

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL081325\
 Data File : VL042857.D
 Acq On : 13 Aug 2025 18:21
 Operator : SY/MD
 Sample : Q2794-01DL 10X
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1DL

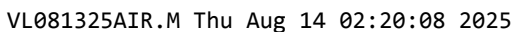
Quant Time: Aug 14 02:19:57 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL081325AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Aug 14 02:12:54 2025
 Response via : Initial Calibration

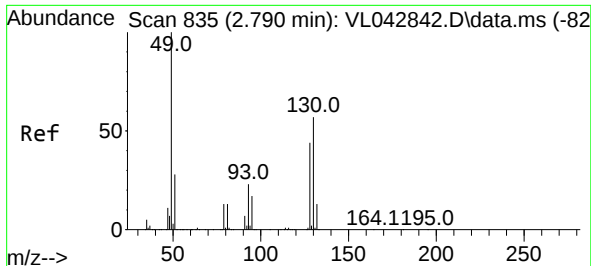
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.800	49	132826	10.000	ppbv	0.01
33) 1,4-Difluorobenzene	3.975	114	406342	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.898	117	347245	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.390	95	260346	9.997	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.000%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.502	85	907	0.047	ppbv #	78
3) Chlorodifluoromethane	1.470	51	27205	1.264	ppbv #	61
4) Chloromethane	1.538	50	661	0.084	ppbv #	80
6) Bromomethane	1.680	94	118	0.038	ppbv #	36
9) Propene	1.625	41	4736	0.510	ppbv	94
10) Heptane	5.001	43	4011	0.161	ppbv	100
13) Ethanol	1.726	45	158844	186.947	ppbv	93
15) Acetone	1.842	43	61695	3.511	ppbv	98
16) 1,3-Butadiene	1.625	39	2901	0.364	ppbv #	10
17) tert-Butyl alcohol	2.056	59	645	0.031	ppbv #	85
19) Isopropyl Alcohol	1.894	45	71252	6.789	ppbv #	37
20) Methylene Chloride	2.072	84	2111	0.287	ppbv #	79
23) Vinyl Acetate	2.483	43	12716	0.526	ppbv #	50
25) Ethyl Acetate	2.852	43	16896	0.397	ppbv #	90
26) Hexane	2.836	57	4508	0.230	ppbv #	18
30) Cyclohexane	3.878	84	1764	0.103	ppbv #	70
31) cis-1,2-Dichloroethene	2.849	61	1962	0.100	ppbv #	22
34) 2-Butanone	2.574	43	3693	0.135	ppbv #	83
36) Benzene	3.674	78	4851	0.125	ppbv #	89
37) 1,2-Dichloroethane	3.231	62	418	0.021	ppbv #	79
39) 1,2-Dichloropropane	3.975	63	99781	7.021	ppbv #	26
43) Methyl Methacrylate	4.901	69	327	0.020	ppbv #	1
44) 2,2,4-Trimethylpentane	4.658	57	8597	0.130	ppbv #	35
53) Toluene	6.956	91	46683	1.009	ppbv	97
58) Ethyl Benzene	9.371	91	9634	0.157	ppbv	90
59) m/p-Xylene	9.549	91	22807	0.475	ppbv #	100
60) o-Xylene	9.982	91	9054	0.187	ppbv	98
66) Benzyl Chloride	11.562	91	220	0.028	ppbv #	65
69) p-Isopropyltoluene	11.934	119	1660	0.022	ppbv #	86
72) 4-Ethyltoluene	11.135	105	2417	0.041	ppbv #	56
73) 1,3,5-Trimethylbenzene	11.215	105	2234	0.045	ppbv	91
74) 1,2,4-Trimethylbenzene	11.549	105	8568	0.157	ppbv #	62
79) Naphthalene	13.530	128	2734	0.055	ppbv #	86

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

Quant Time: Aug 14 02:19:57 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL081325AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Thu Aug 14 02:12:54 2025
Response via : Initial Calibration

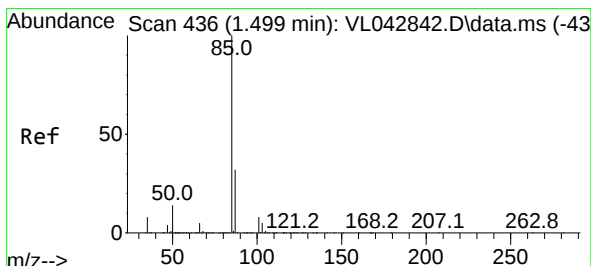
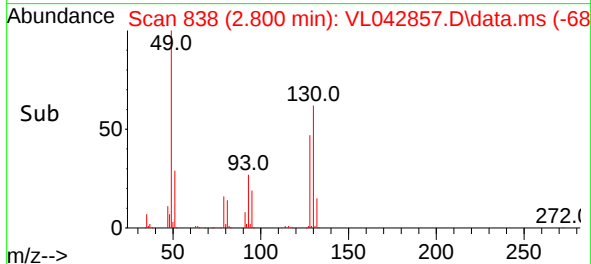
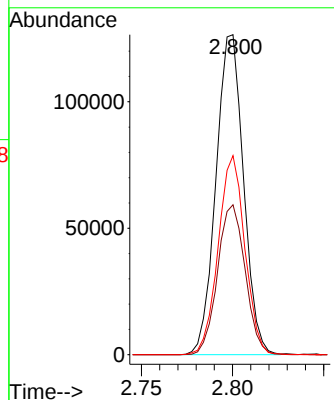
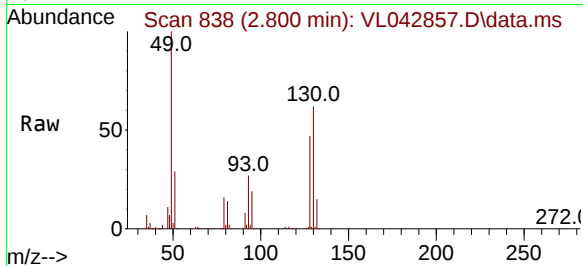




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.800 min Scan# 835
Delta R.T. 0.010 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

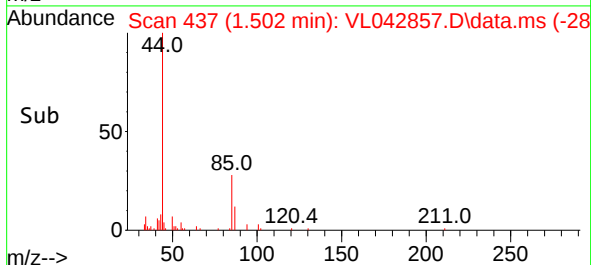
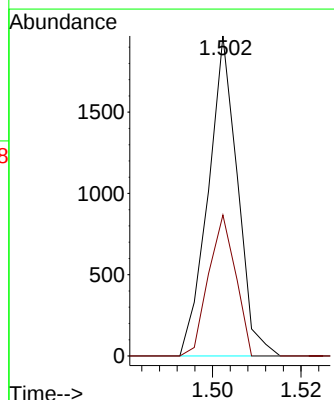
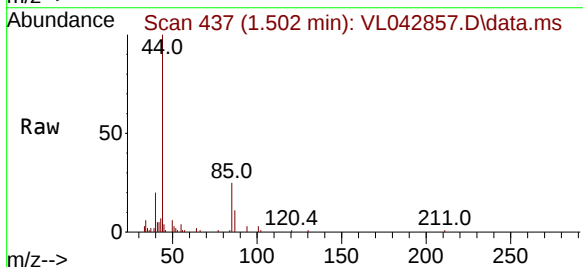
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

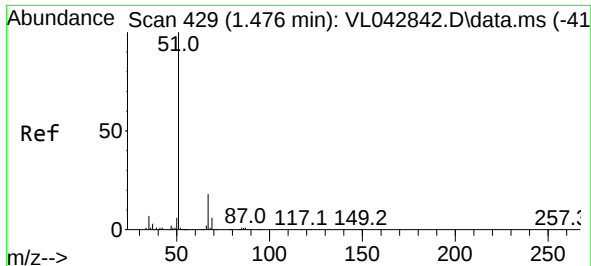
Tgt Ion: 49 Resp: 132826
Ion Ratio Lower Upper
49 100
128 47.0 23.7 71.1
130 60.1 30.6 91.6



#2
Dichlorodifluoromethane
Concen: 0.047 ppbv
RT: 1.502 min Scan# 437
Delta R.T. 0.003 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 85 Resp: 907
Ion Ratio Lower Upper
85 100
87 44.0 25.3 37.9

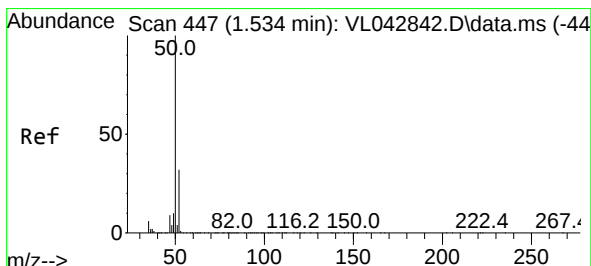
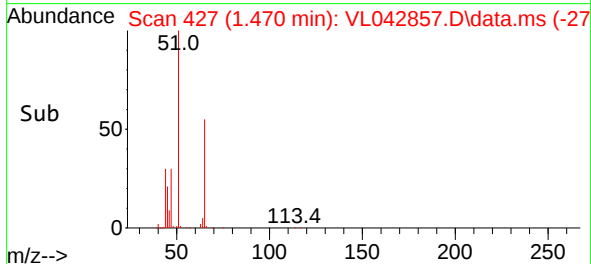
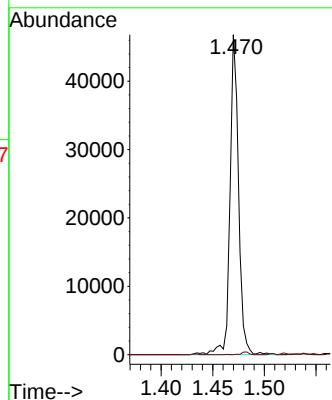
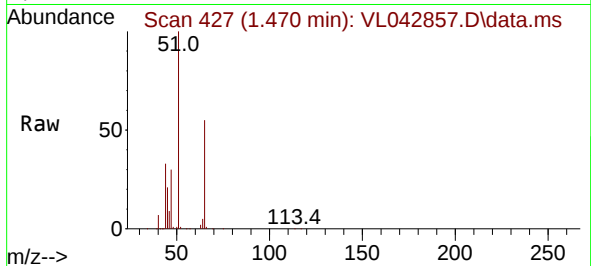




#3
Chlorodifluoromethane
Concen: 1.264 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.006 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

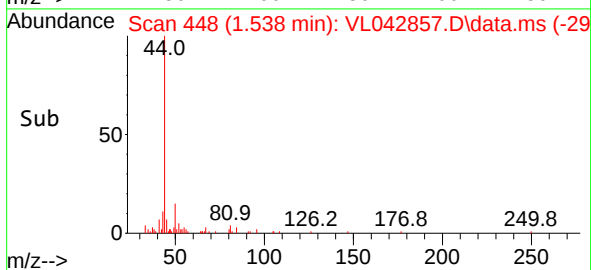
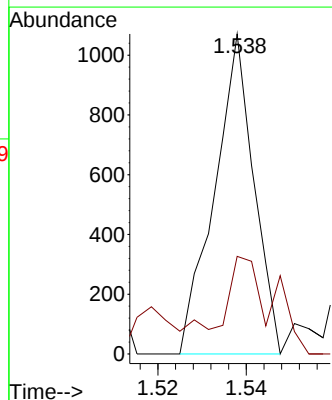
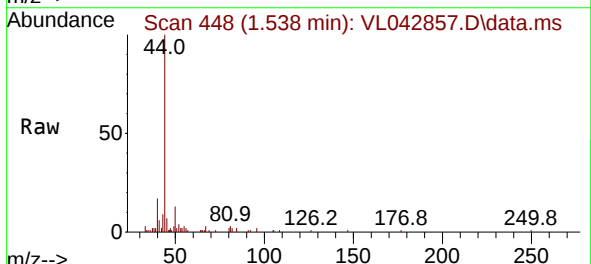
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

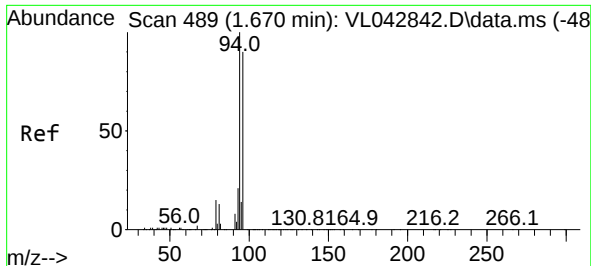
Tgt Ion: 51 Resp: 27205
Ion Ratio Lower Upper
51 100
67 1.3 14.9 22.3#



#4
Chloromethane
Concen: 0.084 ppbv
RT: 1.538 min Scan# 448
Delta R.T. 0.003 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 50 Resp: 661
Ion Ratio Lower Upper
50 100
52 21.0 25.9 38.9#

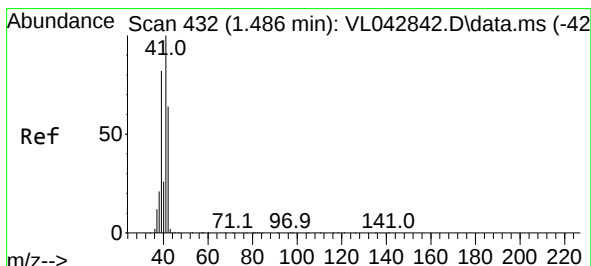
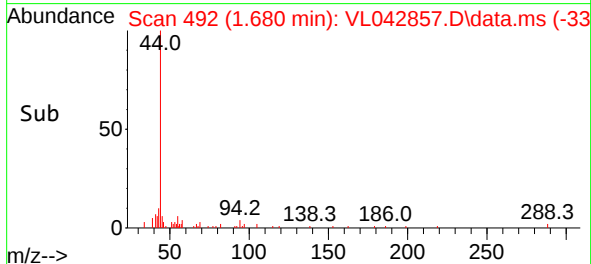
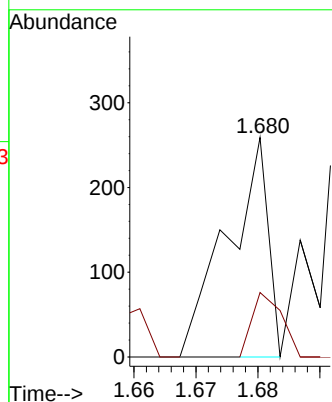
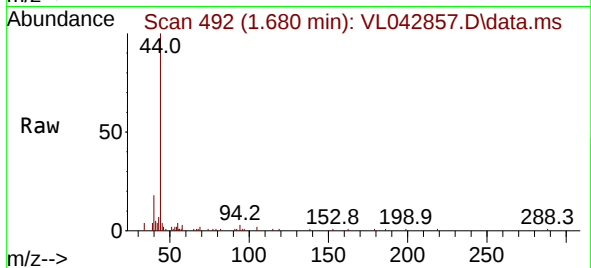




#6
Bromomethane
Concen: 0.038 ppbv
RT: 1.680 min Scan# 492
Delta R.T. 0.010 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

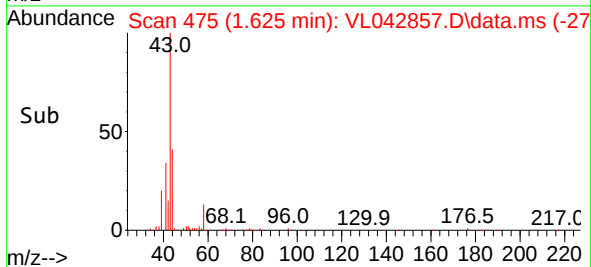
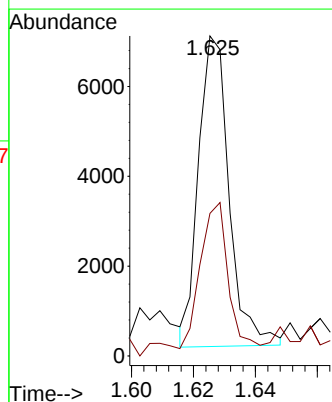
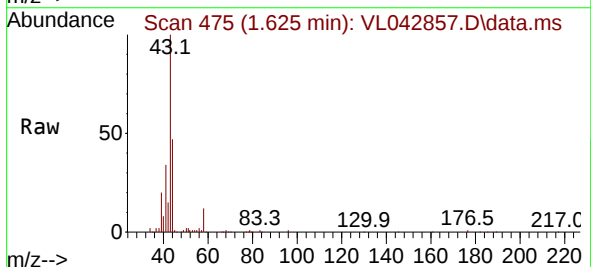
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

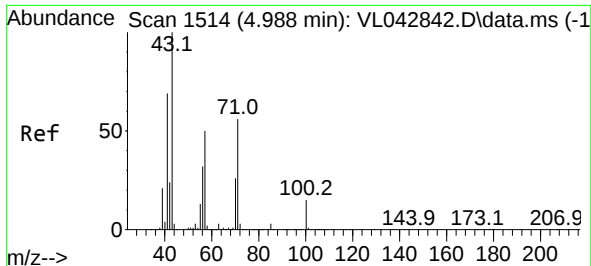
Tgt Ion: 94 Resp: 118
Ion Ratio Lower Upper
94 100
96 29.3 72.1 108.1#



#9
Propene
Concen: 0.510 ppbv
RT: 1.625 min Scan# 475
Delta R.T. 0.139 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 41 Resp: 4736
Ion Ratio Lower Upper
41 100
42 61.7 53.0 79.4

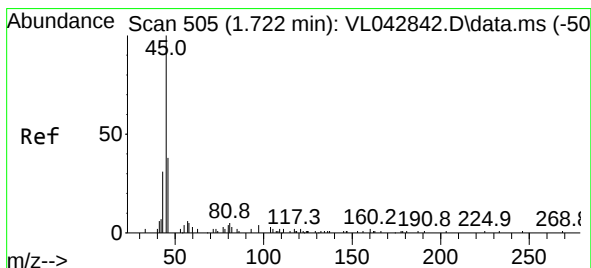
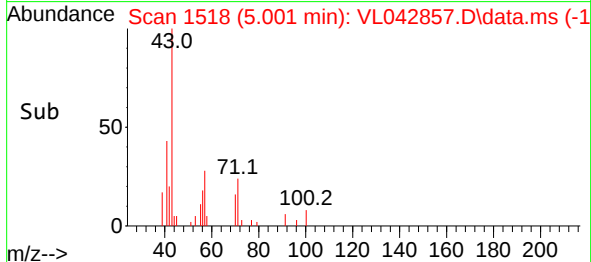
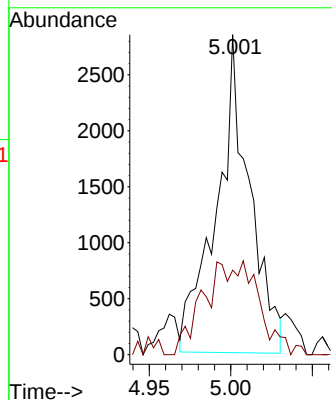
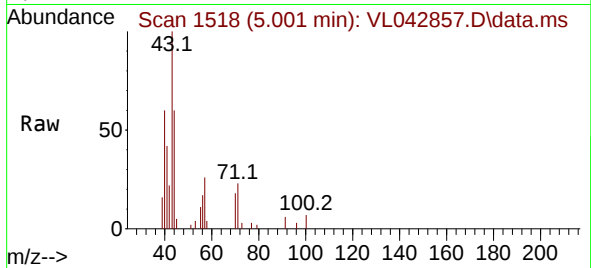




#10
Heptane
Concen: 0.161 ppbv
RT: 5.001 min Scan# 11
Delta R.T. 0.013 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

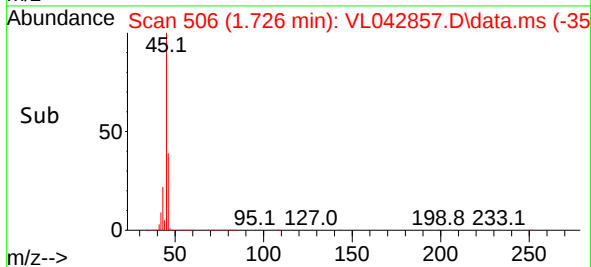
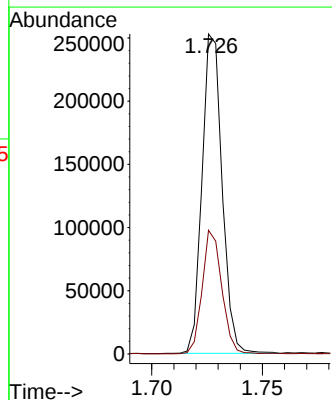
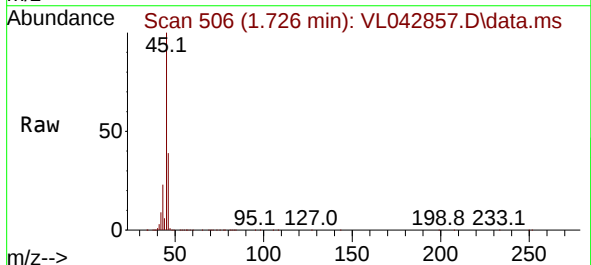
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

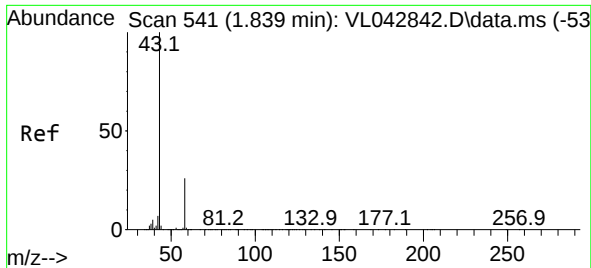
Tgt Ion: 43 Resp: 4011
Ion Ratio Lower Upper
43 100
57 51.4 41.4 62.0



#13
Ethanol
Concen: 186.947 ppbv
RT: 1.726 min Scan# 506
Delta R.T. 0.003 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 45 Resp: 158844
Ion Ratio Lower Upper
45 100
46 38.9 17.5 69.9

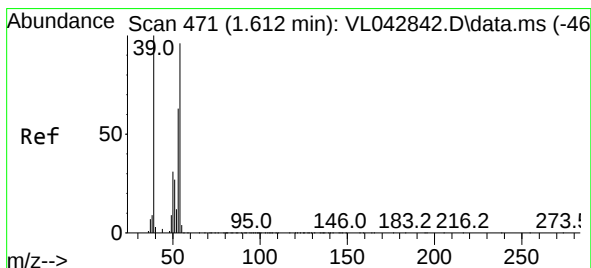
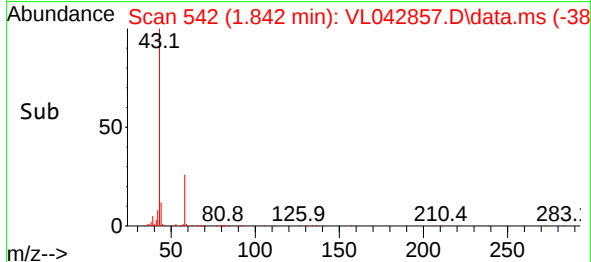
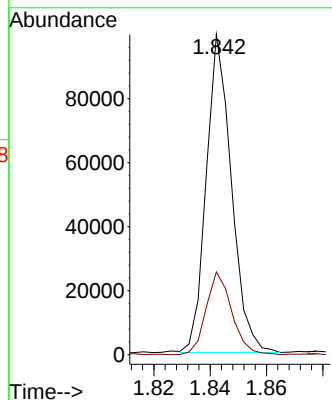
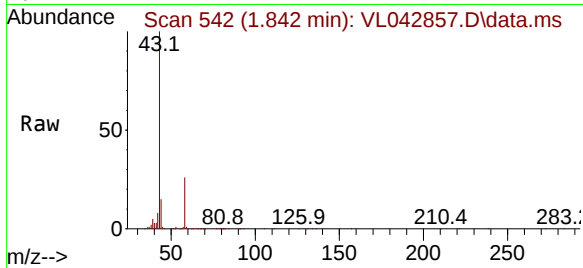




#15
Acetone
Concen: 3.511 ppbv
RT: 1.842 min Scan# 541
Delta R.T. 0.003 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

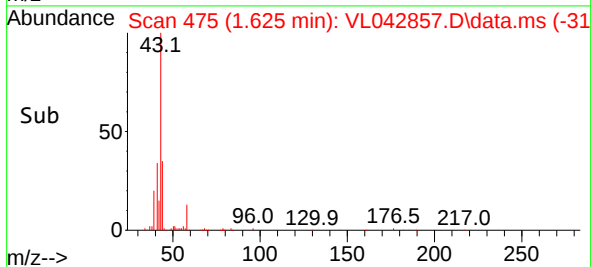
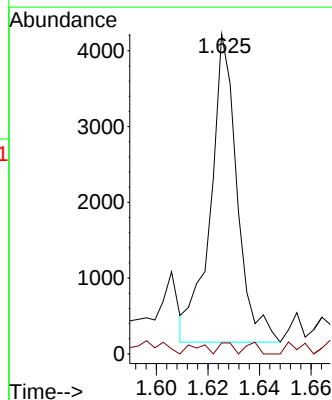
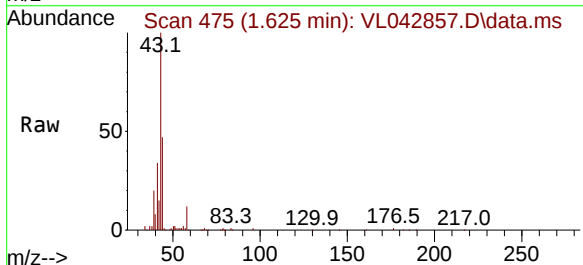
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ClientSampleId :
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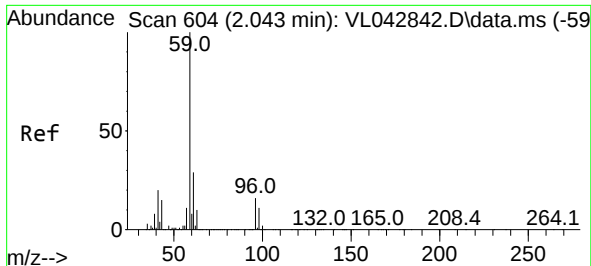
Tgt Ion: 43 Resp: 61695
Ion Ratio Lower Upper
43 100
58 26.8 22.4 33.6



#16
1,3-Butadiene
Concen: 0.364 ppbv
RT: 1.625 min Scan# 475
Delta R.T. 0.013 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 39 Resp: 2901
Ion Ratio Lower Upper
39 100
54 0.0 63.6 95.4#





#17

tert-Butyl alcohol

Concen: 0.031 ppbv

RT: 2.056 min Scan# 604

Delta R.T. 0.013 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

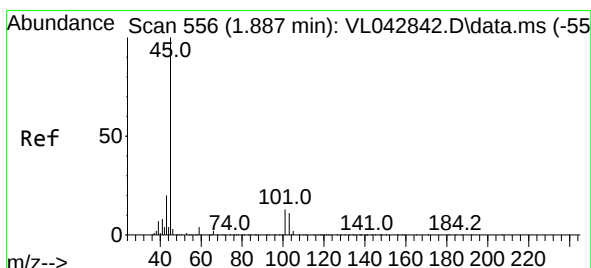
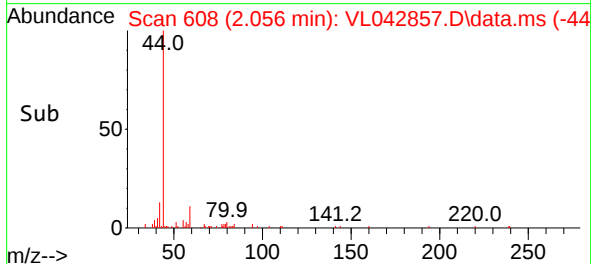
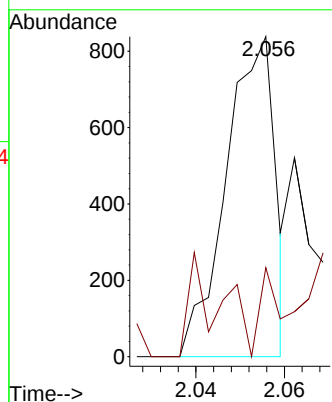
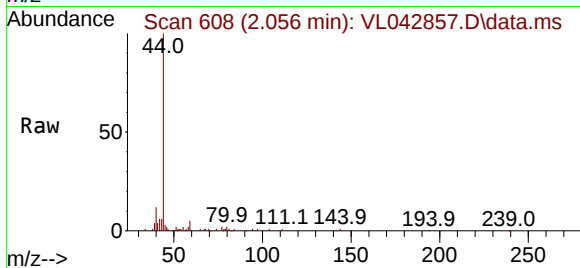
IA1DL

Tgt Ion: 59 Resp: 645

Ion Ratio Lower Upper

59 100

57 16.7 9.0 13.4#



#19

Isopropyl Alcohol

Concen: 6.789 ppbv

RT: 1.894 min Scan# 558

Delta R.T. 0.007 min

Lab File: VL042857.D

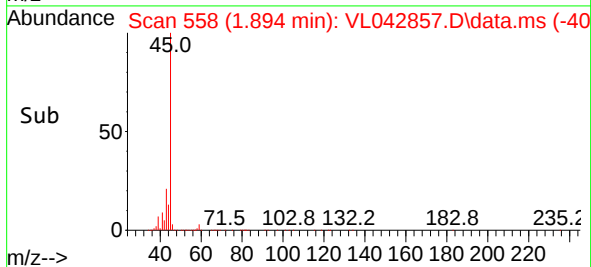
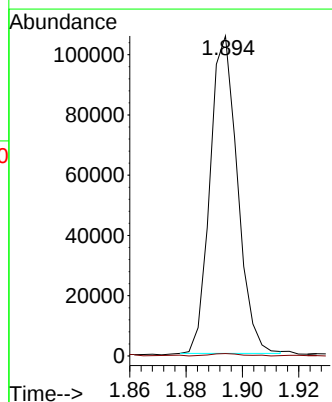
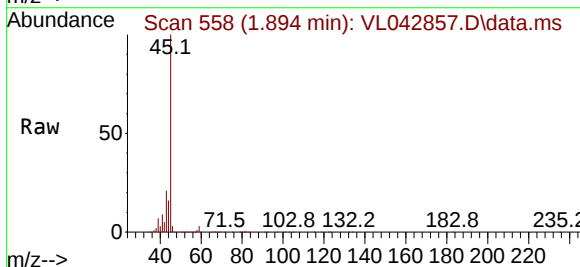
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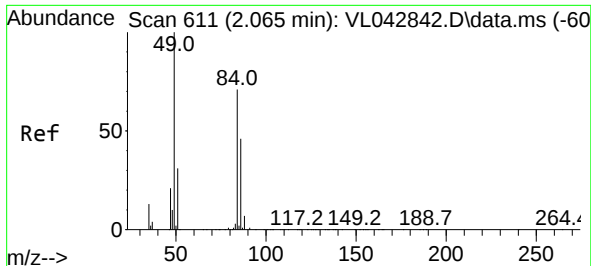
Tgt Ion: 45 Resp: 71252

Ion Ratio Lower Upper

45 100

58 1.3 32.7 49.1#

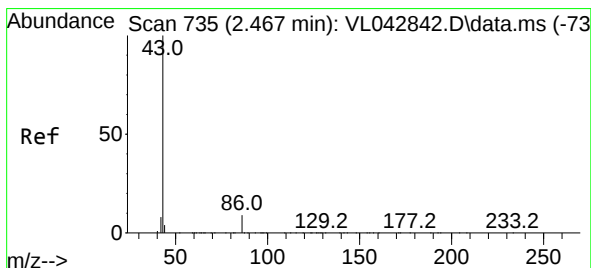
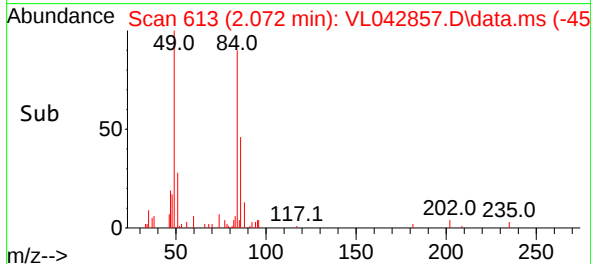
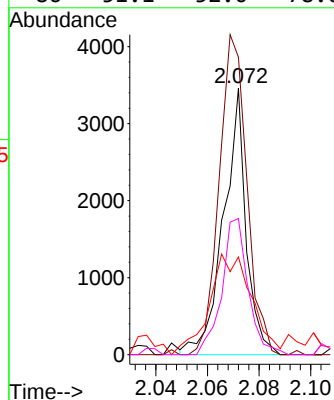
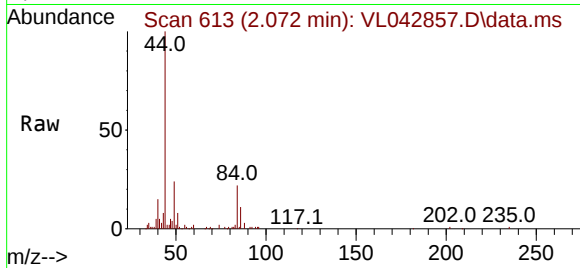




#20
Methylene Chloride
Concen: 0.287 ppbv
RT: 2.072 min Scan# 611
Delta R.T. 0.007 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

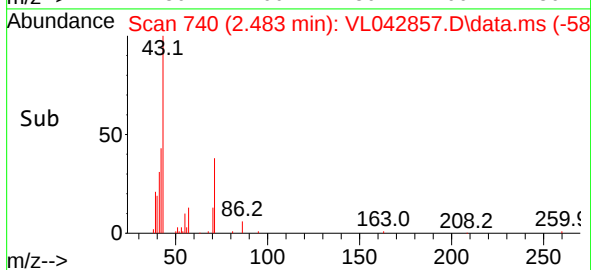
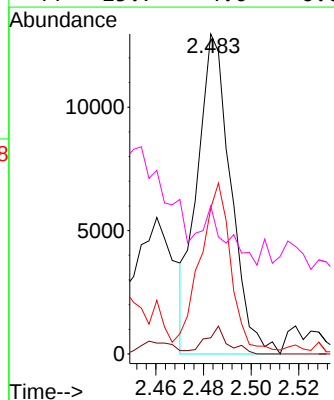
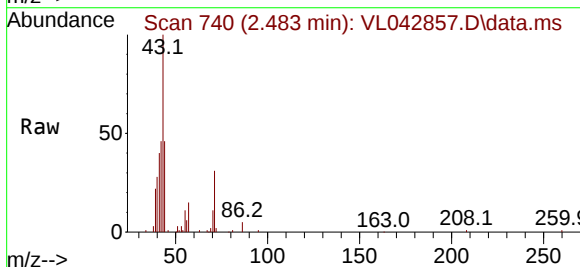
Instrument :
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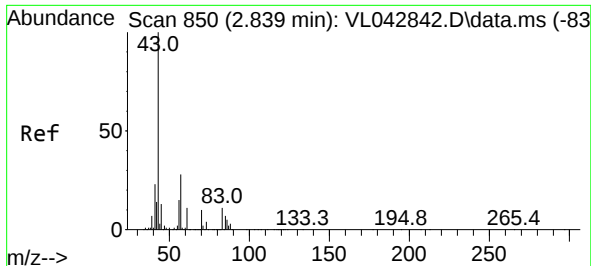
Tgt Ion: 84	Resp: 2111
Ion Ratio	Lower Upper
84 100	
49 111.6	112.3 168.5#
51 34.5	36.0 54.0#
86 51.1	52.0 78.0#



#23
Vinyl Acetate
Concen: 0.526 ppbv
RT: 2.483 min Scan# 740
Delta R.T. 0.016 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt	Ion: 43	Resp:	12716
Ion	Ratio	Lower	Upper
43	100		
86	5.1	6.6	9.8#
42	44.3	7.0	10.6#
44	15.7	4.0	6.0#

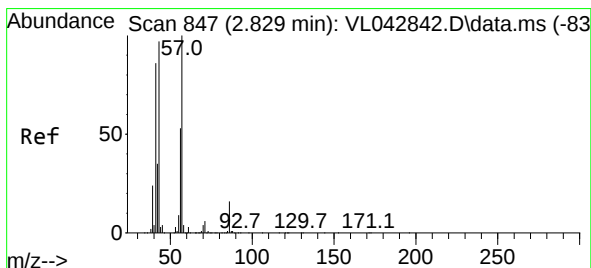
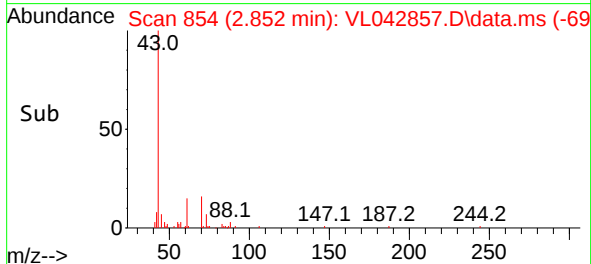
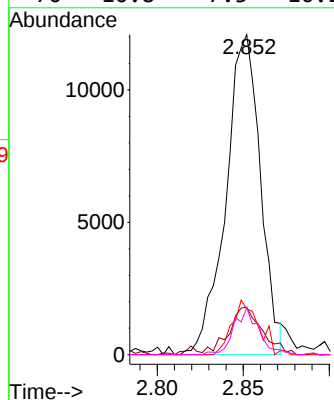
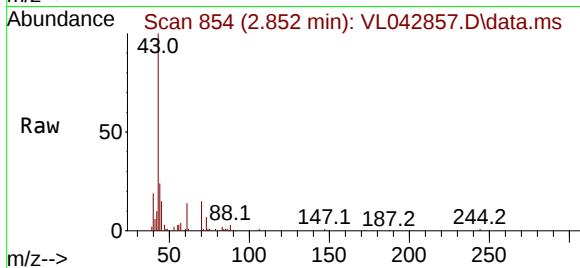




#25
Ethyl Acetate
Concen: 0.397 ppbv
RT: 2.852 min Scan# 81
Delta R.T. 0.013 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

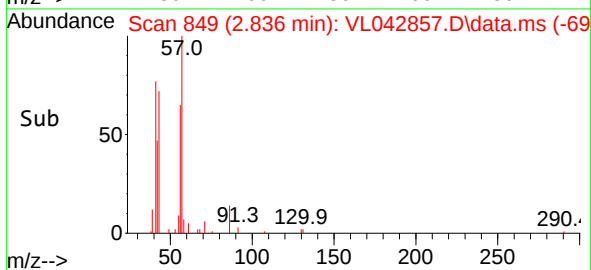
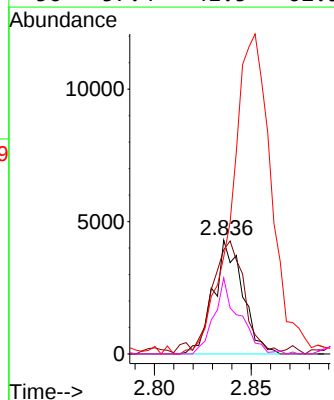
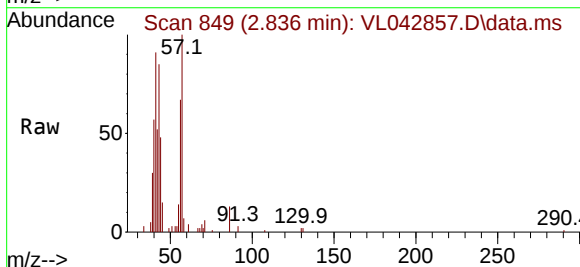
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

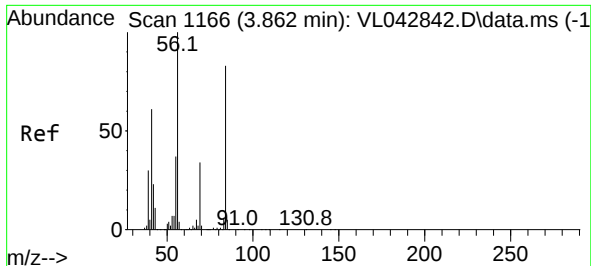
Tgt Ion:	43	Resp:	16896
Ion	Ratio	Lower	Upper
43	100		
45	15.4	8.1	12.1#
61	13.2	7.4	11.2#
70	10.8	7.3	10.9



#26
Hexane
Concen: 0.230 ppbv
RT: 2.836 min Scan# 849
Delta R.T. 0.007 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion:	57	Resp:	4508
Ion	Ratio	Lower	Upper
57	100		
41	118.4	68.6	103.0#
43	398.0	168.5	252.7#
56	57.4	41.5	62.3

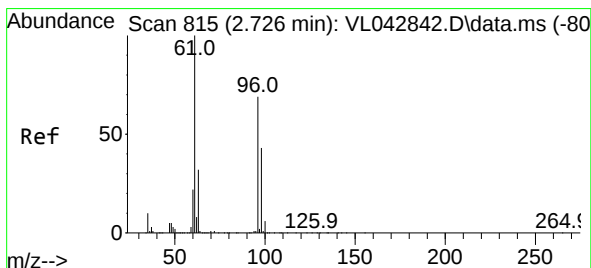
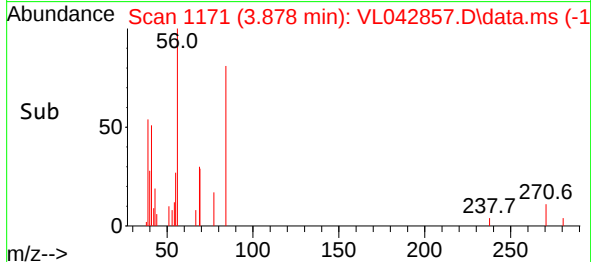
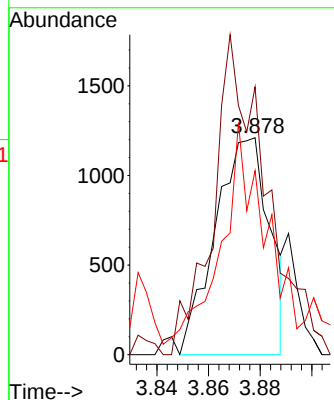
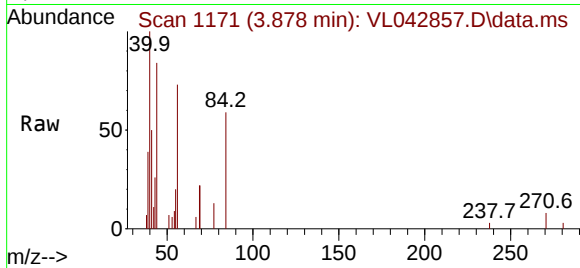




#30
Cyclohexane
Concen: 0.103 ppbv
RT: 3.878 min Scan# 1166
Delta R.T. 0.016 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

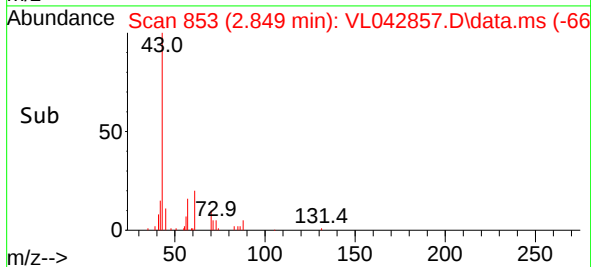
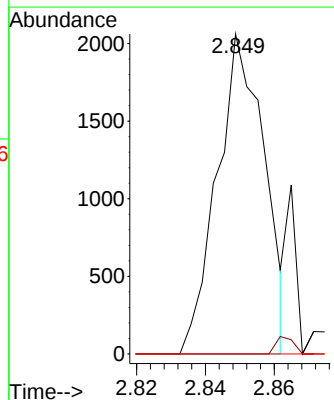
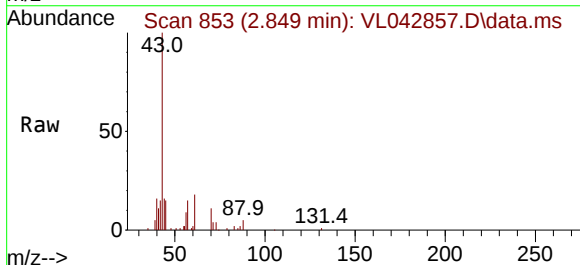
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

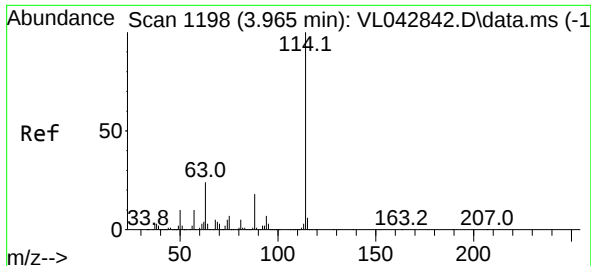
Tgt Ion: 84 Resp: 1764
Ion Ratio Lower Upper
84 100
56 146.5 98.8 148.2
41 115.9 61.3 91.9#



#31
cis-1,2-Dichloroethene
Concen: 0.100 ppbv
RT: 2.849 min Scan# 853
Delta R.T. 0.123 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 61 Resp: 1962
Ion Ratio Lower Upper
61 100
96 0.0 55.0 82.6#
98 0.0 34.3 51.5#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.975 min Scan# 1198

Delta R.T. 0.010 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

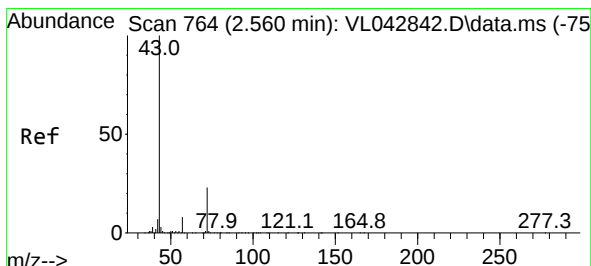
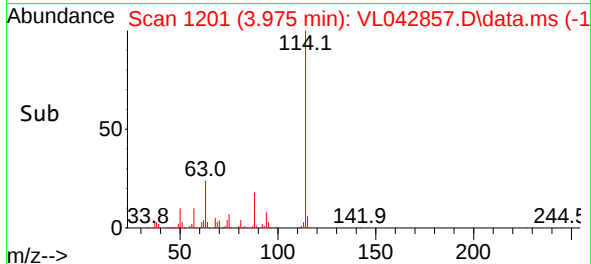
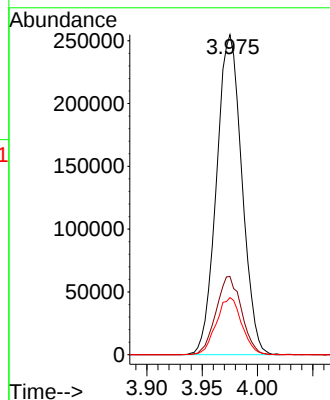
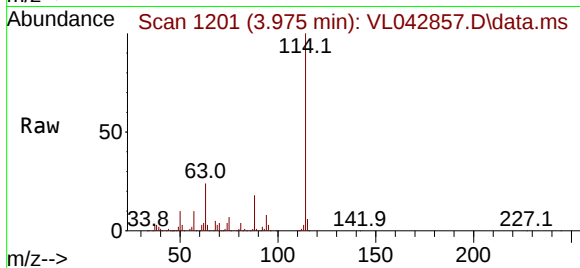
Tgt Ion:114 Resp: 406342

Ion Ratio Lower Upper

114 100

63 24.6 19.7 29.5

88 17.9 14.4 21.6



#34

2-Butanone

Concen: 0.135 ppbv

RT: 2.574 min Scan# 768

Delta R.T. 0.013 min

Lab File: VL042857.D

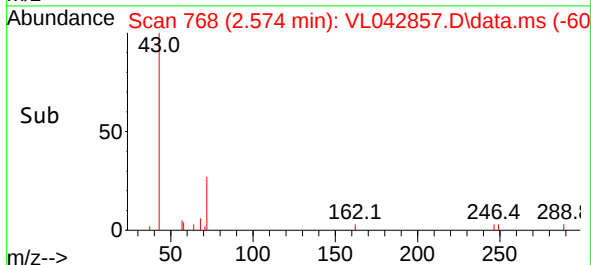
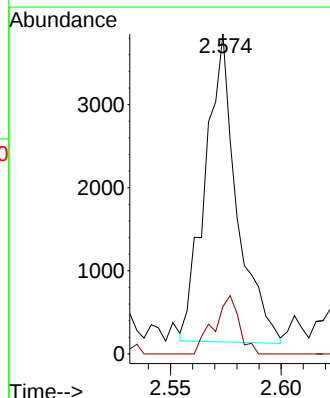
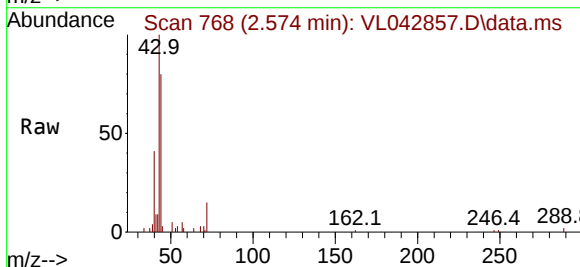
Acq: 13 Aug 2025 18:21

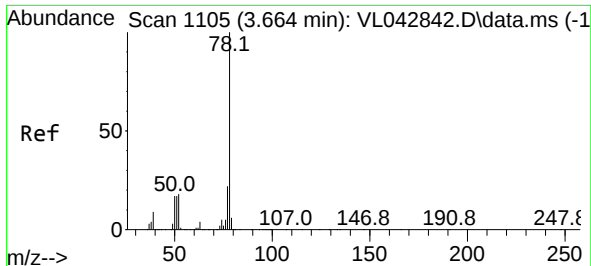
Tgt Ion: 43 Resp: 3693

Ion Ratio Lower Upper

43 100

72 14.9 18.6 28.0#

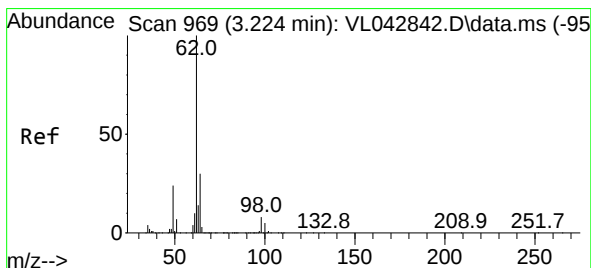
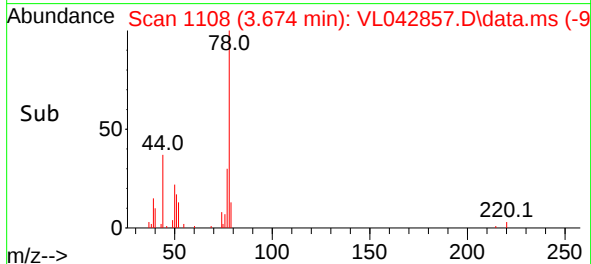
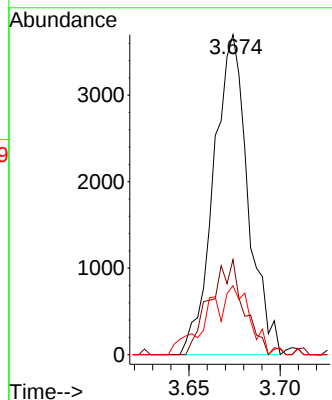
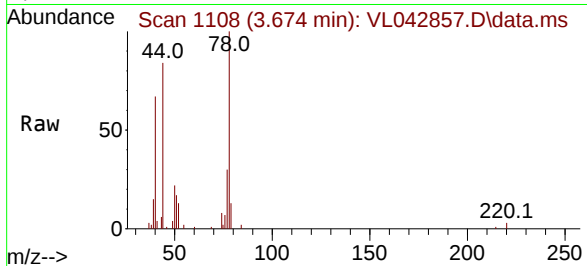




#36
Benzene
Concen: 0.125 ppbv
RT: 3.674 min Scan# 1105
Delta R.T. 0.010 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

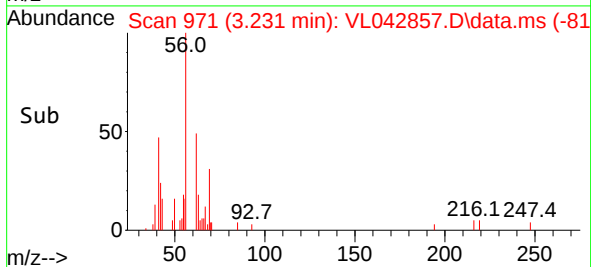
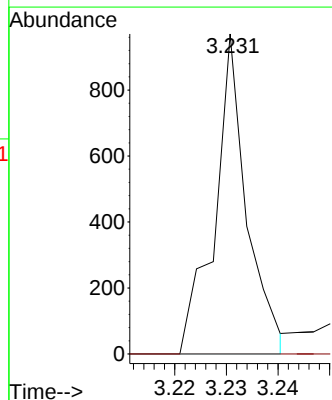
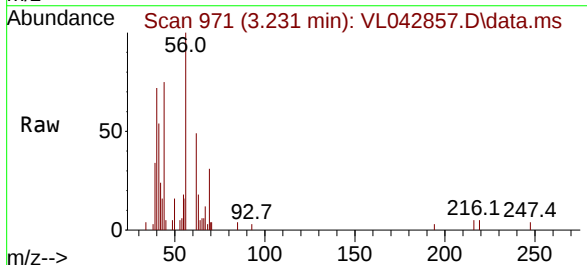
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

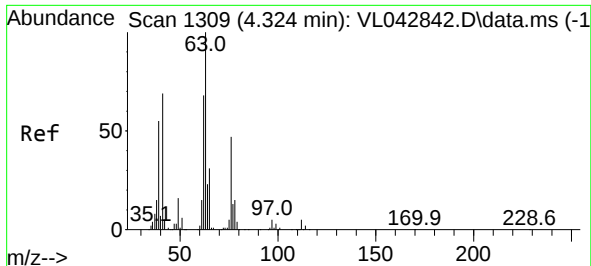
Tgt Ion: 78 Resp: 4851
Ion Ratio Lower Upper
78 100
77 29.7 17.7 26.5#
50 19.5 13.9 20.9



#37
1,2-Dichloroethane
Concen: 0.021 ppbv
RT: 3.231 min Scan# 971
Delta R.T. 0.007 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 62 Resp: 418
Ion Ratio Lower Upper
62 100
98 0.0 5.9 8.9#





#39

1,2-Dichloropropane

Concen: 7.021 ppbv

RT: 3.975 min Scan# 11

Delta R.T. -0.349 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

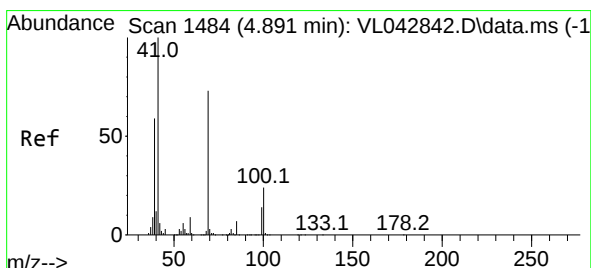
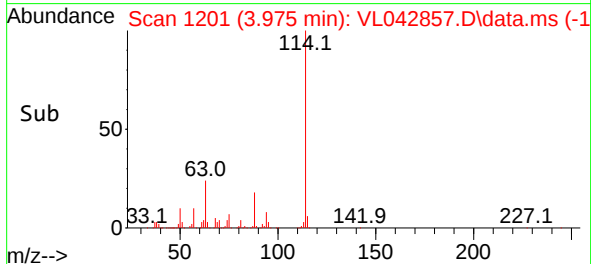
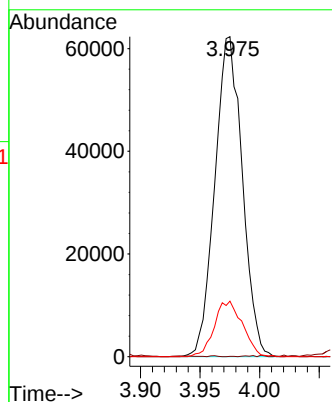
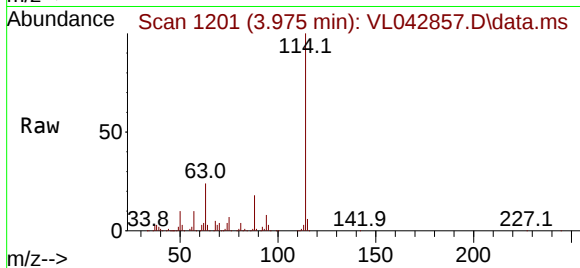
Tgt Ion: 63 Resp: 99781

Ion Ratio Lower Upper

63 100

41 0.0 55.0 82.4#

62 17.4 54.4 81.6#



#43

Methyl Methacrylate

Concen: 0.020 ppbv

RT: 4.901 min Scan# 1487

Delta R.T. 0.010 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

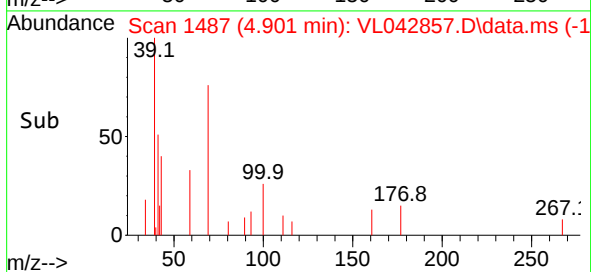
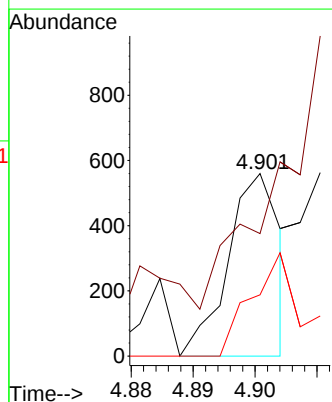
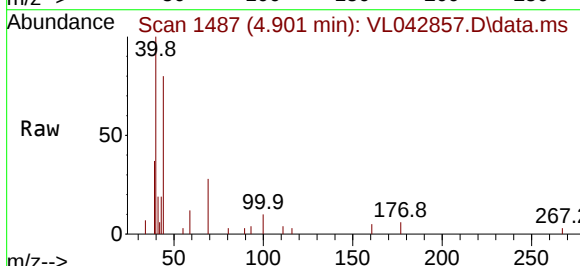
Tgt Ion: 69 Resp: 327

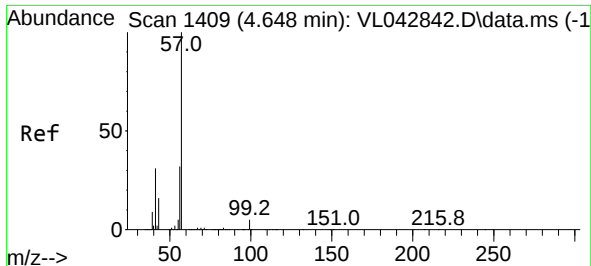
Ion Ratio Lower Upper

69 100

41 0.0 114.6 172.0#

100 67.6 30.2 45.4#





#44

2,2,4-Trimethylpentane

Concen: 0.130 ppbv

RT: 4.658 min Scan# 1409

Delta R.T. 0.010 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

IA1DL

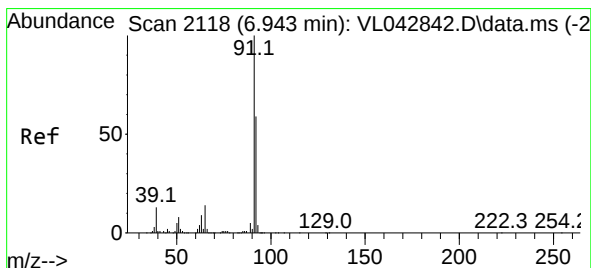
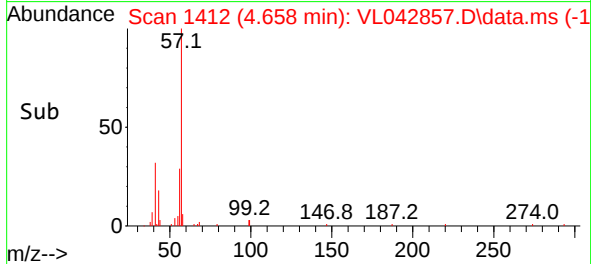
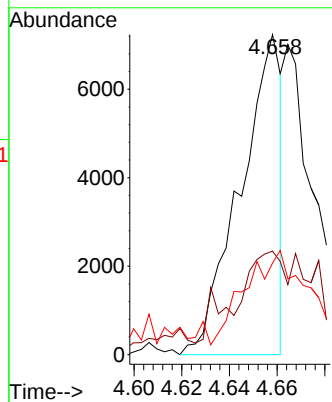
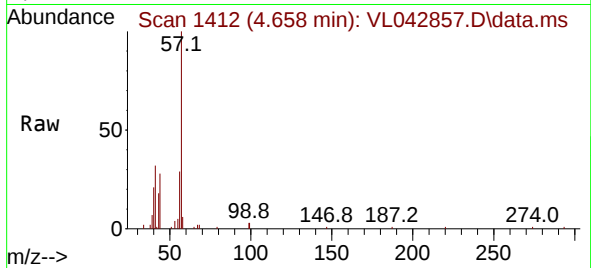
Tgt Ion: 57 Resp: 8597

Ion Ratio Lower Upper

57 100

41 76.8 24.8 37.2#

56 57.7 25.5 38.3#



#53

Toluene

Concen: 1.009 ppbv

RT: 6.956 min Scan# 2122

Delta R.T. 0.013 min

Lab File: VL042857.D

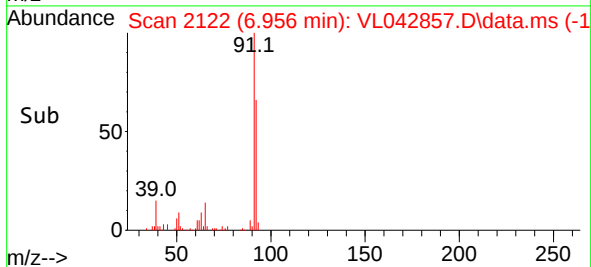
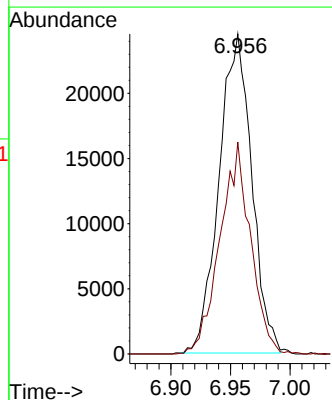
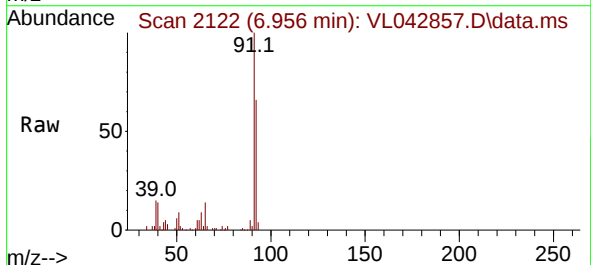
Acq: 13 Aug 2025 18:21

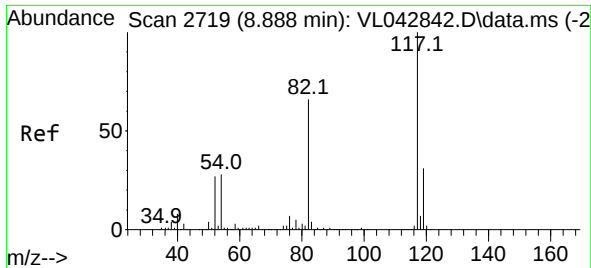
Tgt Ion: 91 Resp: 46683

Ion Ratio Lower Upper

91 100

92 62.1 47.8 71.6

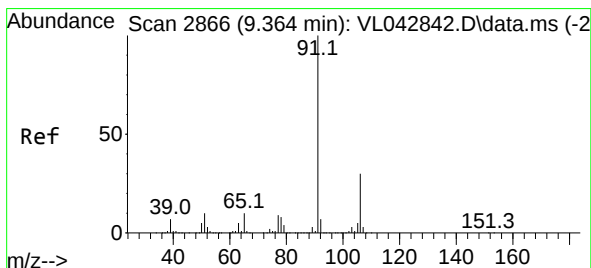
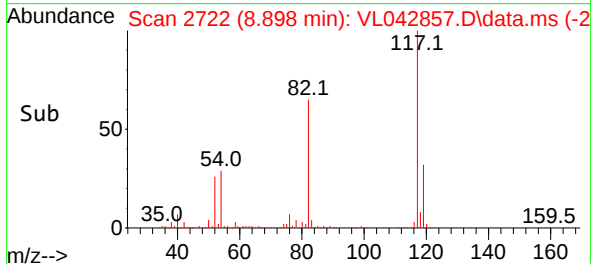
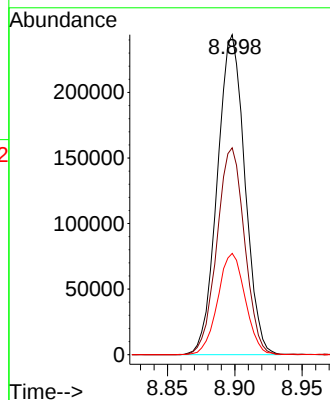
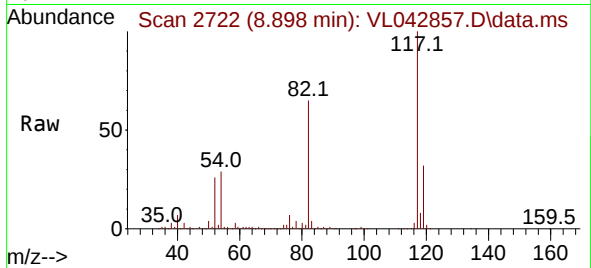




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.898 min Scan# 21
Delta R.T. 0.010 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

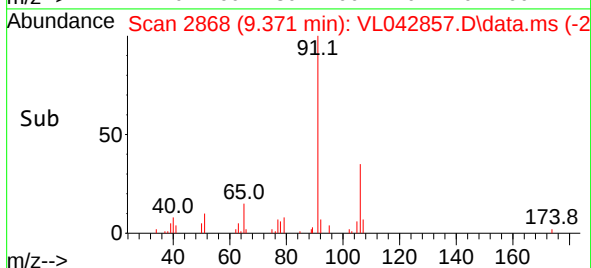
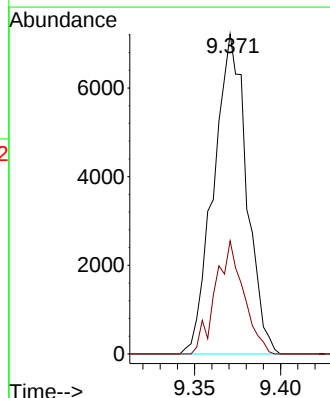
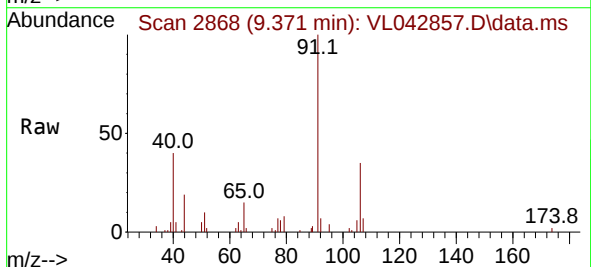
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

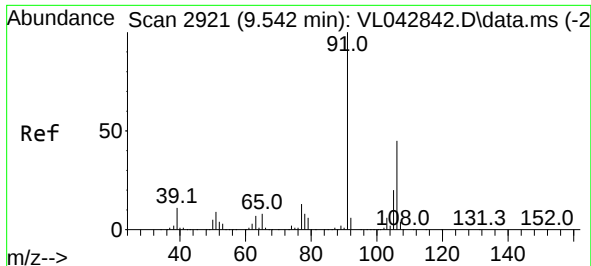
Tgt Ion:117 Resp: 347245
Ion Ratio Lower Upper
117 100
82 65.1 54.6 81.8
119 31.7 25.9 38.9



#58
Ethyl Benzene
Concen: 0.157 ppbv
RT: 9.371 min Scan# 2868
Delta R.T. 0.007 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 91 Resp: 9634
Ion Ratio Lower Upper
91 100
106 35.4 23.9 35.9





#59

m/p-Xylene

Concen: 0.475 ppbv

RT: 9.549 min Scan# 2921

Delta R.T. 0.007 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

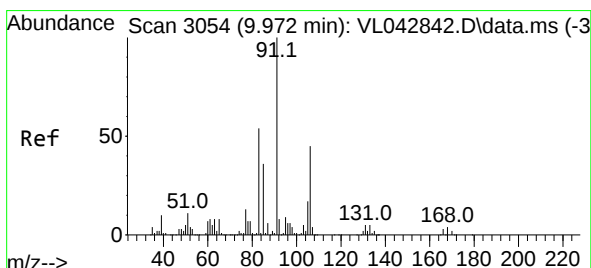
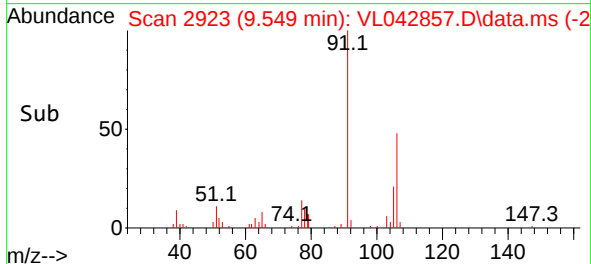
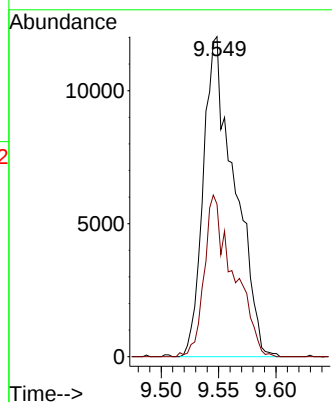
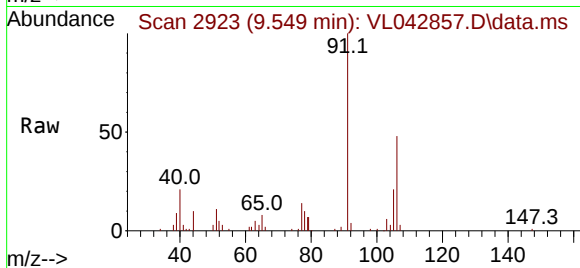
IA1DL

Tgt Ion: 91 Resp: 22807

Ion Ratio Lower Upper

91 100

106 47.3 0.0 0.0#



#60

o-Xylene

Concen: 0.187 ppbv

RT: 9.982 min Scan# 3057

Delta R.T. 0.010 min

Lab File: VL042857.D

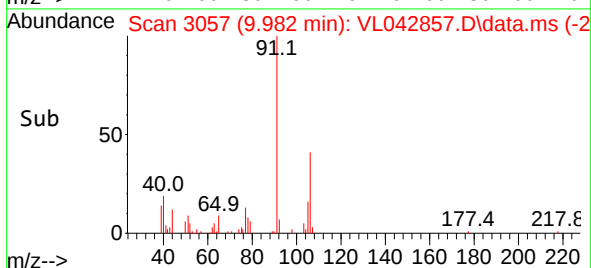
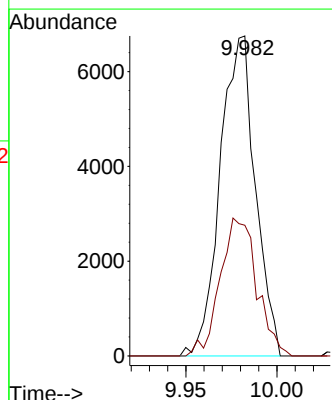
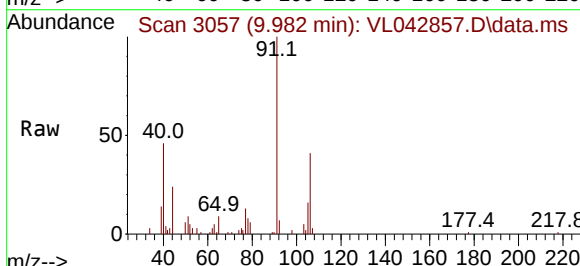
Acq: 13 Aug 2025 18:21

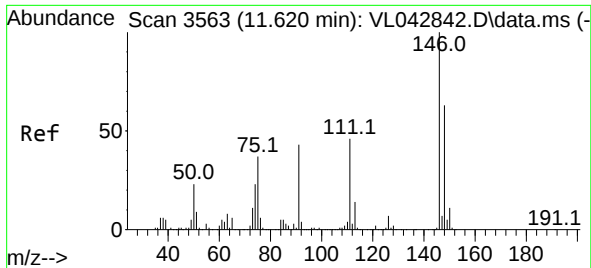
Tgt Ion: 91 Resp: 9054

Ion Ratio Lower Upper

91 100

106 45.0 21.8 65.4

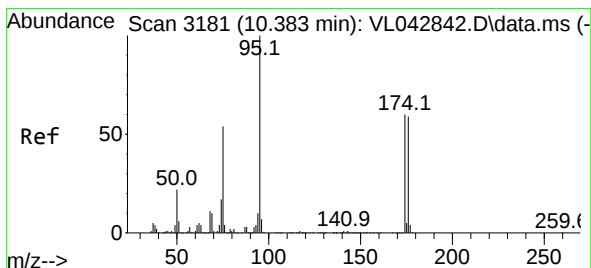
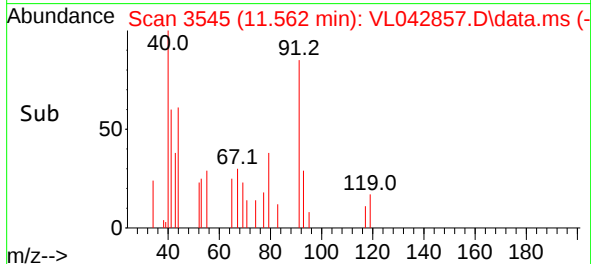
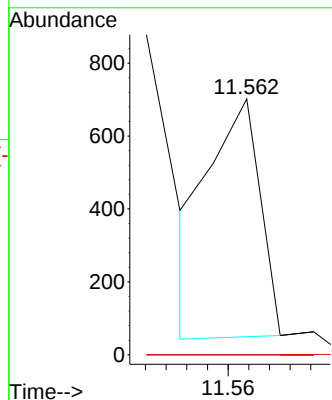
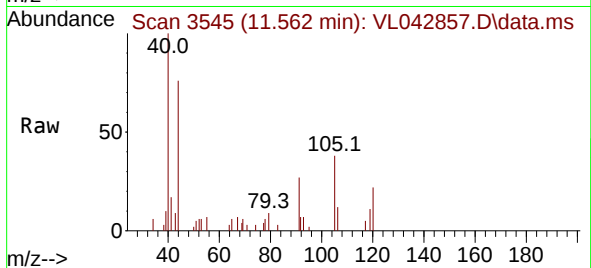




#66
Benzyl Chloride
Concen: 0.028 ppbv
RT: 11.562 min Scan# 3183
Delta R.T. -0.058 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

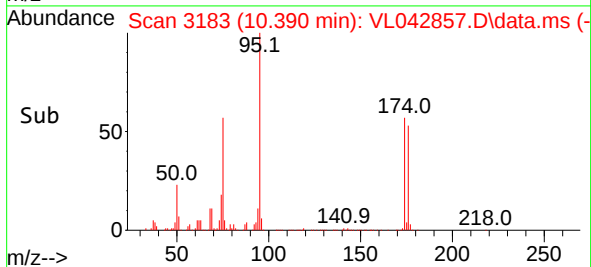
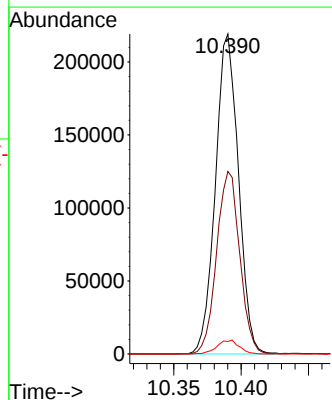
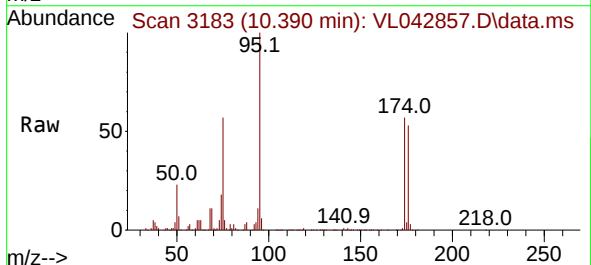
Instrument :
MSVOA_L
ClientSampleId :
IA1DL

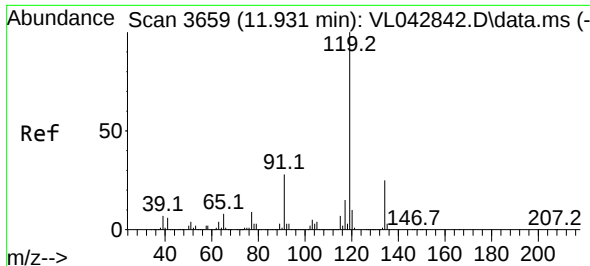
Tgt Ion: 91 Resp: 220
Ion Ratio Lower Upper
91 100
126 0.0 14.2 21.4#
128 0.0 5.0 7.6#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.997 ppbv
RT: 10.390 min Scan# 3183
Delta R.T. 0.007 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Tgt Ion: 95 Resp: 260346
Ion Ratio Lower Upper
95 100
174 57.4 48.4 72.6
175 4.2 3.8 5.8





#69

p-Isopropyltoluene

Concen: 0.022 ppbv

RT: 11.934 min Scan# 3660

Delta R.T. 0.003 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

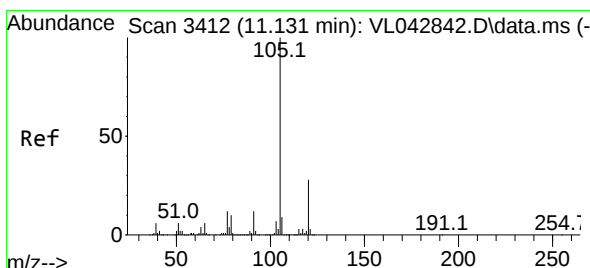
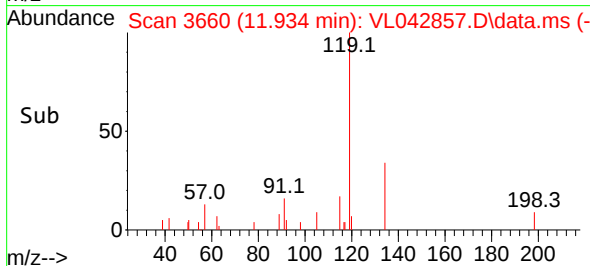
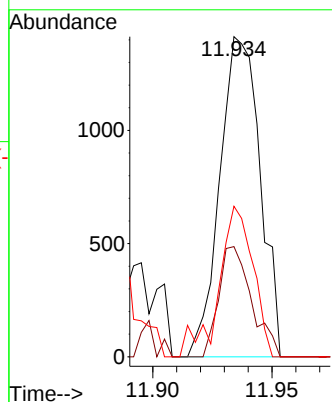
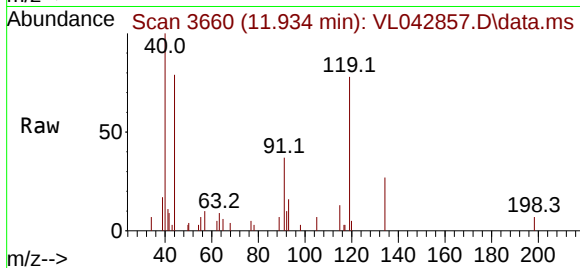
Instrument :

MSVOA_L

ClientSampleId :

IA1DL

Tgt Ion:	119	Resp:	1660
Ion	Ratio	Lower	Upper
119	100		
134	28.1	20.6	30.8
91	39.9	22.6	34.0#



#72

4-Ethyltoluene

Concen: 0.041 ppbv

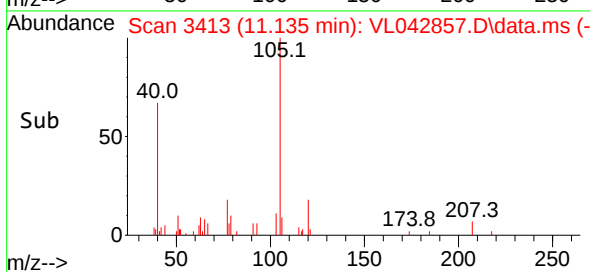
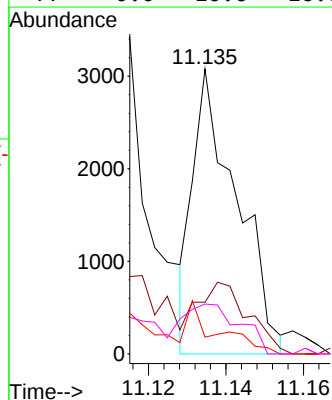
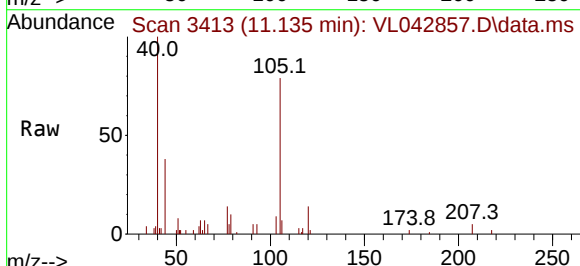
RT: 11.135 min Scan# 3413

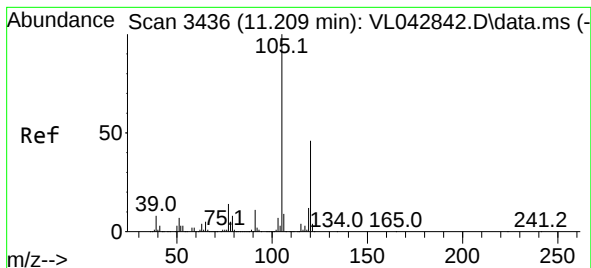
Delta R.T. 0.003 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Tgt Ion:	105	Resp:	2417
Ion	Ratio	Lower	Upper
105	100		
120	0.0	23.4	35.2#
91	0.0	9.8	14.6#
77	0.0	10.6	16.0#





#73

1,3,5-Trimethylbenzene

Concen: 0.045 ppbv

RT: 11.215 min Scan# 3438

Delta R.T. 0.007 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Instrument :

MSVOA_L

ClientSampleId :

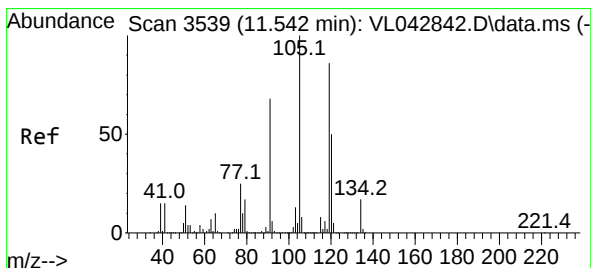
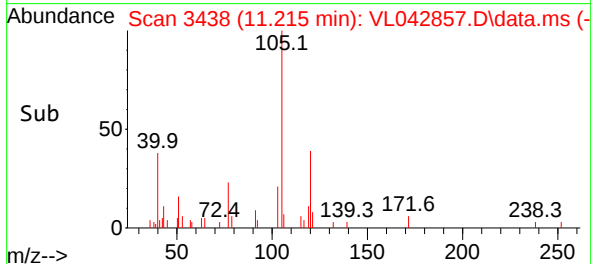
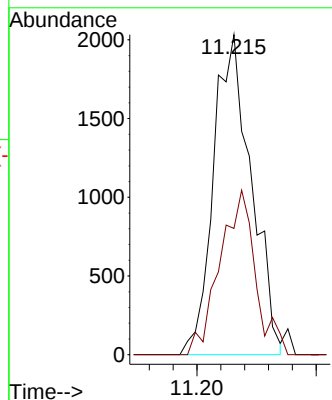
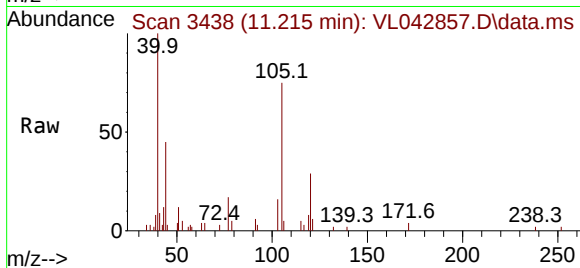
IA1DL

Tgt Ion:105 Resp: 2234

Ion Ratio Lower Upper

105 100

120 39.4 36.6 54.8



#74

1,2,4-Trimethylbenzene

Concen: 0.157 ppbv

RT: 11.549 min Scan# 3541

Delta R.T. 0.007 min

Lab File: VL042857.D

Acq: 13 Aug 2025 18:21

Tgt Ion:105 Resp: 8568

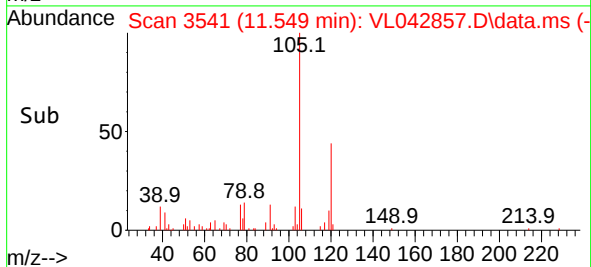
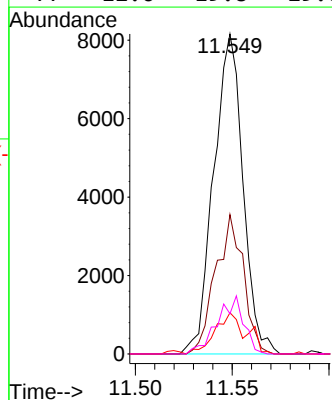
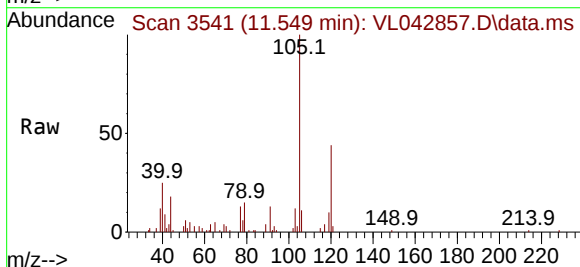
Ion Ratio Lower Upper

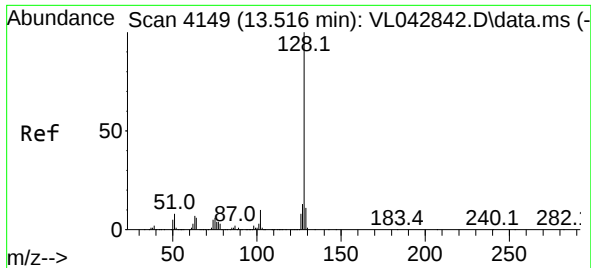
105 100

120 46.8 39.8 59.6

91 12.9 54.2 81.4#

77 12.6 19.8 29.6#





#79
Naphthalene
Concen: 0.055 ppbv
RT: 13.530 min Scan# 41
Delta R.T. 0.013 min
Lab File: VL042857.D
Acq: 13 Aug 2025 18:21

Instrument :
MSVOA_L
ClientSampleId :
IA1DL

Tgt Ion:128 Resp: 2734
Ion Ratio Lower Upper
128 100
127 8.3 10.6 16.0#
129 4.8 8.9 13.3#

