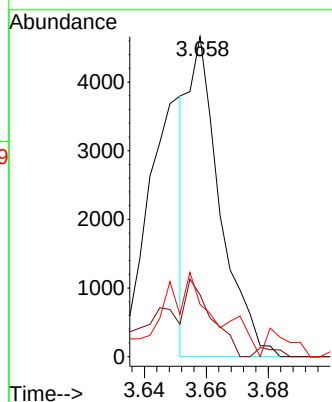
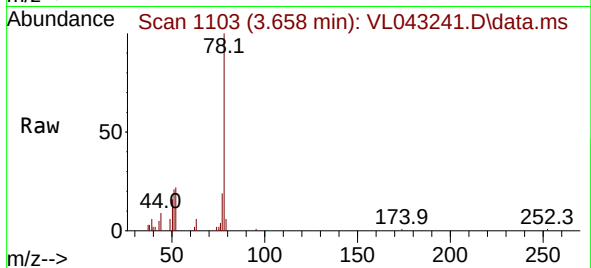
Tgt Ion: 78 Resp: 3352

Ion Ratio Lower Upper

78 100

77 17.2 17.5 26.3#

50 6.2 15.5 23.3#



#38

Trichloroethene

Concen: 0.147 ppbv

RT: 4.542 min Scan# 1376

Delta R.T. 0.006 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Tgt Ion: 130 Resp: 1590

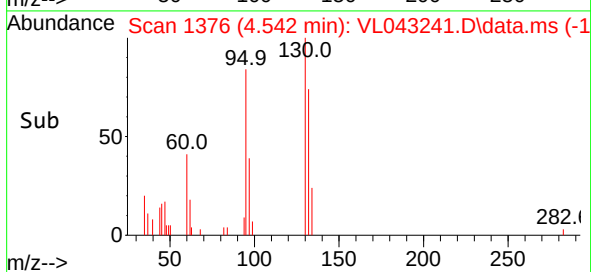
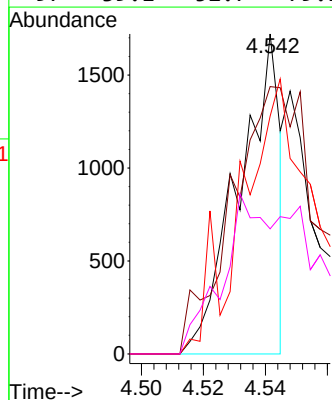
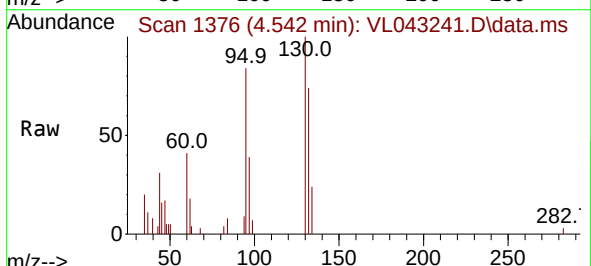
Ion Ratio Lower Upper

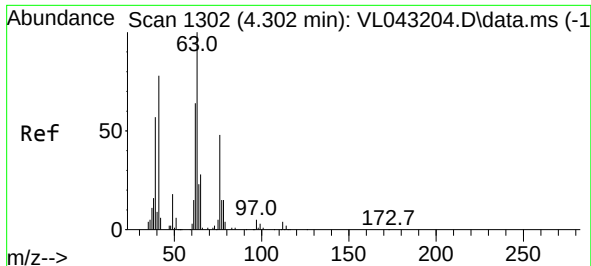
130 100

95 83.6 85.7 128.5#

132 74.3 73.4 110.0

97 39.1 52.7 79.1#





#39

1,2-Dichloropropane

Concen: 7.094 ppbv

RT: 3.952 min Scan# 1194

Delta R.T. -0.350 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_L

ClientSampleId :

12-SG-1

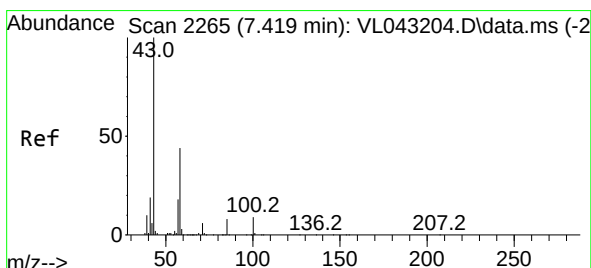
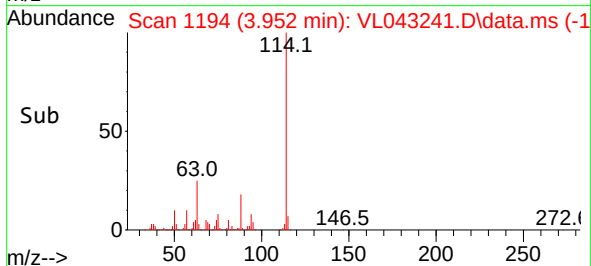
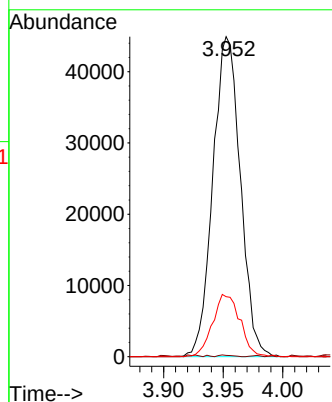
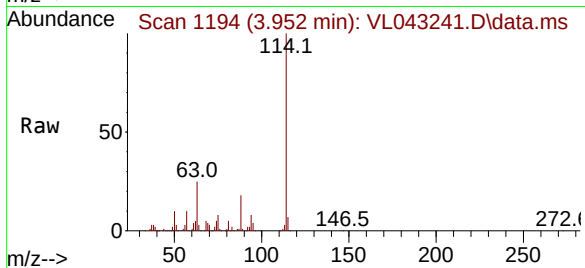
Tgt Ion: 63 Resp: 71940

Ion Ratio Lower Upper

63 100

41 0.3 62.6 93.8#

62 18.8 51.0 76.6#



#51

2-Hexanone

Concen: 0.033 ppbv

RT: 7.442 min Scan# 2272

Delta R.T. 0.023 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

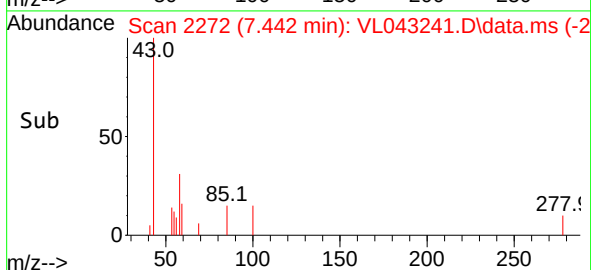
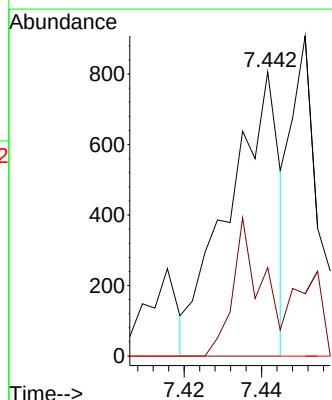
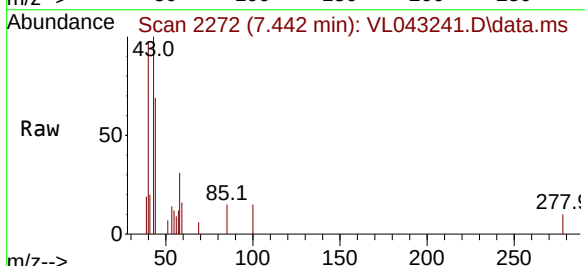
Tgt Ion: 43 Resp: 727

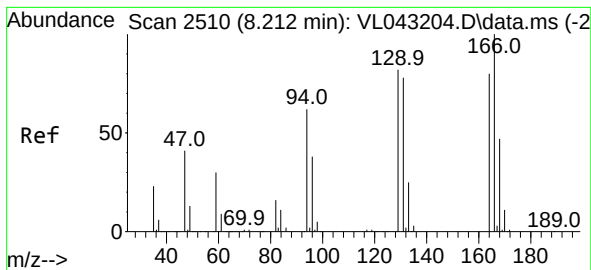
Ion Ratio Lower Upper

43 100

58 56.1 38.4 57.6

98 0.0 0.0 0.0





#52

Tetrachloroethene

Concen: 4.093 ppbv

RT: 8.218 min Scan# 2116

Delta R.T. 0.006 min

Lab File: VL043241.D

Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_1

ClientSampleId :

12-SG-1

Tgt Ion:164 Resp: 42186

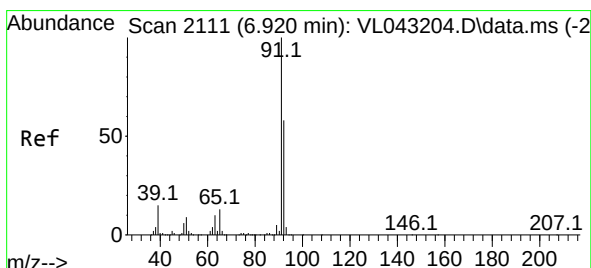
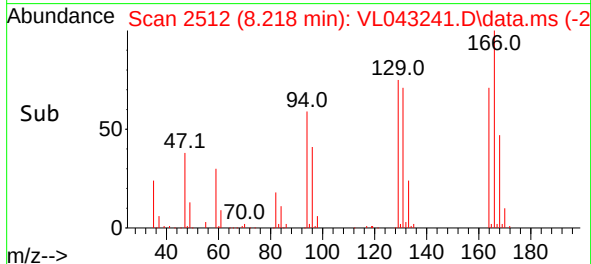
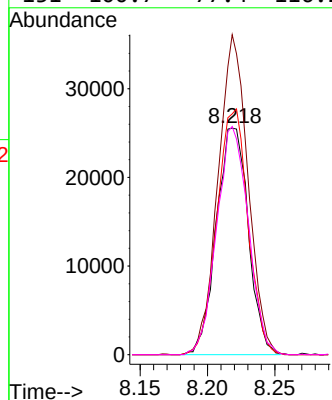
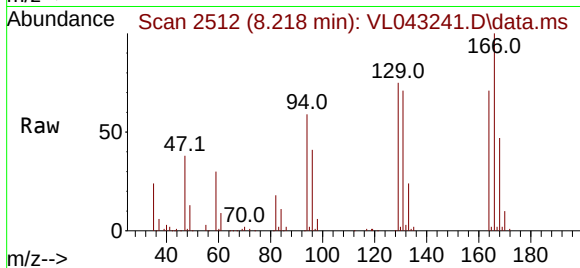
Ion Ratio Lower Upper

164 100

166 141.2 99.4 149.2

129 106.3 81.8 122.8

131 100.7 77.4 116.2



#53

Toluene

Concen: 0.073 ppbv

RT: 6.937 min Scan# 2116

Delta R.T. 0.016 min

Lab File: VL043241.D

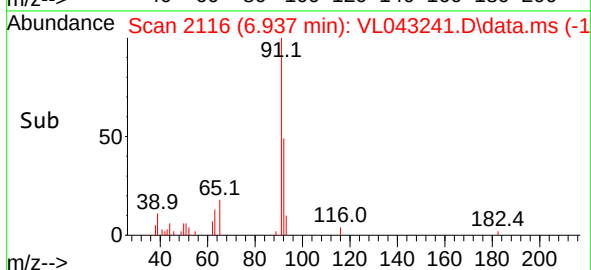
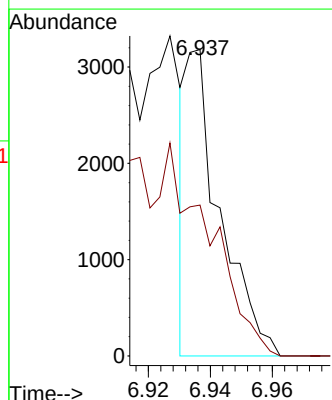
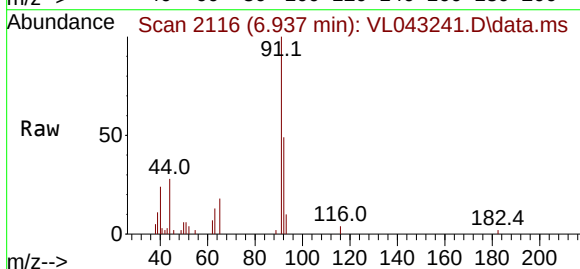
Acq: 19 Nov 2025 16:06

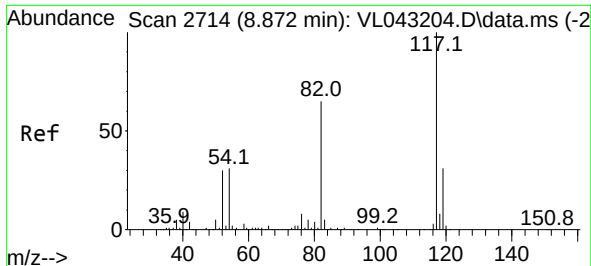
Tgt Ion: 91 Resp: 2402

Ion Ratio Lower Upper

91 100

92 0.0 47.4 71.0#

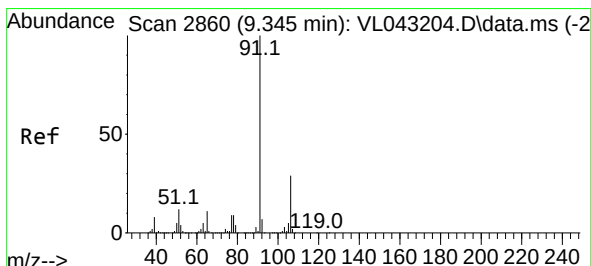
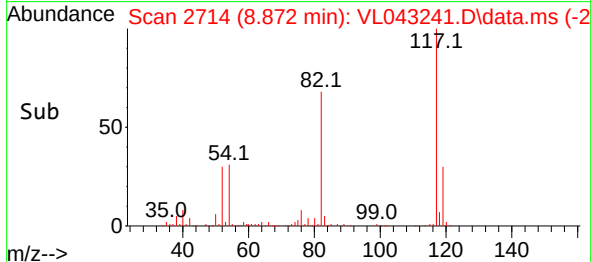
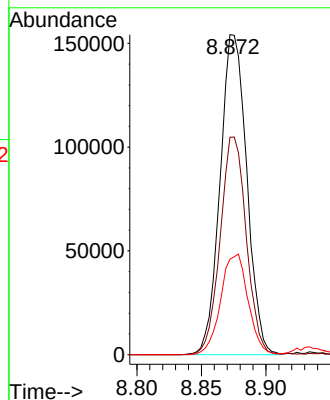
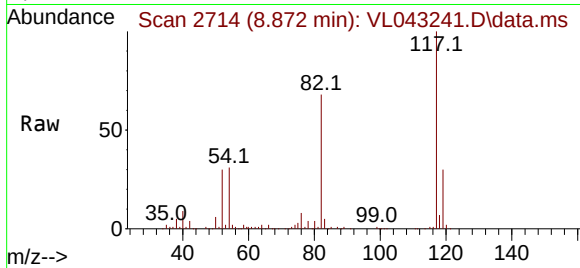




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.872 min Scan# 21
Delta R.T. 0.000 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

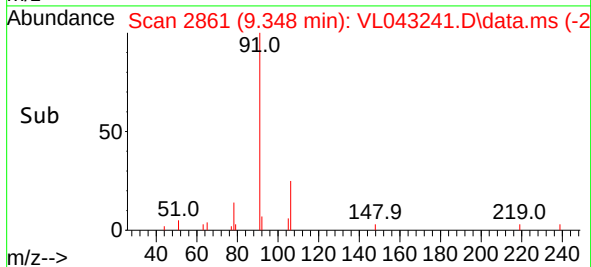
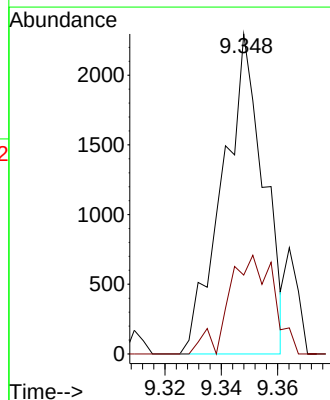
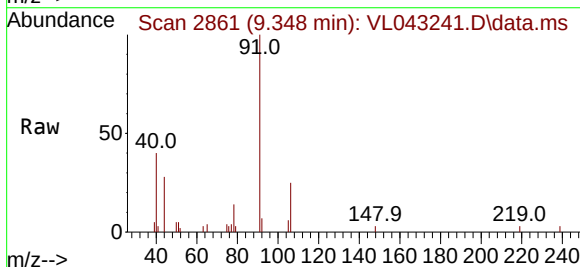
Instrument :
MSVOA_L
ClientSampleId :
12-SG-1

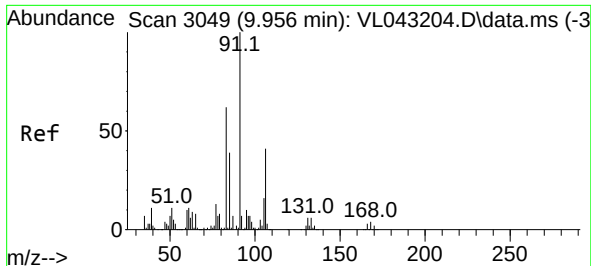
Tgt Ion:117 Resp: 221774
Ion Ratio Lower Upper
117 100
82 66.9 56.1 84.1
119 32.2 25.0 37.6



#58
Ethyl Benzene
Concen: 0.054 ppbv
RT: 9.348 min Scan# 2861
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 91 Resp: 2322
Ion Ratio Lower Upper
91 100
106 24.7 22.8 34.2

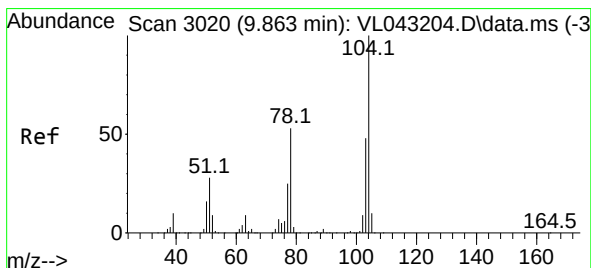
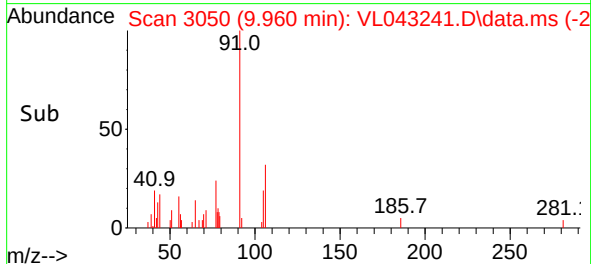
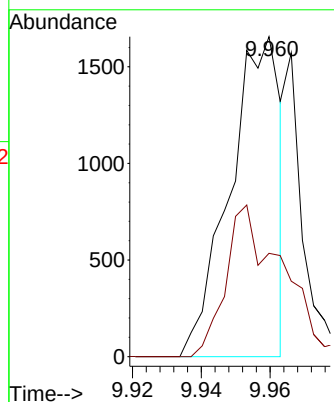
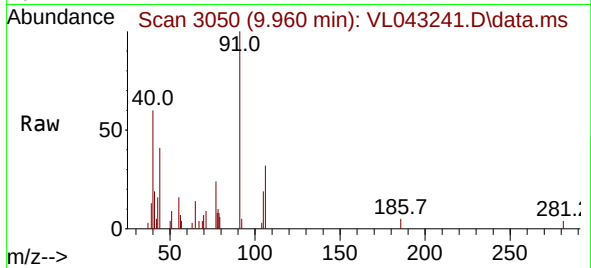




#60
o-Xylene
Concen: 0.049 ppbv
RT: 9.960 min Scan# 3049
Delta R.T. 0.003 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

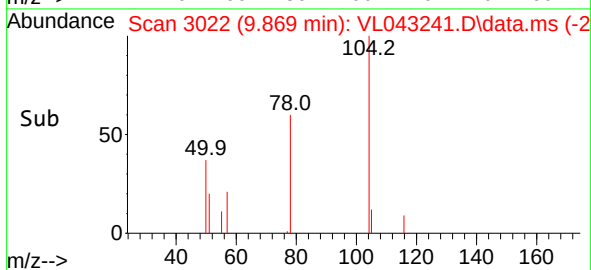
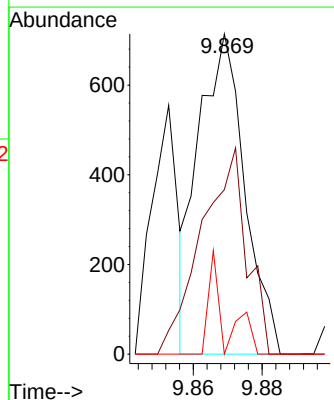
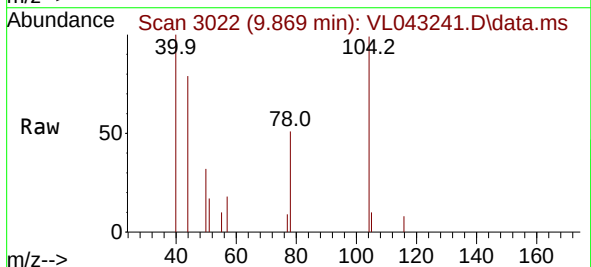
Instrument :
MSVOA_1
ClientSampleId :
12-SG-1

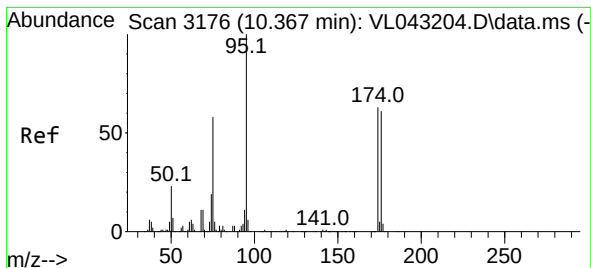
Tgt Ion: 91 Resp: 1690
Ion Ratio Lower Upper
91 100
106 52.7 20.9 62.8



#61
Styrene
Concen: 0.044 ppbv
RT: 9.869 min Scan# 3022
Delta R.T. 0.007 min
Lab File: VL043241.D
Acq: 19 Nov 2025 16:06

Tgt Ion: 104 Resp: 665
Ion Ratio Lower Upper
104 100
78 63.2 42.1 63.1#
103 0.0 37.2 55.8#

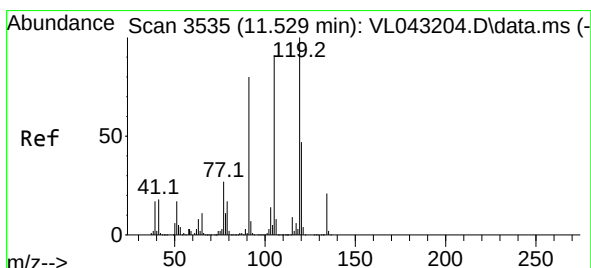
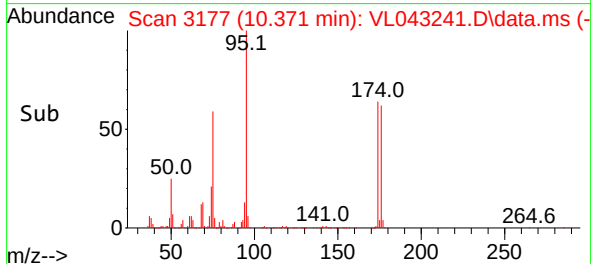
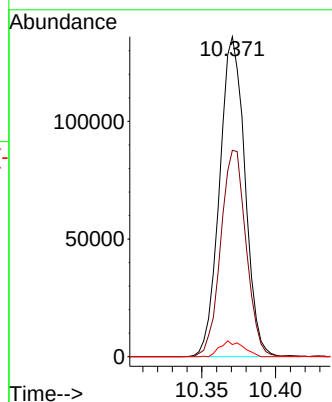
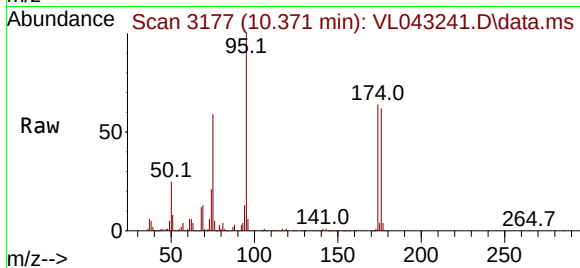




#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.993 ppbv
 RT: 10.371 min Scan# 3177
 Delta R.T. 0.003 min
 Lab File: VL043241.D
 Acq: 19 Nov 2025 16:06

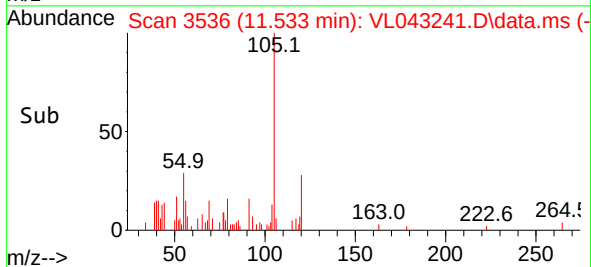
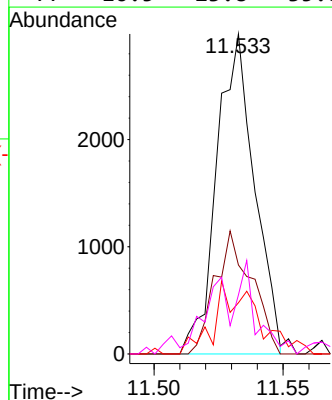
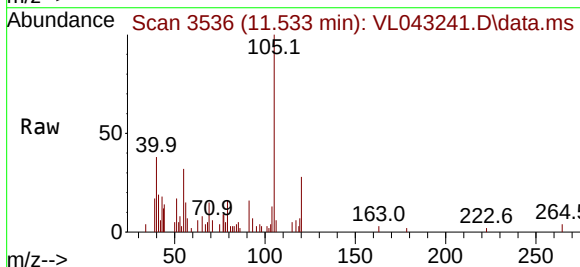
Instrument :
 MSVOA_L
 ClientSampleId :
 12-SG-1

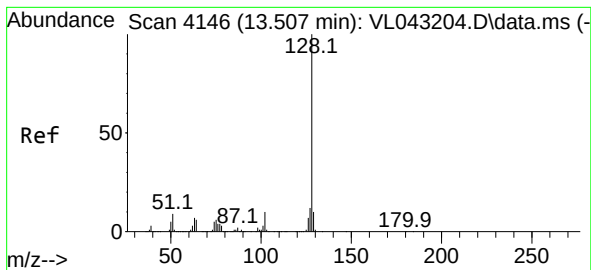
Tgt Ion: 95 Resp: 162452
 Ion Ratio Lower Upper
 95 100
 174 64.8 50.2 75.2
 175 4.6 4.1 6.1



#74
 1,2,4-Trimethylbenzene
 Concen: 0.080 ppbv
 RT: 11.533 min Scan# 3536
 Delta R.T. 0.003 min
 Lab File: VL043241.D
 Acq: 19 Nov 2025 16:06

Tgt Ion: 105 Resp: 3032
 Ion Ratio Lower Upper
 105 100
 120 27.8 41.7 62.5#
 91 16.0 70.0 105.0#
 77 16.5 23.8 35.8#





#79

Naphthalene

Concen: 0.034 ppbv

RT: 13.517 min Scan# 41

Delta R.T. 0.010 min

Lab File: VL043241.D

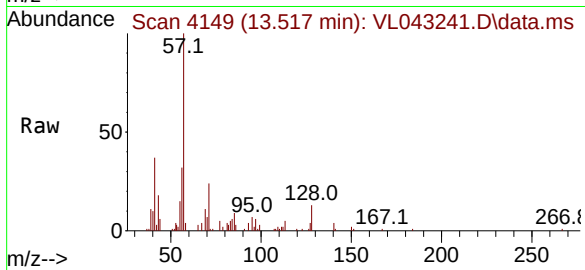
Acq: 19 Nov 2025 16:06

Instrument :

MSVOA_L

ClientSampleId :

12-SG-1



Tgt Ion:	128	Resp:	1140
Ion	Ratio	Lower	Upper
128	100		
127	22.4	9.9	14.9#
129	0.0	8.4	12.6#

