

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL091825\
 Data File : VL042944.D
 Acq On : 18 Sep 2025 14:01
 Operator : SY/MD
 Sample : Q3111-02 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Sep 19 01:25:26 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL091725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Sep 18 02:57:46 2025
 Response via : Initial Calibration

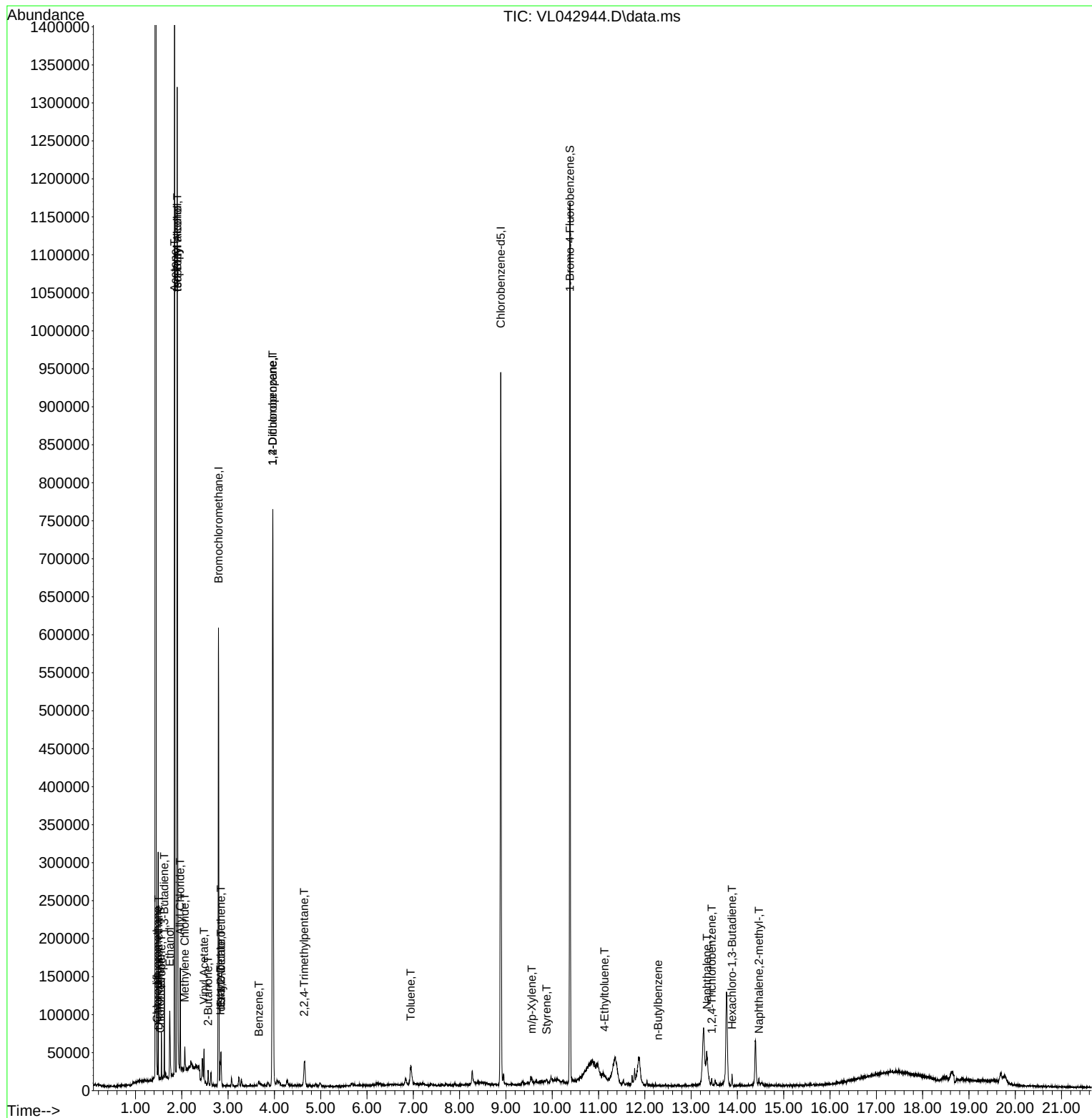
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	2.793	49	174462	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.965	114	433367	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.888	117	375554	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.383	95	290943	9.911	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	1347	0.054	ppbv #	85
3) Chlorodifluoromethane	1.466	51	3980	0.152	ppbv #	78
4) Chloromethane	1.534	50	1123	0.112	ppbv #	77
9) Propene	1.560	41	5654	0.590	ppbv	85
13) Ethanol	1.738	45	61531	62.983	ppbv	93
15) Acetone	1.842	43	742105	34.631	ppbv	96
16) 1,3-Butadiene	1.622	39	6348	0.708	ppbv #	25
17) tert-Butyl alcohol	1.900	59	30530	1.480	ppbv	94
19) Isopropyl Alcohol	1.900	45	818245	71.220	ppbv #	96
20) Methylene Chloride	2.065	84	4339	0.465	ppbv	91
21) Allyl Chloride	1.965	41	17934	1.235	ppbv #	47
23) Vinyl Acetate	2.479	43	11446	0.460	ppbv #	46
25) Ethyl Acetate	2.845	43	28227	0.617	ppbv #	92
26) Hexane	2.836	57	5587	0.285	ppbv #	1
31) cis-1,2-Dichloroethene	2.848	61	3237	0.169	ppbv #	24
34) 2-Butanone	2.567	43	10224	0.364	ppbv	93
36) Benzene	3.664	78	3666	0.097	ppbv #	75
39) 1,2-Dichloropropane	3.965	63	115933	7.589	ppbv #	21
44) 2,2,4-Trimethylpentane	4.645	57	12611	0.200	ppbv #	28
53) Toluene	6.943	91	15621	0.443	ppbv	98
59) m/p-Xylene	9.558	91	2091	0.051	ppbv #	30
61) Styrene	9.878	104	1042	0.590	ppbv #	1
70) n-Butylbenzene	12.286	91	214	0.304	ppbv #	33
72) 4-Ethyltoluene	11.128	105	4038	0.425	ppbv #	46
78) Hexachloro-1,3-Butadiene	13.882	225	1176	0.061	ppbv	89
79) Naphthalene	13.342	128	25306	0.857	ppbv	97
80) Naphthalene,2-methyl-	14.465	142	3254	0.952	ppbv	95
81) 1,2,4-Trichlorobenzene	13.445	180	1154	0.471	ppbv #	82

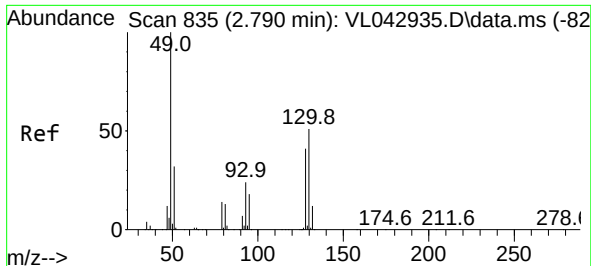
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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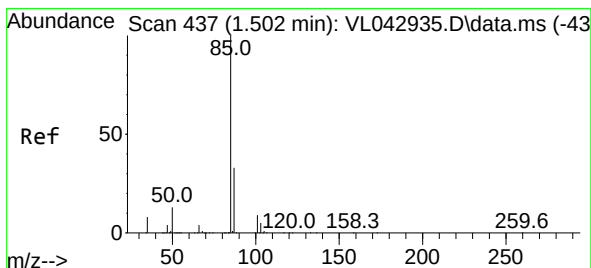
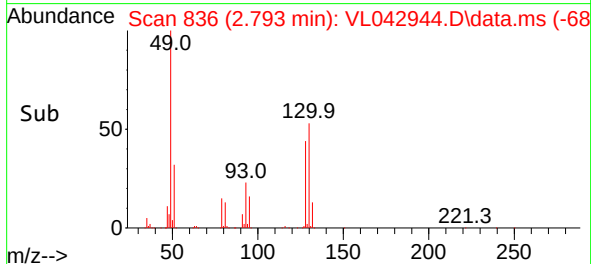
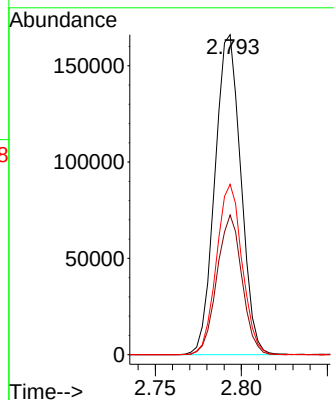
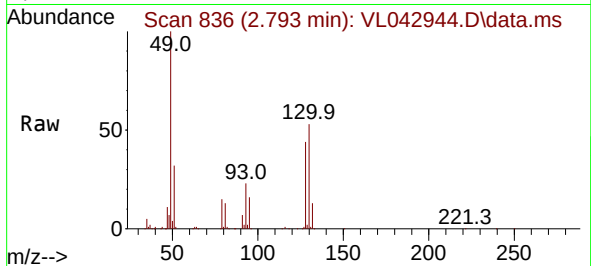




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.793 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

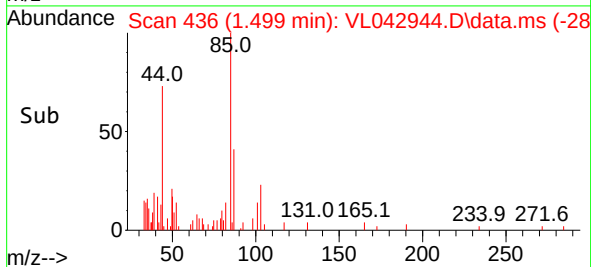
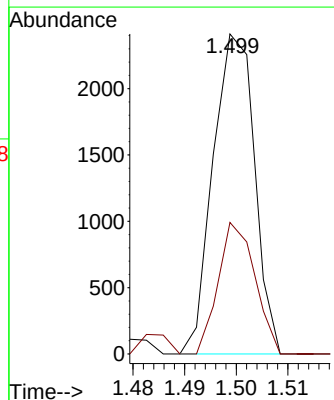
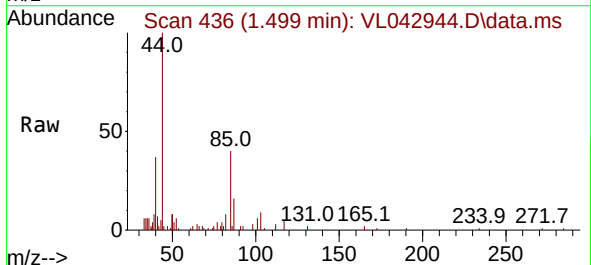
Instrument :
MSVOA_L
ClientSampleId :

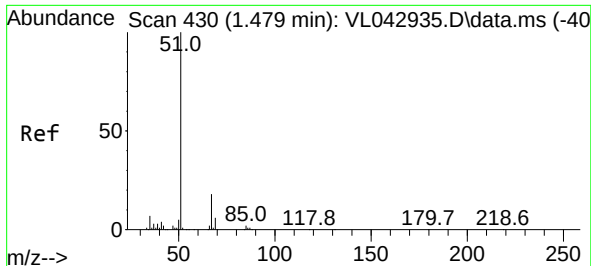
Tgt Ion: 49 Resp: 174462
Ion Ratio Lower Upper
49 100
128 42.1 21.1 63.4
130 52.6 26.4 79.2



#2
Dichlorodifluoromethane
Concen: 0.054 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 85 Resp: 1347
Ion Ratio Lower Upper
85 100
87 41.1 26.1 39.1#

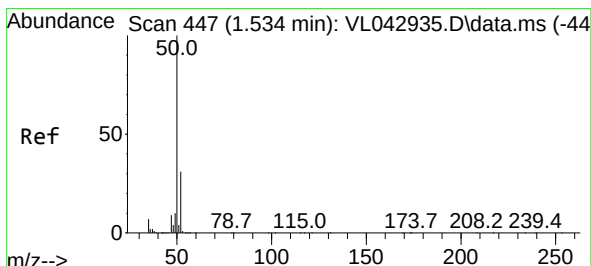
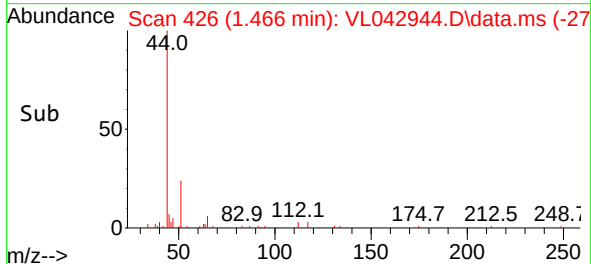
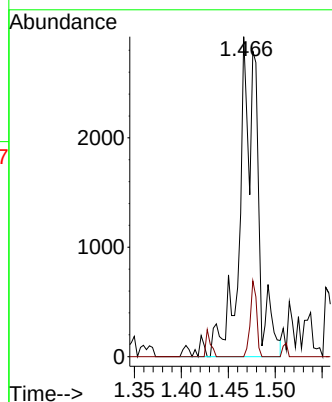
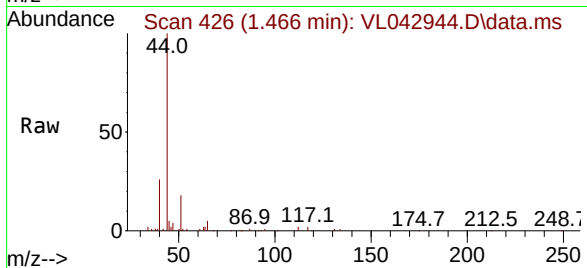




#3
Chlorodifluoromethane
Concen: 0.152 ppbv
RT: 1.466 min Scan# 41
Delta R.T. -0.013 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

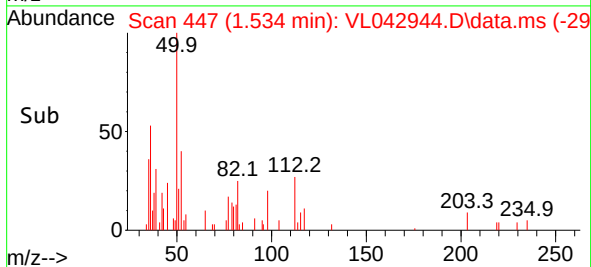
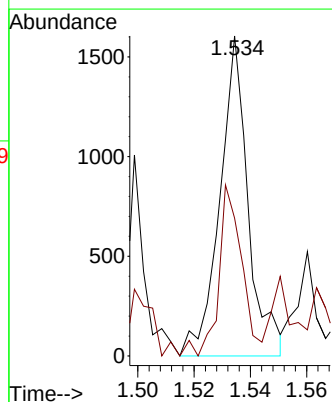
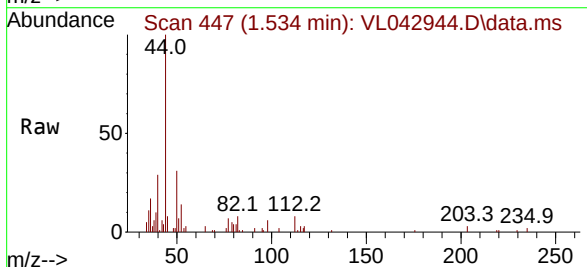
Instrument :
MSVOA_L
ClientSampleId :

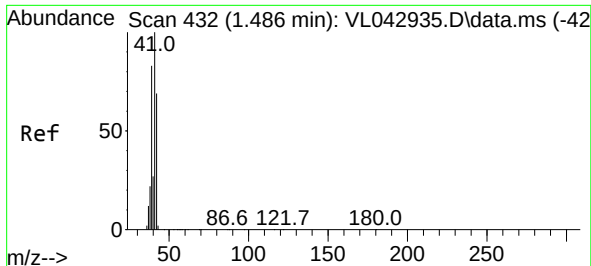
Tgt Ion: 51 Resp: 3980
Ion Ratio Lower Upper
51 100
67 8.2 14.1 21.1#



#4
Chloromethane
Concen: 0.112 ppbv
RT: 1.534 min Scan# 447
Delta R.T. 0.000 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 50 Resp: 1123
Ion Ratio Lower Upper
50 100
52 43.1 24.6 36.8#

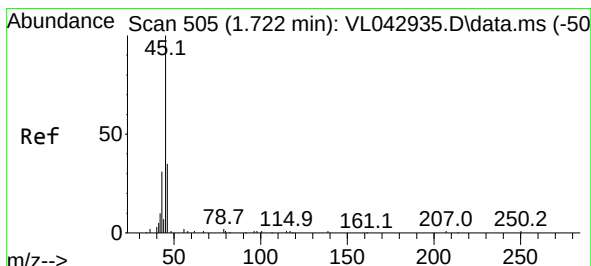
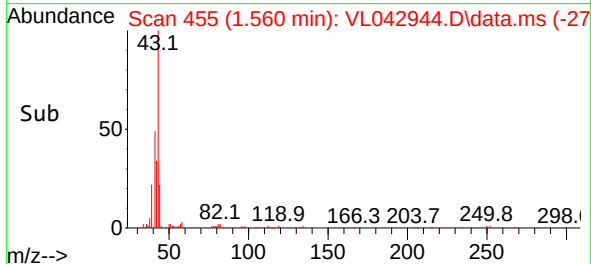
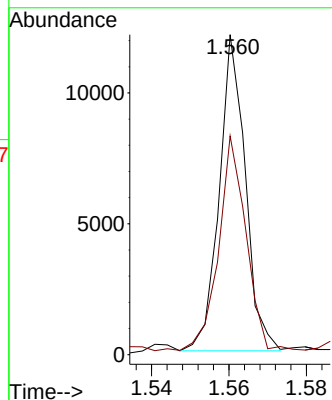
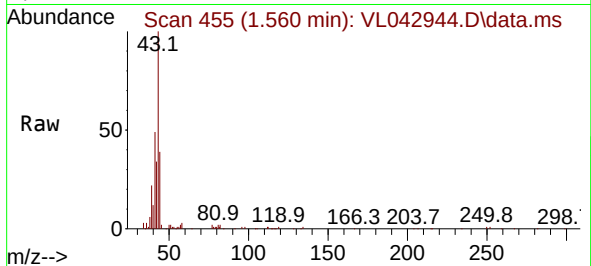




#9
Propene
Concen: 0.590 ppbv
RT: 1.560 min Scan# 41
Delta R.T. 0.075 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

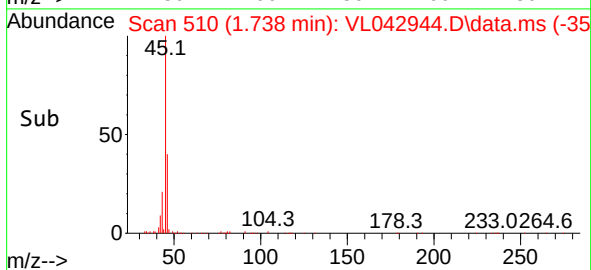
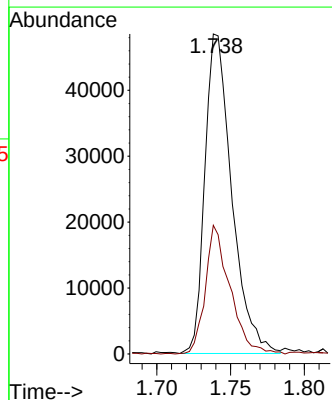
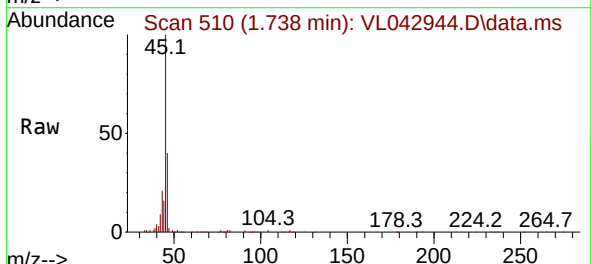
Instrument :
MSVOA_L
ClientSampleId :

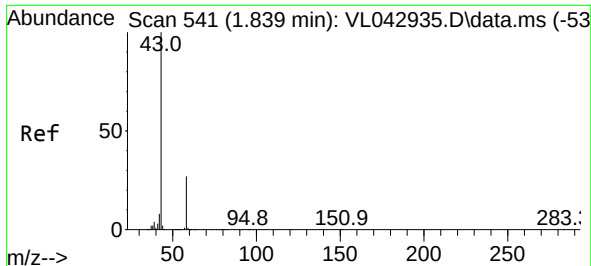
Tgt Ion: 41 Resp: 5654
Ion Ratio Lower Upper
41 100
42 81.3 55.0 82.4



#13
Ethanol
Concen: 62.983 ppbv
RT: 1.738 min Scan# 510
Delta R.T. 0.016 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 45 Resp: 61531
Ion Ratio Lower Upper
45 100
46 37.0 16.5 66.1

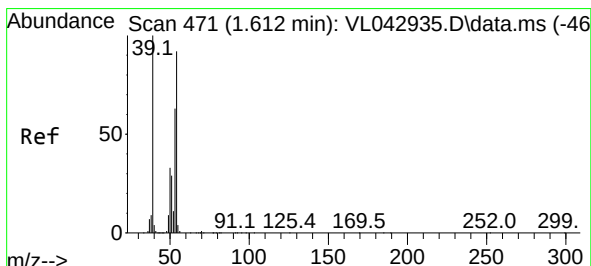
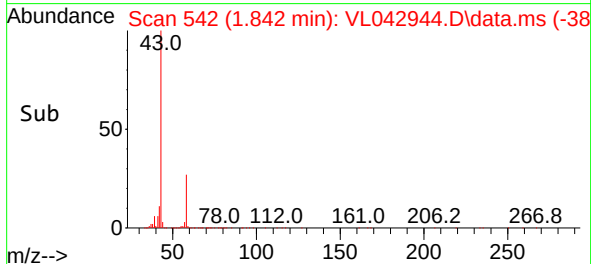
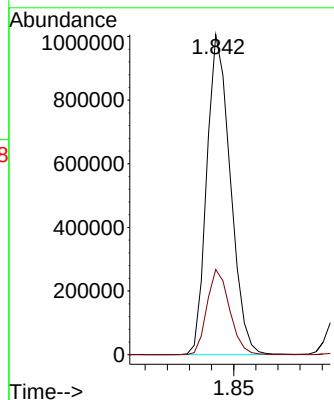
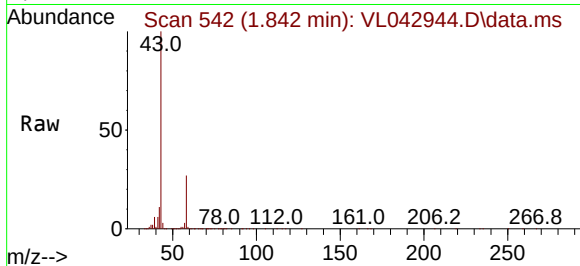




#15
Acetone
Concen: 34.631 ppbv
RT: 1.842 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

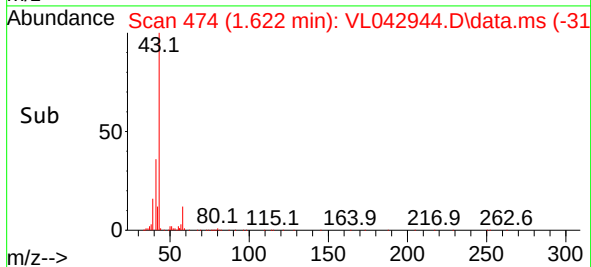
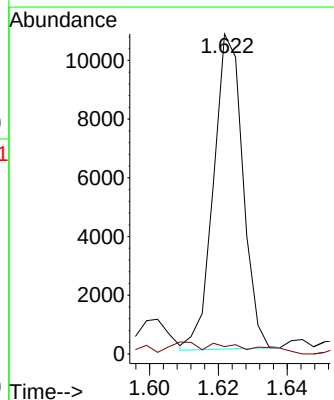
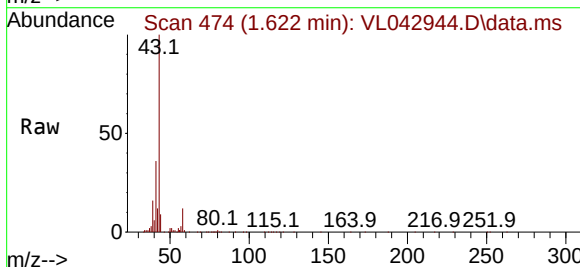
Instrument :
MSVOA_L
ClientSampleId :

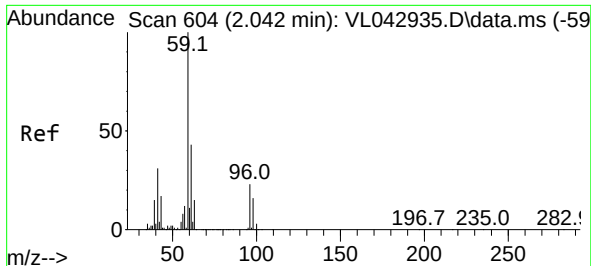
Tgt Ion: 43 Resp: 742105
Ion Ratio Lower Upper
43 100
58 25.6 22.2 33.2



#16
1,3-Butadiene
Concen: 0.708 ppbv
RT: 1.622 min Scan# 474
Delta R.T. 0.010 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 39 Resp: 6348
Ion Ratio Lower Upper
39 100
54 12.7 62.2 93.4#





#17

tert-Butyl alcohol

Concen: 1.480 ppbv

RT: 1.900 min Scan# 5

Delta R.T. -0.142 min

Lab File: VL042944.D

Acq: 18 Sep 2025 14:01

Instrument :

MSVOA_L

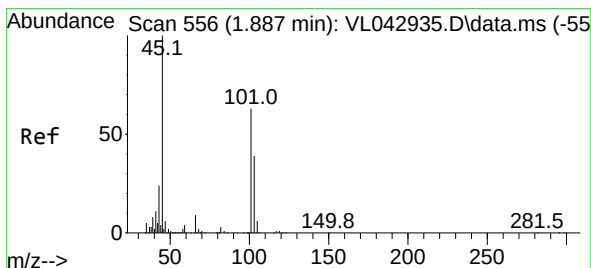
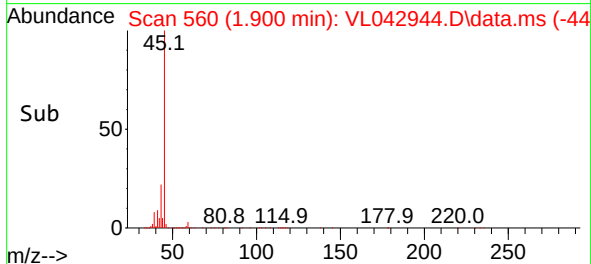
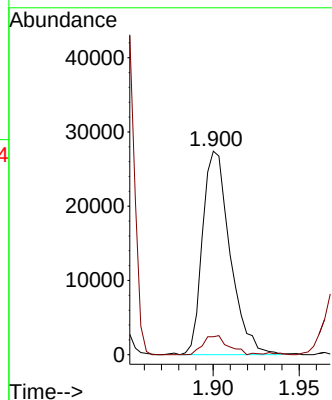
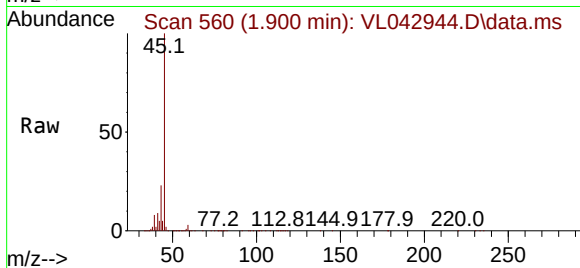
ClientSampleId :

Tgt Ion: 59 Resp: 30530

Ion Ratio Lower Upper

59 100

57 9.1 9.0 13.6



#19

Isopropyl Alcohol

Concen: 71.220 ppbv

RT: 1.900 min Scan# 560

Delta R.T. 0.013 min

Lab File: VL042944.D

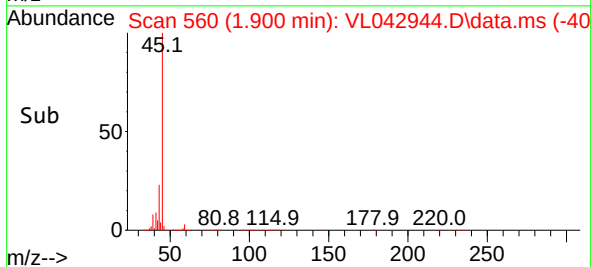
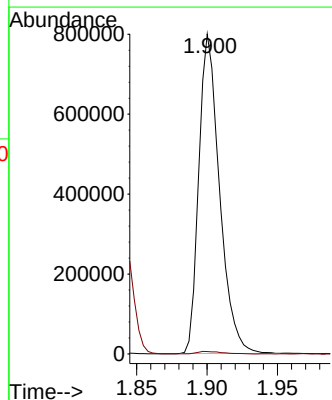
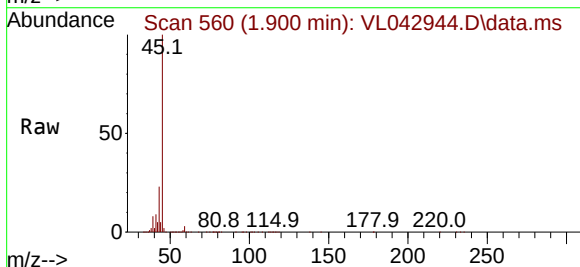
Acq: 18 Sep 2025 14:01

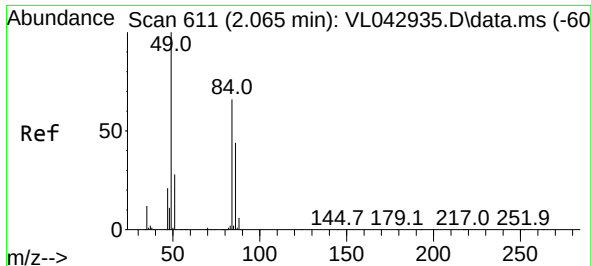
Tgt Ion: 45 Resp: 818245

Ion Ratio Lower Upper

45 100

58 1.0 2.0 3.0#

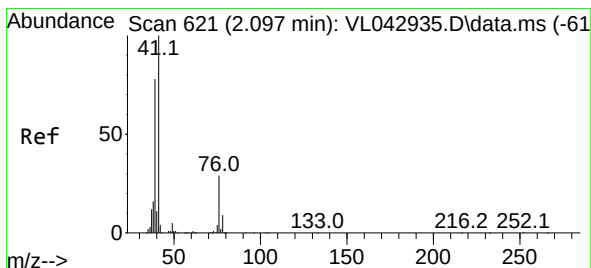
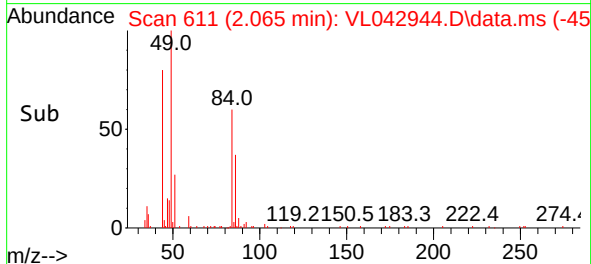
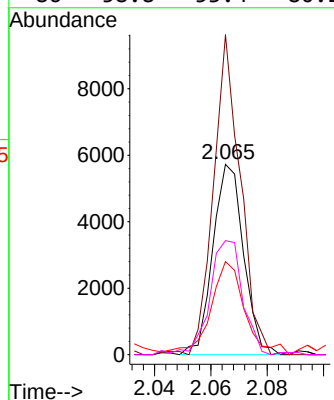
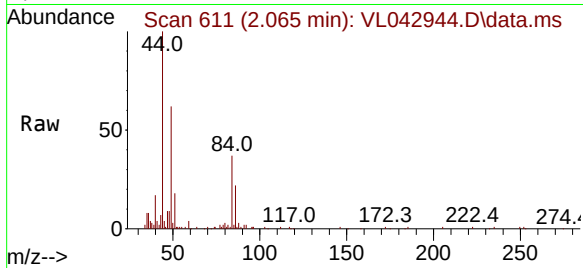




#20
Methylene Chloride
Concen: 0.465 ppbv
RT: 2.065 min Scan# 611
Delta R.T. 0.000 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

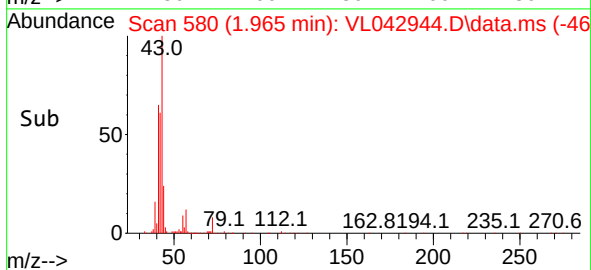
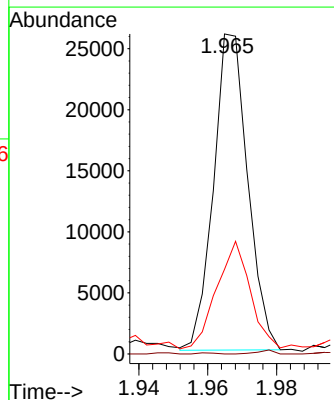
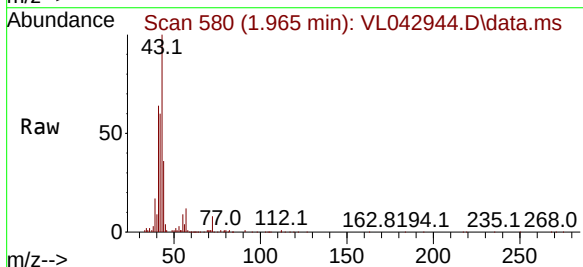
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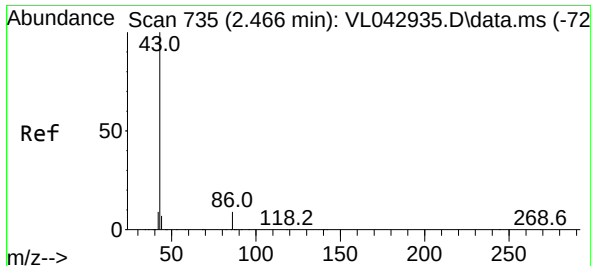
Tgt Ion:	84	Resp:	4339
Ion	Ratio	Lower	Upper
84	100		
49	166.5	121.8	182.6
51	43.3	35.6	53.4
86	58.8	53.4	80.2



#21
Allyl Chloride
Concen: 1.235 ppbv
RT: 1.965 min Scan# 580
Delta R.T. -0.133 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

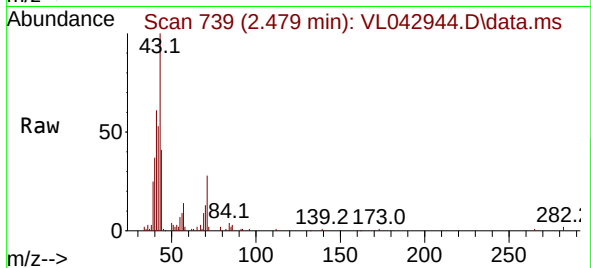
Tgt Ion:	41	Resp:	17934
Ion	Ratio	Lower	Upper
41	100		
76	1.4	23.8	35.6#
39	32.4	63.2	94.8#



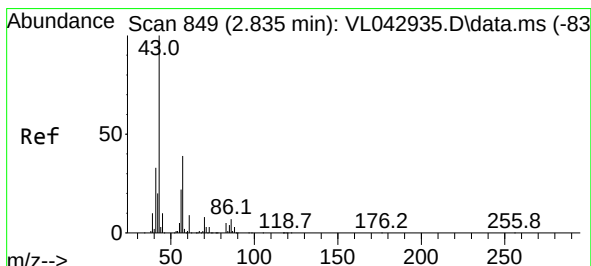
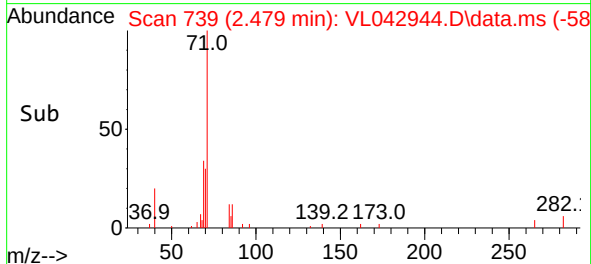
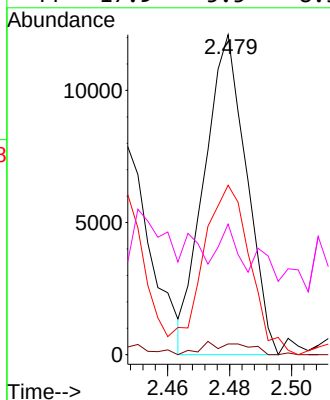


#23
 Vinyl Acetate
 Concen: 0.460 ppbv
 RT: 2.479 min Scan# 71
 Delta R.T. 0.013 min
 Lab File: VL042944.D
 Acq: 18 Sep 2025 14:01

Instrument :
 MSVOA_L
 ClientSampleId :

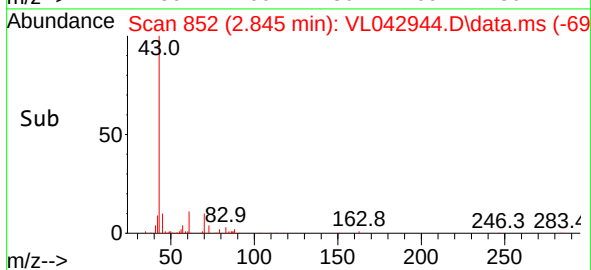
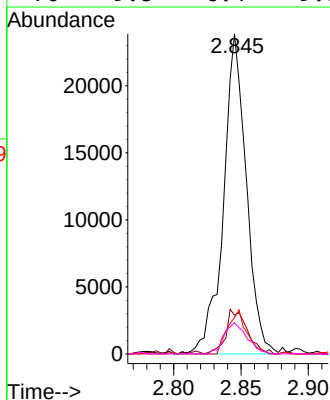
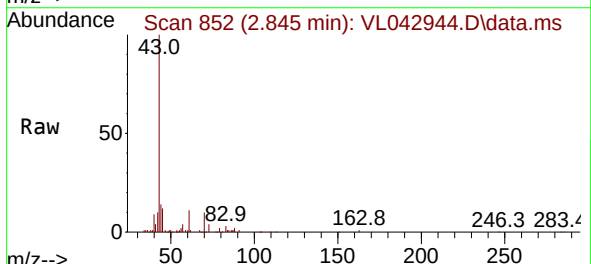


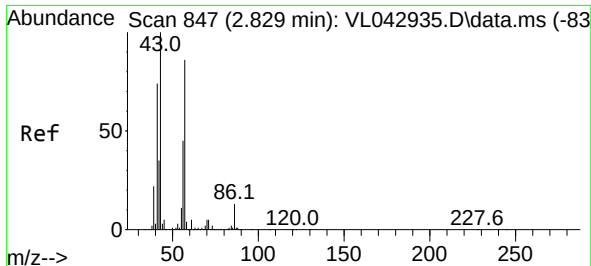
Tgt Ion: 43	Resp: 11446
Ion Ratio	Lower Upper
43 100	
86 3.3	6.4 9.6#
42 47.5	7.5 11.3#
44 17.9	5.5 8.3#



#25
 Ethyl Acetate
 Concen: 0.617 ppbv
 RT: 2.845 min Scan# 852
 Delta R.T. 0.010 min
 Lab File: VL042944.D
 Acq: 18 Sep 2025 14:01

Tgt Ion: 43	Resp: 28227
Ion Ratio	Lower Upper
43 100	
45 13.7	7.8 11.8#
61 11.6	7.2 10.8#
70 9.8	6.4 9.6#

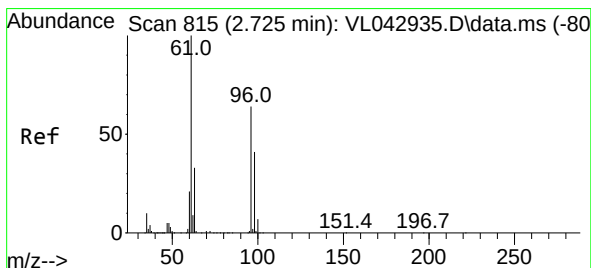
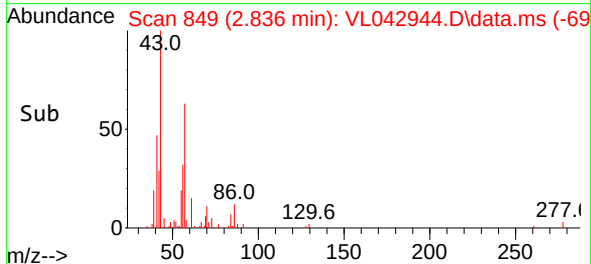
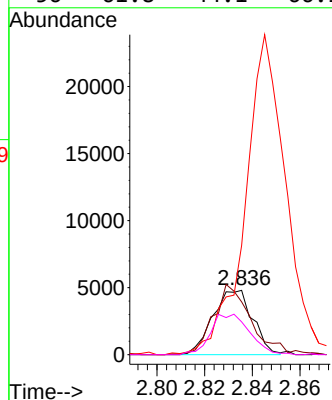
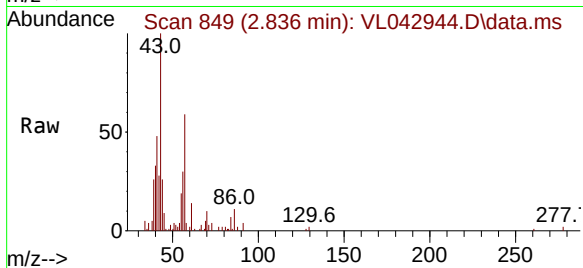




#26
Hexane
Concen: 0.285 ppbv
RT: 2.836 min Scan# 84
Delta R.T. 0.007 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

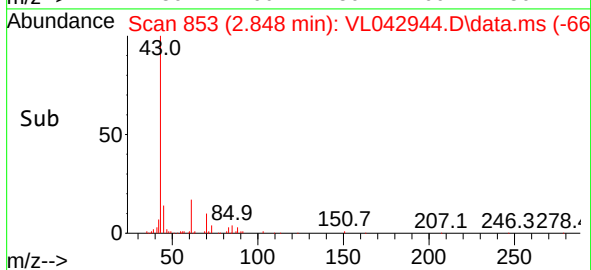
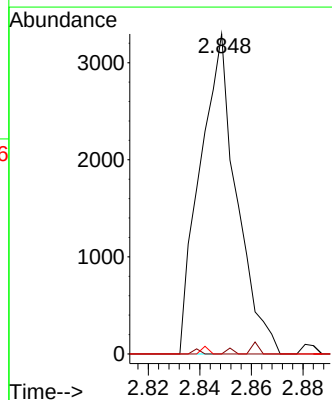
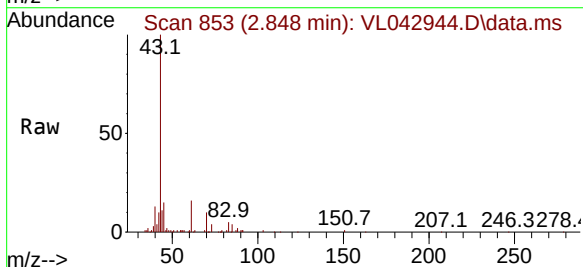
Instrument :
MSVOA_L
ClientSampleId :

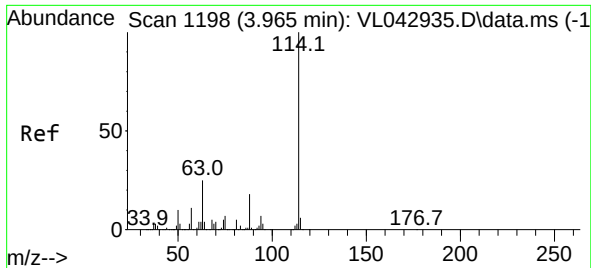
Tgt Ion: 57 Resp: 5587
Ion Ratio Lower Upper
57 100
41 107.0 71.3 106.9#
43 517.5 183.9 275.9#
56 61.8 44.1 66.1



#31
cis-1,2-Dichloroethene
Concen: 0.169 ppbv
RT: 2.848 min Scan# 853
Delta R.T. 0.123 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 61 Resp: 3237
Ion Ratio Lower Upper
61 100
96 0.0 51.4 77.2#
98 0.0 32.8 49.2#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.965 min Scan# 1198

Delta R.T. 0.000 min

Lab File: VL042944.D

Acq: 18 Sep 2025 14:01

Instrument :

MSVOA_L

ClientSampleId :

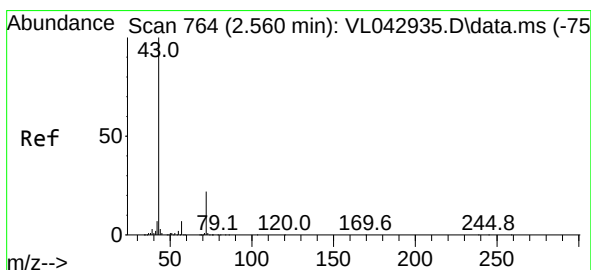
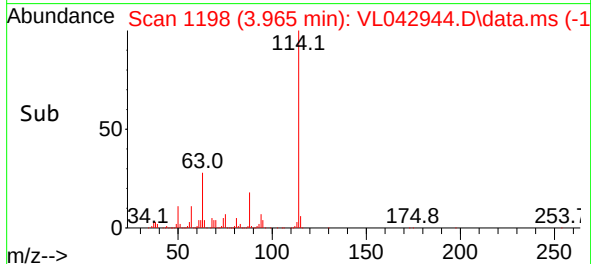
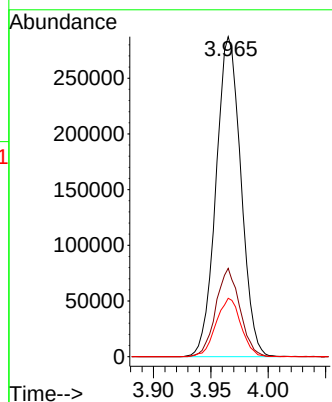
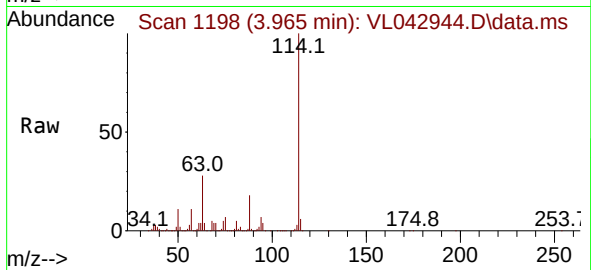
Tgt Ion:114 Resp: 433367

Ion Ratio Lower Upper

114 100

63 26.8 21.1 31.7

88 18.3 14.6 22.0



#34

2-Butanone

Concen: 0.364 ppbv

RT: 2.567 min Scan# 766

Delta R.T. 0.007 min

Lab File: VL042944.D

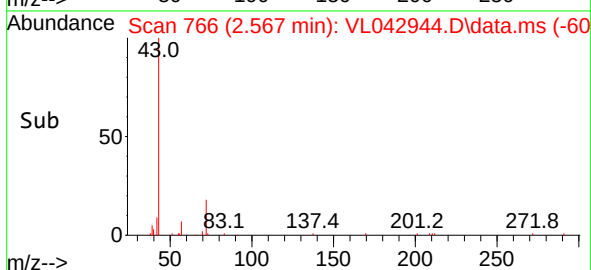
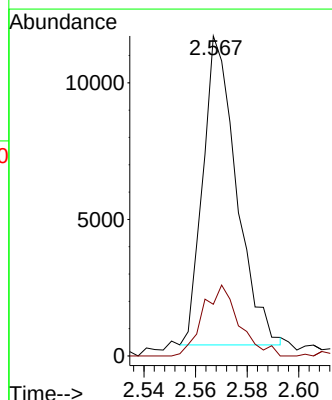
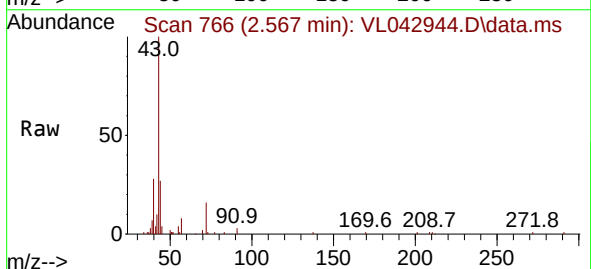
Acq: 18 Sep 2025 14:01

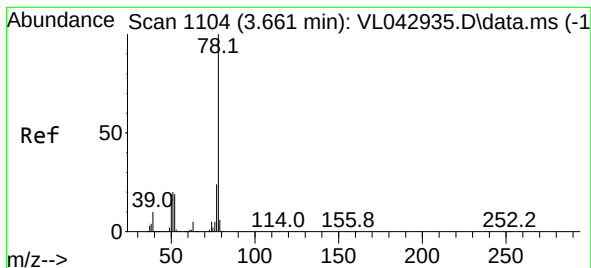
Tgt Ion: 43 Resp: 10224

Ion Ratio Lower Upper

43 100

72 24.8 17.2 25.8





#36

Benzene

Concen: 0.097 ppbv

RT: 3.664 min Scan# 1104

Delta R.T. 0.003 min

Lab File: VL042944.D

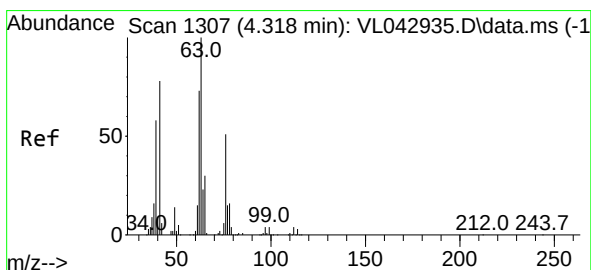
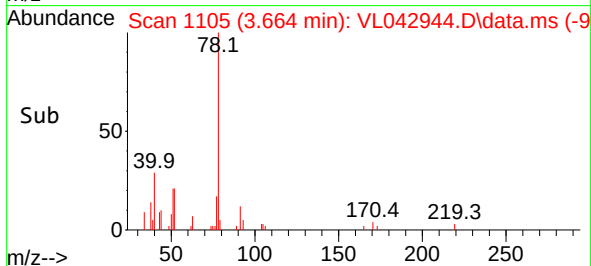
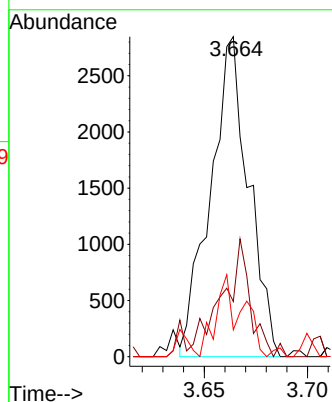
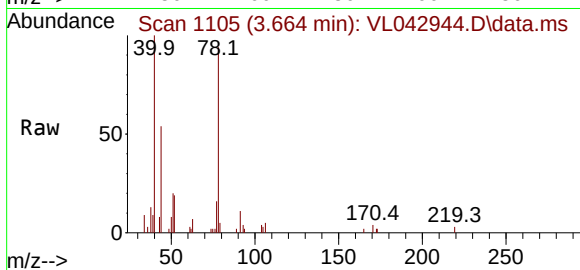
Acq: 18 Sep 2025 14:01

Instrument :

MSVOA_L

ClientSampleId :

Tgt Ion: 78	Resp:	3666
Ion Ratio	Lower	Upper
78	100	
77	13.1	19.2 28.8#
50	5.7	14.8 22.2#



#39

1,2-Dichloropropane

Concen: 7.589 ppbv

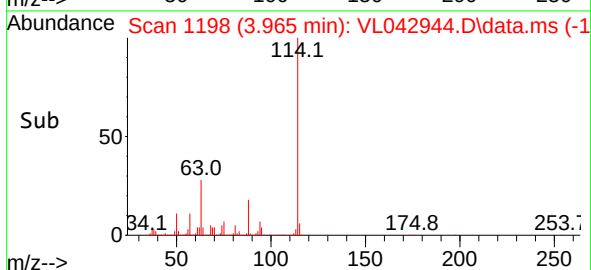
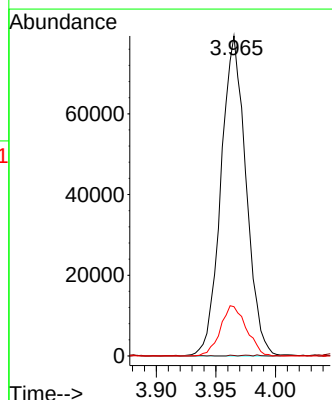
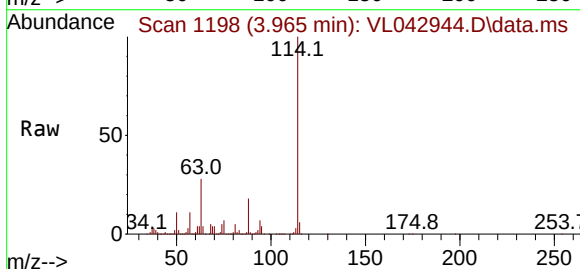
RT: 3.965 min Scan# 1198

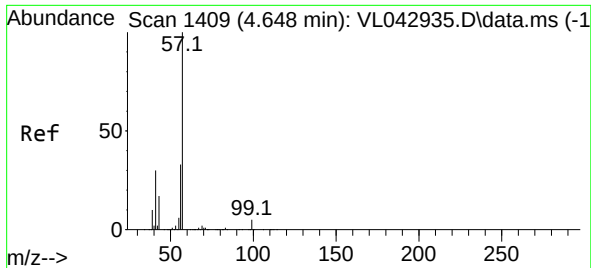
Delta R.T. -0.353 min

Lab File: VL042944.D

Acq: 18 Sep 2025 14:01

Tgt Ion: 63	Resp:	115933
Ion Ratio	Lower	Upper
63	100	
41	0.3	62.7 94.1#
62	15.4	58.4 87.6#

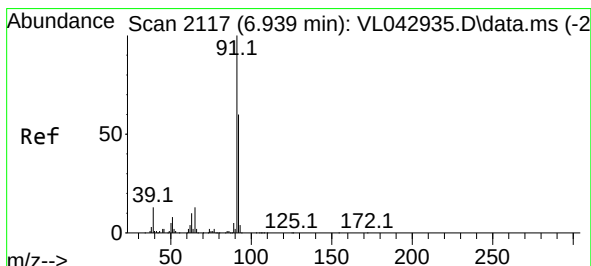
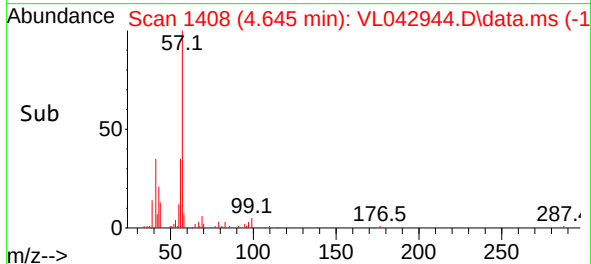
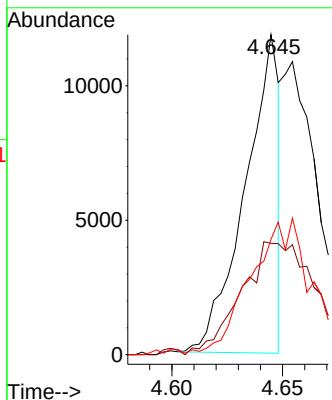
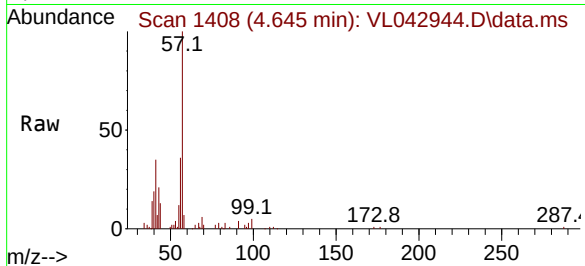




#44
2,2,4-Trimethylpentane
Concen: 0.200 ppbv
RT: 4.645 min Scan# 1409
Delta R.T. -0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

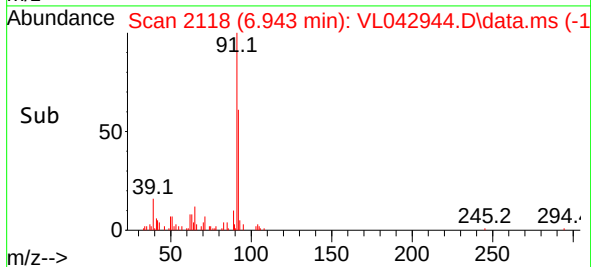
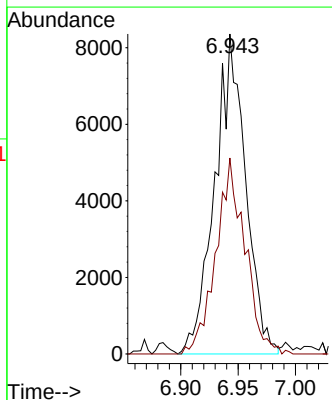
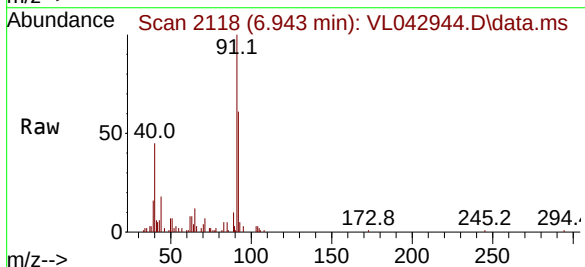
Instrument :
MSVOA_L
ClientSampleId :

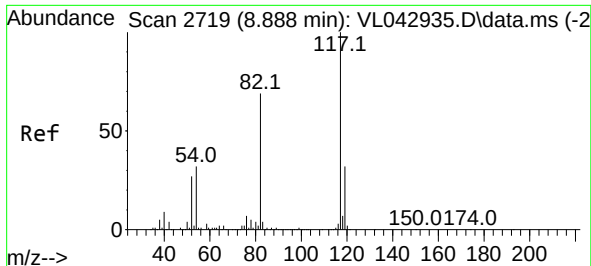
Tgt Ion: 57 Resp: 12611
Ion Ratio Lower Upper
57 100
41 80.4 25.8 38.6#
56 0.0 26.2 39.4#



#53
Toluene
Concen: 0.443 ppbv
RT: 6.943 min Scan# 2118
Delta R.T. 0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 91 Resp: 15621
Ion Ratio Lower Upper
91 100
92 57.9 47.4 71.2





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.888 min Scan# 2719

Delta R.T. 0.000 min

Lab File: VL042944.D

Acq: 18 Sep 2025 14:01

Instrument :

MSVOA_L

ClientSampleId :

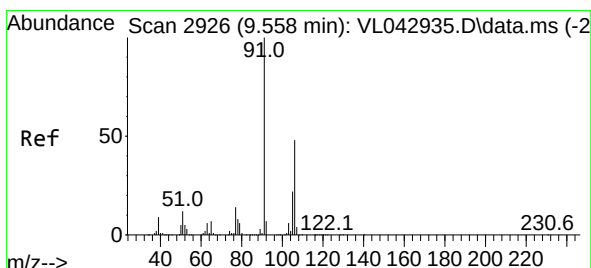
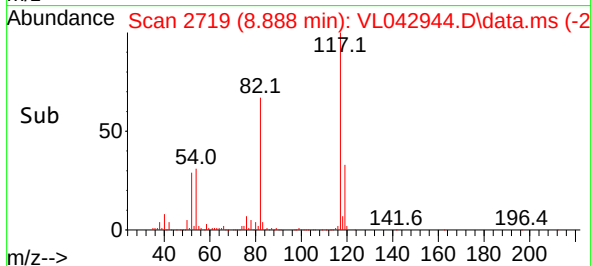
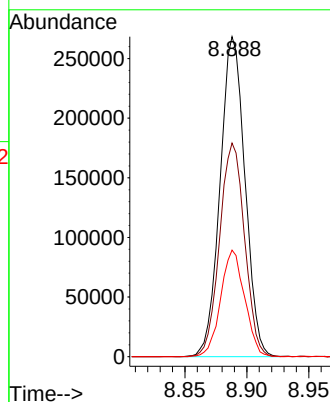
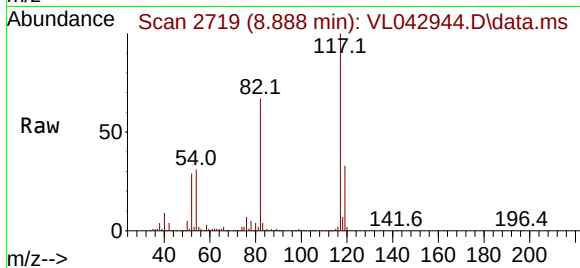
Tgt Ion:117 Resp: 375554

Ion Ratio Lower Upper

117 100

82 67.0 56.1 84.1

119 32.2 25.8 38.8



#59

m/p-Xylene

Concen: 0.051 ppbv

RT: 9.558 min Scan# 2926

Delta R.T. 0.000 min

Lab File: VL042944.D

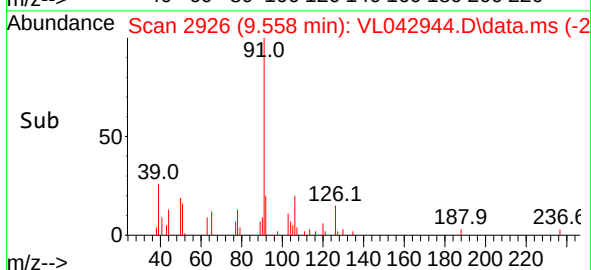
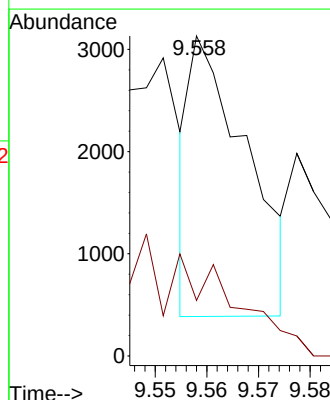
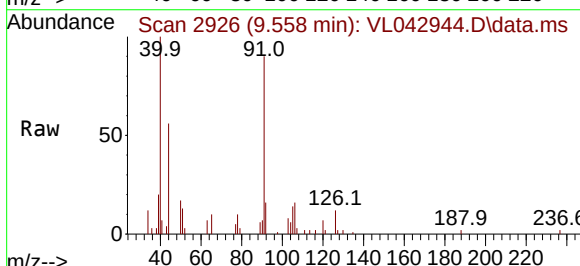
Acq: 18 Sep 2025 14:01

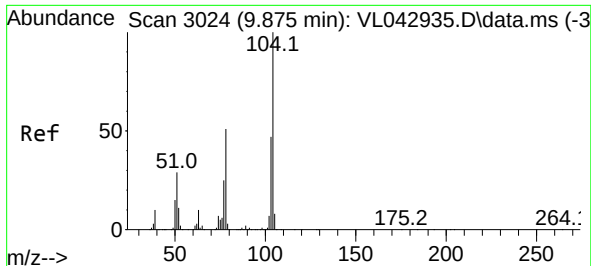
Tgt Ion: 91 Resp: 2091

Ion Ratio Lower Upper

91 100

106 0.0 37.4 56.0#

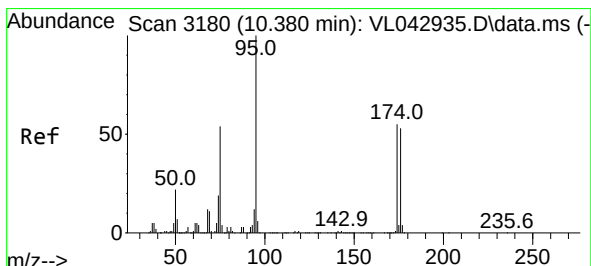
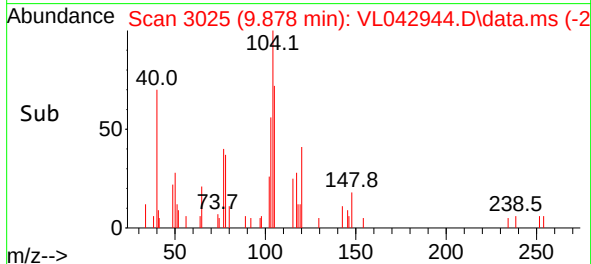
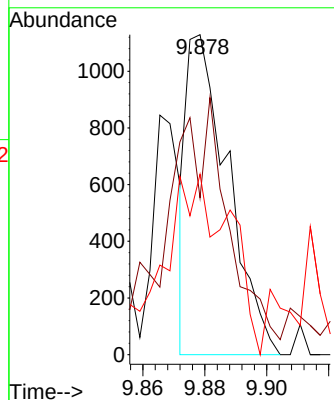
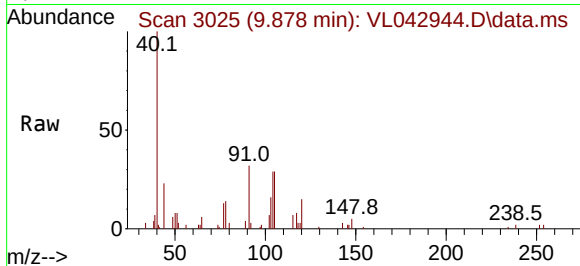




#61
Styrene
Concen: 0.590 ppbv
RT: 9.878 min Scan# 3024
Delta R.T. 0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

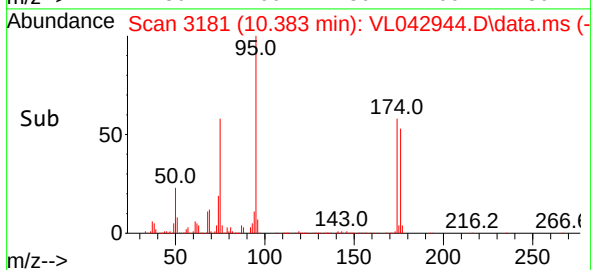
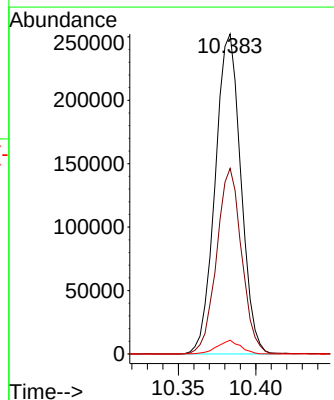
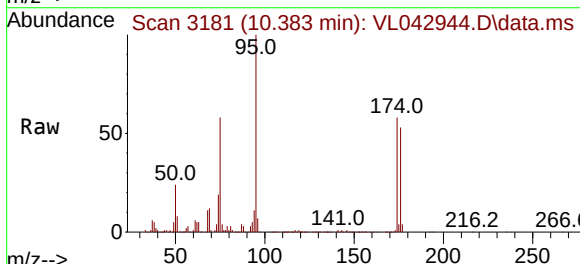
Instrument :
MSVOA_L
ClientSampleId :

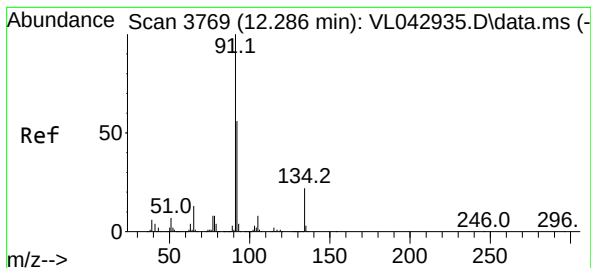
Tgt Ion:104 Resp: 1042
Ion Ratio Lower Upper
104 100
78 138.6 40.2 60.2#
103 95.4 36.8 55.2#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.911 ppbv
RT: 10.383 min Scan# 3181
Delta R.T. 0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion: 95 Resp: 290943
Ion Ratio Lower Upper
95 100
174 56.5 44.9 67.3
175 3.9 3.3 4.9

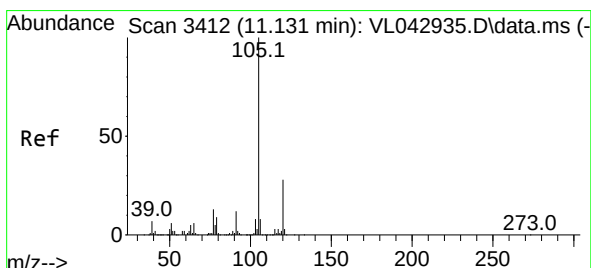
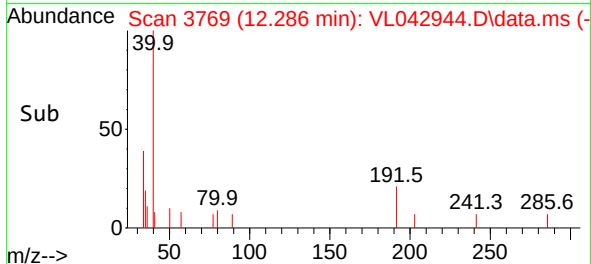
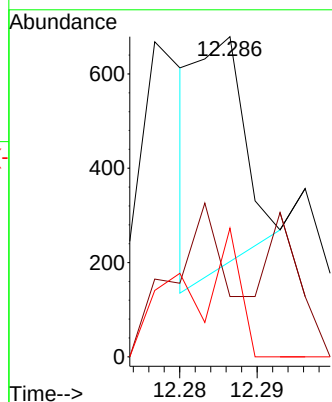
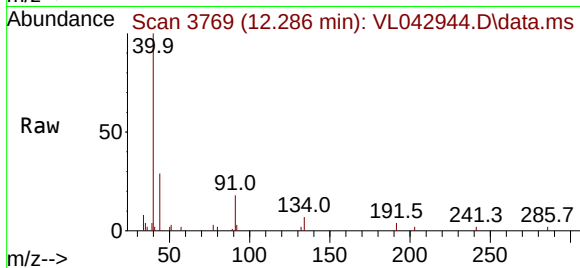




#70
n-Butylbenzene
Concen: 0.304 ppbv
RT: 12.286 min Scan# 31
Delta R.T. 0.000 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

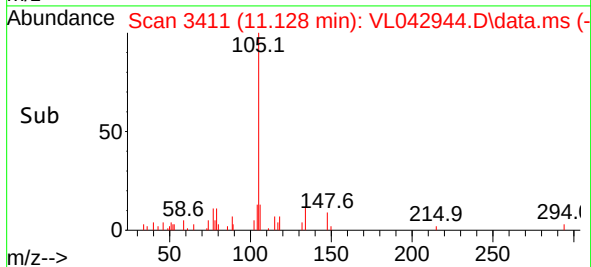
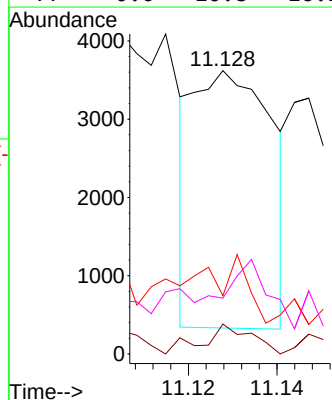
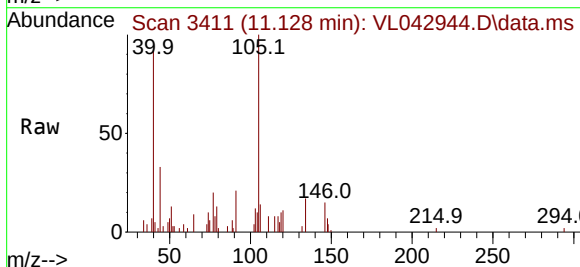
Instrument :
MSVOA_L
ClientSampleId :

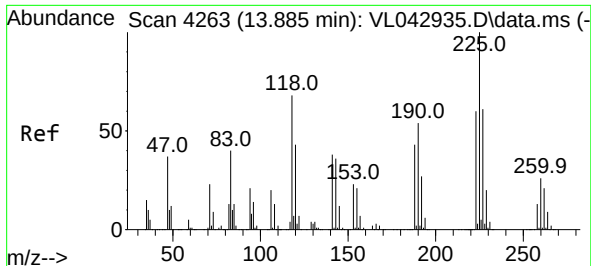
Tgt Ion: 91 Resp: 214
Ion Ratio Lower Upper
91 100
92 0.0 43.8 65.8#
134 0.0 17.3 25.9#



#72
4-Ethyltoluene
Concen: 0.425 ppbv
RT: 11.128 min Scan# 3411
Delta R.T. -0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

Tgt Ion:105 Resp: 4038
Ion Ratio Lower Upper
105 100
120 15.2 23.1 34.7#
91 67.5 10.4 15.6#
77 0.0 10.8 16.2#

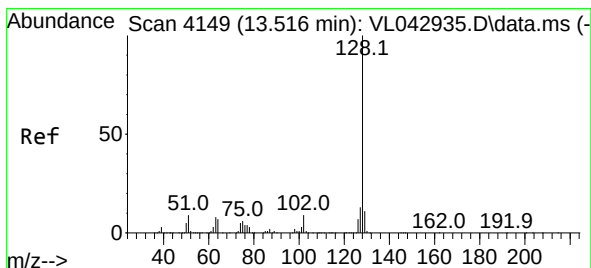
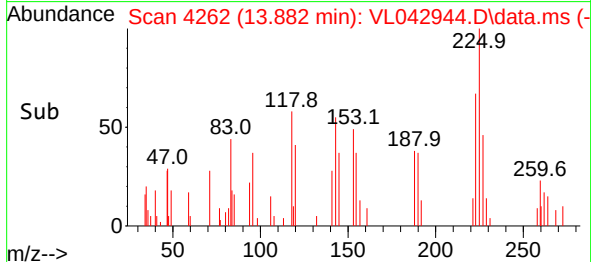
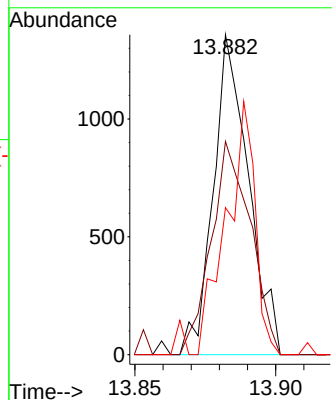
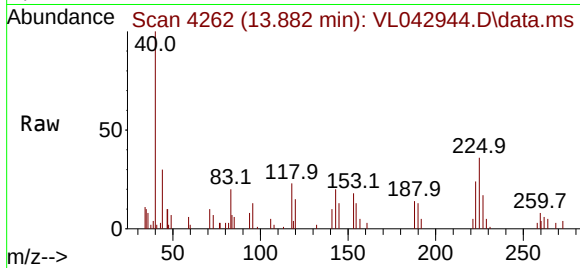




#78
Hexachloro-1,3-Butadiene
Concen: 0.061 ppbv
RT: 13.882 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

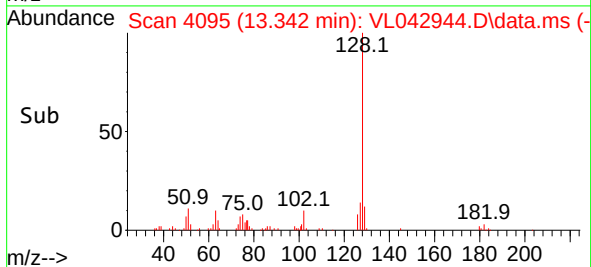
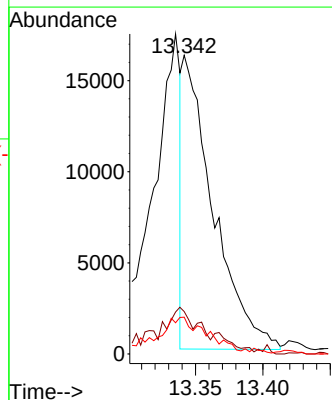
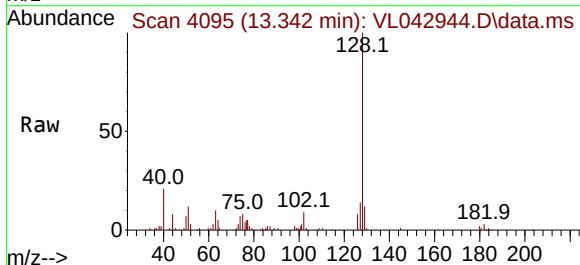
Instrument :
MSVOA_L
ClientSampleId :

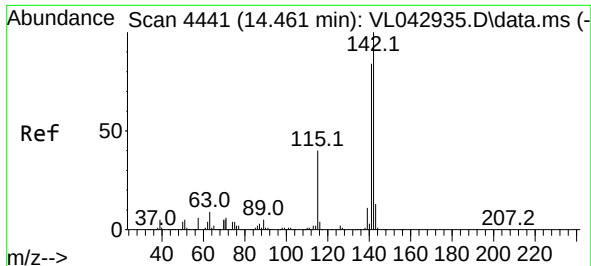
Tgt Ion	Ratio	Lower	Upper
225	100		
223	74.7	50.6	76.0
227	68.3	50.5	75.7



#79
Naphthalene
Concen: 0.857 ppbv
RT: 13.342 min Scan# 4095
Delta R.T. -0.174 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

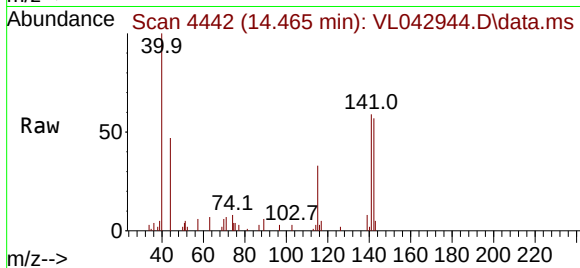
Tgt Ion	Ratio	Lower	Upper
128	100		
127	14.6	10.3	15.5
129	11.9	8.7	13.1



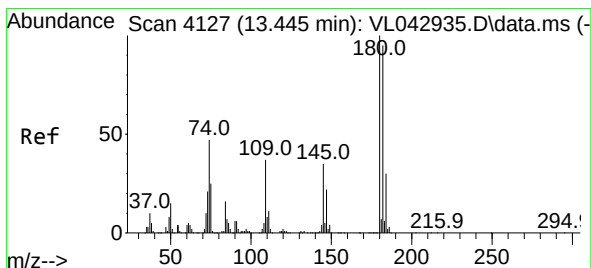
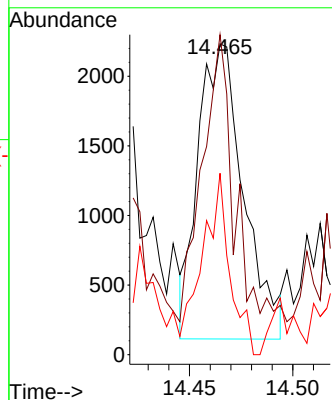
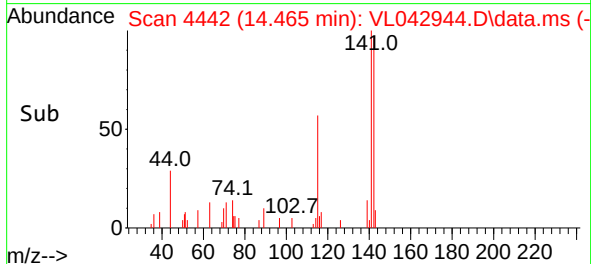


#80
Naphthalene, 2-methyl-
Concen: 0.952 ppbv
RT: 14.465 min Scan# 4441
Delta R.T. 0.004 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01

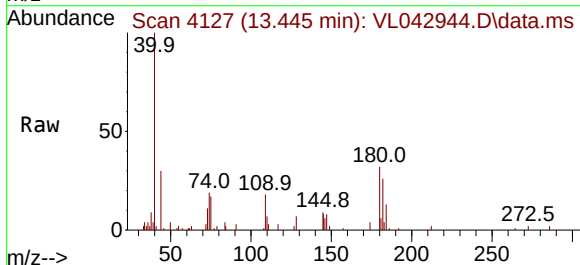
Instrument :
MSVOA_L
ClientSampleId :



Tgt Ion:	142	Resp:	3254
Ion	Ratio	Lower	Upper
142	100		
141	78.8	67.0	100.6
115	36.9	32.0	48.0



#81
1,2,4-Trichlorobenzene
Concen: 0.471 ppbv
RT: 13.445 min Scan# 4127
Delta R.T. 0.000 min
Lab File: VL042944.D
Acq: 18 Sep 2025 14:01



Tgt Ion:	180	Resp:	1154
Ion	Ratio	Lower	Upper
180	100		
182	115.5	75.5	113.3#
184	33.9	24.6	37.0

