

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL031025\
 Data File : VL042133.D
 Acq On : 10 Mar 2025 19:30
 Operator : SY/MD
 Sample : Q1533-04
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA2

Quant Time: Mar 11 01:29:51 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	2.800	49	163450	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.978	114	382061	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.901	117	315801	10.000	ppbv	0.00

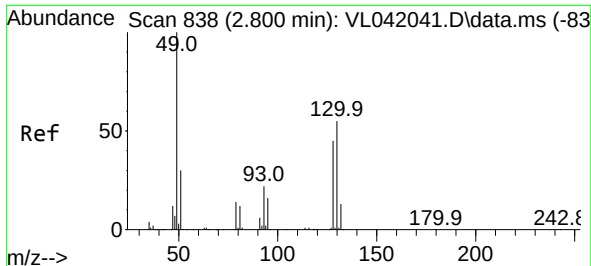
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.393	95	243680	10.030	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.300%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.502	85	9485	0.558	ppbv	97
3) Chlorodifluoromethane	1.479	51	15624	0.658	ppbv #	81
4) Chloromethane	1.538	50	4223	0.672	ppbv	89
6) Bromomethane	1.674	94	157	0.055	ppbv #	39
7) Chloroethane	1.712	64	75	0.031	ppbv	95
9) Propene	1.563	41	10602	1.096	ppbv	84
11) Trichlorofluoromethane	1.887	101	4547	0.267	ppbv	91
12) 1,1,2-Trichlorotrifluo...	2.149	101	1144	0.084	ppbv	100
13) Ethanol	1.729	45	416869	678.556	ppbv	93
15) Acetone	1.842	43	211093	14.624	ppbv	99
16) 1,3-Butadiene	1.628	39	18827	2.803	ppbv #	18
17) tert-Butyl alcohol	1.894	59	37578	2.081	ppbv	94
19) Isopropyl Alcohol	1.894	45	931851	112.388	ppbv #	33
20) Methylene Chloride	2.068	84	141522	25.920	ppbv	98
21) Allyl Chloride	2.068	41	5286	0.507	ppbv #	20
23) Vinyl Acetate	2.466	43	4235	0.417	ppbv #	70
25) Ethyl Acetate	2.839	43	398348	6.895	ppbv #	76
26) Hexane	2.839	57	555187	23.769	ppbv #	34
29) Chloroform	2.861	83	11915	0.379	ppbv	99
34) 2-Butanone	2.577	43	7802	0.262	ppbv	100
35) Carbon Tetrachloride	3.781	117	1100	0.042	ppbv #	67
36) Benzene	3.674	78	4877	0.122	ppbv #	84
37) 1,2-Dichloroethane	3.237	62	761	0.034	ppbv	96
39) 1,2-Dichloropropane	3.978	63	97433	6.418	ppbv #	24
41) Tetrahydrofuran	3.243	42	25977	1.477	ppbv #	39
52) Tetrachloroethene	8.244	164	14536	1.062	ppbv	89
53) Toluene	6.962	91	1557	0.035	ppbv #	20
72) 4-Ethyltoluene	11.137	105	2552	0.045	ppbv #	55
73) 1,3,5-Trimethylbenzene	11.215	105	2741	0.056	ppbv #	77
74) 1,2,4-Trimethylbenzene	11.549	105	9448	0.170	ppbv #	61
79) Naphthalene	13.523	128	2702	0.071	ppbv #	25

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

Quant Time: Mar 11 01:29:51 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

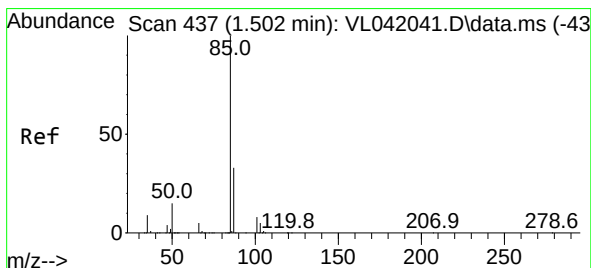
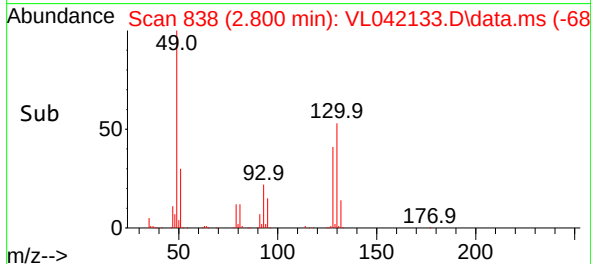
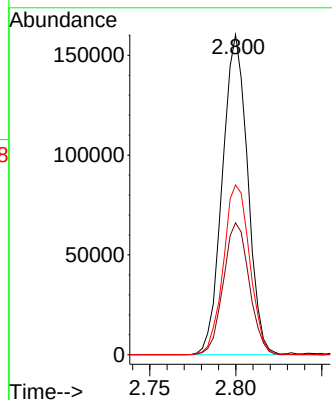
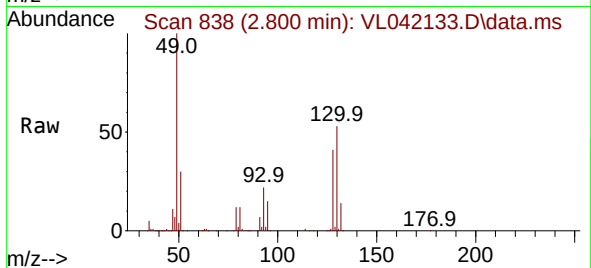




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.800 min Scan# 838
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

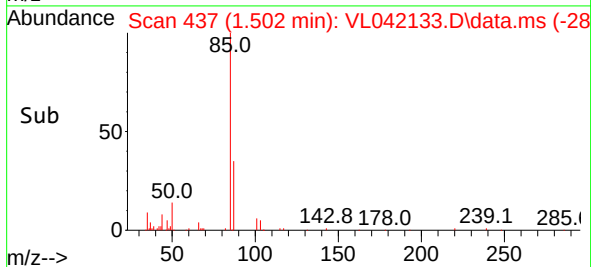
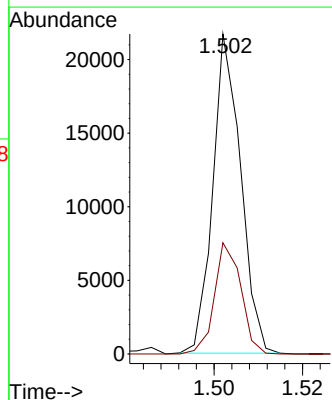
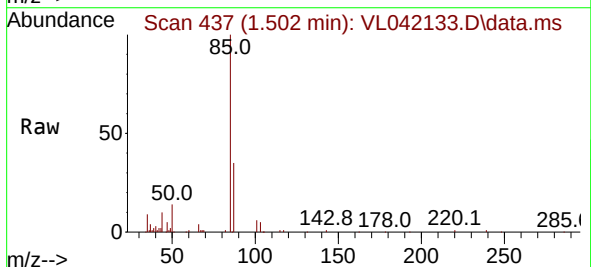
Instrument :
MSVOA_L
ClientSampleId :
IA2

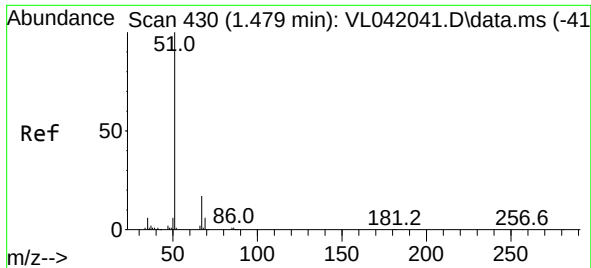
Tgt Ion: 49 Resp: 163450
Ion Ratio Lower Upper
49 100
128 42.2 21.6 64.8
130 55.5 27.8 83.4



#2
Dichlorodifluoromethane
Concen: 0.558 ppbv
RT: 1.502 min Scan# 437
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 85 Resp: 9485
Ion Ratio Lower Upper
85 100
87 34.8 26.4 39.6





#3

Chlorodifluoromethane

Concen: 0.658 ppbv

RT: 1.479 min Scan# 41

Delta R.T. -0.000 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

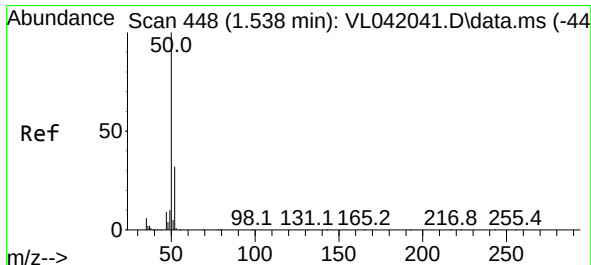
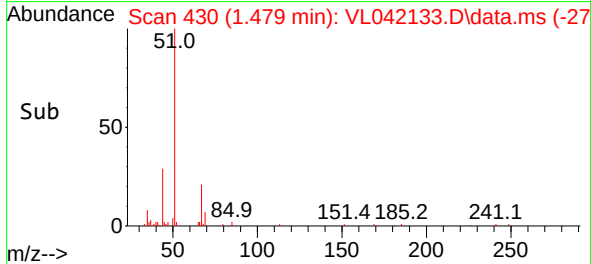
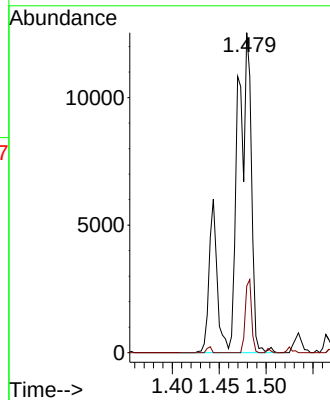
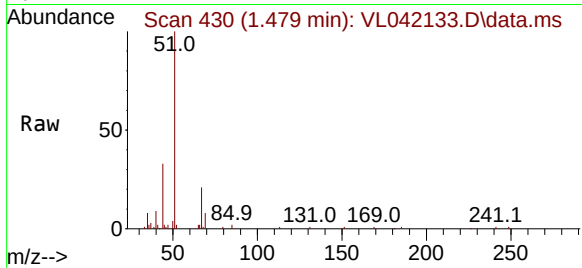
IA2

Tgt Ion: 51 Resp: 15624

Ion Ratio Lower Upper

51 100

67 8.7 13.7 20.5#



#4

Chloromethane

Concen: 0.672 ppbv

RT: 1.538 min Scan# 448

Delta R.T. -0.000 min

Lab File: VL042133.D

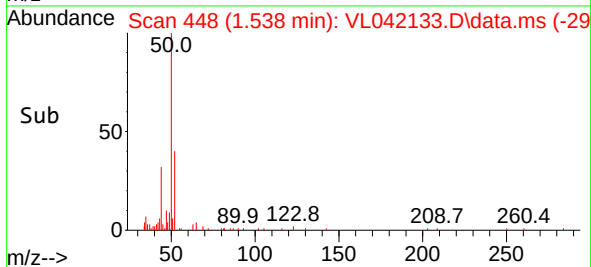
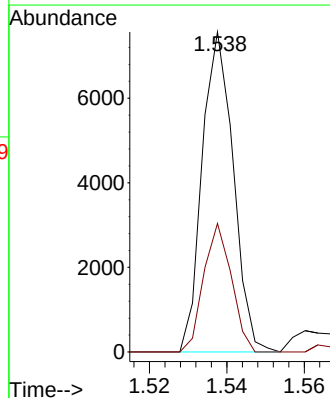
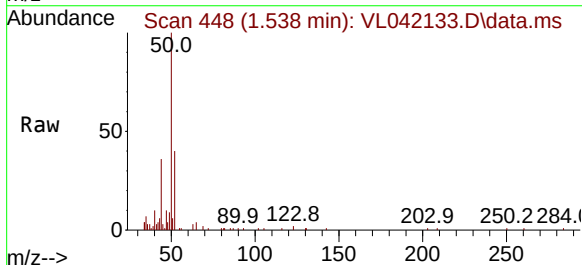
Acq: 10 Mar 2025 19:30

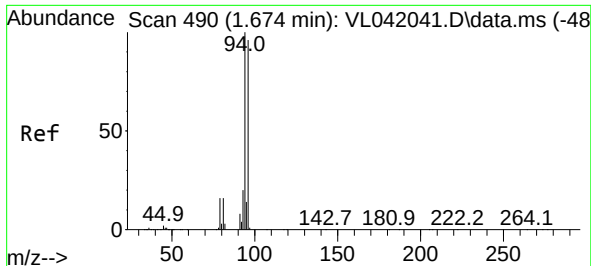
Tgt Ion: 50 Resp: 4223

Ion Ratio Lower Upper

50 100

52 38.0 25.4 38.0

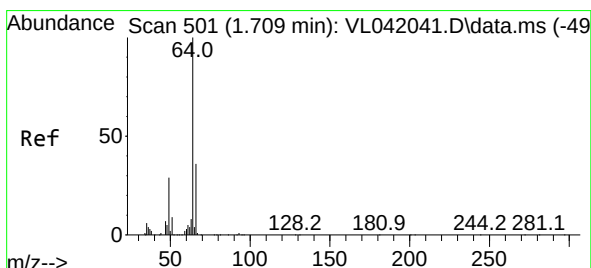
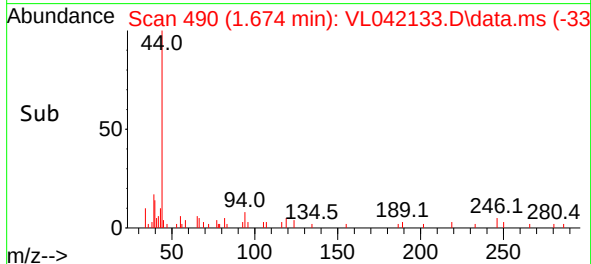
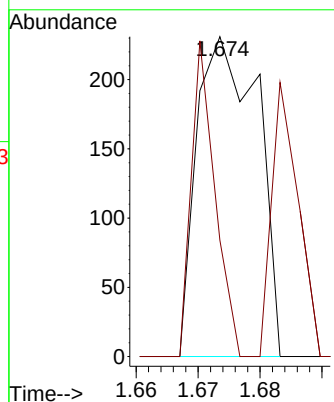
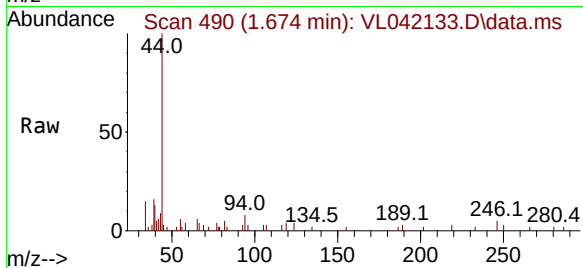




#6
Bromomethane
Concen: 0.055 ppbv
RT: 1.674 min Scan# 490
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

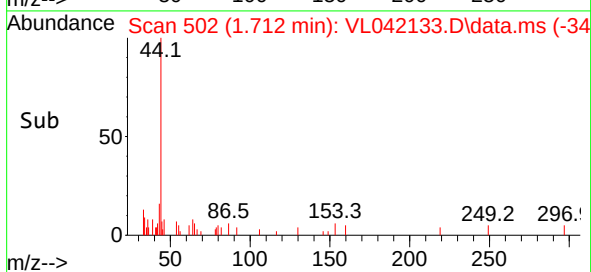
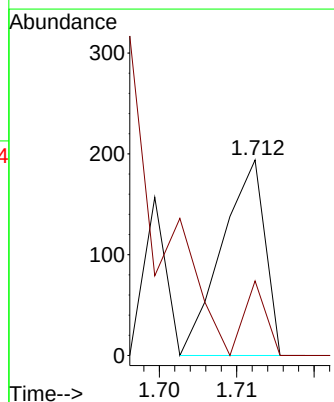
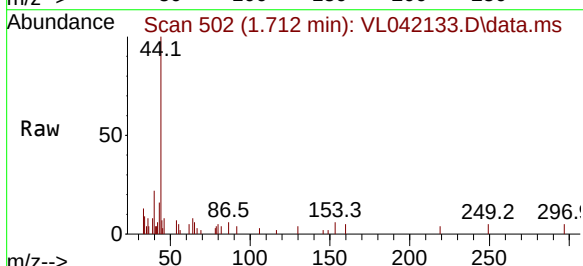
Instrument :
MSVOA_L
ClientSampleId :
IA2

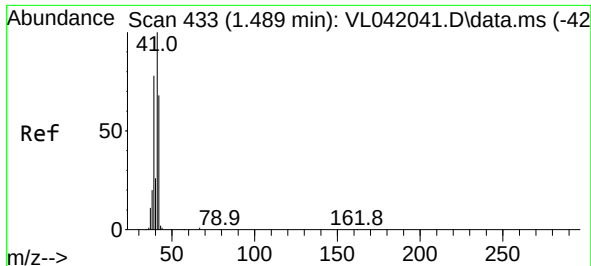
Tgt Ion: 94 Resp: 157
Ion Ratio Lower Upper
94 100
96 36.4 76.5 114.7#



#7
Chloroethane
Concen: 0.031 ppbv
RT: 1.712 min Scan# 502
Delta R.T. 0.003 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 64 Resp: 75
Ion Ratio Lower Upper
64 100
66 38.1 28.4 42.6





#9

Propene

Concen: 1.096 ppbv

RT: 1.563 min Scan# 41

Delta R.T. 0.074 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

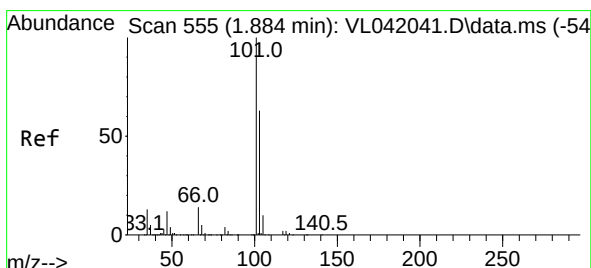
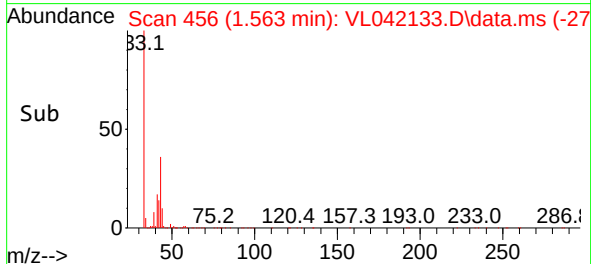
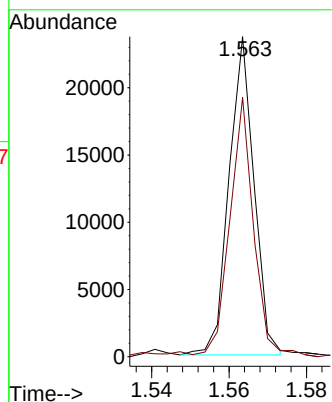
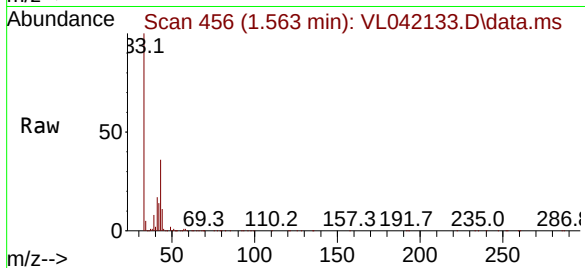
IA2

Tgt Ion: 41 Resp: 10602

Ion Ratio Lower Upper

41 100

42 82.5 55.8 83.6



#11

Trichlorofluoromethane

Concen: 0.267 ppbv

RT: 1.887 min Scan# 556

Delta R.T. 0.003 min

Lab File: VL042133.D

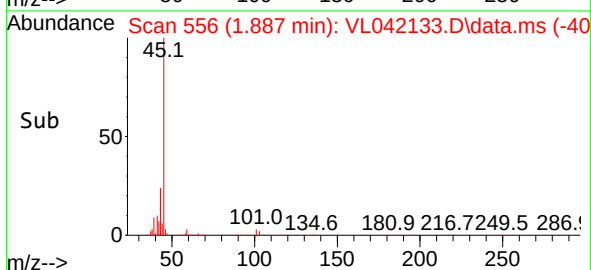
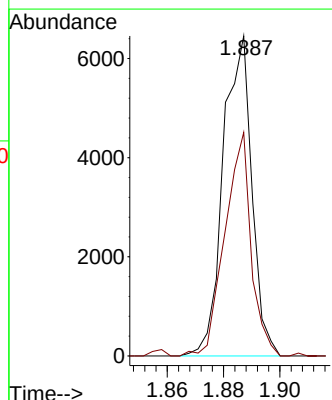
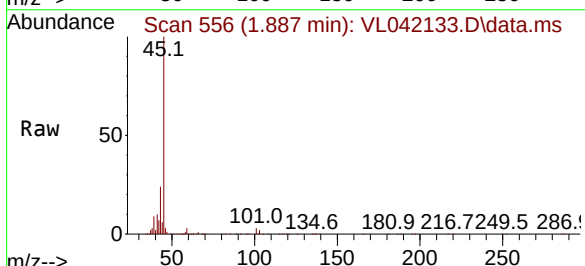
Acq: 10 Mar 2025 19:30

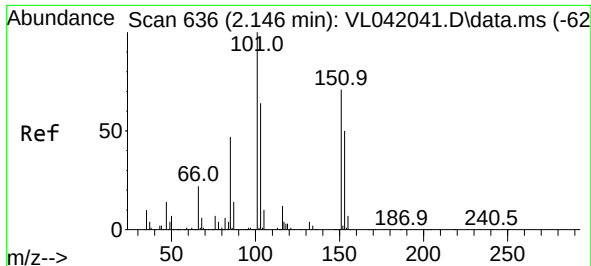
Tgt Ion:101 Resp: 4547

Ion Ratio Lower Upper

101 100

103 69.8 50.6 75.8

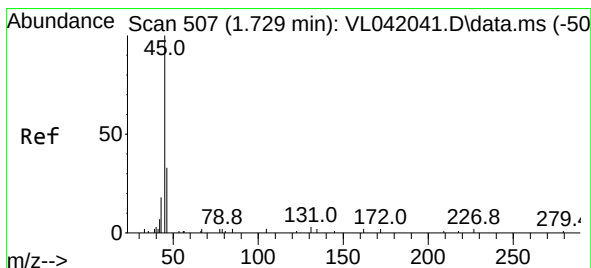
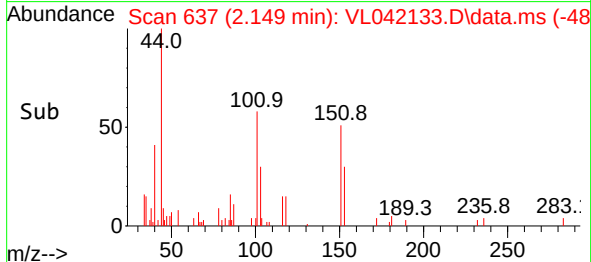
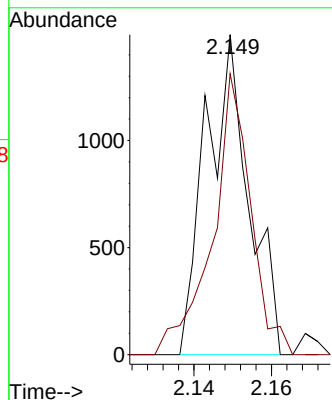
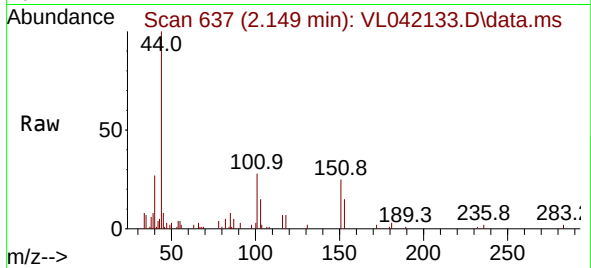




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.084 ppbv
RT: 2.149 min Scan# 61
Delta R.T. 0.003 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

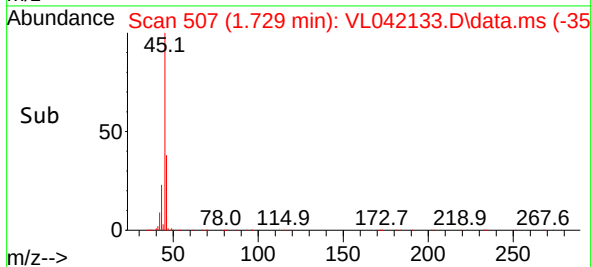
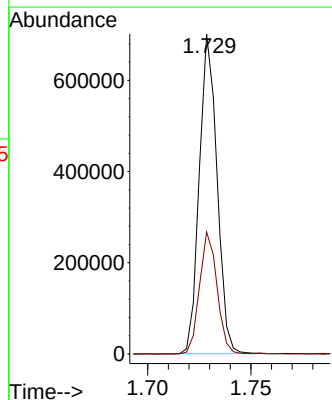
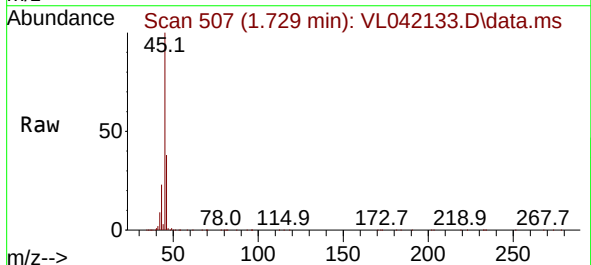
Instrument :
MSVOA_L
ClientSampleId :
IA2

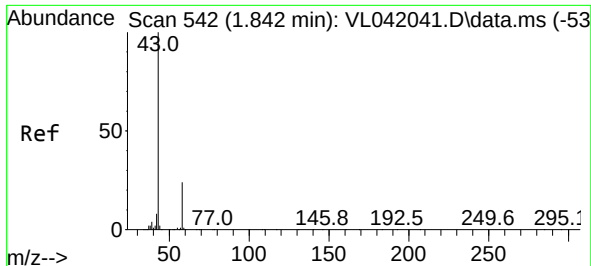
Tgt Ion:101 Resp: 1144
Ion Ratio Lower Upper
101 100
151 78.3 62.6 94.0



#13
Ethanol
Concen: 678.556 ppbv
RT: 1.729 min Scan# 507
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 45 Resp: 416869
Ion Ratio Lower Upper
45 100
46 38.1 17.1 68.3

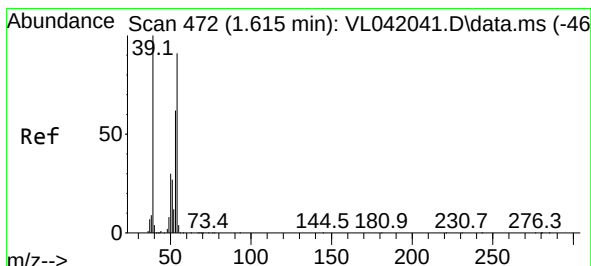
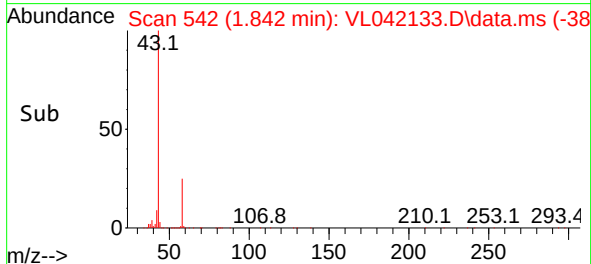
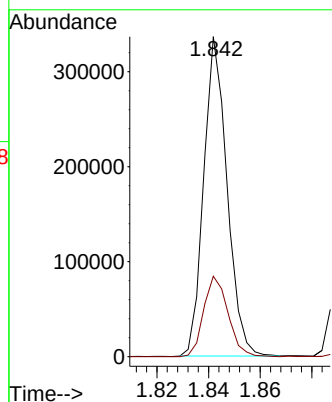
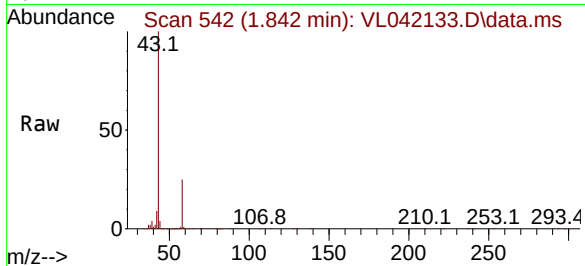




#15
Acetone
Concen: 14.624 ppbv
RT: 1.842 min Scan# 54
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

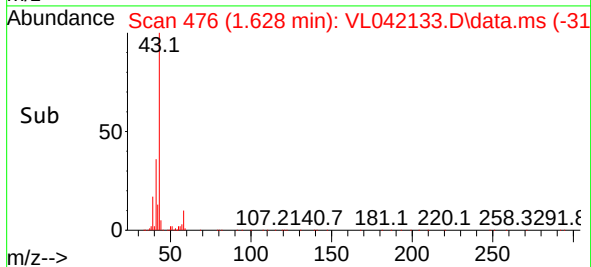
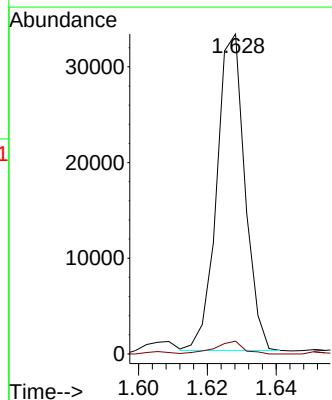
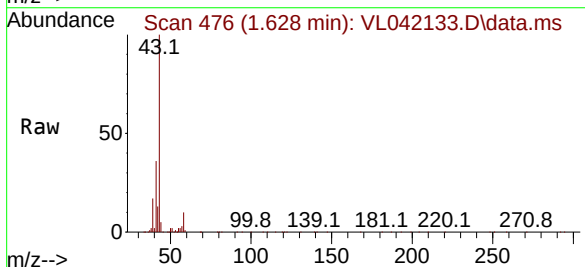
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ClientSampleId :
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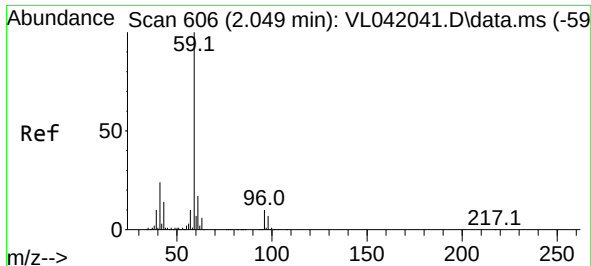
Tgt Ion: 43 Resp: 211093
Ion Ratio Lower Upper
43 100
58 26.3 20.7 31.1



#16
1,3-Butadiene
Concen: 2.803 ppbv
RT: 1.628 min Scan# 476
Delta R.T. 0.013 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 39 Resp: 18827
Ion Ratio Lower Upper
39 100
54 4.7 59.6 89.4#





#17

tert-Butyl alcohol

Concen: 2.081 ppbv

RT: 1.894 min Scan# 51

Delta R.T. -0.156 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

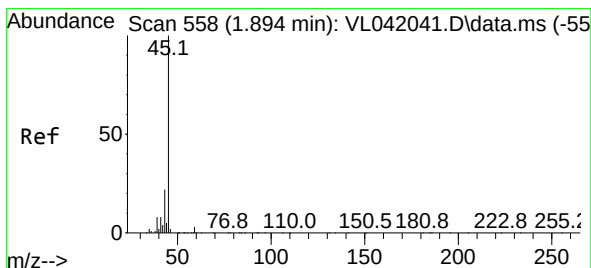
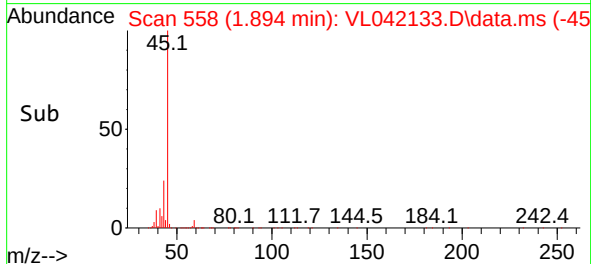
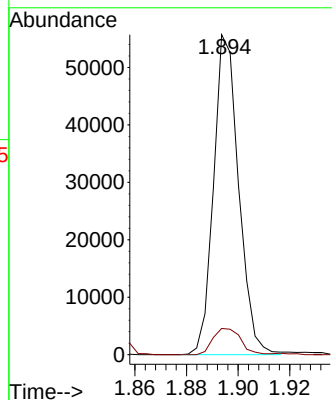
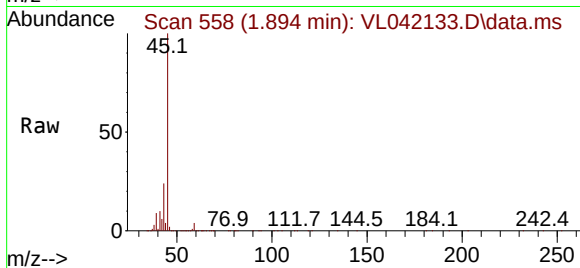
IA2

Tgt Ion: 59 Resp: 37578

Ion Ratio Lower Upper

59 100

57 9.4 9.3 13.9



#19

Isopropyl Alcohol

Concen: 112.388 ppbv

RT: 1.894 min Scan# 558

Delta R.T. -0.000 min

Lab File: VL042133.D

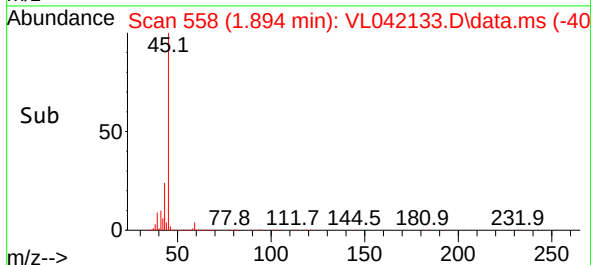
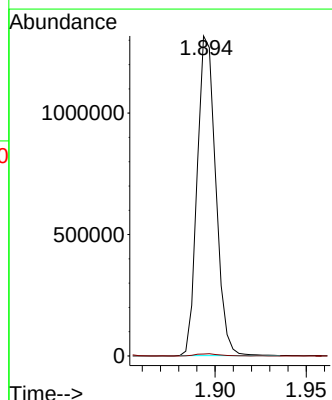
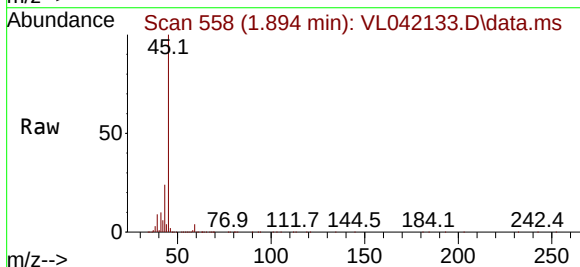
Acq: 10 Mar 2025 19:30

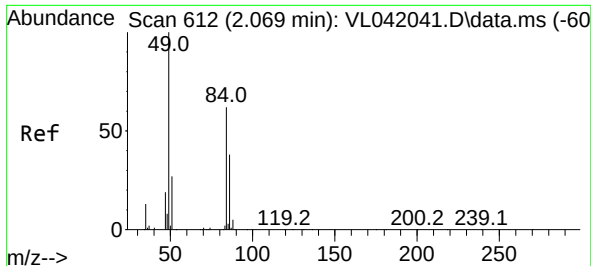
Tgt Ion: 45 Resp: 931851

Ion Ratio Lower Upper

45 100

58 0.9 35.3 52.9#

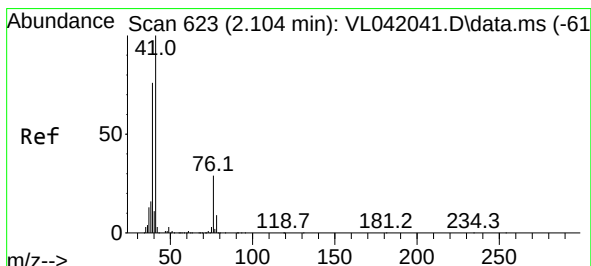
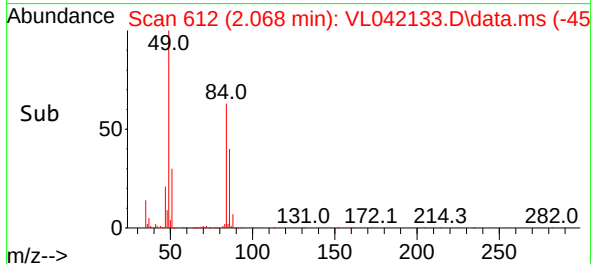
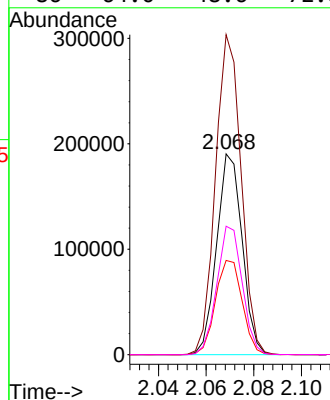
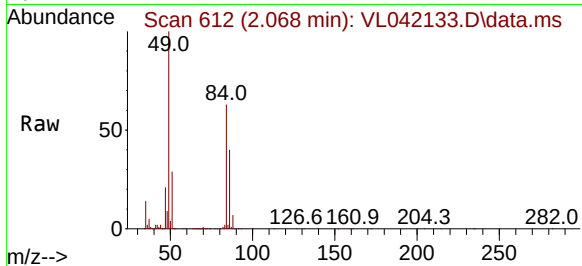




#20
Methylene Chloride
Concen: 25.920 ppbv
RT: 2.068 min Scan# 612
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

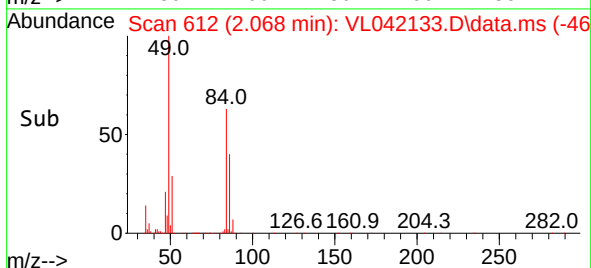
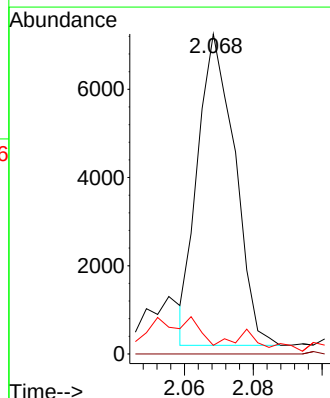
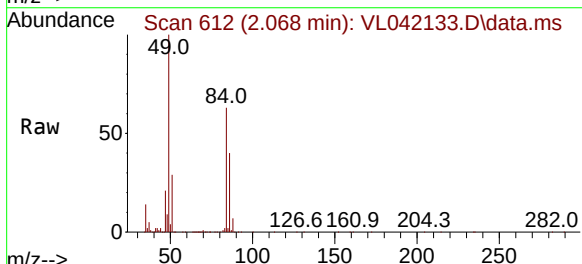
Instrument :
MSVOA_L
ClientSampleId :
IA2

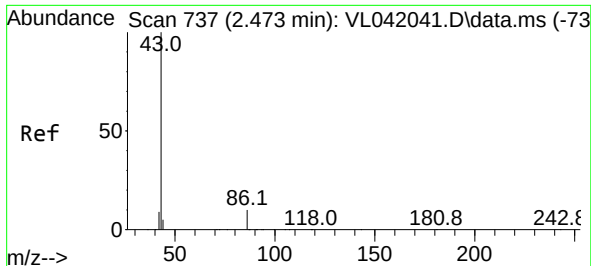
Tgt Ion:	84	Resp:	141522
Ion	Ratio	Lower	Upper
84	100		
49	159.3	130.0	195.0
51	46.9	37.4	56.0
86	64.0	48.6	72.8



#21
Allyl Chloride
Concen: 0.507 ppbv
RT: 2.068 min Scan# 612
Delta R.T. -0.036 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion:	41	Resp:	5286
Ion	Ratio	Lower	Upper
41	100		
76	1.8	23.8	35.6#
39	0.0	63.8	95.6#

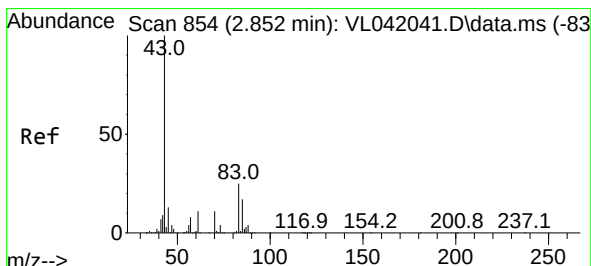
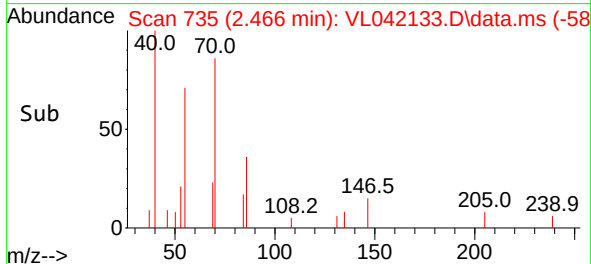
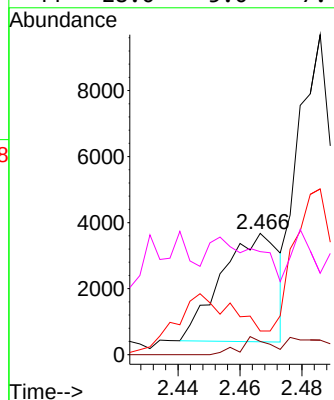
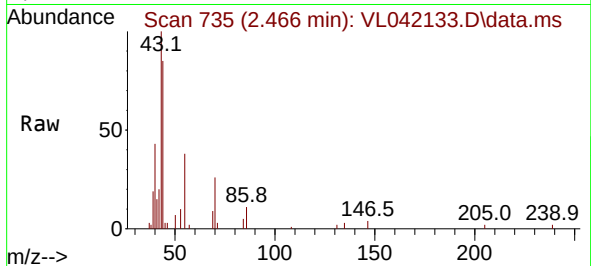




#23
 Vinyl Acetate
 Concen: 0.417 ppbv
 RT: 2.466 min Scan# 71
 Delta R.T. -0.007 min
 Lab File: VL042133.D
 Acq: 10 Mar 2025 19:30

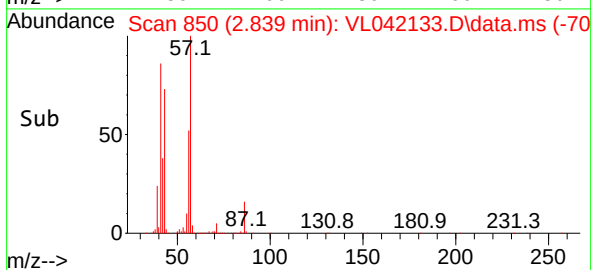
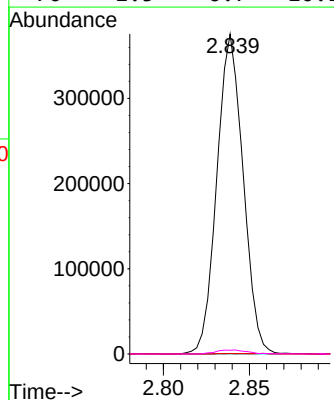
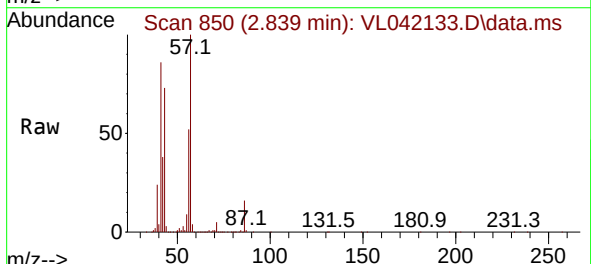
Instrument :
 MSVOA_L
 ClientSampleId :
 IA2

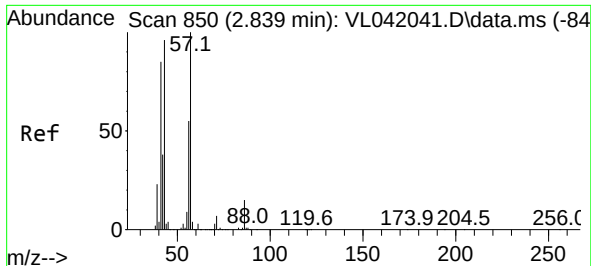
Tgt Ion:	43	Resp:	4235
Ion	Ratio	Lower	Upper
43	100		
86	12.3	7.0	10.4#
42	0.0	7.6	11.4#
44	28.0	5.0	7.4#



#25
 Ethyl Acetate
 Concen: 6.895 ppbv
 RT: 2.839 min Scan# 850
 Delta R.T. -0.013 min
 Lab File: VL042133.D
 Acq: 10 Mar 2025 19:30

Tgt Ion:	43	Resp:	398348
Ion	Ratio	Lower	Upper
43	100		
45	0.2	8.1	12.1#
61	0.2	7.2	10.8#
70	1.5	6.7	10.1#

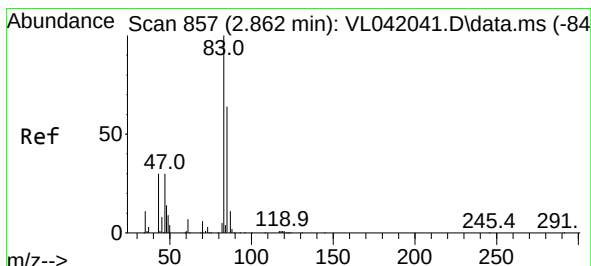
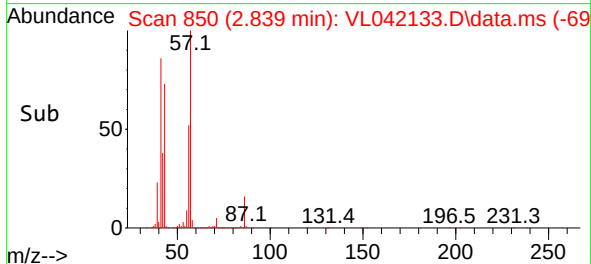
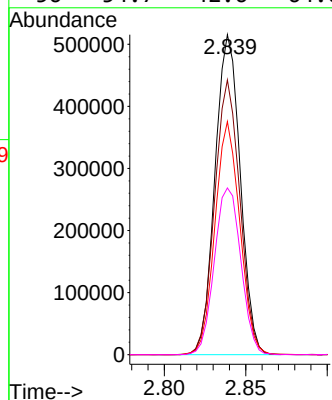
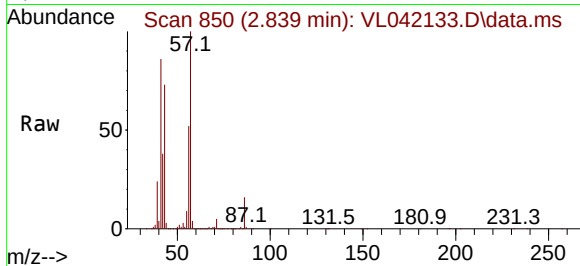




#26
Hexane
Concen: 23.769 ppbv
RT: 2.839 min Scan# 850
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

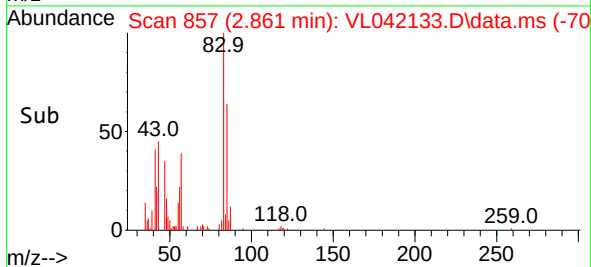
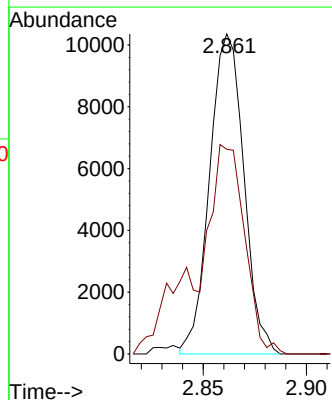
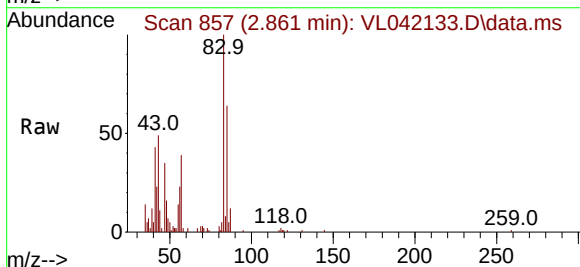
Instrument :
MSVOA_L
ClientSampleId :
IA2

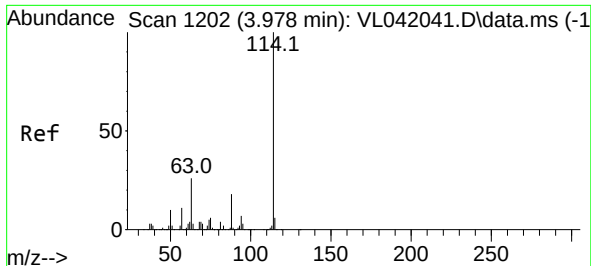
Tgt Ion: 57	Resp: 555187
Ion Ratio	Lower Upper
57 100	
41 86.4	70.6 106.0
43 71.9	199.4 299.0#
56 54.7	42.6 64.0



#29
Chloroform
Concen: 0.379 ppbv
RT: 2.861 min Scan# 857
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 83	Resp: 11915
Ion Ratio	Lower Upper
83 100	
85 62.9	51.2 76.8





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.978 min Scan# 11

Delta R.T. -0.000 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

IA2

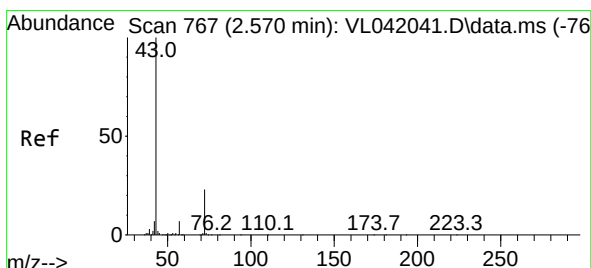
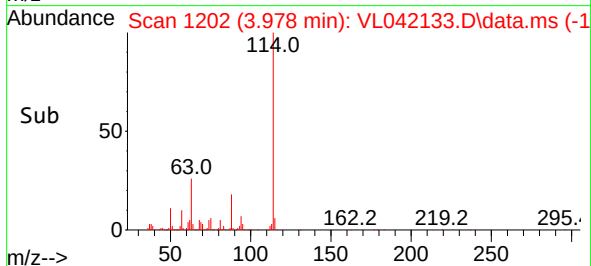
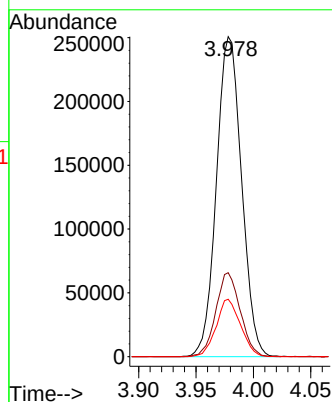
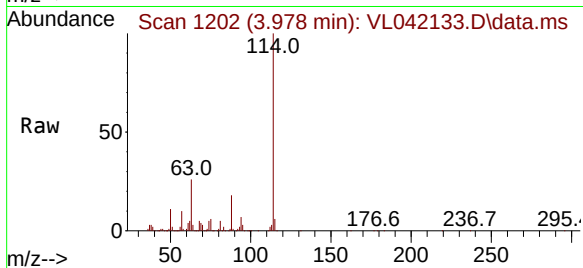
Tgt Ion:114 Resp: 382061

Ion Ratio Lower Upper

114 100

63 25.6 20.1 30.1

88 17.4 14.3 21.5



#34

2-Butanone

Concen: 0.262 ppbv

RT: 2.577 min Scan# 769

Delta R.T. 0.006 min

Lab File: VL042133.D

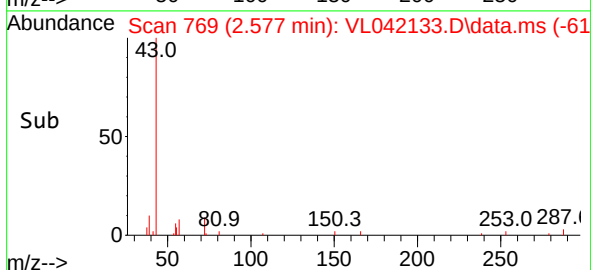
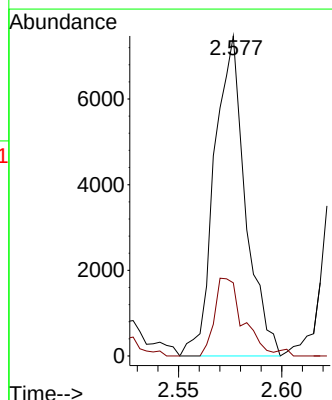
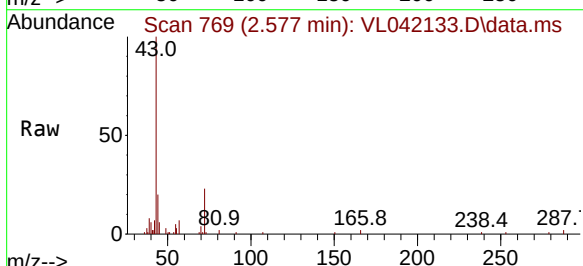
Acq: 10 Mar 2025 19:30

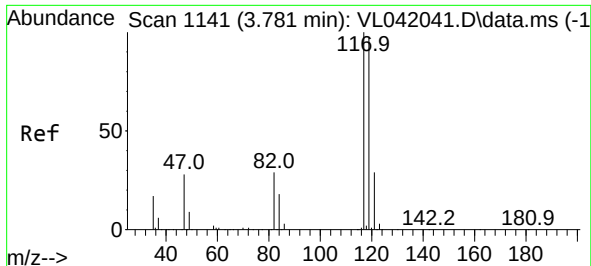
Tgt Ion: 43 Resp: 7802

Ion Ratio Lower Upper

43 100

72 22.9 18.5 27.7

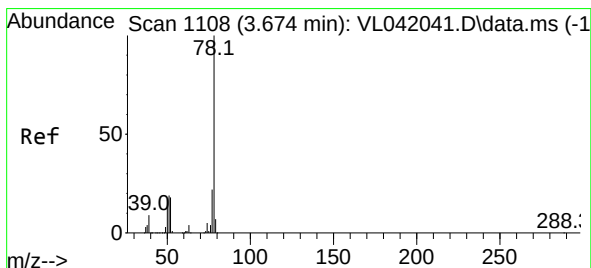
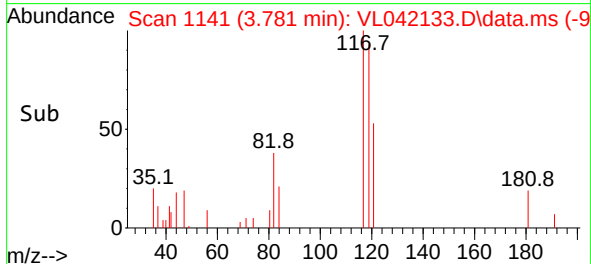
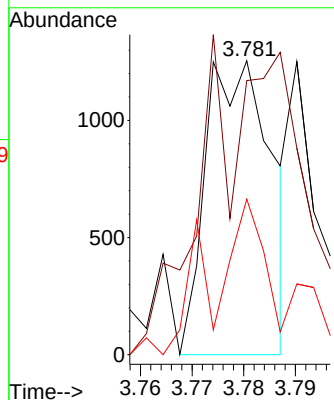
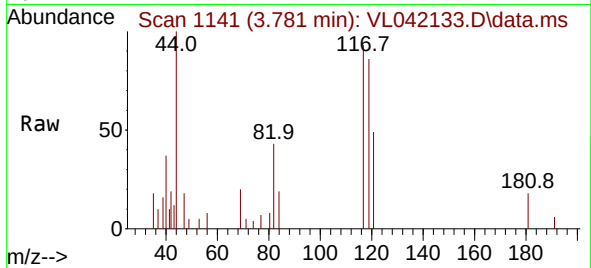




#35
Carbon Tetrachloride
Concen: 0.042 ppbv
RT: 3.781 min Scan# 1141
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

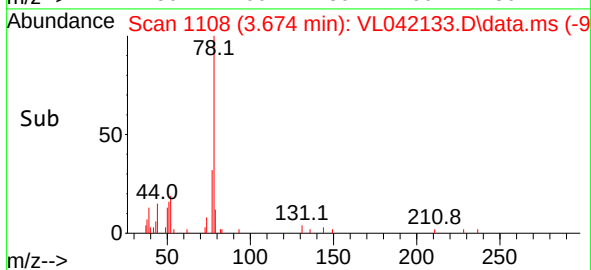
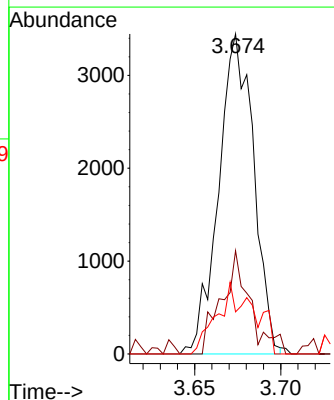
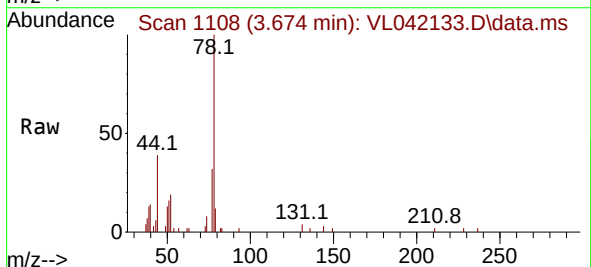
Instrument :
MSVOA_L
ClientSampleId :
IA2

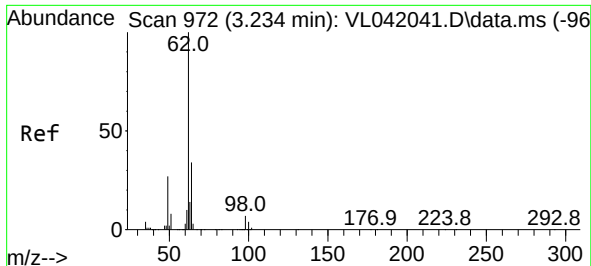
Tgt Ion:117 Resp: 1100
Ion Ratio Lower Upper
117 100
119 64.5 77.8 116.8#
121 45.2 23.4 35.0#



#36
Benzene
Concen: 0.122 ppbv
RT: 3.674 min Scan# 1108
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 78 Resp: 4877
Ion Ratio Lower Upper
78 100
77 32.3 17.7 26.5#
50 13.1 13.9 20.9#





#37

1,2-Dichloroethane

Concen: 0.034 ppbv

RT: 3.237 min Scan# 91

Delta R.T. 0.003 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

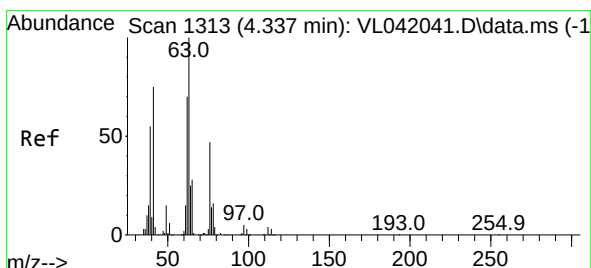
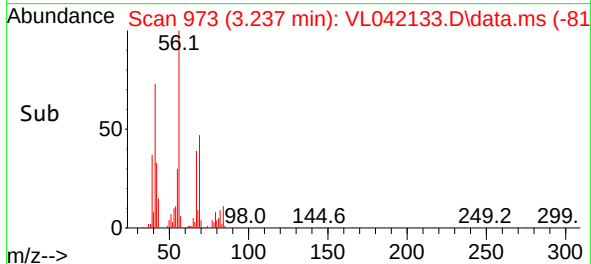
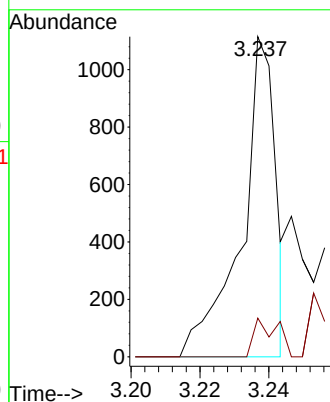
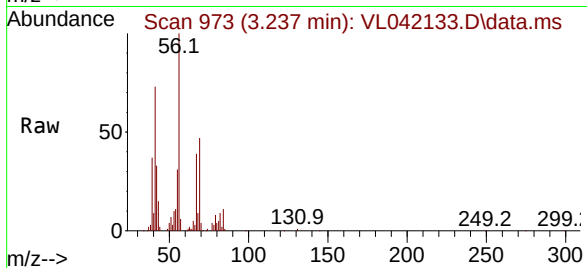
IA2

Tgt Ion: 62 Resp: 761

Ion Ratio Lower Upper

62 100

98 8.4 5.7 8.5



#39

1,2-Dichloropropane

Concen: 6.418 ppbv

RT: 3.978 min Scan# 1202

Delta R.T. -0.359 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

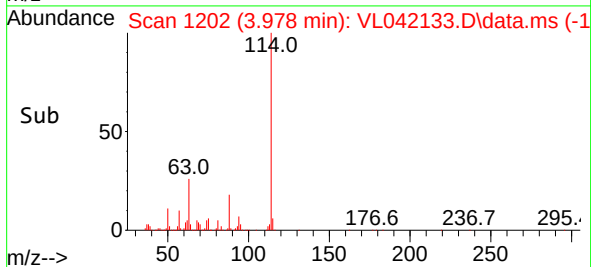
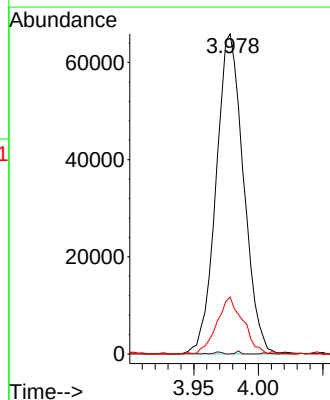
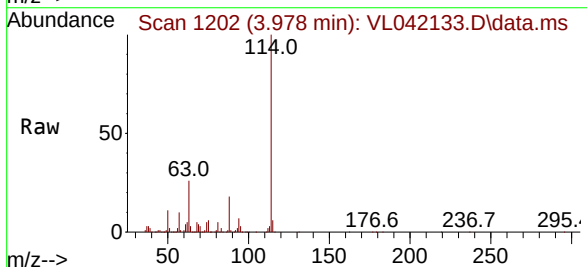
Tgt Ion: 63 Resp: 97433

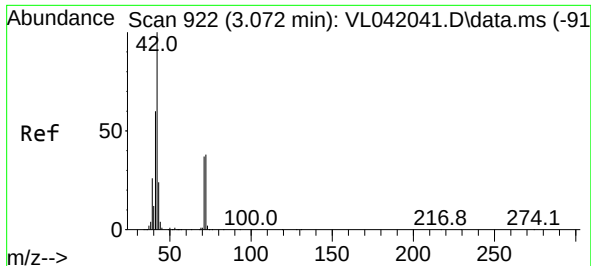
Ion Ratio Lower Upper

63 100

41 0.0 60.1 90.1#

62 17.8 55.8 83.8#

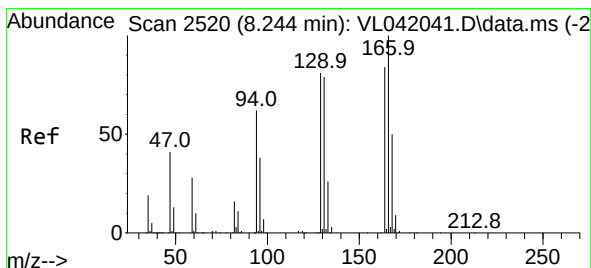
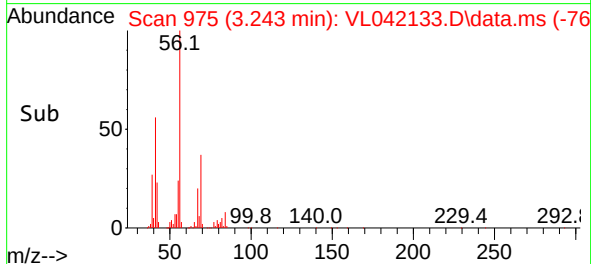
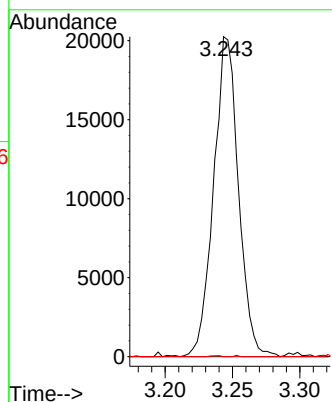
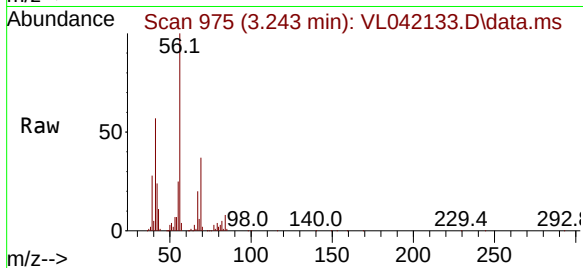




#41
Tetrahydrofuran
Concen: 1.477 ppbv
RT: 3.243 min Scan# 91
Delta R.T. 0.171 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

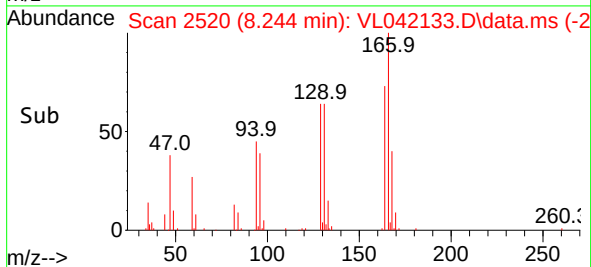
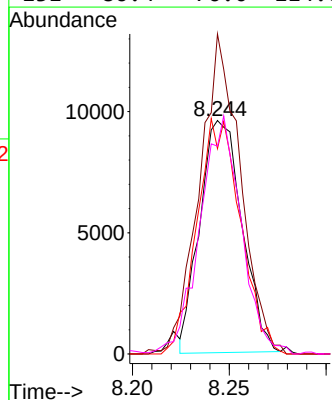
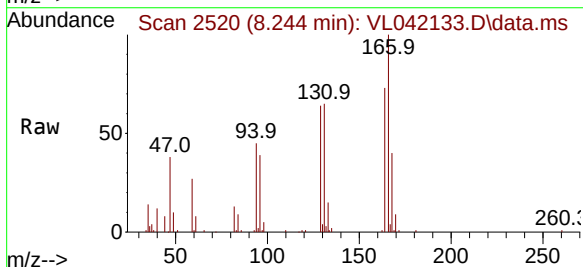
Instrument :
MSVOA_L
ClientSampleId :
IA2

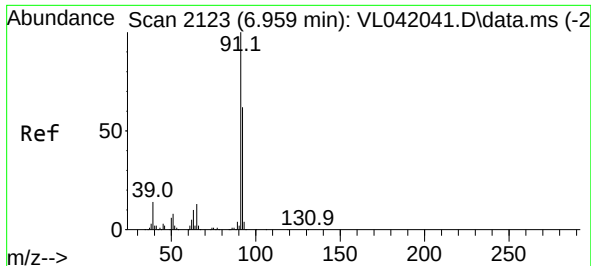
Tgt Ion: 42 Resp: 25977
Ion Ratio Lower Upper
42 100
72 0.2 30.2 45.2#
71 0.0 28.2 42.4#



#52
Tetrachloroethene
Concen: 1.062 ppbv
RT: 8.244 min Scan# 2520
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 164 Resp: 14536
Ion Ratio Lower Upper
164 100
166 134.7 95.7 143.5
129 87.5 77.1 115.7
131 86.4 76.0 114.0





#53

Toluene

Concen: 0.035 ppbv

RT: 6.962 min Scan# 2123

Delta R.T. 0.003 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

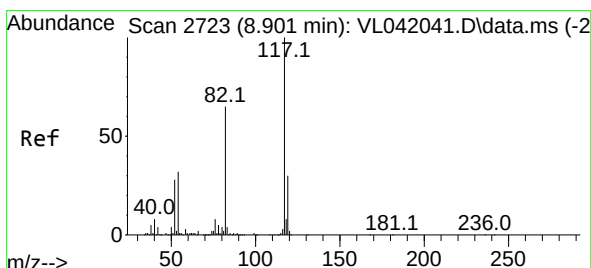
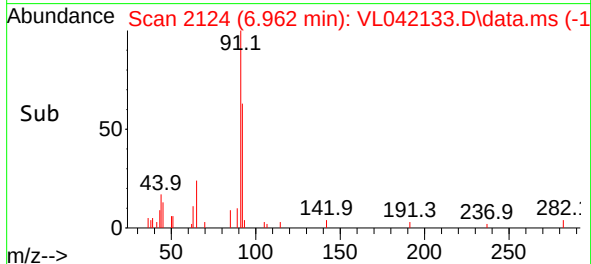
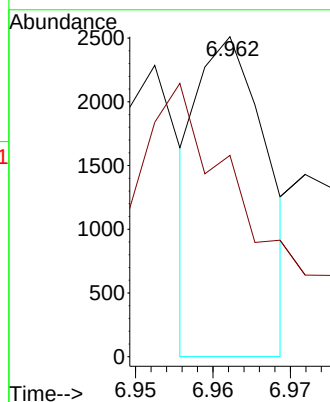
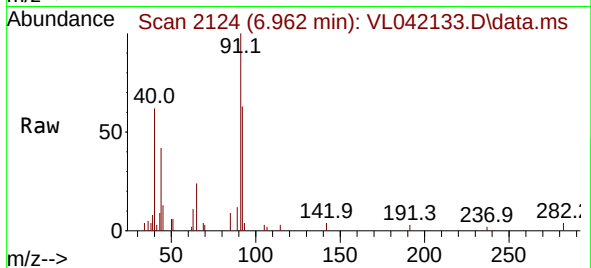
IA2

Tgt Ion: 91 Resp: 1557

Ion Ratio Lower Upper

91 100

92 0.0 49.0 73.6#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 8.901 min Scan# 2723

Delta R.T. -0.000 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

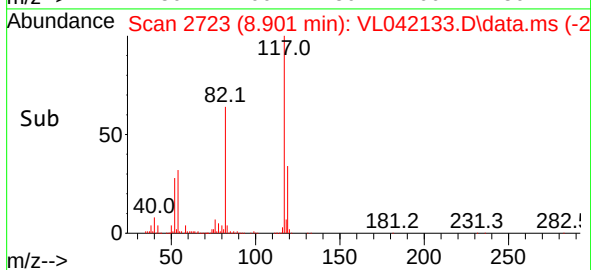
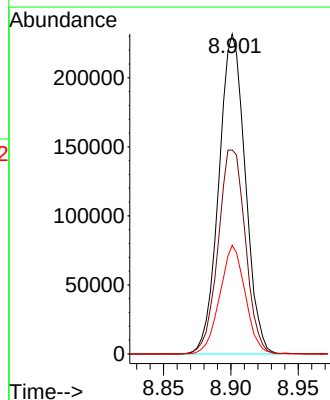
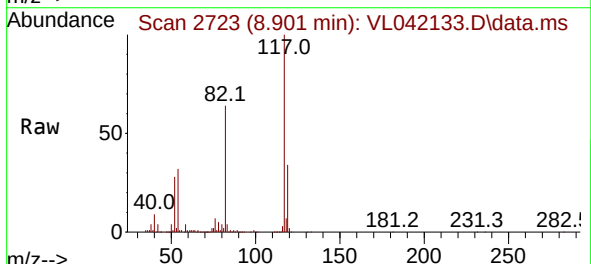
Tgt Ion: 117 Resp: 315801

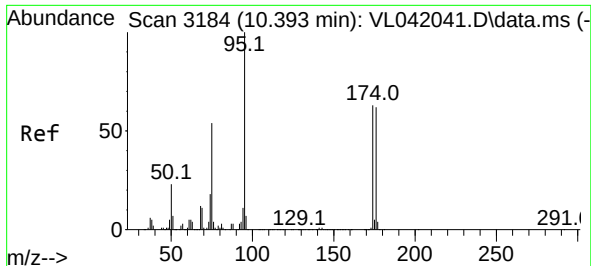
Ion Ratio Lower Upper

117 100

82 65.9 55.0 82.6

119 32.7 25.9 38.9

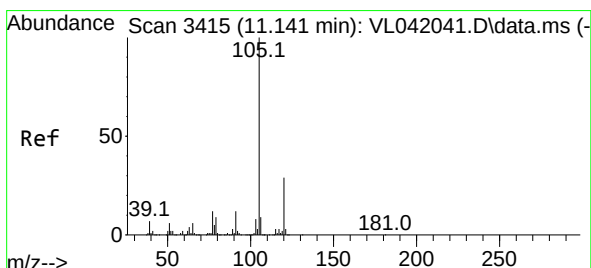
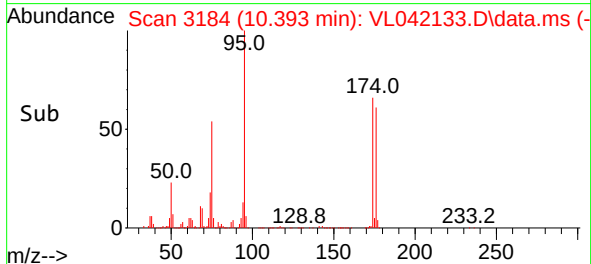
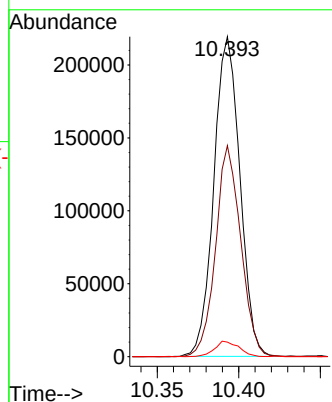
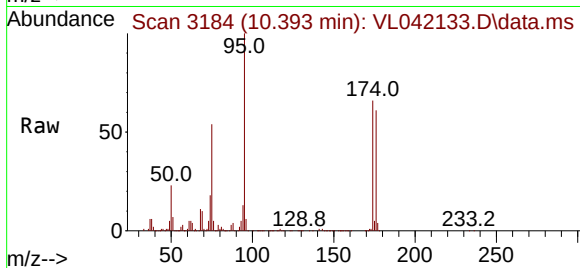




#68
1-Bromo-4-Fluorobenzene
Concen: 10.030 ppbv
RT: 10.393 min Scan# 3184
Delta R.T. -0.000 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

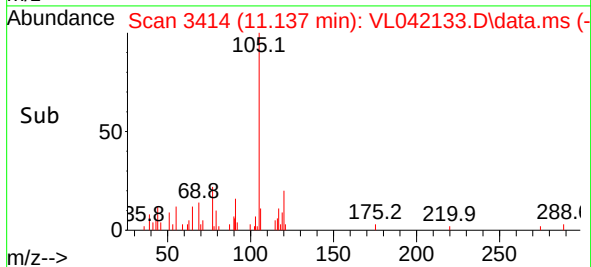
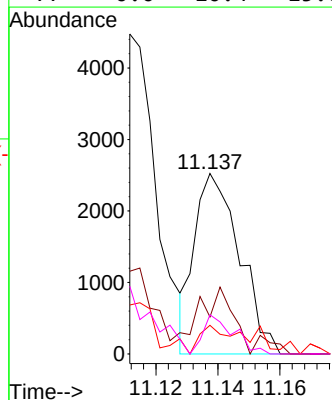
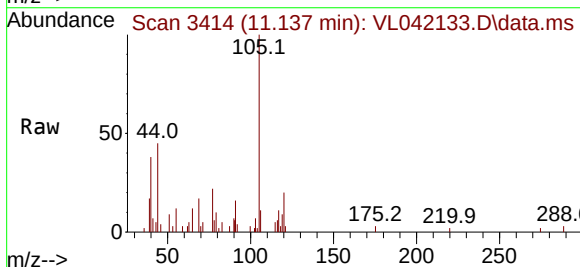
Instrument :
MSVOA_L
ClientSampleId :
IA2

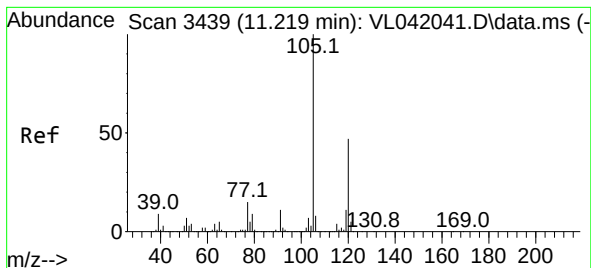
Tgt Ion: 95 Resp: 243680
Ion Ratio Lower Upper
95 100
174 63.7 51.8 77.6
175 4.6 3.9 5.9



#72
4-Ethyltoluene
Concen: 0.045 ppbv
RT: 11.137 min Scan# 3414
Delta R.T. -0.003 min
Lab File: VL042133.D
Acq: 10 Mar 2025 19:30

Tgt Ion: 105 Resp: 2552
Ion Ratio Lower Upper
105 100
120 0.0 24.1 36.1#
91 0.0 10.2 15.4#
77 0.0 10.4 15.6#





#73

1,3,5-Trimethylbenzene

Concen: 0.056 ppbv

RT: 11.215 min Scan# 3439

Delta R.T. -0.003 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

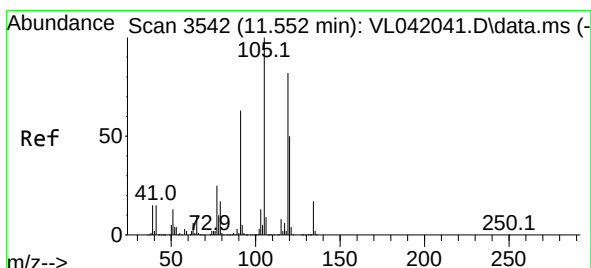
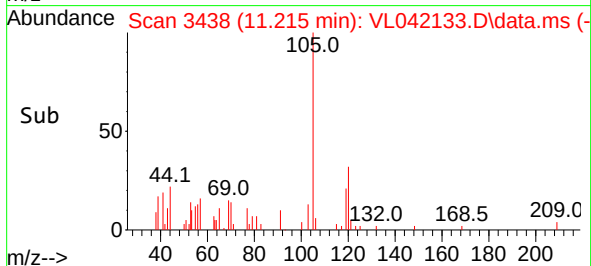
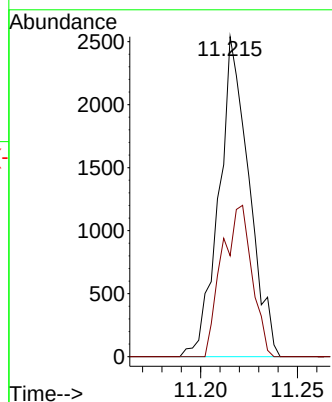
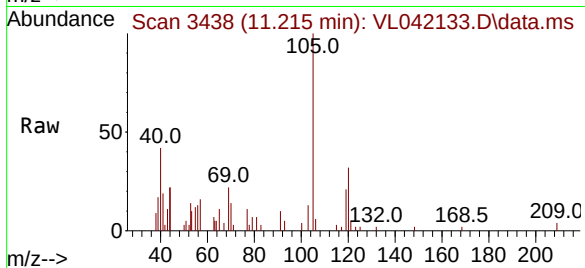
IA2

Tgt Ion:105 Resp: 2741

Ion Ratio Lower Upper

105 100

120 31.5 37.4 56.0#



#74

1,2,4-Trimethylbenzene

Concen: 0.170 ppbv

RT: 11.549 min Scan# 3541

Delta R.T. -0.003 min

Lab File: VL042133.D

Acq: 10 Mar 2025 19:30

Tgt Ion:105 Resp: 9448

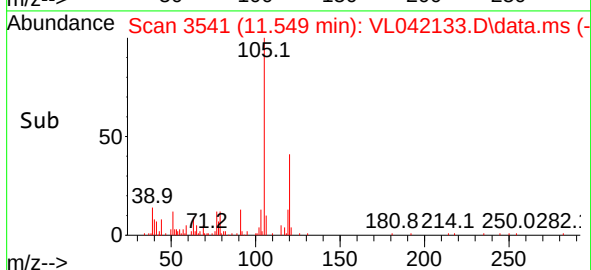
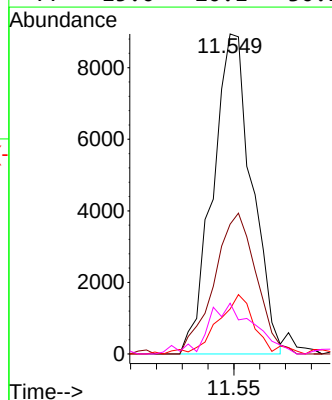
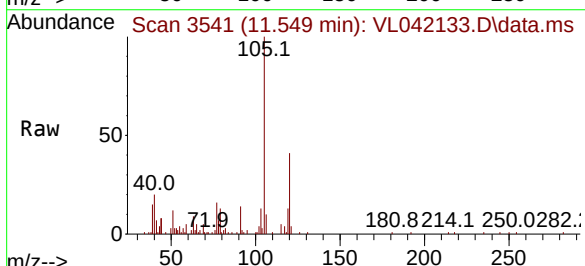
Ion Ratio Lower Upper

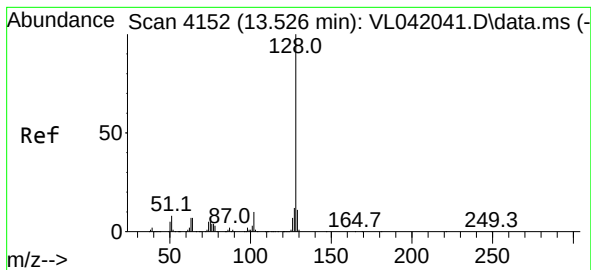
105 100

120 40.6 40.2 60.2

91 12.7 51.4 77.2#

77 15.0 20.1 30.1#





#79

Naphthalene

Concen: 0.071 ppbv

RT: 13.523 min Scan# 41

Delta R.T. -0.003 min

Lab File: VL042133.D

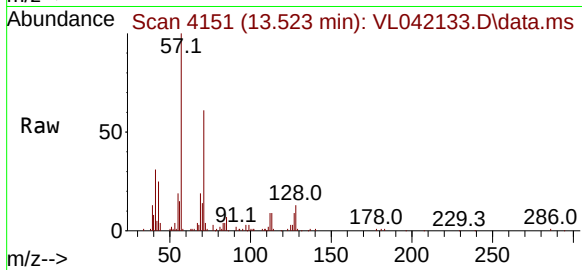
Acq: 10 Mar 2025 19:30

Instrument :

MSVOA_L

ClientSampleId :

IA2



Tgt Ion:	128	Resp:	2702
Ion	Ratio	Lower	Upper
128	100		
127	61.8	9.8	14.6#
129	4.6	8.6	12.8#

