

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL031025\
 Data File : VL042129.D
 Acq On : 10 Mar 2025 17:20
 Operator : SY/MD
 Sample : QC1506-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Quant Time: Mar 11 01:27:44 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL022525AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Wed Feb 26 01:08:36 2025
 Response via : Initial Calibration

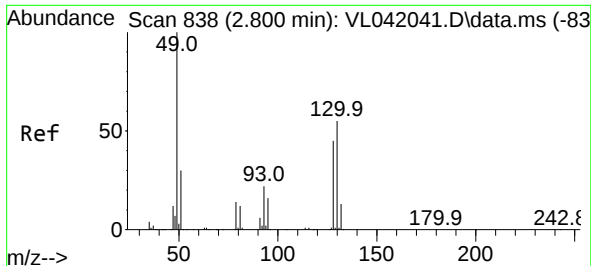
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.797	49	155742	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.975	114	361993	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.898	117	308529	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.390	95	259167	10.918	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	= 109.200%	
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.502	85	8995	0.555	ppbv	99
3) Chlorodifluoromethane	1.470	51	37967	1.677	ppbv #	67
4) Chloromethane	1.534	50	3411	0.570	ppbv #	76
6) Bromomethane	1.677	94	145	0.054	ppbv #	2
9) Propene	1.563	41	22621	2.453	ppbv	100
10) Heptane	4.998	43	1096	0.038	ppbv #	1
11) Trichlorofluoromethane	1.884	101	4807	0.296	ppbv	91
12) 1,1,2-Trichlorotrifluo...	2.149	101	1239	0.096	ppbv	97
13) Ethanol	1.725	45	76408	130.528	ppbv	91
15) Acetone	1.842	43	106603	7.751	ppbv #	89
16) 1,3-Butadiene	1.625	39	14345	2.241	ppbv #	18
17) tert-Butyl alcohol	2.052	59	1251	0.073	ppbv #	70
19) Isopropyl Alcohol	1.894	45	20146	2.550	ppbv #	3
20) Methylene Chloride	2.068	84	4206	0.808	ppbv	95
21) Allyl Chloride	2.088	41	1691	0.170	ppbv #	37
23) Vinyl Acetate	2.483	43	15263	1.578	ppbv #	42
26) Hexane	2.835	57	7833	0.352	ppbv #	44
29) Chloroform	2.858	83	1694	0.057	ppbv #	83
30) Cyclohexane	3.871	84	857	0.047	ppbv #	15
31) cis-1,2-Dichloroethene	2.829	61	2545	0.121	ppbv #	25
34) 2-Butanone	2.570	43	7380	0.262	ppbv	97
35) Carbon Tetrachloride	3.777	117	1965	0.079	ppbv #	51
36) Benzene	3.667	78	10673	0.282	ppbv #	85
39) 1,2-Dichloropropane	3.975	63	92041	6.399	ppbv #	22
44) 2,2,4-Trimethylpentane	4.654	57	4547	0.068	ppbv #	8
53) Toluene	6.952	91	14124	0.333	ppbv #	56
58) Ethyl Benzene	9.373	91	28623	0.504	ppbv	97
59) m/p-Xylene	9.548	91	200012	4.423	ppbv #	100
60) o-Xylene	9.979	91	57106	1.256	ppbv	99
74) 1,2,4-Trimethylbenzene	11.548	105	5210	0.096	ppbv #	65
76) 1,4-Dichlorobenzene	11.684	146	1067	0.034	ppbv	86
77) 1,2-Dichlorobenzene	11.684	146	1067	0.035	ppbv	90

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

Quant Time: Mar 11 01:27:44 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL022525AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Wed Feb 26 01:08:36 2025
Response via : Initial Calibration

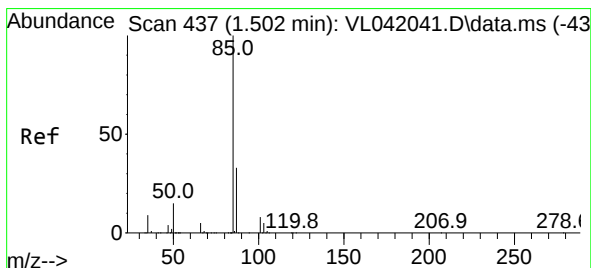
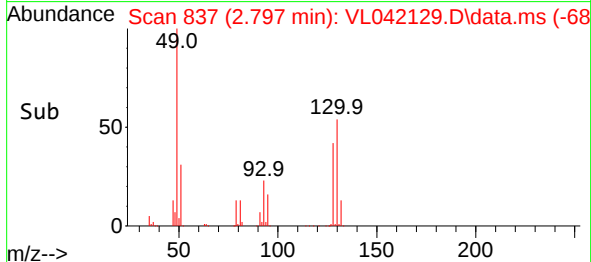
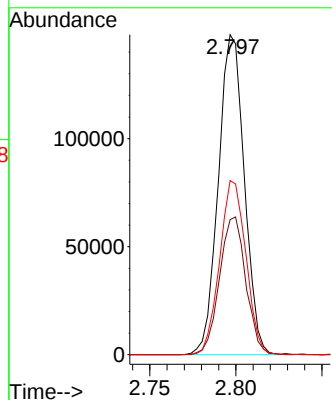
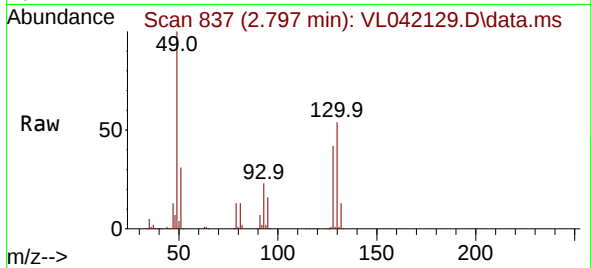




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.797 min Scan# 81
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

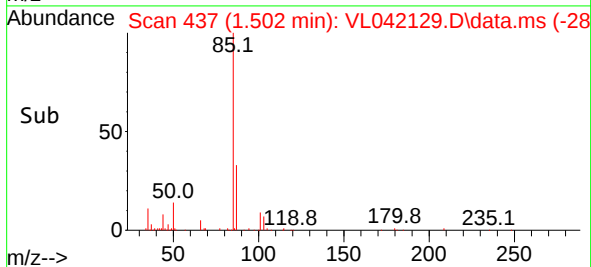
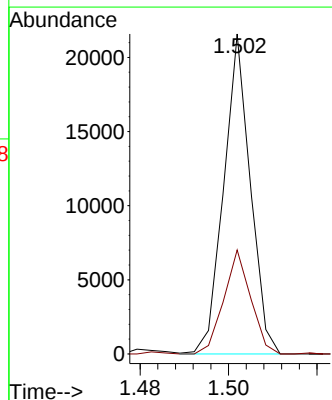
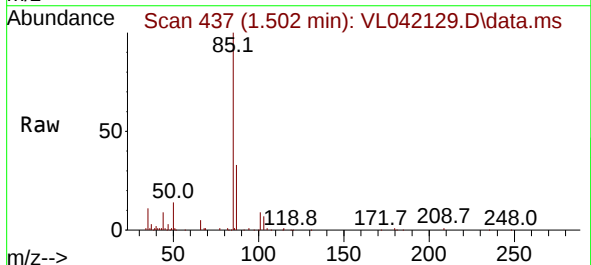
Instrument :
MSVOA_L
ClientSampleId :
IA1

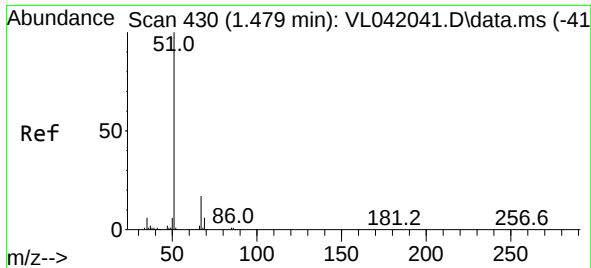
Tgt Ion: 49 Resp: 155742
Ion Ratio Lower Upper
49 100
128 43.5 21.6 64.8
130 55.0 27.8 83.4



#2
Dichlorodifluoromethane
Concen: 0.555 ppbv
RT: 1.502 min Scan# 437
Delta R.T. -0.000 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 85 Resp: 8995
Ion Ratio Lower Upper
85 100
87 32.5 26.4 39.6

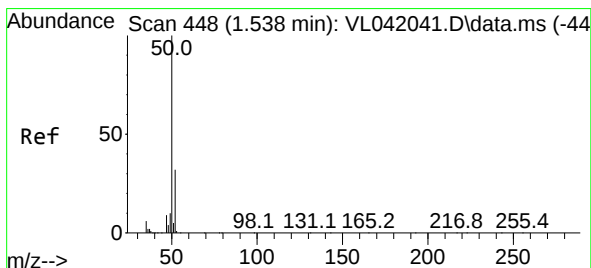
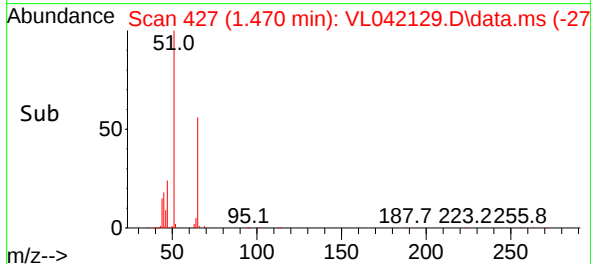
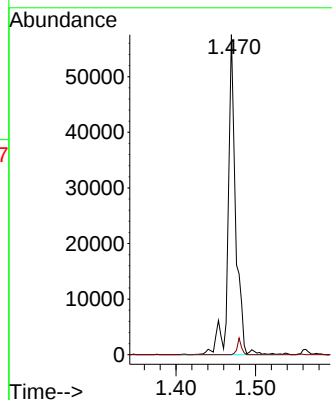
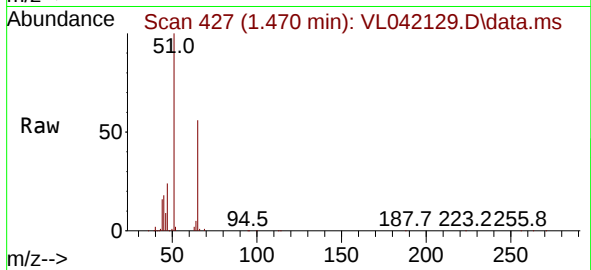




#3
Chlorodifluoromethane
Concen: 1.677 ppbv
RT: 1.470 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

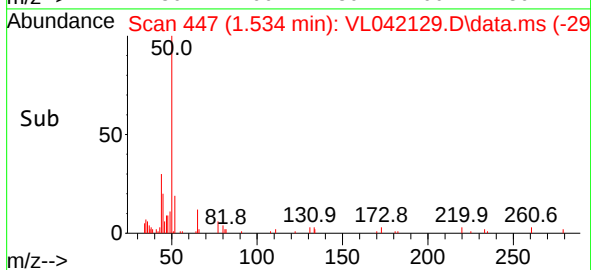
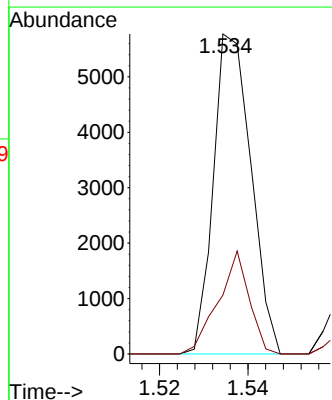
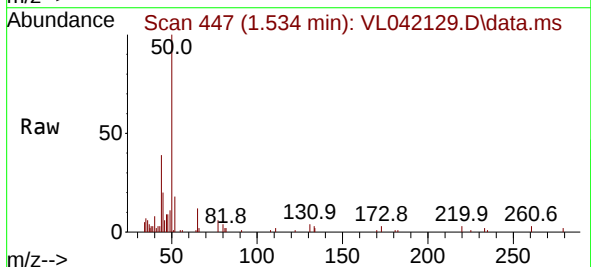
Instrument :
MSVOA_L
ClientSampleId :
IA1

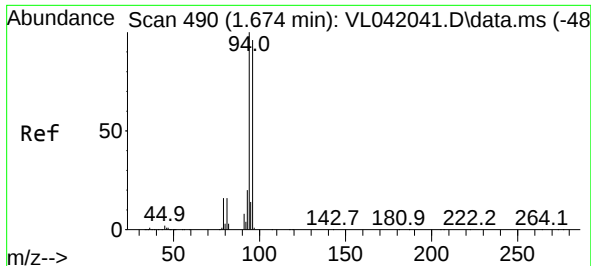
Tgt Ion: 51 Resp: 37967
Ion Ratio Lower Upper
51 100
67 2.9 13.7 20.5#



#4
Chloromethane
Concen: 0.570 ppbv
RT: 1.534 min Scan# 447
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 50 Resp: 3411
Ion Ratio Lower Upper
50 100
52 18.4 25.4 38.0#

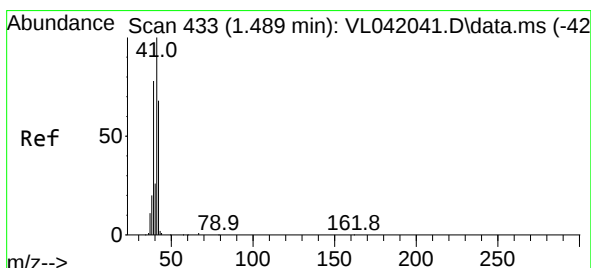
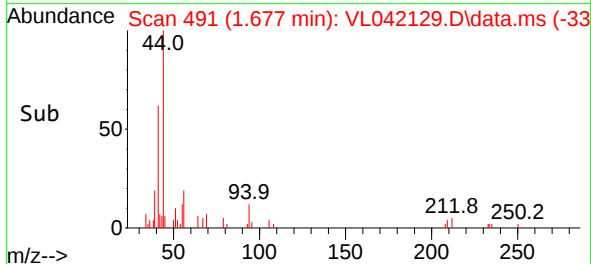
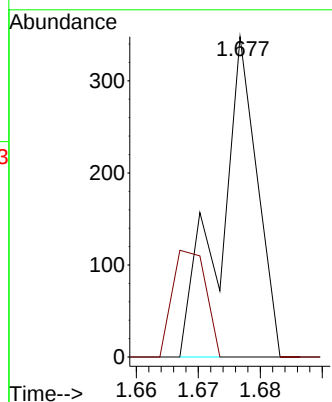
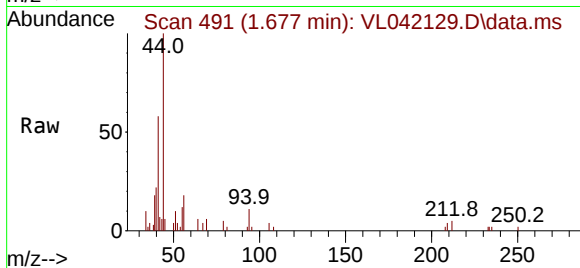




#6
Bromomethane
Concen: 0.054 ppbv
RT: 1.677 min Scan# 491
Delta R.T. 0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

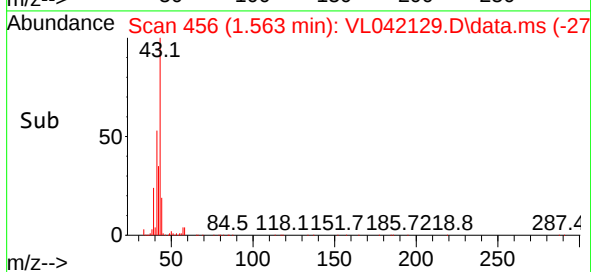
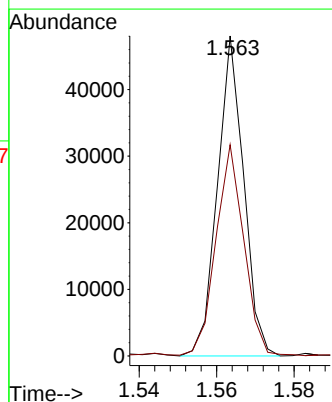
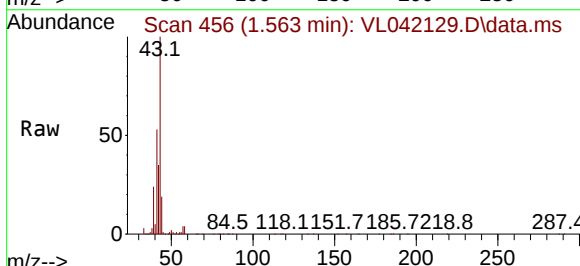
Instrument :
MSVOA_L
ClientSampleId :
IA1

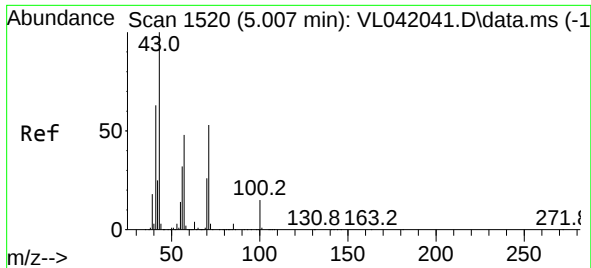
Tgt Ion: 94 Resp: 145
Ion Ratio Lower Upper
94 100
96 0.0 76.5 114.7#



#9
Propene
Concen: 2.453 ppbv
RT: 1.563 min Scan# 456
Delta R.T. 0.074 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 41 Resp: 22621
Ion Ratio Lower Upper
41 100
42 69.8 55.8 83.6





#10

Heptane

Concen: 0.038 ppbv

RT: 4.998 min Scan# 11

Delta R.T. -0.010 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

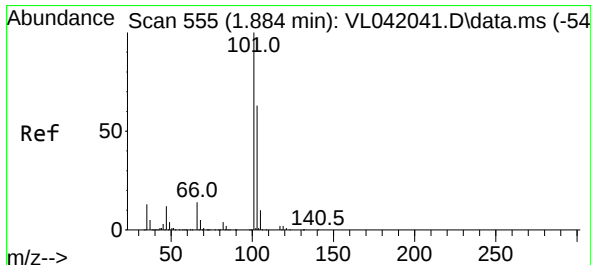
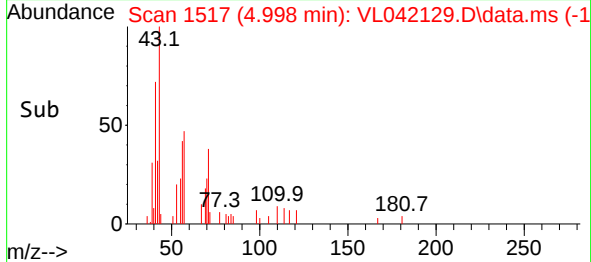
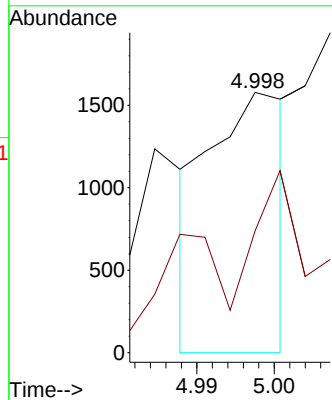
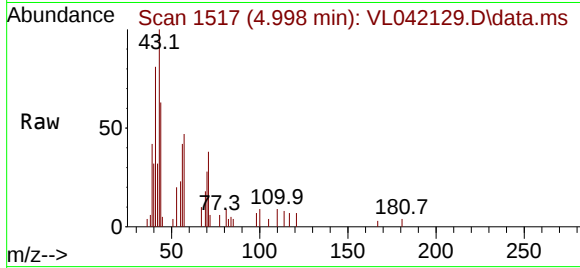
IA1

Tgt Ion: 43 Resp: 1096

Ion Ratio Lower Upper

43 100

57 151.7 39.4 59.0#



#11

Trichlorofluoromethane

Concen: 0.296 ppbv

RT: 1.884 min Scan# 555

Delta R.T. -0.000 min

Lab File: VL042129.D

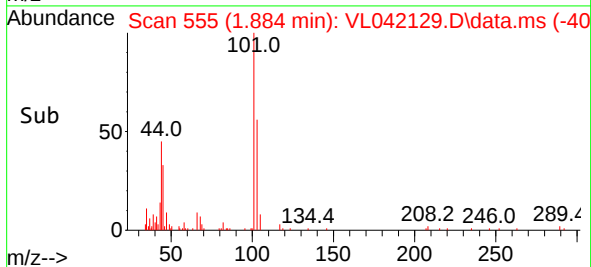
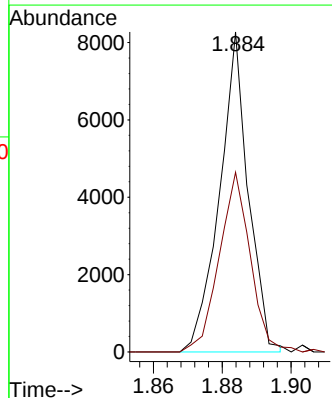
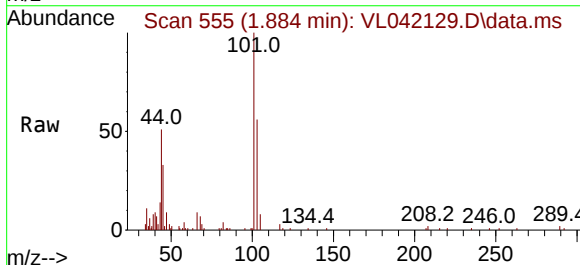
Acq: 10 Mar 2025 17:20

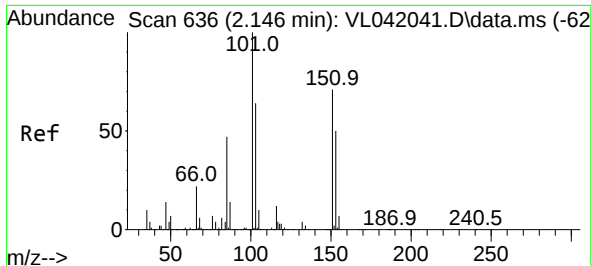
Tgt Ion:101 Resp: 4807

Ion Ratio Lower Upper

101 100

103 56.1 50.6 75.8

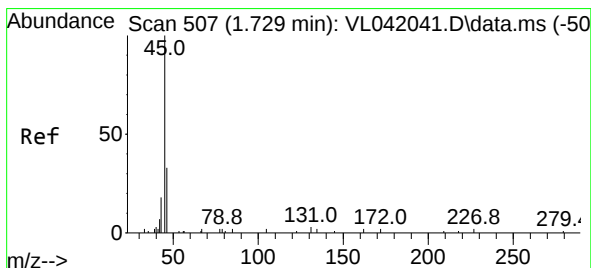
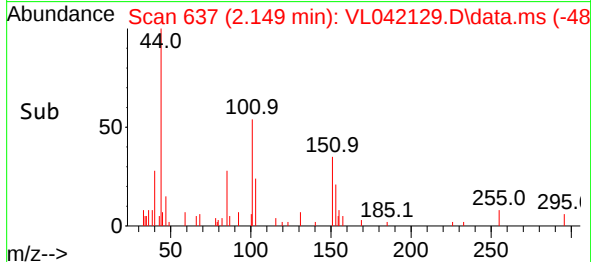
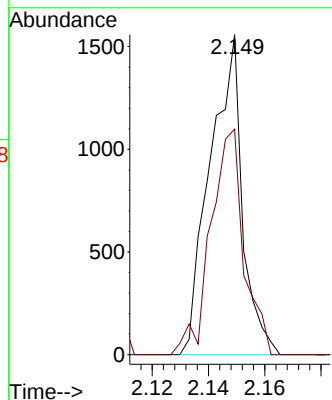
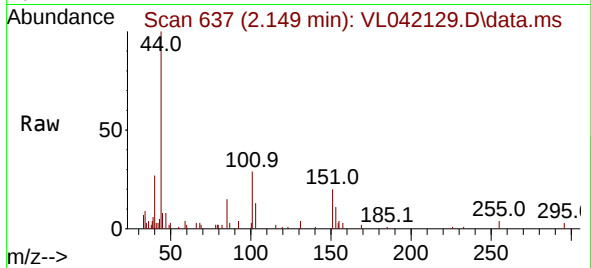




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.096 ppbv
RT: 2.149 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

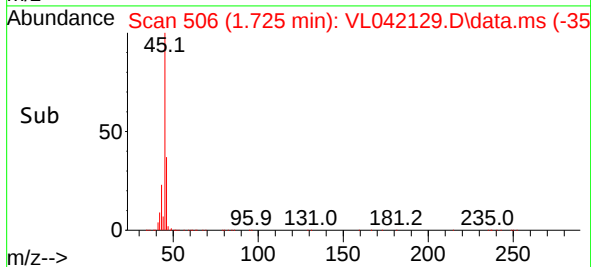
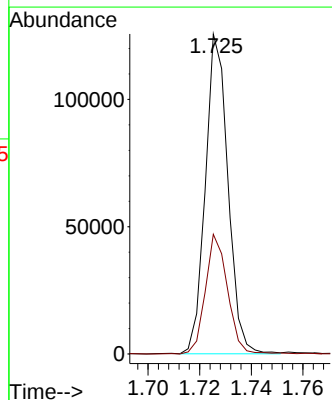
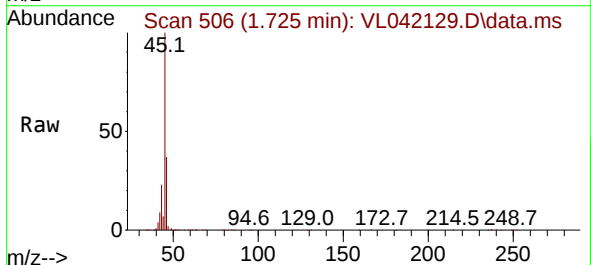
Instrument :
MSVOA_L
ClientSampleId :
IA1

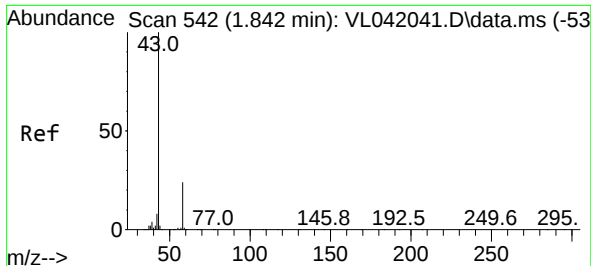
Tgt Ion:101 Resp: 1239
Ion Ratio Lower Upper
101 100
151 75.4 62.6 94.0



#13
Ethanol
Concen: 130.528 ppbv
RT: 1.725 min Scan# 506
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 45 Resp: 76408
Ion Ratio Lower Upper
45 100
46 37.1 17.1 68.3

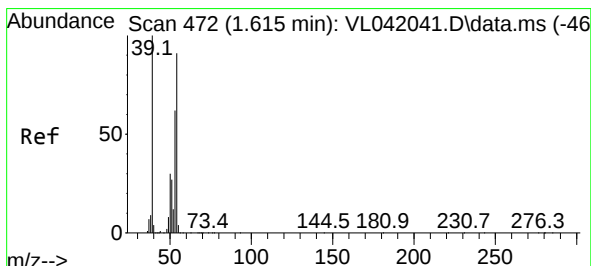
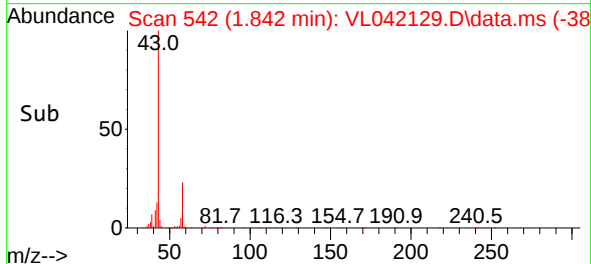
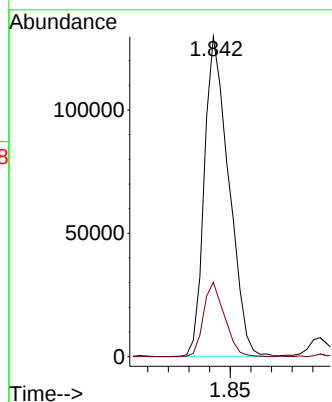
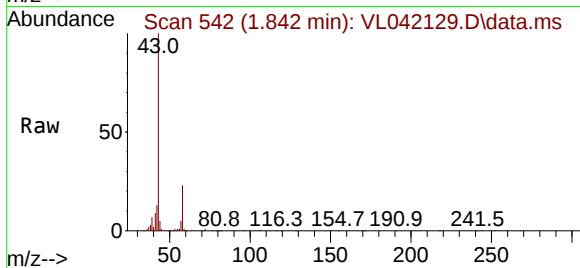




#15
Acetone
Concen: 7.751 ppbv
RT: 1.842 min Scan# 54
Delta R.T. -0.000 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

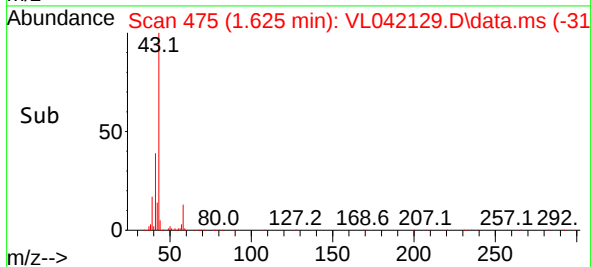
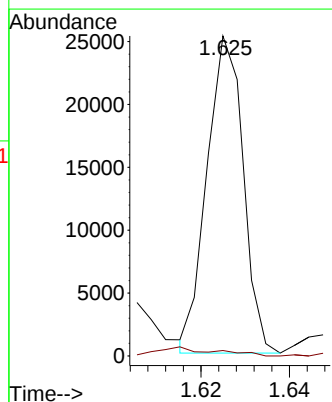
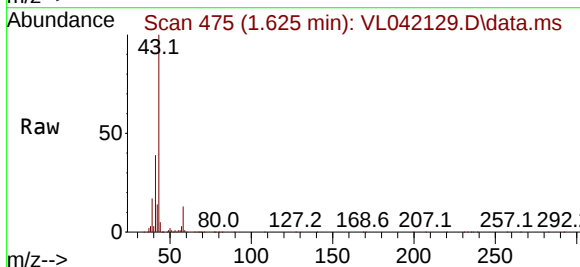
Instrument :
MSVOA_L
ClientSampleId :
IA1

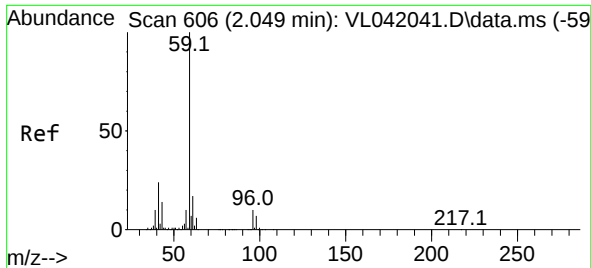
Tgt Ion: 43 Resp: 106603
Ion Ratio Lower Upper
43 100
58 20.1 20.7 31.1#



#16
1,3-Butadiene
Concen: 2.241 ppbv
RT: 1.625 min Scan# 475
Delta R.T. 0.010 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 39 Resp: 14345
Ion Ratio Lower Upper
39 100
54 5.0 59.6 89.4#





#17

tert-Butyl alcohol

Concen: 0.073 ppbv

RT: 2.052 min Scan# 606

Delta R.T. 0.003 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

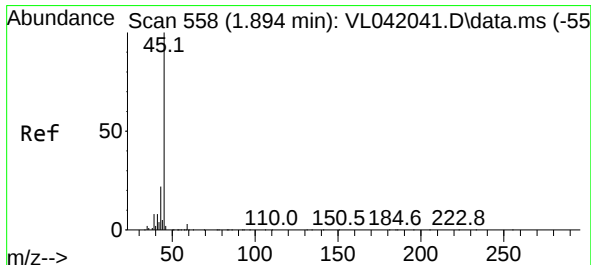
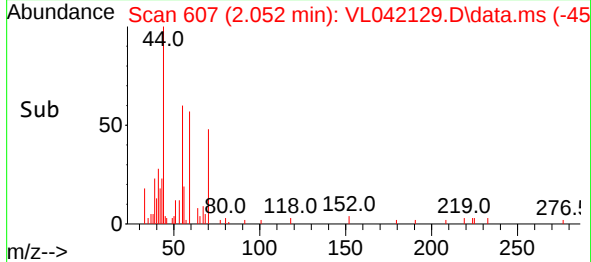
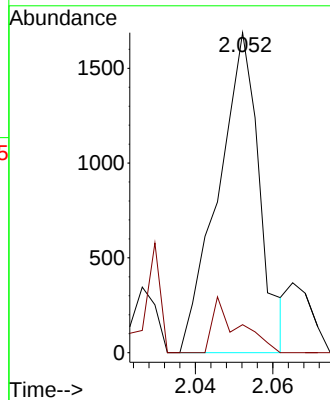
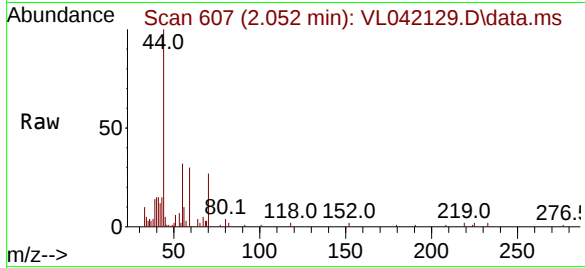
IA1

Tgt Ion: 59 Resp: 1251

Ion Ratio Lower Upper

59 100

57 0.0 9.3 13.9#



#19

Isopropyl Alcohol

Concen: 2.550 ppbv

RT: 1.894 min Scan# 558

Delta R.T. -0.000 min

Lab File: VL042129.D

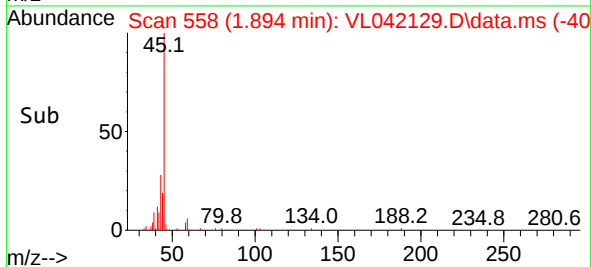
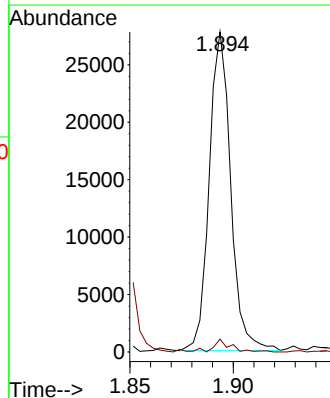
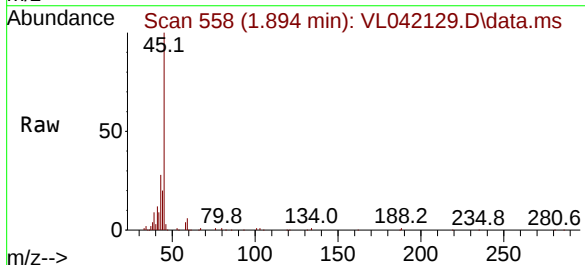
Acq: 10 Mar 2025 17:20

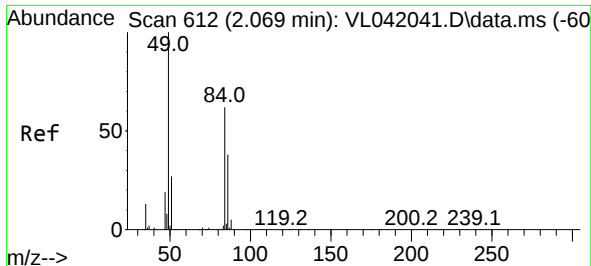
Tgt Ion: 45 Resp: 20146

Ion Ratio Lower Upper

45 100

58 106.8 35.3 52.9#





#20

Methylene Chloride

Concen: 0.808 ppbv

RT: 2.068 min Scan# 612

Delta R.T. -0.000 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

IA1

Tgt Ion: 84 Resp: 4206

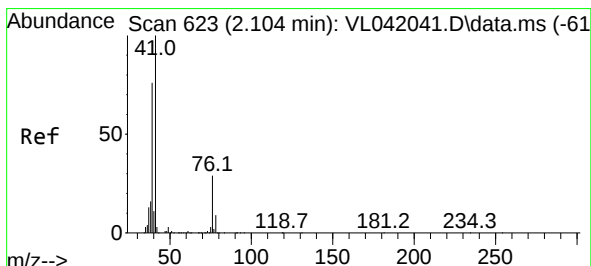
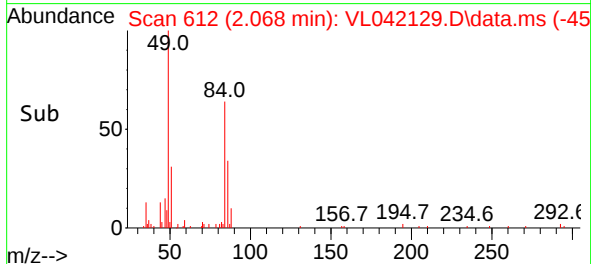
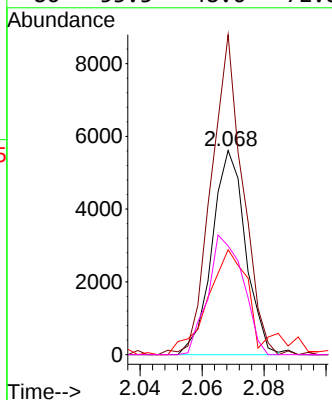
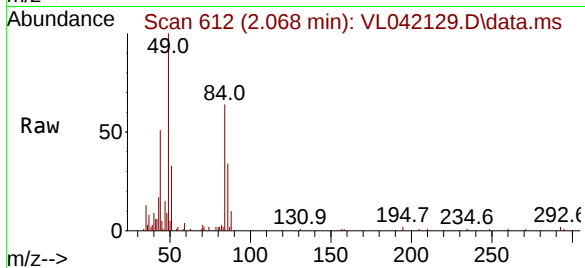
Ion Ratio Lower Upper

84 100

49 156.7 130.0 195.0

51 45.0 37.4 56.0

86 53.3 48.6 72.8



#21

Allyl Chloride

Concen: 0.170 ppbv

RT: 2.088 min Scan# 618

Delta R.T. -0.016 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

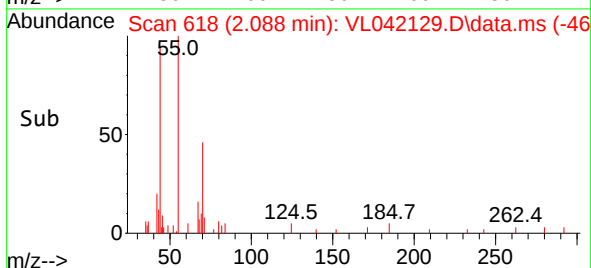
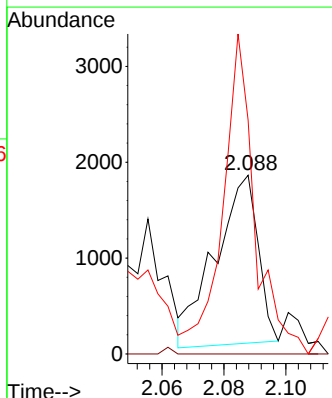
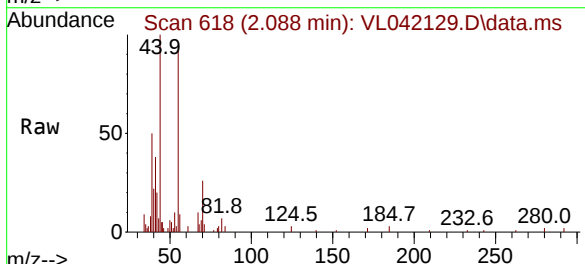
Tgt Ion: 41 Resp: 1691

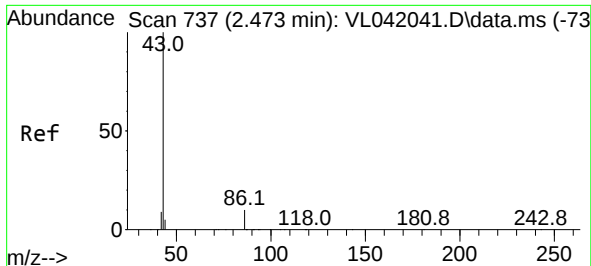
Ion Ratio Lower Upper

41 100

76 0.0 23.8 35.6#

39 138.0 63.8 95.6#

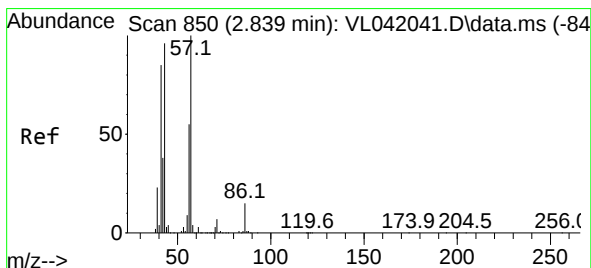
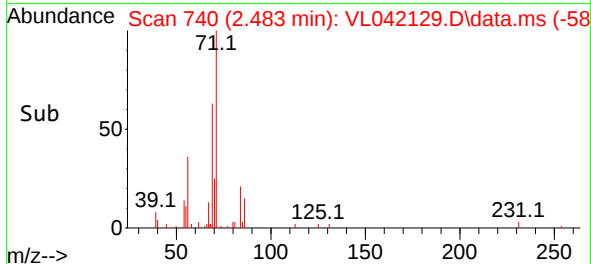
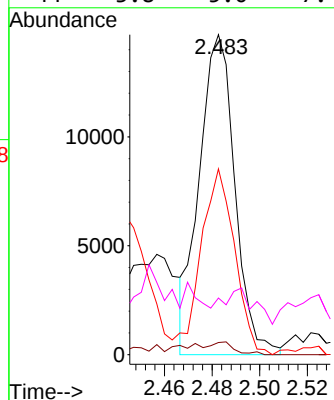
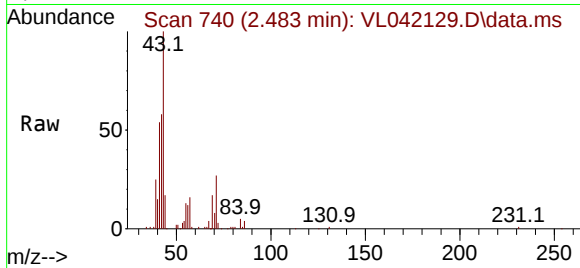




#23
 Vinyl Acetate
 Concen: 1.578 ppbv
 RT: 2.483 min Scan# 741
 Delta R.T. 0.010 min
 Lab File: VL042129.D
 Acq: 10 Mar 2025 17:20

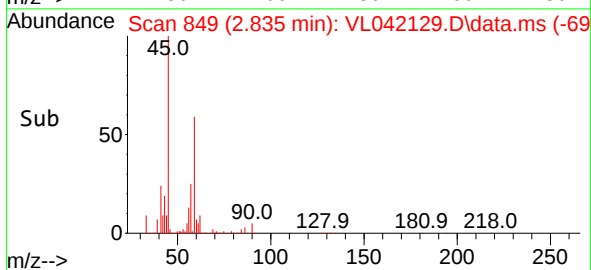
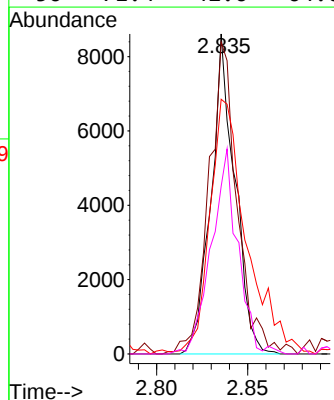
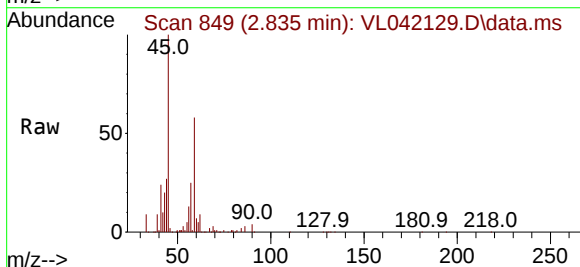
Instrument :
 MSVOA_1
 ClientSampleId :
 IA1

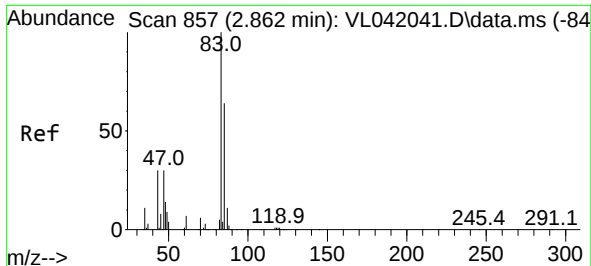
Tgt Ion: 43	Resp: 15263
Ion Ratio	Lower Upper
43 100	
86 3.9	7.0 10.4#
42 57.9	7.6 11.4#
44 3.8	5.0 7.4#



#26
 Hexane
 Concen: 0.352 ppbv
 RT: 2.835 min Scan# 849
 Delta R.T. -0.003 min
 Lab File: VL042129.D
 Acq: 10 Mar 2025 17:20

Tgt	Ion: 57	Resp:	7833
Ion	Ratio	Lower	Upper
57	100		
41	117.8	70.6	106.0#
43	124.3	199.4	299.0#
56	71.4	42.6	64.0#





#29

Chloroform

Concen: 0.057 ppbv

RT: 2.858 min Scan# 81

Delta R.T. -0.003 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

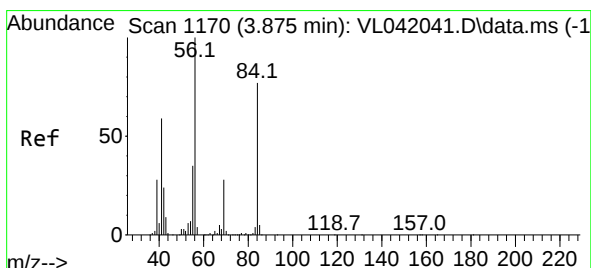
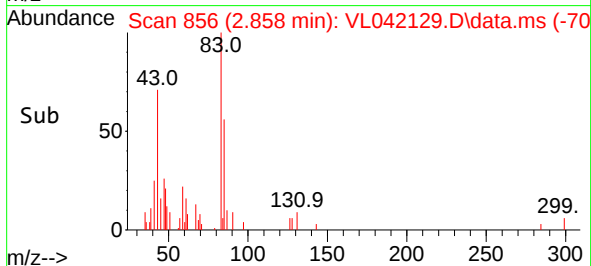
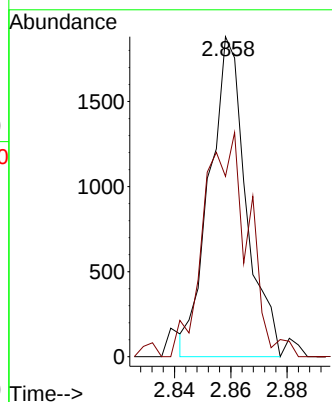
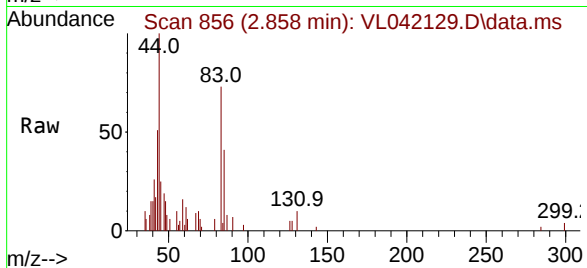
IA1

Tgt Ion: 83 Resp: 1694

Ion Ratio Lower Upper

83 100

85 51.0 51.2 76.8#



#30

Cyclohexane

Concen: 0.047 ppbv

RT: 3.871 min Scan# 1169

Delta R.T. -0.003 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

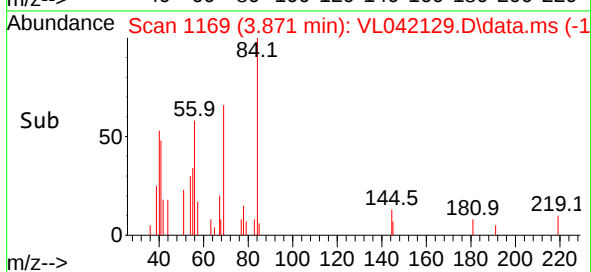
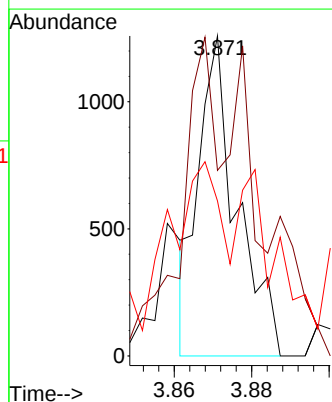
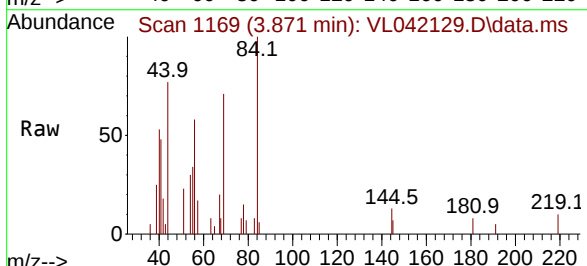
Tgt Ion: 84 Resp: 857

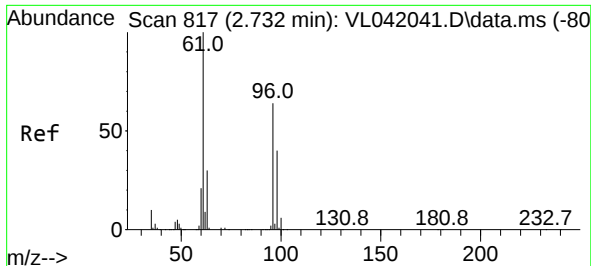
Ion Ratio Lower Upper

84 100

56 196.6 101.5 152.3#

41 187.3 62.6 93.8#

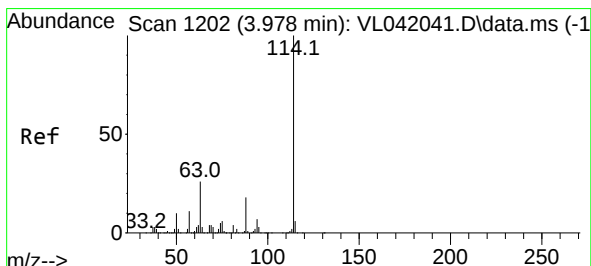
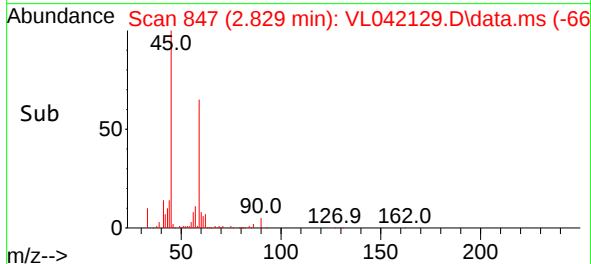
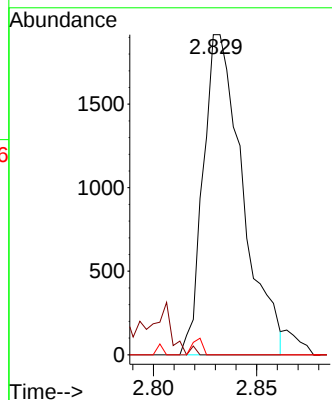
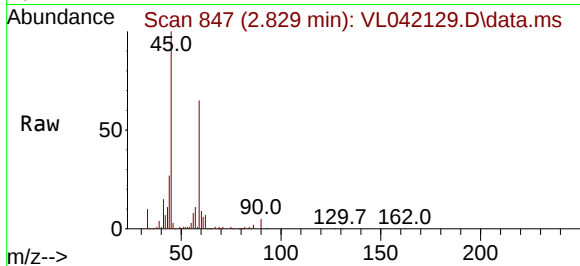




#31
 cis-1,2-Dichloroethene
 Concen: 0.121 ppbv
 RT: 2.829 min Scan# 847
 Delta R.T. 0.097 min
 Lab File: VL042129.D
 Acq: 10 Mar 2025 17:20

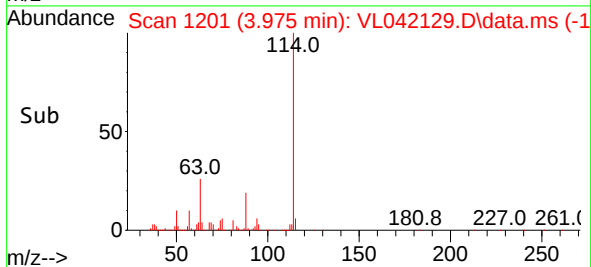
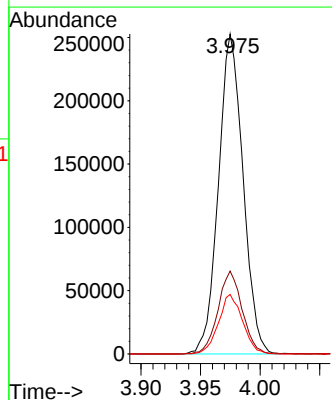
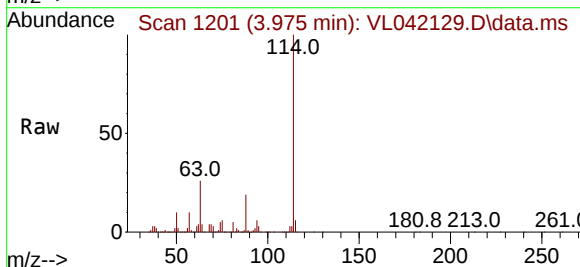
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

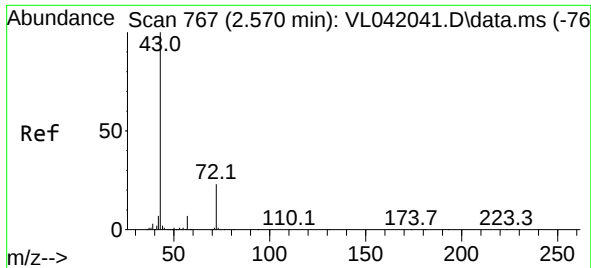
Tgt Ion: 61 Resp: 2545
 Ion Ratio Lower Upper
 61 100
 96 0.0 51.5 77.3#
 98 0.0 32.0 48.0#



#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 3.975 min Scan# 1201
 Delta R.T. -0.003 min
 Lab File: VL042129.D
 Acq: 10 Mar 2025 17:20

Tgt Ion: 114 Resp: 361993
 Ion Ratio Lower Upper
 114 100
 63 25.6 20.1 30.1
 88 18.2 14.3 21.5

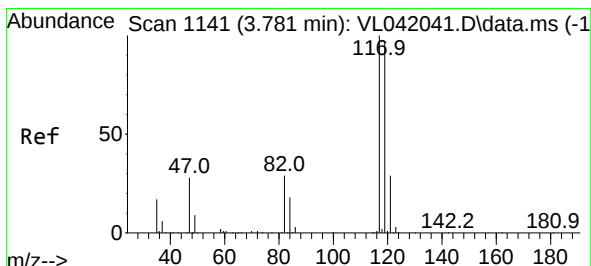
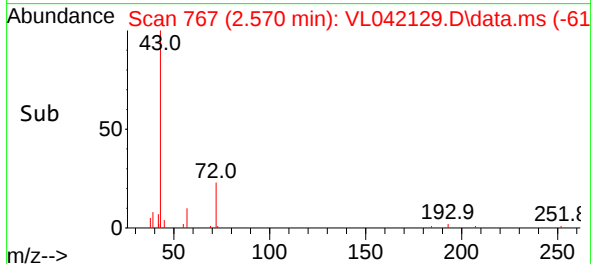
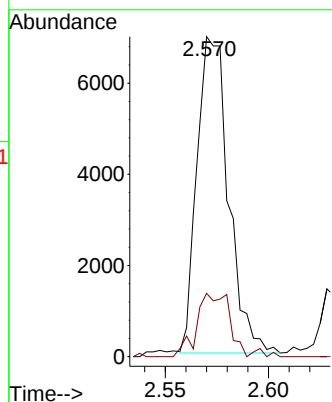
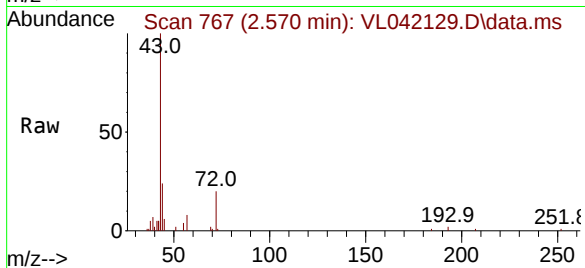




#34
2-Butanone
Concen: 0.262 ppbv
RT: 2.570 min Scan# 767
Delta R.T. -0.000 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

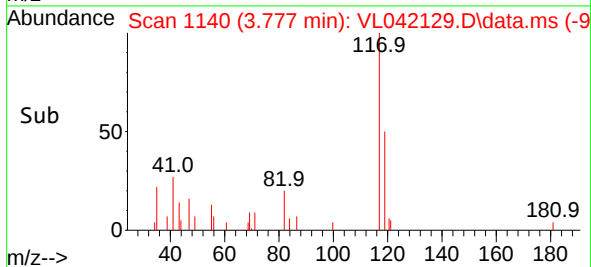
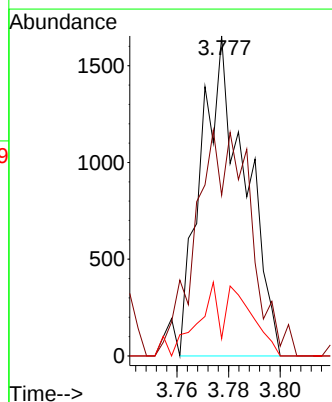
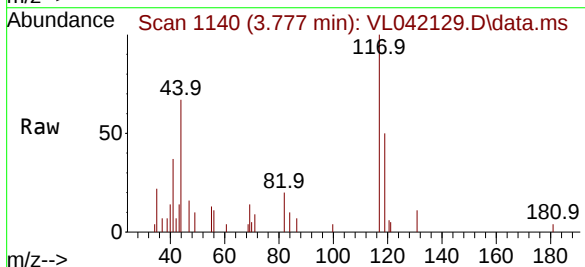
Instrument :
MSVOA_L
ClientSampleId :
IA1

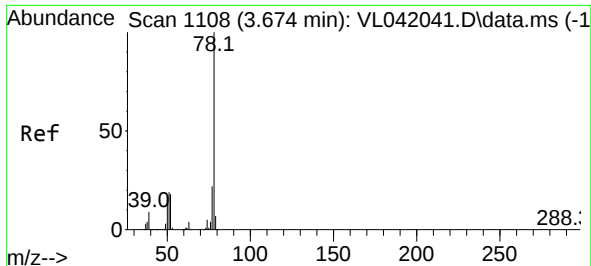
Tgt Ion: 43 Resp: 7380
Ion Ratio Lower Upper
43 100
72 21.5 18.5 27.7



#35
Carbon Tetrachloride
Concen: 0.079 ppbv
RT: 3.777 min Scan# 1140
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 117 Resp: 1965
Ion Ratio Lower Upper
117 100
119 47.2 77.8 116.8#
121 5.4 23.4 35.0#

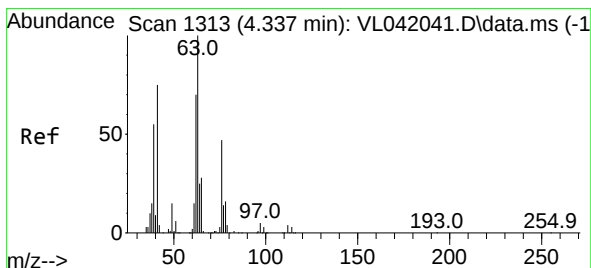
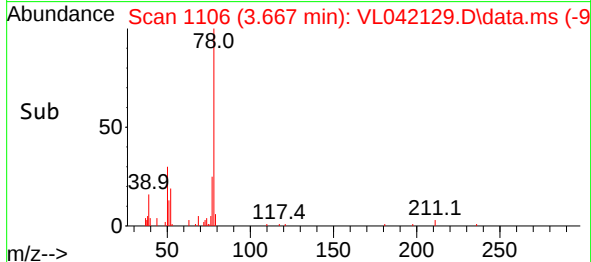
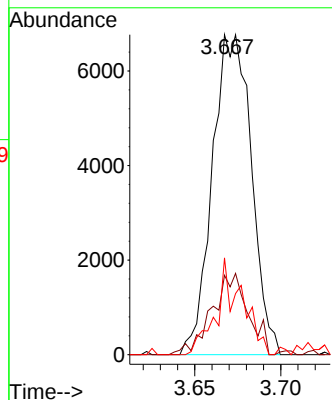
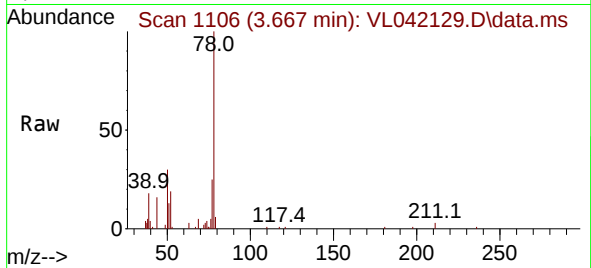




#36
Benzene
Concen: 0.282 ppbv
RT: 3.667 min Scan# 1106
Delta R.T. -0.007 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

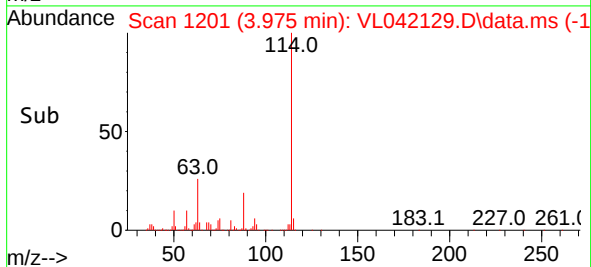
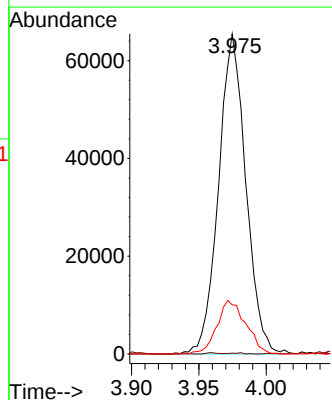
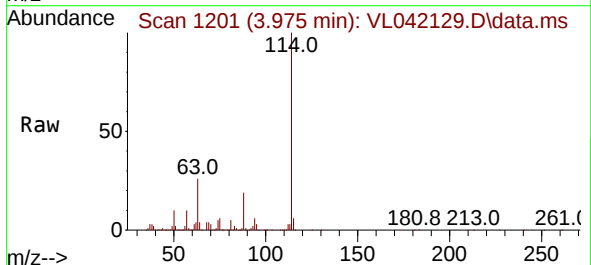
Instrument :
MSVOA_L
ClientSampleId :
IA1

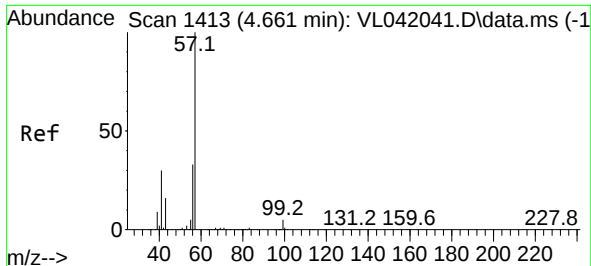
Tgt Ion	Ratio	Lower	Upper
78	100		
77	24.0	17.7	26.5
50	30.2	13.9	20.9



#39
1,2-Dichloropropane
Concen: 6.399 ppbv
RT: 3.975 min Scan# 1201
Delta R.T. -0.363 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion	Ratio	Lower	Upper
63	100		
41	0.3	60.1	90.1
62	15.3	55.8	83.8





#44

2,2,4-Trimethylpentane

Concen: 0.068 ppbv

RT: 4.654 min Scan# 1411

Delta R.T. -0.007 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

IA1

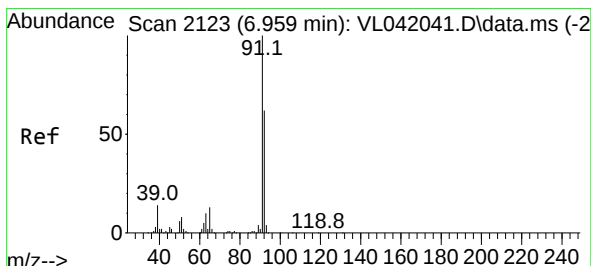
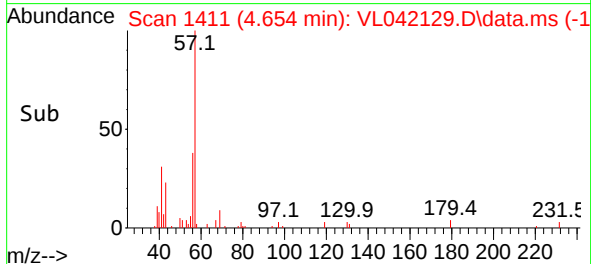
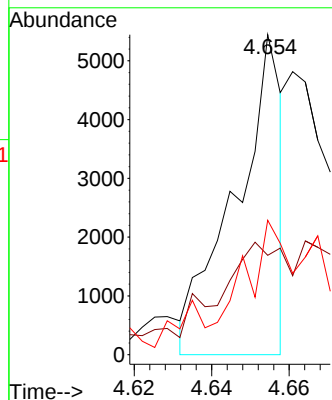
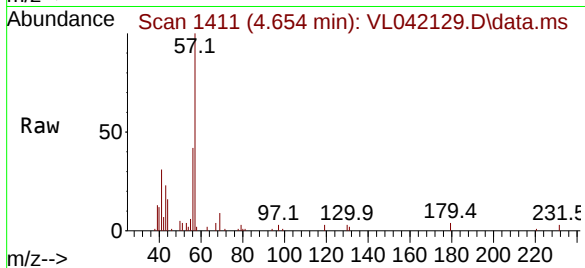
Tgt Ion: 57 Resp: 4547

Ion Ratio Lower Upper

57 100

41 0.0 24.4 36.6#

56 103.8 26.5 39.7#



#53

Toluene

Concen: 0.333 ppbv

RT: 6.952 min Scan# 2121

Delta R.T. -0.007 min

Lab File: VL042129.D

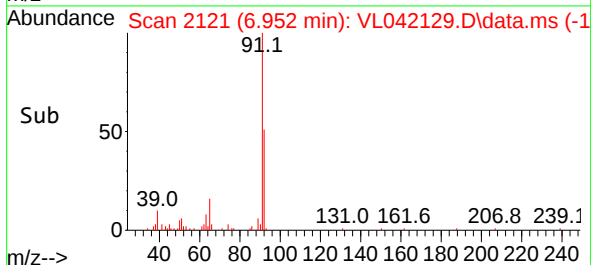
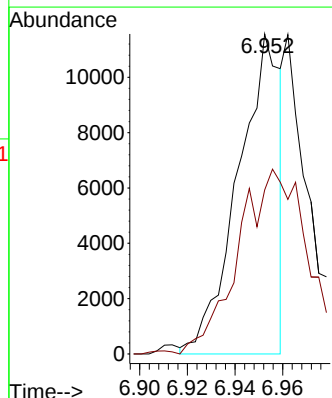
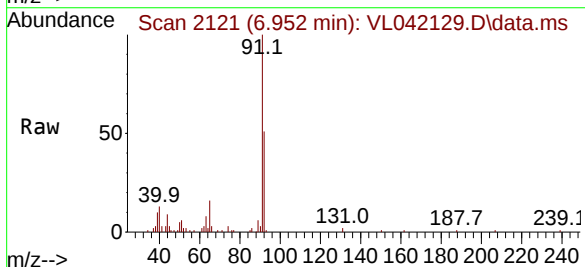
Acq: 10 Mar 2025 17:20

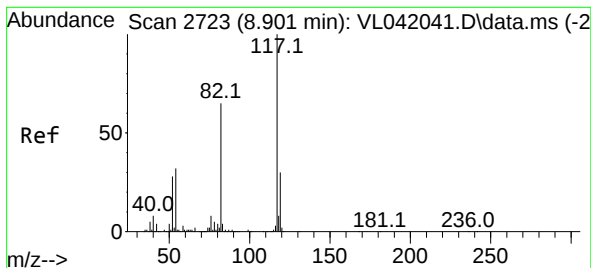
Tgt Ion: 91 Resp: 14124

Ion Ratio Lower Upper

91 100

92 94.6 49.0 73.6#





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.898 min Scan# 21

Delta R.T. -0.003 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

IA1

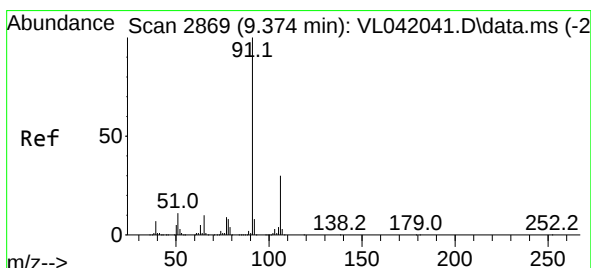
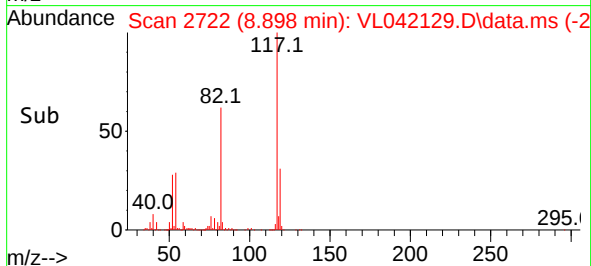
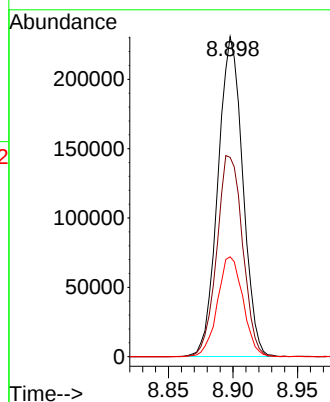
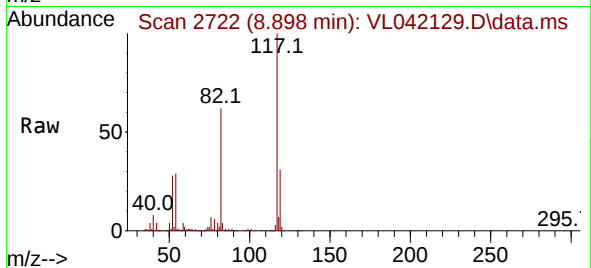
Tgt Ion:117 Resp: 308529

Ion Ratio Lower Upper

117 100

82 65.4 55.0 82.6

119 32.2 25.9 38.9



#58

Ethyl Benzene

Concen: 0.504 ppbv

RT: 9.373 min Scan# 2869

Delta R.T. -0.000 min

Lab File: VL042129.D

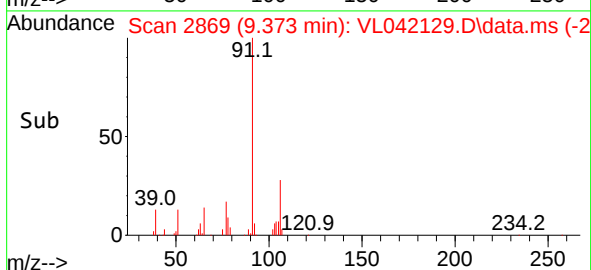
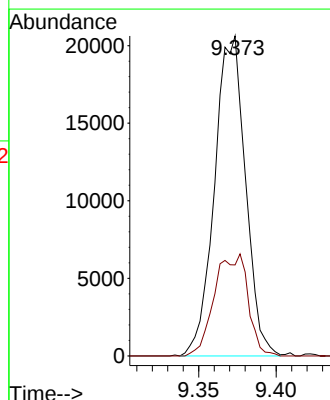
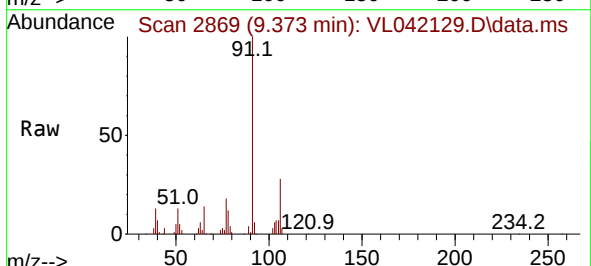
Acq: 10 Mar 2025 17:20

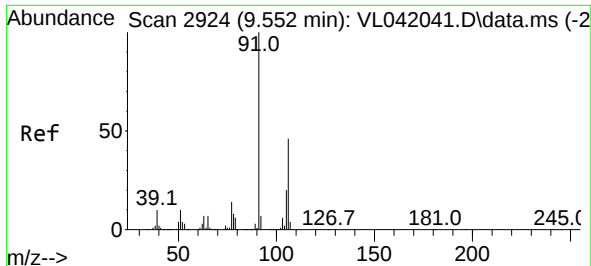
Tgt Ion: 91 Resp: 28623

Ion Ratio Lower Upper

91 100

106 28.5 24.2 36.2





#59

m/p-Xylene

Concen: 4.423 ppbv

RT: 9.548 min Scan# 2924

Delta R.T. -0.003 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

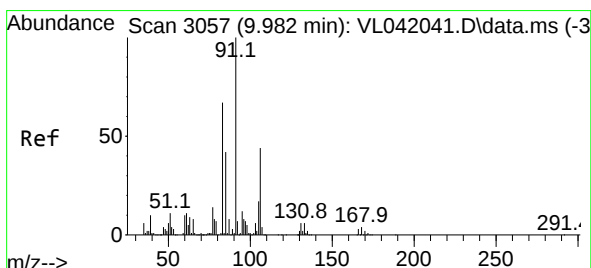
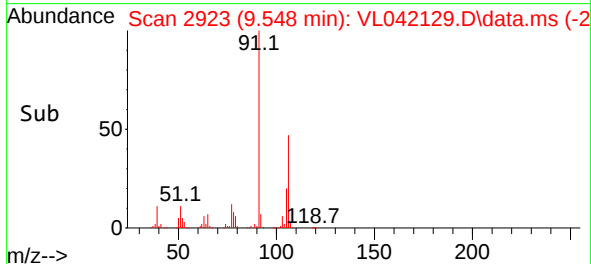
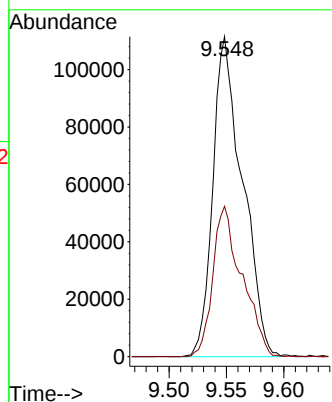
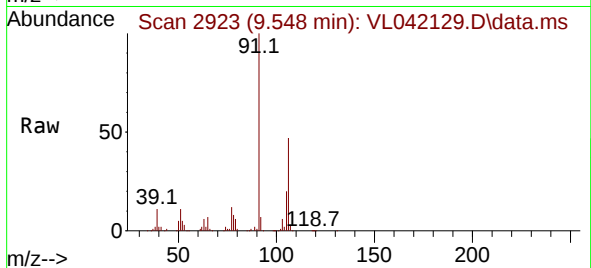
IA1

Tgt Ion: 91 Resp: 200012

Ion Ratio Lower Upper

91 100

106 46.2 0.0 0.0#



#60

o-Xylene

Concen: 1.256 ppbv

RT: 9.979 min Scan# 3056

Delta R.T. -0.003 min

Lab File: VL042129.D

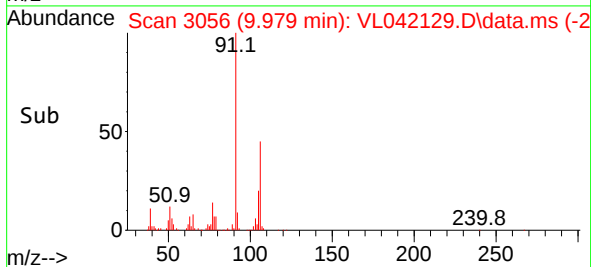
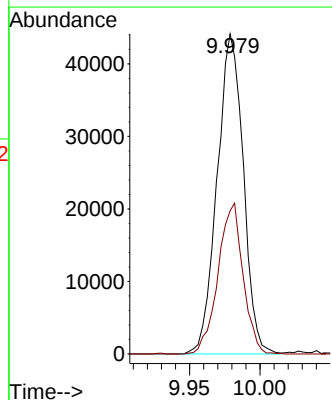
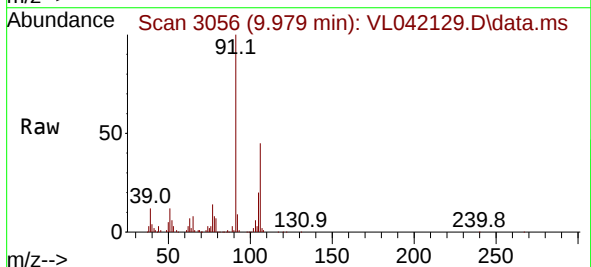
Acq: 10 Mar 2025 17:20

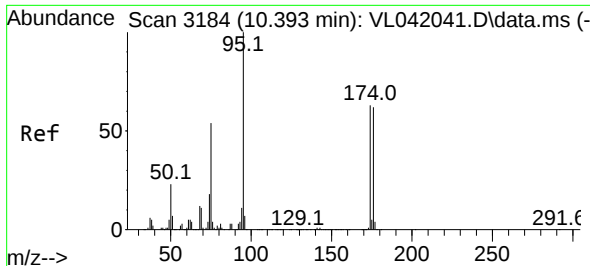
Tgt Ion: 91 Resp: 57106

Ion Ratio Lower Upper

91 100

106 44.9 22.3 66.8

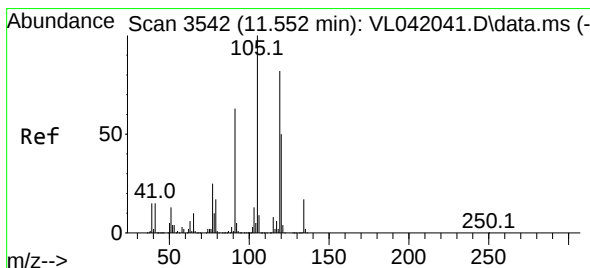
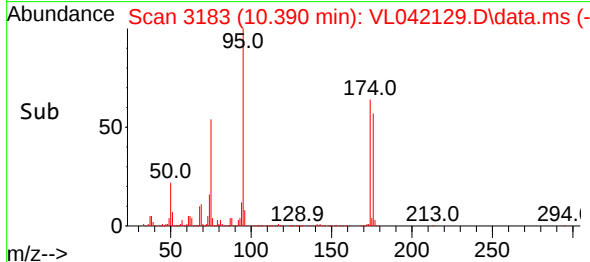
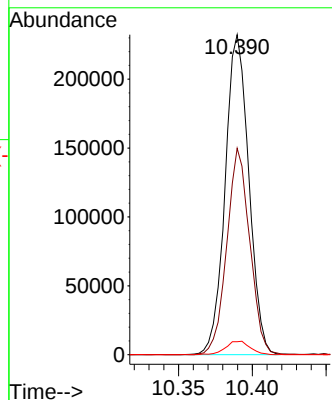
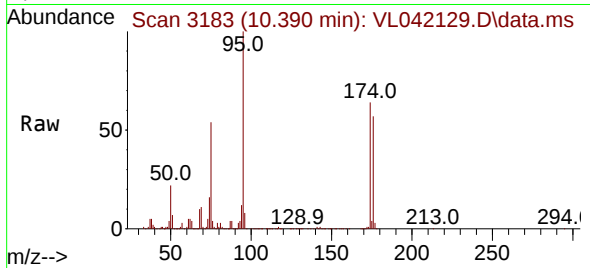




#68
1-Bromo-4-Fluorobenzene
Concen: 10.918 ppbv
RT: 10.390 min Scan# 3183
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

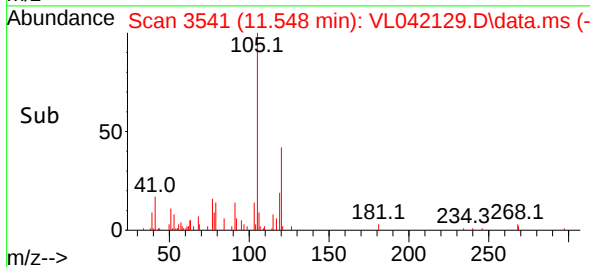
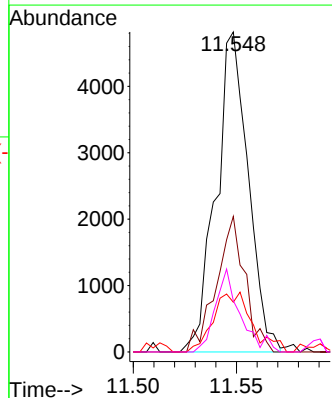
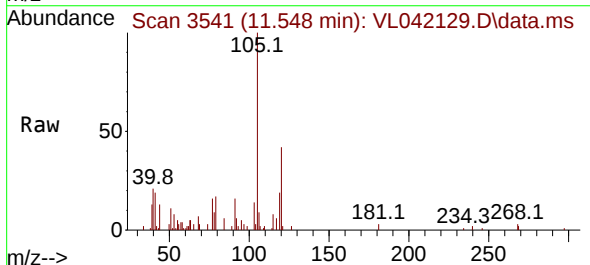
Instrument :
MSVOA_L
ClientSampleId :
IA1

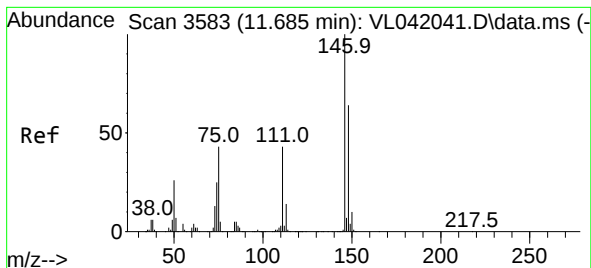
Tgt Ion: 95 Resp: 259167
Ion Ratio Lower Upper
95 100
174 62.6 51.8 77.6
175 4.4 3.9 5.9



#74
1,2,4-Trimethylbenzene
Concen: 0.096 ppbv
RT: 11.548 min Scan# 3541
Delta R.T. -0.003 min
Lab File: VL042129.D
Acq: 10 Mar 2025 17:20

Tgt Ion: 105 Resp: 5210
Ion Ratio Lower Upper
105 100
120 44.7 40.2 60.2
91 15.6 51.4 77.2#
77 16.0 20.1 30.1#





#76

1,4-Dichlorobenzene

Concen: 0.034 ppbv

RT: 11.684 min Scan# 3583

Delta R.T. -0.000 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Instrument :

MSVOA_L

ClientSampleId :

IA1

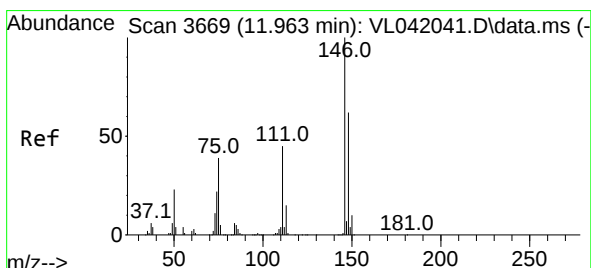
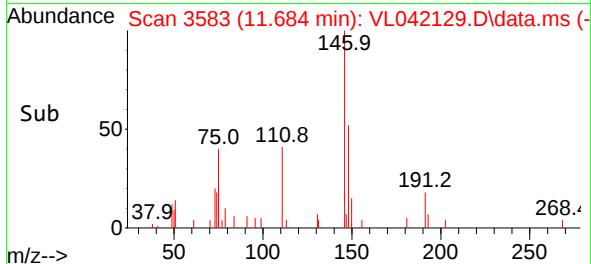
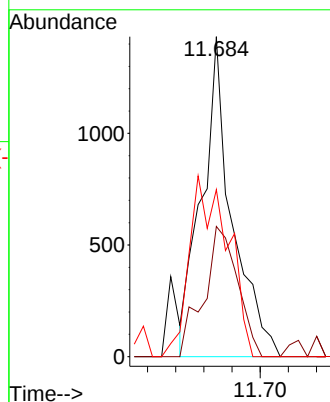
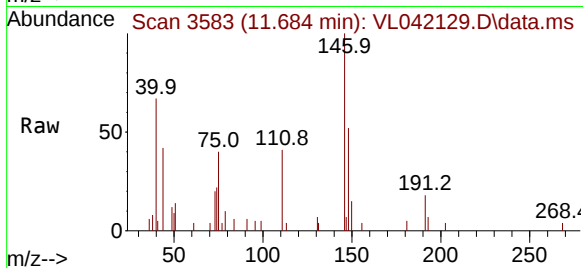
Tgt Ion:146 Resp: 1067

Ion Ratio Lower Upper

146 100

111 49.8 21.5 64.5

148 75.5 31.6 95.0



#77

1,2-Dichlorobenzene

Concen: 0.035 ppbv

RT: 11.684 min Scan# 3583

Delta R.T. -0.279 min

Lab File: VL042129.D

Acq: 10 Mar 2025 17:20

Tgt Ion:146 Resp: 1067

Ion Ratio Lower Upper

146 100

111 46.8 23.2 69.6

148 75.5 31.4 94.2

