

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL042125\
 Data File : VL042405.D
 Acq On : 21 Apr 2025 15:18
 Operator : SY/MD
 Sample : Q1843-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Quant Time: Apr 22 02:55:07 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Apr 18 02:14:00 2025
 Response via : Initial Calibration

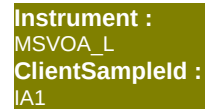
Compound	R.T. QIon		Response	Conc	Units	Dev(Min)

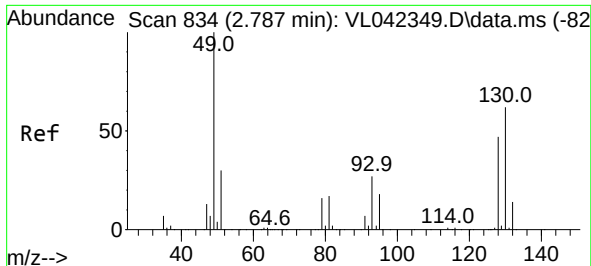
Internal Standards						
1) Bromochloromethane	2.787	49	126464	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	348043	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.878	117	298931	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	259568	10.567	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	9994	0.447	ppbv	96
3) Chlorodifluoromethane	1.466	51	36381	1.710	ppbv #	64
4) Chloromethane	1.531	50	4567	0.516	ppbv #	86
6) Bromomethane	1.667	94	214	0.052	ppbv #	72
9) Propene	1.887	41	13290	1.372	ppbv	93
10) Heptane	4.975	43	3089	0.113	ppbv #	27
11) Trichlorofluoromethane	1.499	101	837	0.039	ppbv	89
12) 1,1,2-Trichlorotrifluo...	2.136	101	1094	0.063	ppbv	96
13) Ethanol	1.722	45	63374	41.149	ppbv	76
15) Acetone	1.835	43	987031	47.677	ppbv	99
16) 1,3-Butadiene	1.622	39	9184	0.928	ppbv #	23
17) tert-Butyl alcohol	2.046	59	2590	0.101	ppbv #	49
19) Isopropyl Alcohol	1.887	45	159355	13.856	ppbv #	1
20) Methylene Chloride	2.059	84	7400	0.913	ppbv	85
21) Allyl Chloride	2.078	41	763	0.053	ppbv #	1
23) Vinyl Acetate	2.473	43	88018	10.503	ppbv #	48
25) Ethyl Acetate	2.826	43	327702	6.420	ppbv #	77
26) Hexane	2.826	57	477107	23.097	ppbv #	32
29) Chloroform	2.852	83	2312	0.079	ppbv	94
30) Cyclohexane	3.858	84	1214	0.073	ppbv #	1
34) 2-Butanone	2.564	43	7185	0.261	ppbv	100
35) Carbon Tetrachloride	3.764	117	1151	0.037	ppbv #	63
36) Benzene	3.658	78	6904	0.184	ppbv #	93
39) 1,2-Dichloropropane	3.959	63	96530	6.900	ppbv #	24
41) Tetrahydrofuran	3.227	42	40962	2.552	ppbv #	36
44) 2,2,4-Trimethylpentane	4.642	57	14523	0.224	ppbv #	81
53) Toluene	6.933	91	21738	0.483	ppbv	99
58) Ethyl Benzene	9.351	91	3726	0.063	ppbv #	81
59) m/p-Xylene	9.532	91	18242	0.382	ppbv	99
60) o-Xylene	9.963	91	5556	0.116	ppbv	95
61) Styrene	9.875	104	1120	0.049	ppbv	93
74) 1,2,4-Trimethylbenzene	11.536	105	4269	0.070	ppbv #	70
76) 1,4-Dichlorobenzene	11.672	146	1026	0.032	ppbv	85
77) 1,2-Dichlorobenzene	11.672	146	1026	0.034	ppbv	86

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

Instrument :
MSVOA_L
ClientSampleId :
IA1

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MSVOA_L
ClientSampleId :
IA1

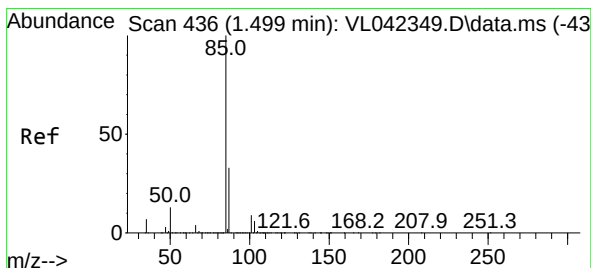
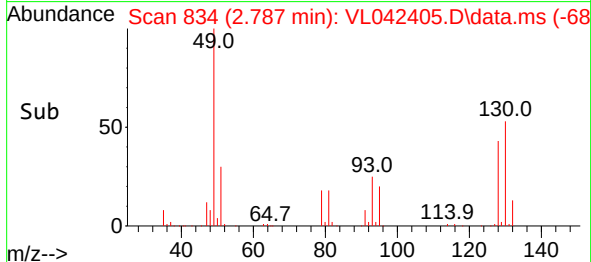
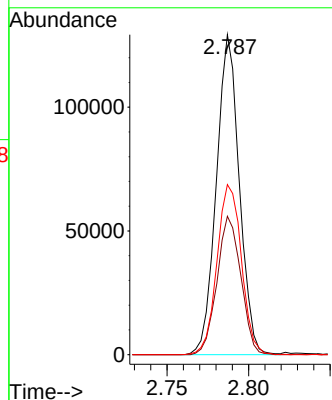
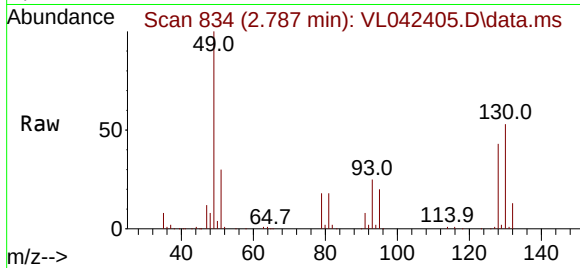




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 834
 Delta R.T. -0.000 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

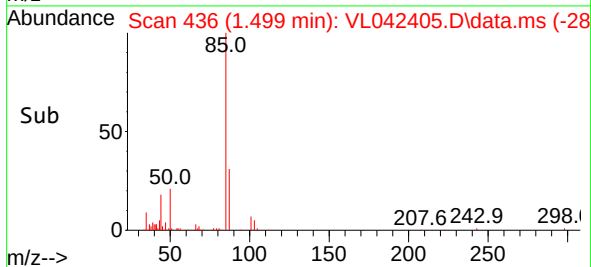
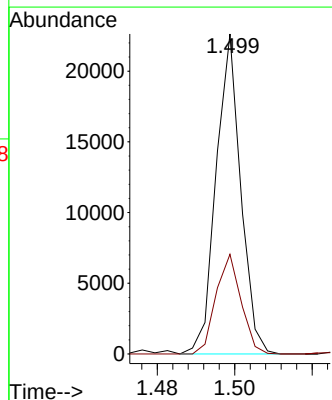
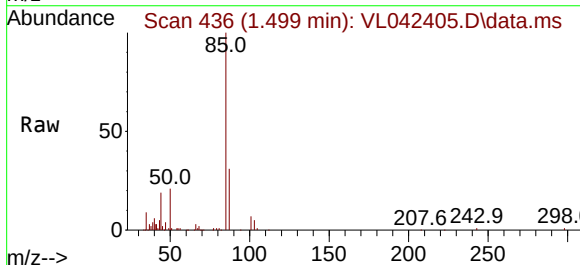
Instrument :
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 ClientSampleId :
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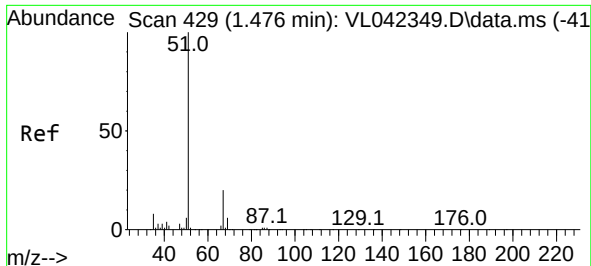
Tgt Ion: 49 Resp: 126464
 Ion Ratio Lower Upper
 49 100
 128 44.9 22.8 68.4
 130 56.6 29.3 88.0



#2
 Dichlorodifluoromethane
 Concen: 0.447 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.000 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

Tgt Ion: 85 Resp: 9994
 Ion Ratio Lower Upper
 85 100
 87 31.1 26.6 39.8

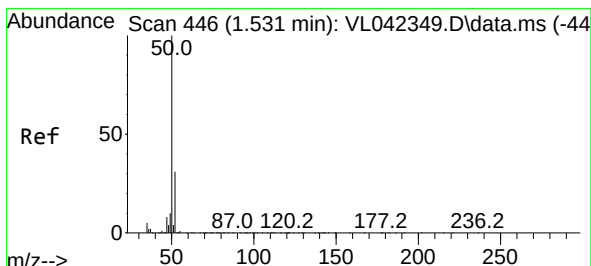
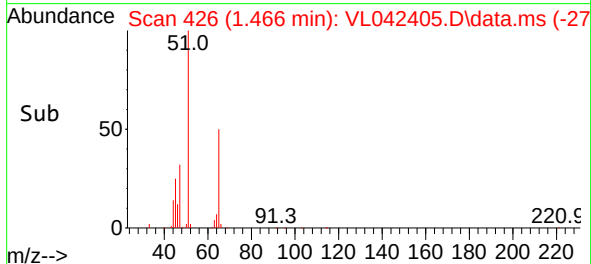
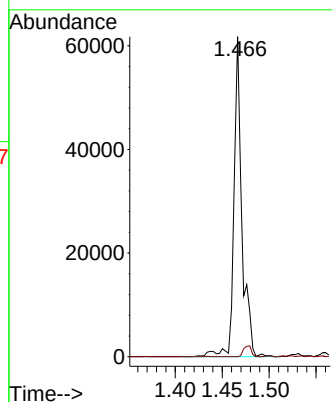
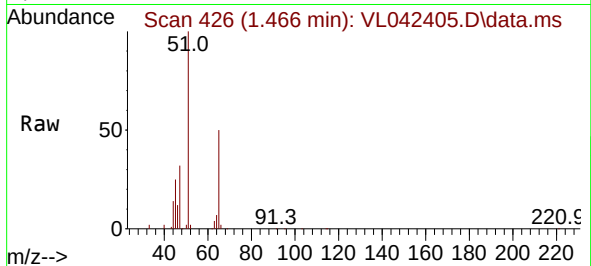




#3
Chlorodifluoromethane
Concen: 1.710 ppbv
RT: 1.466 min Scan# 429
Delta R.T. -0.010 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

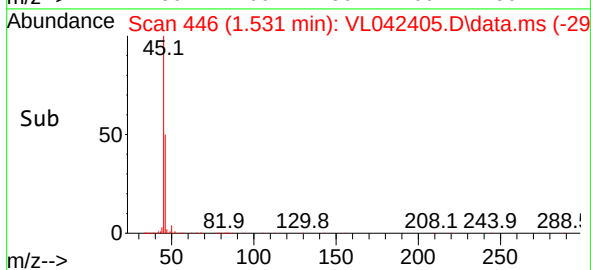
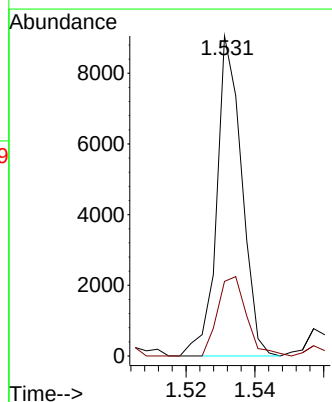
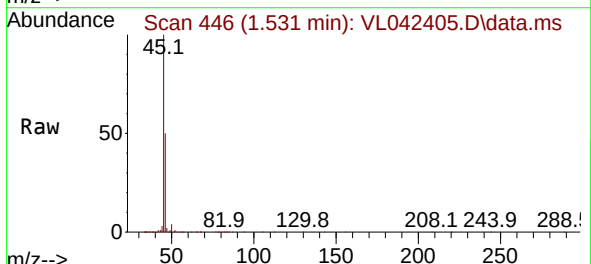
Instrument :
MSVOA_L
ClientSampleId :
IA1

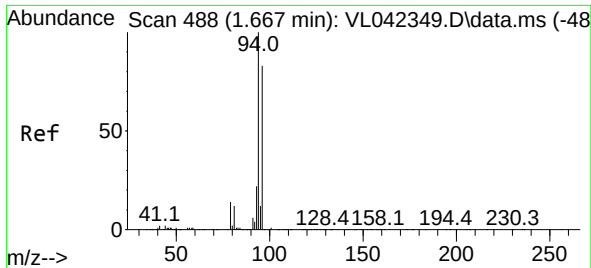
Tgt Ion: 51 Resp: 36381
Ion Ratio Lower Upper
51 100
67 3.5 16.2 24.4#



#4
Chloromethane
Concen: 0.516 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 50 Resp: 4567
Ion Ratio Lower Upper
50 100
52 23.3 24.7 37.1#

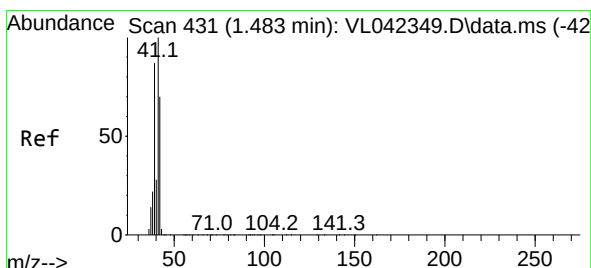
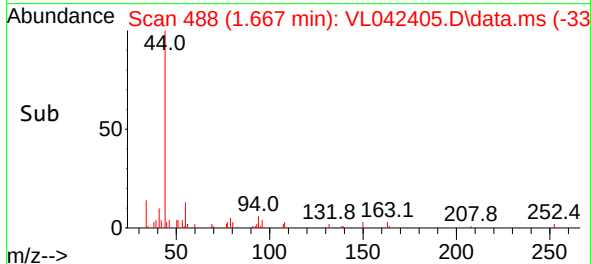
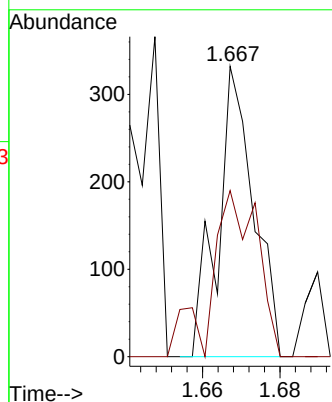
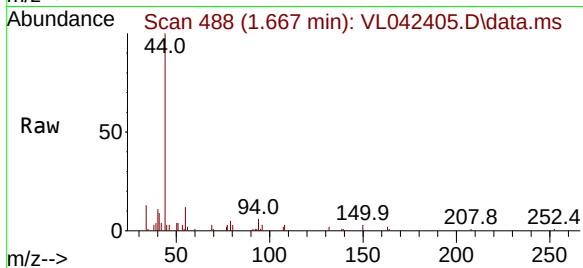




#6
Bromomethane
Concen: 0.052 ppbv
RT: 1.667 min Scan# 41
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

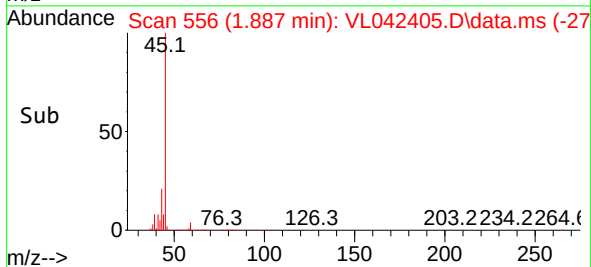
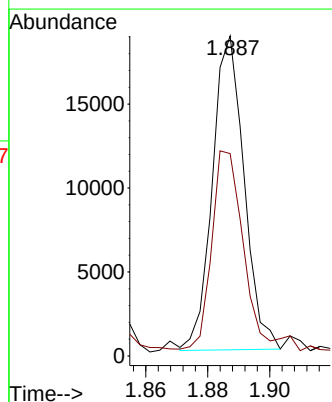
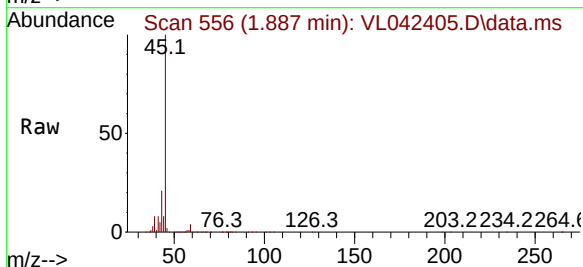
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MSVOA_1
ClientSampleId :
IA1

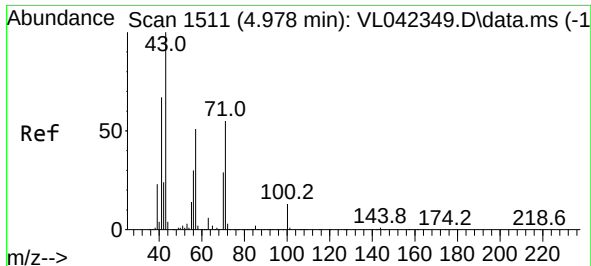
Tgt Ion: 94 Resp: 214
Ion Ratio Lower Upper
94 100
96 57.2 66.2 99.2#



#9
Propene
Concen: 1.372 ppbv
RT: 1.887 min Scan# 556
Delta R.T. 0.405 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 41 Resp: 13290
Ion Ratio Lower Upper
41 100
42 64.5 56.2 84.4

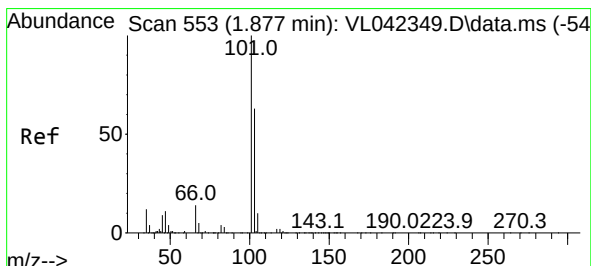
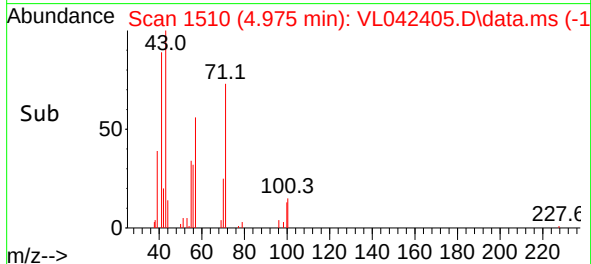
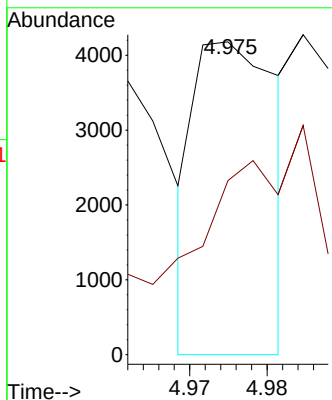
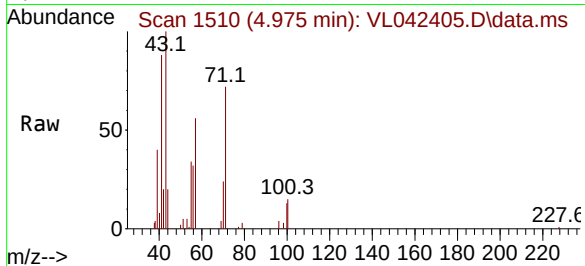




#10
Heptane
Concen: 0.113 ppbv
RT: 4.975 min Scan# 11
Delta R.T. -0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

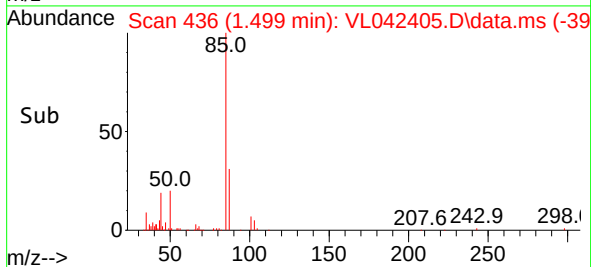
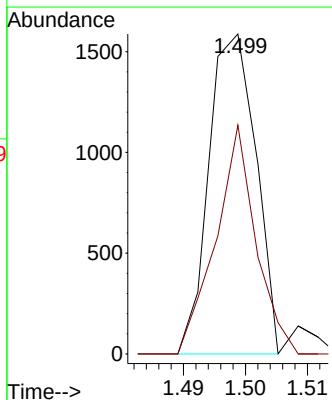
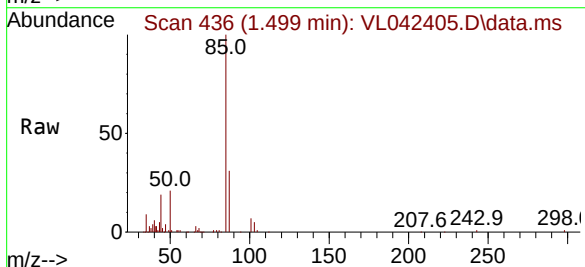
Instrument :
MSVOA_L
ClientSampleId :
IA1

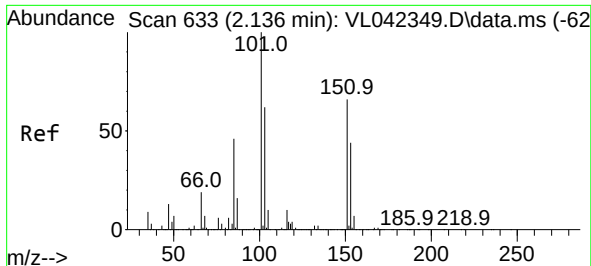
Tgt Ion: 43 Resp: 3089
Ion Ratio Lower Upper
43 100
57 0.0 39.9 59.9#



#11
Trichlorofluoromethane
Concen: 0.039 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.379 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion:101 Resp: 837
Ion Ratio Lower Upper
101 100
103 71.5 50.1 75.1

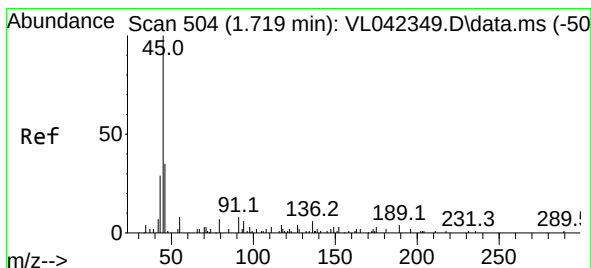
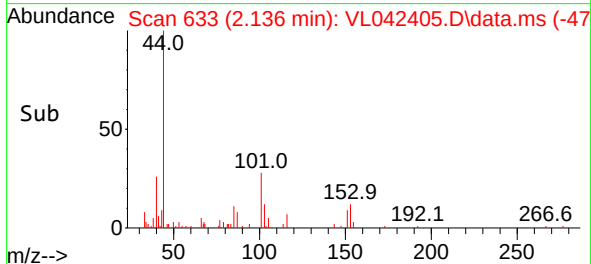
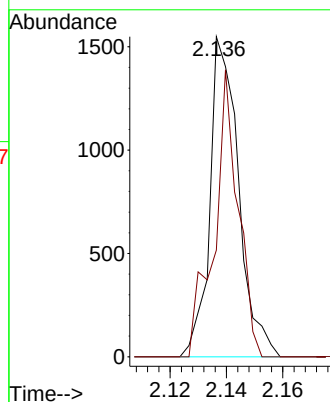
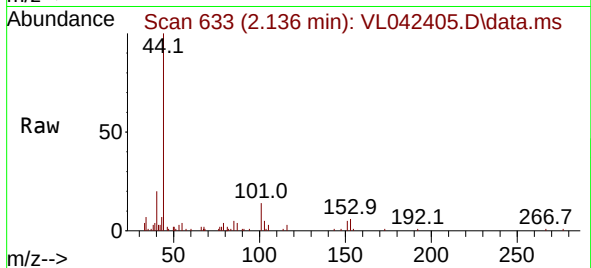




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.063 ppbv
RT: 2.136 min Scan# 61
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

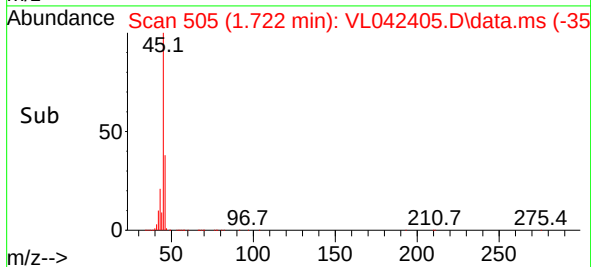
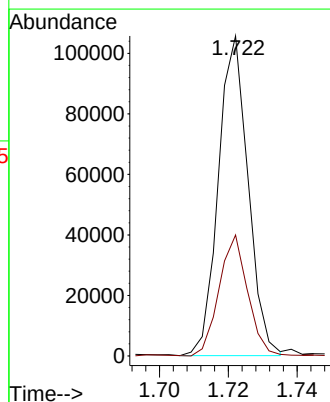
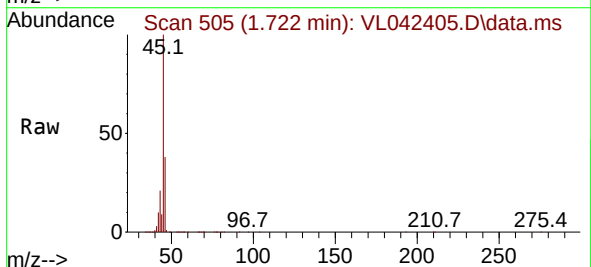
Instrument :
MSVOA_L
ClientSampleId :
IA1

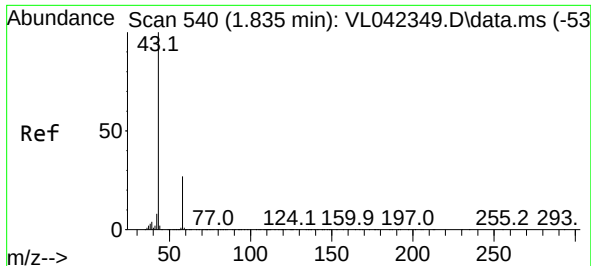
Tgt Ion:101 Resp: 1094
Ion Ratio Lower Upper
101 100
151 74.7 57.0 85.6



#13
Ethanol
Concen: 41.149 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 45 Resp: 63374
Ion Ratio Lower Upper
45 100
46 37.7 21.9 87.7

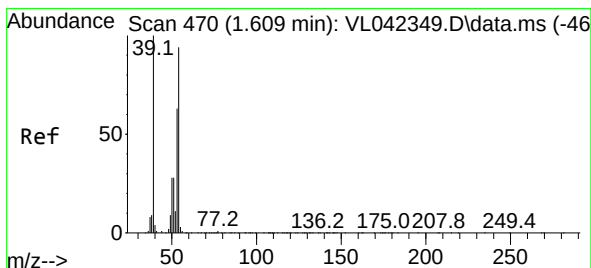
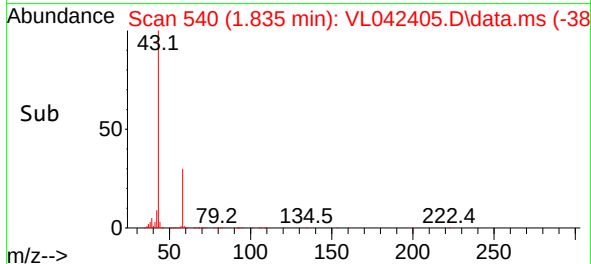
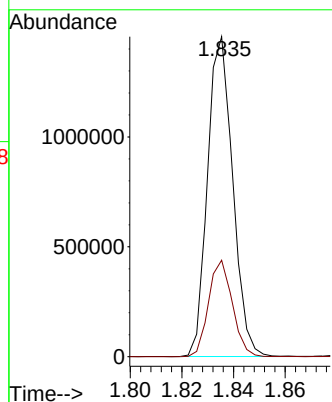
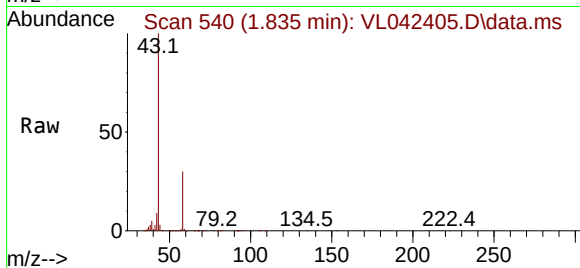




#15
Acetone
Concen: 47.677 ppbv
RT: 1.835 min Scan# 540
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

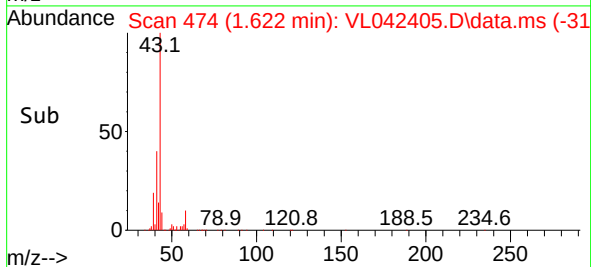
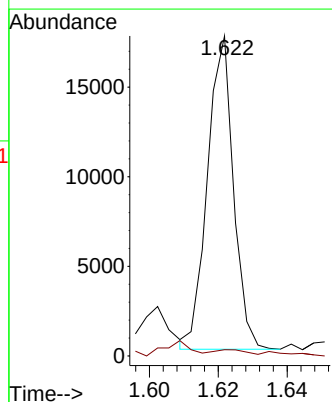
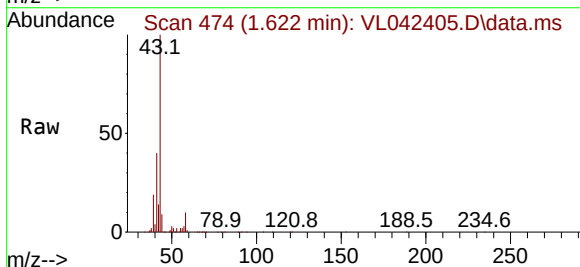
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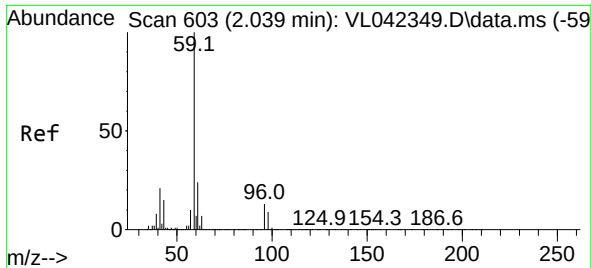
Tgt Ion: 43 Resp: 987031
Ion Ratio Lower Upper
43 100
58 28.5 22.4 33.6



#16
1,3-Butadiene
Concen: 0.928 ppbv
RT: 1.622 min Scan# 474
Delta R.T. 0.013 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 39 Resp: 9184
Ion Ratio Lower Upper
39 100
54 12.3 64.9 97.3#

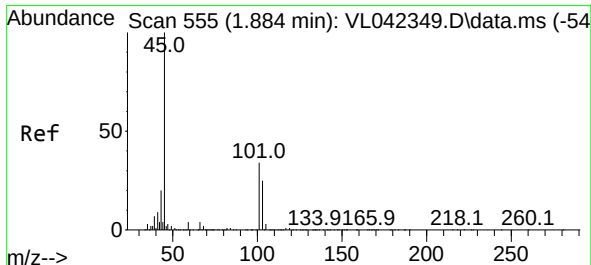
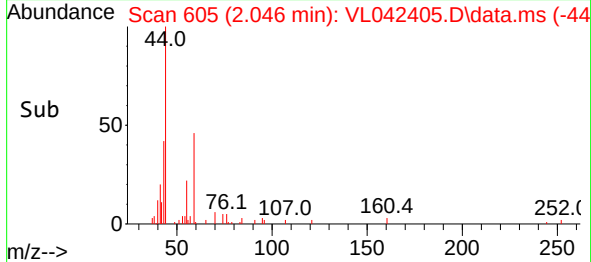
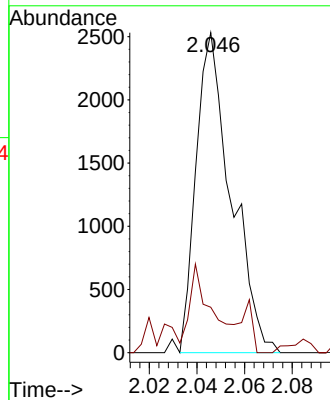
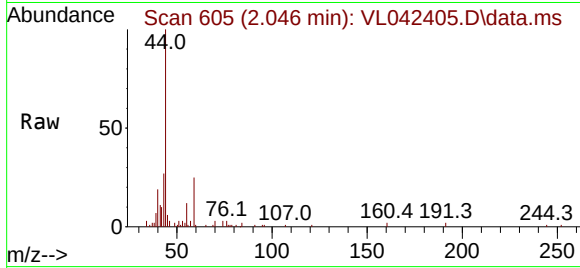




#17
tert-Butyl alcohol
Concen: 0.101 ppbv
RT: 2.046 min Scan# 603
Delta R.T. 0.007 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

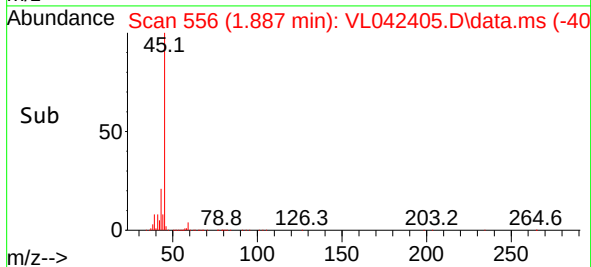
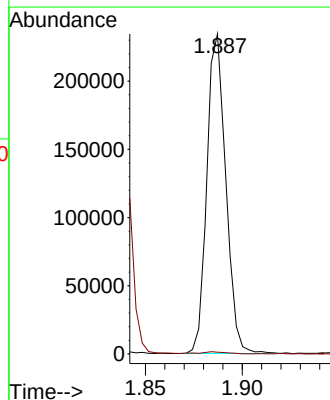
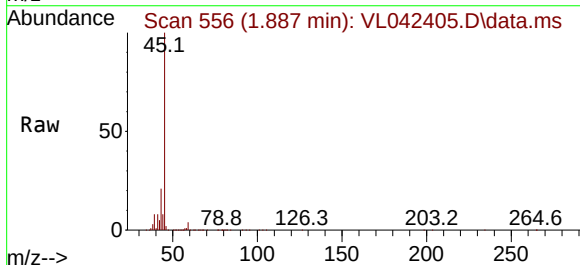
Instrument :
MSVOA_1
ClientSampleId :
1A1

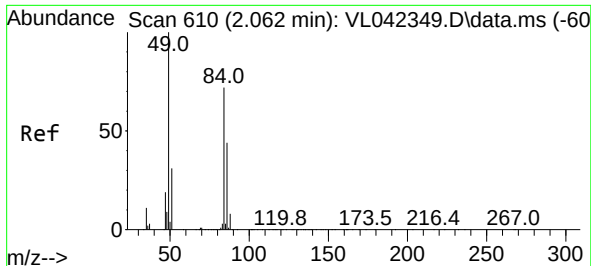
Tgt Ion: 59 Resp: 2590
Ion Ratio Lower Upper
59 100
57 30.2 8.7 13.1#



#19
Isopropyl Alcohol
Concen: 13.856 ppbv
RT: 1.887 min Scan# 556
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 45 Resp: 159355
Ion Ratio Lower Upper
45 100
58 176.6 34.5 51.7#





#20

Methylene Chloride

Concen: 0.913 ppbv

RT: 2.059 min Scan# 609

Delta R.T. -0.003 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

Instrument :

MSVOA_L

ClientSampleId :

IA1

Tgt Ion: 84 Resp: 7400

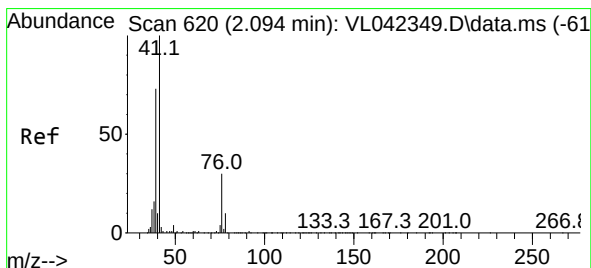
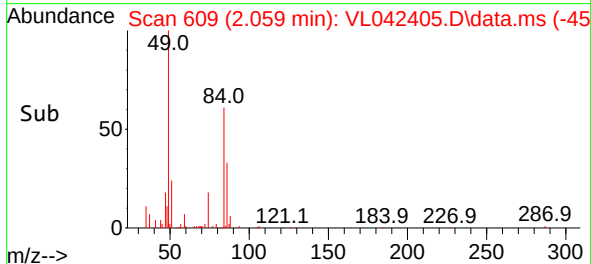
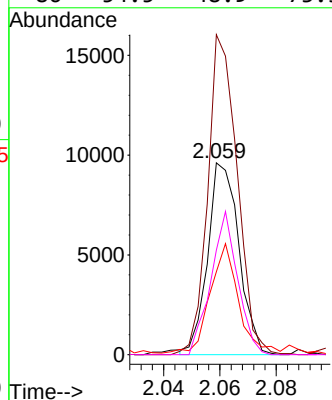
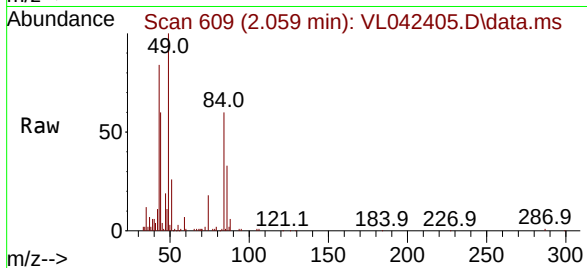
Ion Ratio Lower Upper

84 100

49 166.2 111.6 167.4

51 41.4 35.1 52.7

86 54.5 48.9 73.3



#21

Allyl Chloride

Concen: 0.053 ppbv

RT: 2.078 min Scan# 615

Delta R.T. -0.016 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

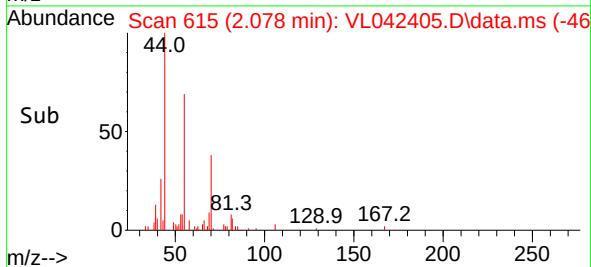
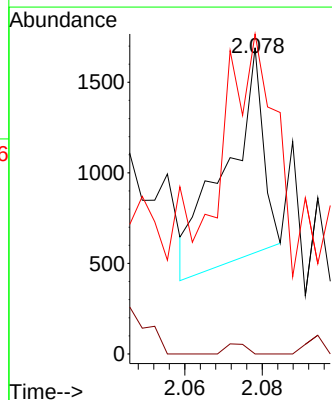
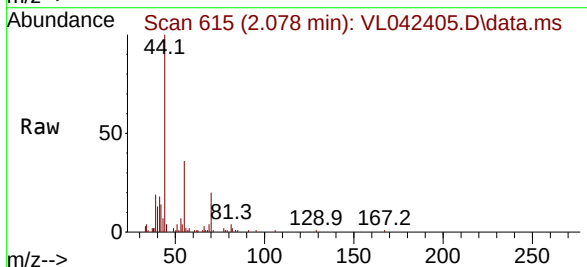
Tgt Ion: 41 Resp: 763

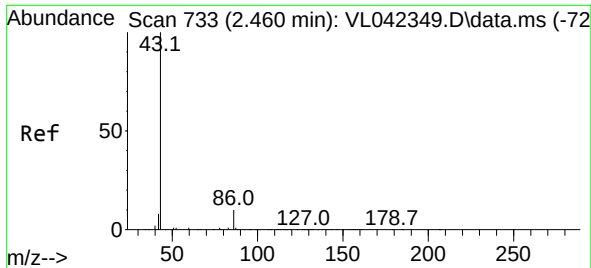
Ion Ratio Lower Upper

41 100

76 38.5 24.8 37.2#

39 399.9 60.6 90.8#

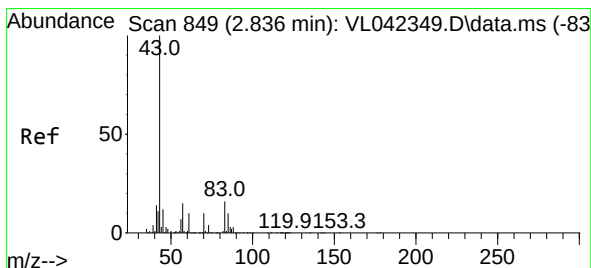
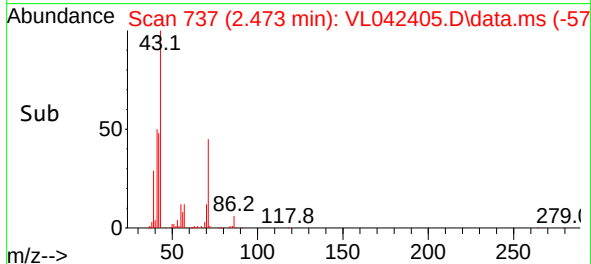
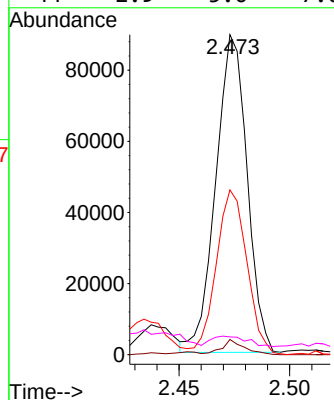
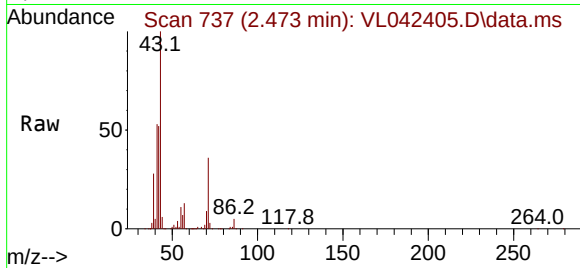




#23
 Vinyl Acetate
 Concen: 10.503 ppbv
 RT: 2.473 min Scan# 71
 Delta R.T. 0.013 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

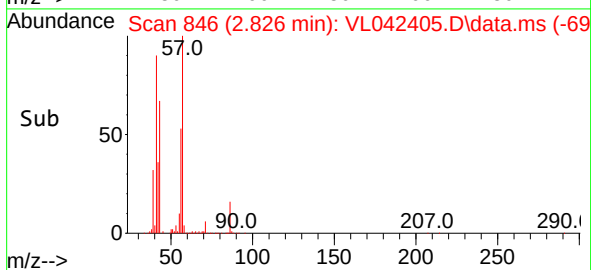
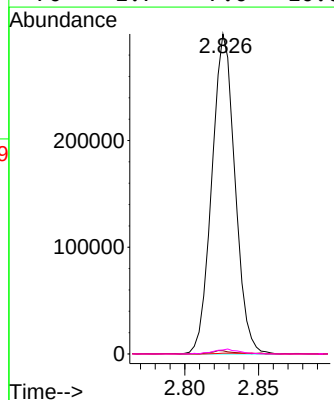
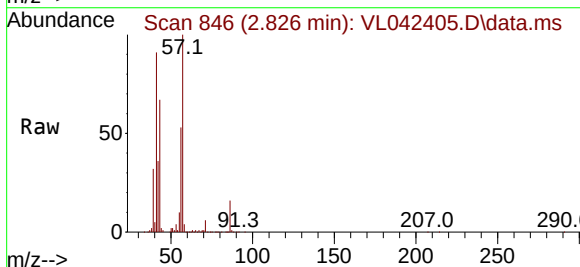
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

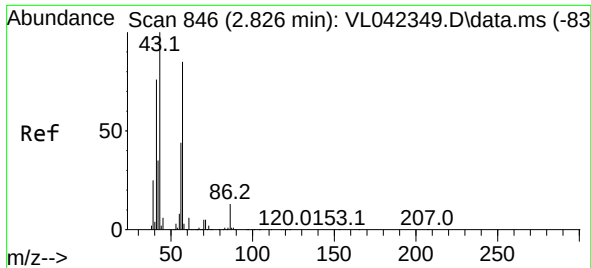
Tgt Ion:	43	Resp:	88018
Ion	Ratio	Lower	Upper
43	100		
86	4.8	6.5	9.7#
42	51.6	7.8	11.8#
44	2.9	5.0	7.6#



#25
 Ethyl Acetate
 Concen: 6.420 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.010 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

Tgt Ion:	43	Resp:	327702
Ion	Ratio	Lower	Upper
43	100		
45	1.2	8.3	12.5#
61	0.4	7.3	10.9#
70	1.7	7.0	10.6#

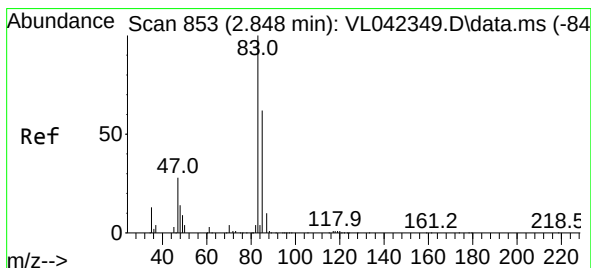
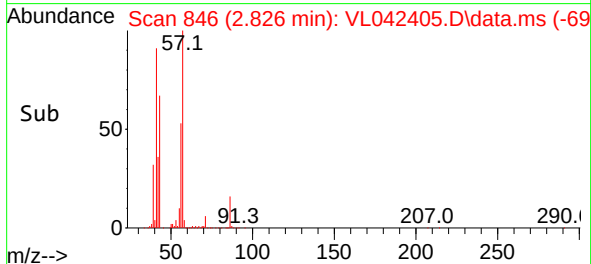
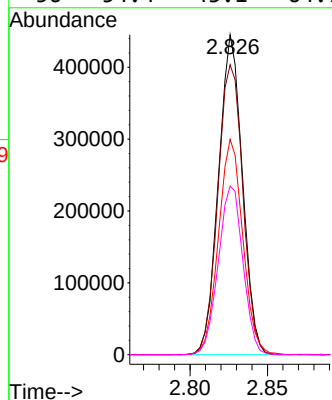
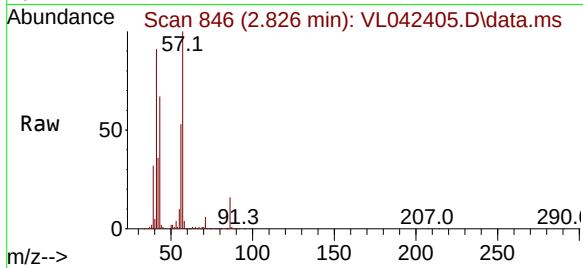




#26
Hexane
Concen: 23.097 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

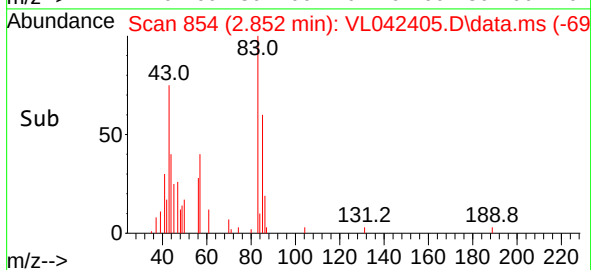
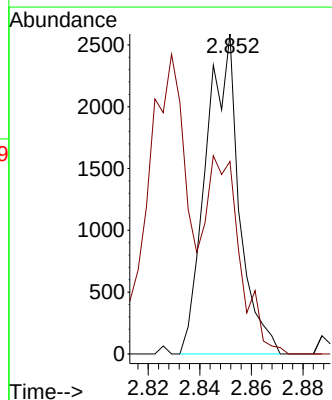
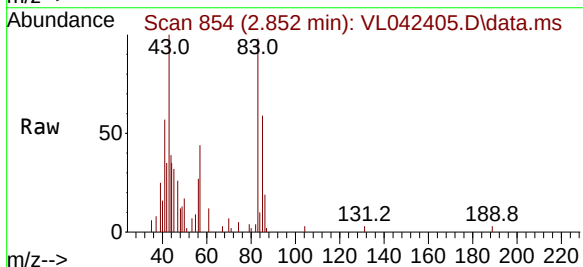
Instrument :
MSVOA_L
ClientSampleId :
IA1

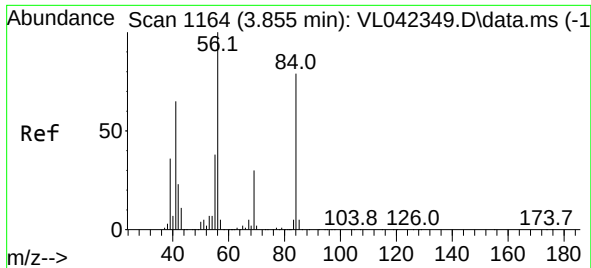
Tgt Ion: 57 Resp: 477107
Ion Ratio Lower Upper
57 100
41 95.3 77.9 116.9
43 68.8 208.4 312.6#
56 54.4 43.1 64.7



#29
Chloroform
Concen: 0.079 ppbv
RT: 2.852 min Scan# 854
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 83 Resp: 2312
Ion Ratio Lower Upper
83 100
85 58.1 50.0 75.0

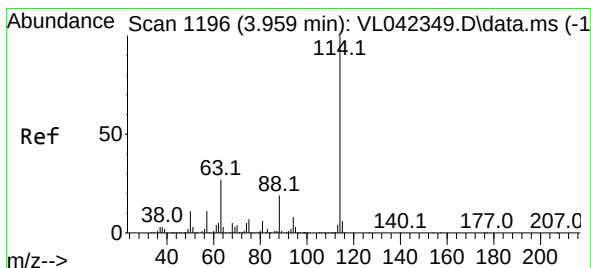
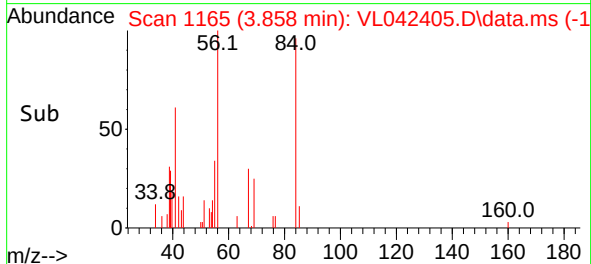
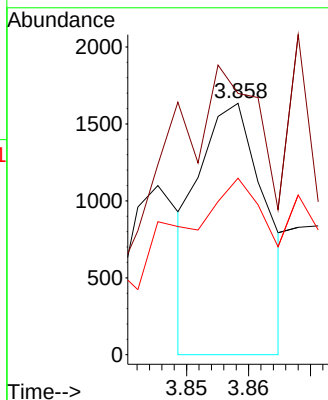
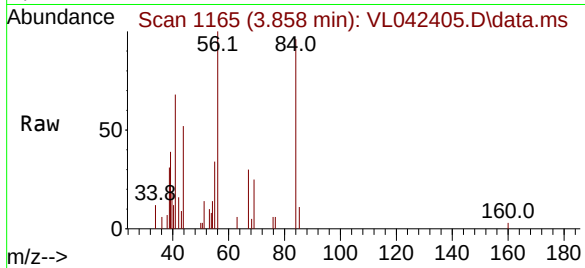




#30
Cyclohexane
Concen: 0.073 ppbv
RT: 3.858 min Scan# 1165
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

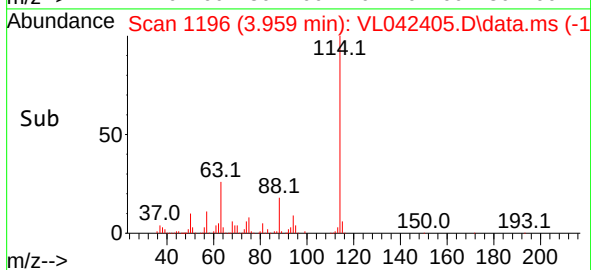
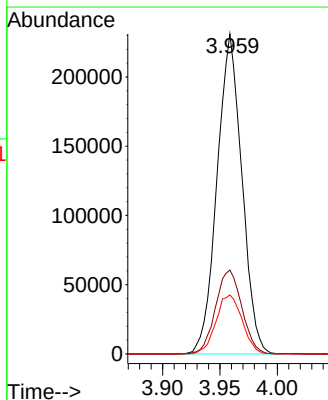
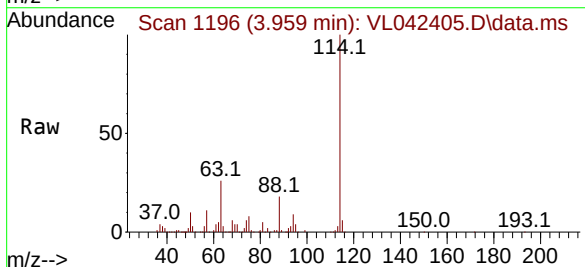
Instrument :
MSVOA_L
ClientSampleId :
IA1

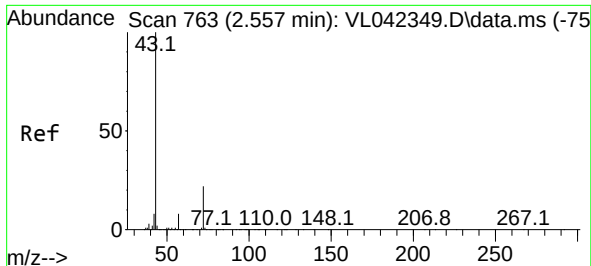
Tgt Ion: 84 Resp: 1214
Ion Ratio Lower Upper
84 100
56 0.0 101.0 151.4#
41 208.6 67.4 101.0#



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 114 Resp: 348043
Ion Ratio Lower Upper
114 100
63 27.8 21.8 32.6
88 19.5 15.5 23.3

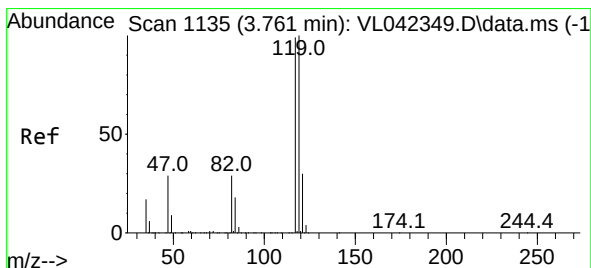
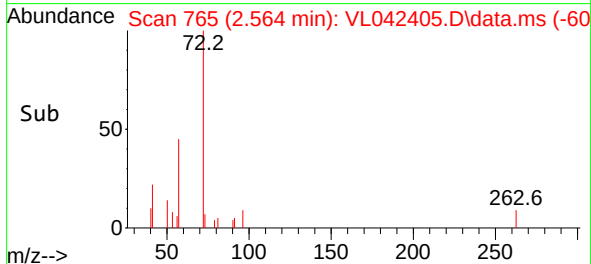
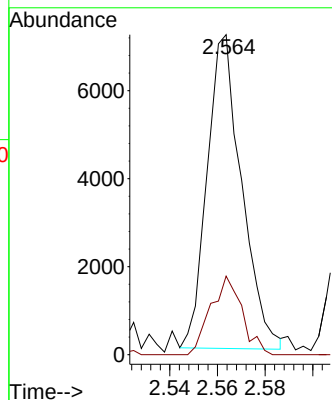
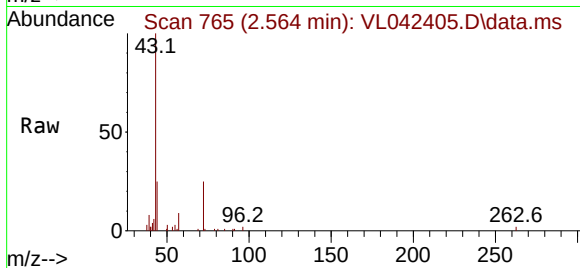




#34
2-Butanone
Concen: 0.261 ppbv
RT: 2.564 min Scan# 7185
Delta R.T. 0.006 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

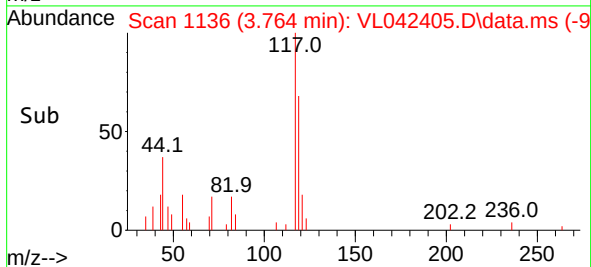
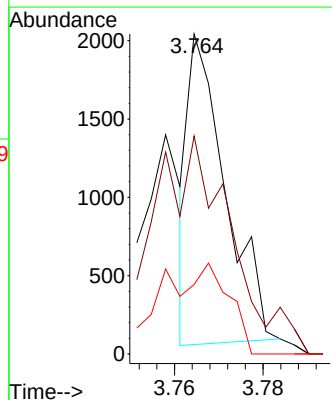
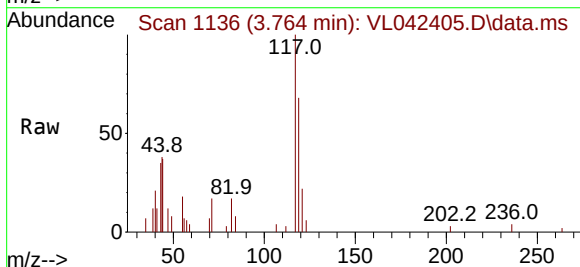
Instrument :
MSVOA_L
ClientSampleId :
IA1

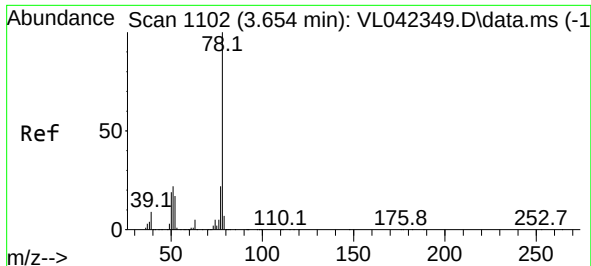
Tgt Ion: 43 Resp: 7185
Ion Ratio Lower Upper
43 100
72 22.7 18.2 27.2



#35
Carbon Tetrachloride
Concen: 0.037 ppbv
RT: 3.764 min Scan# 1136
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 117 Resp: 1151
Ion Ratio Lower Upper
117 100
119 56.1 80.5 120.7#
121 22.8 24.2 36.2#

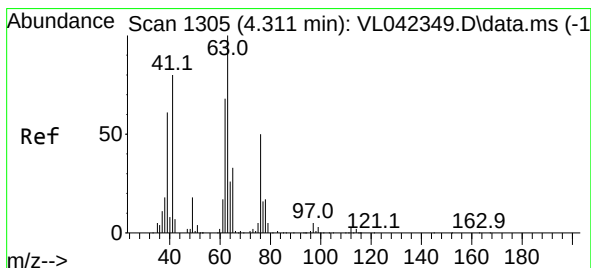
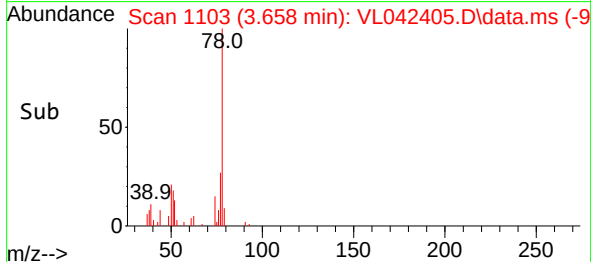
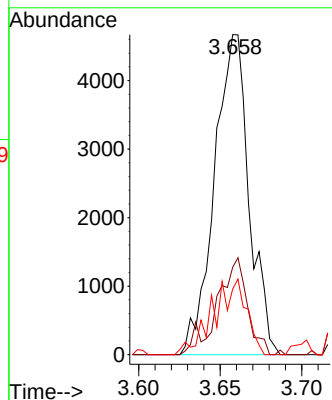
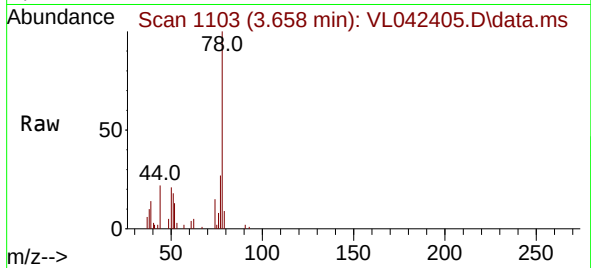




#36
Benzene
Concen: 0.184 ppbv
RT: 3.658 min Scan# 1102
Delta R.T. 0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

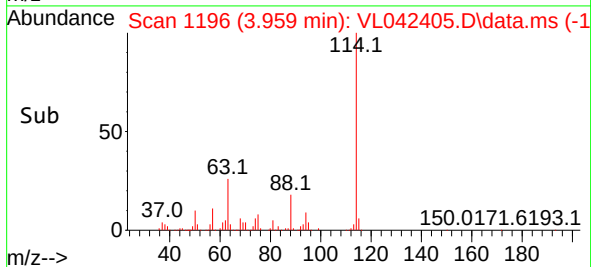
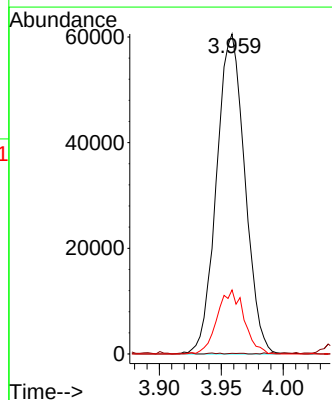
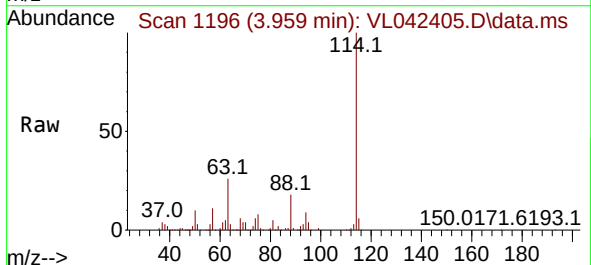
Instrument :
MSVOA_L
ClientSampleId :
IA1

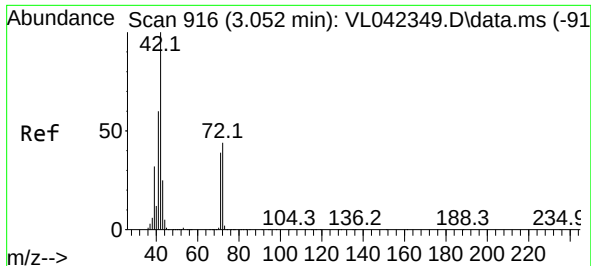
Tgt Ion: 78 Resp: 6904
Ion Ratio Lower Upper
78 100
77 27.3 17.4 26.0#
50 20.5 15.5 23.3



#39
1,2-Dichloropropane
Concen: 6.900 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.353 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 63 Resp: 96530
Ion Ratio Lower Upper
63 100
41 0.0 64.2 96.2#
62 20.0 54.3 81.5#

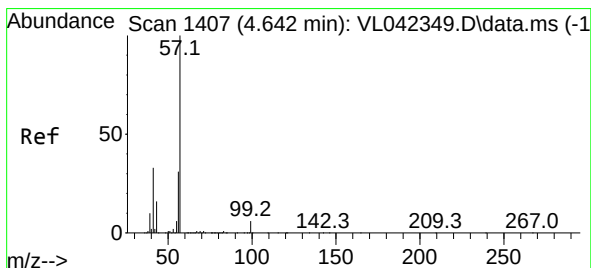
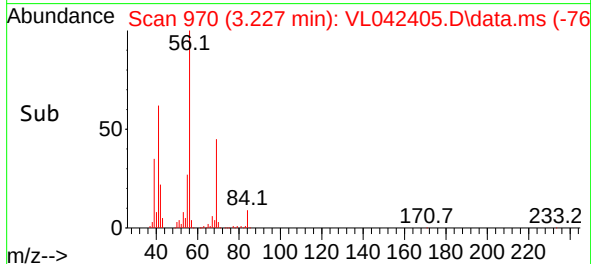
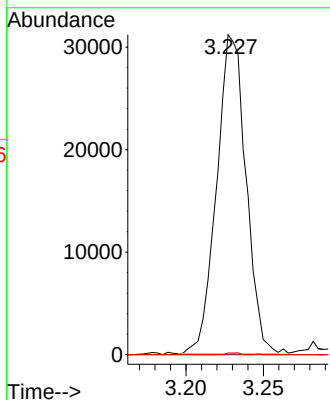
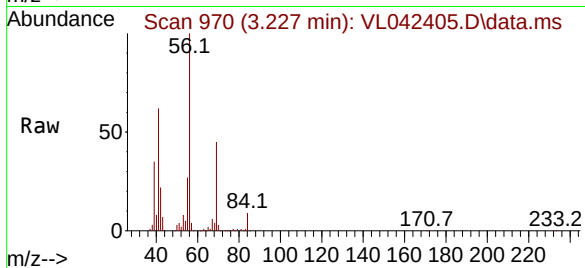




#41
Tetrahydrofuran
Concen: 2.552 ppbv
RT: 3.227 min Scan# 916
Delta R.T. 0.175 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

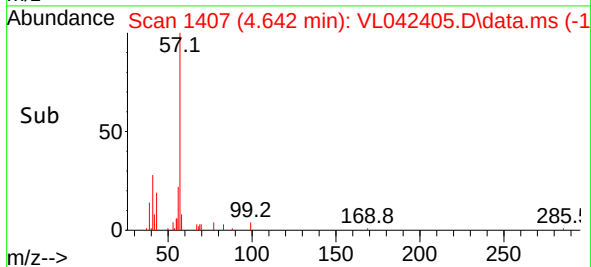
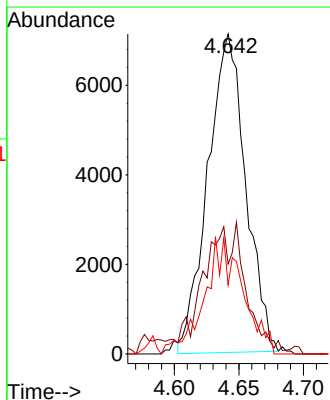
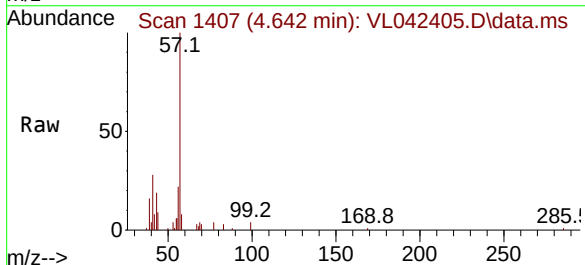
Instrument :
MSVOA_L
ClientSampleId :
IA1

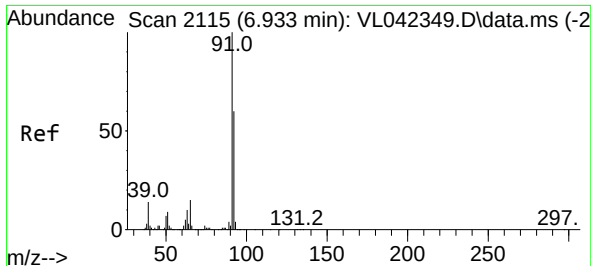
Tgt Ion: 42 Resp: 40962
Ion Ratio Lower Upper
42 100
72 0.5 32.3 48.5#
71 0.0 31.4 47.2#



#44
2,2,4-Trimethylpentane
Concen: 0.224 ppbv
RT: 4.642 min Scan# 1407
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 57 Resp: 14523
Ion Ratio Lower Upper
57 100
41 49.5 27.2 40.8#
56 38.1 25.7 38.5

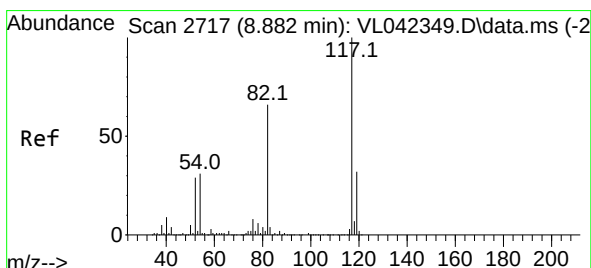
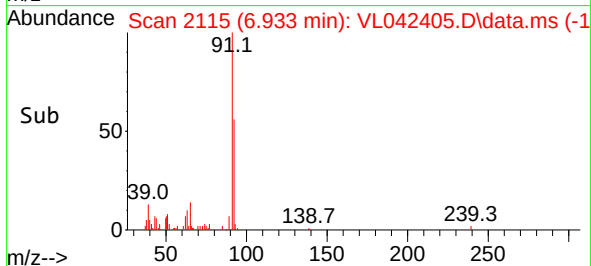
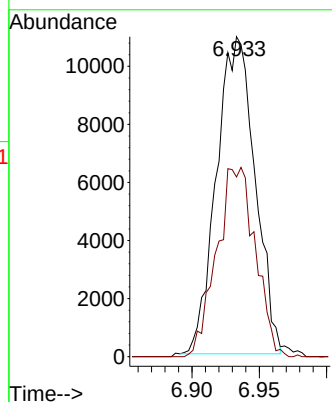
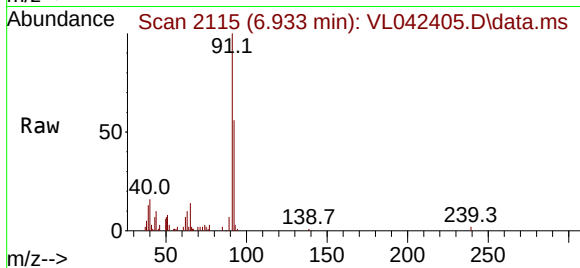




#53
Toluene
Concen: 0.483 ppbv
RT: 6.933 min Scan# 2115
Delta R.T. 0.000 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

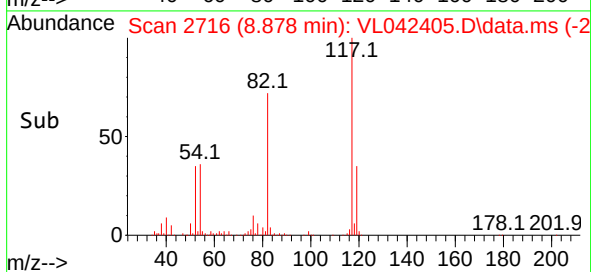
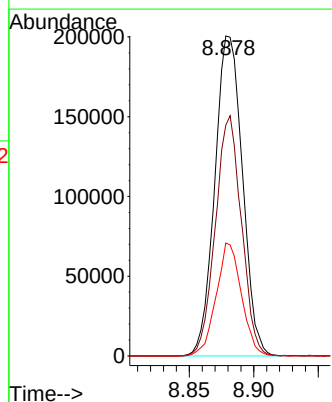
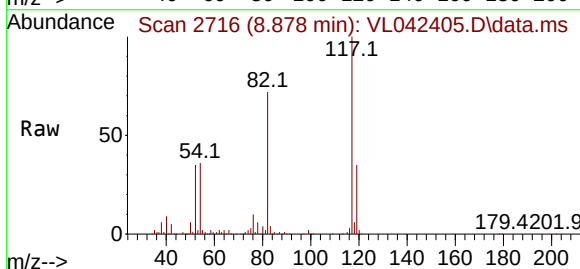
Instrument :
MSVOA_L
ClientSampleId :
IA1

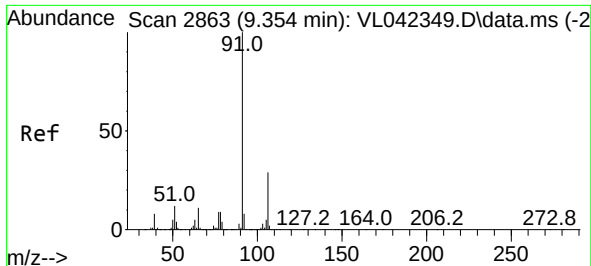
Tgt Ion: 91 Resp: 21738
Ion Ratio Lower Upper
91 100
92 59.9 48.2 72.4



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.878 min Scan# 2716
Delta R.T. -0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 117 Resp: 298931
Ion Ratio Lower Upper
117 100
82 70.7 57.8 86.6
119 32.3 25.2 37.8

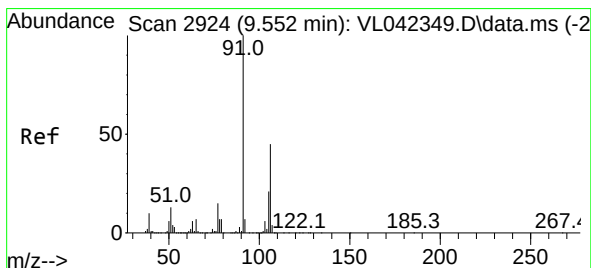
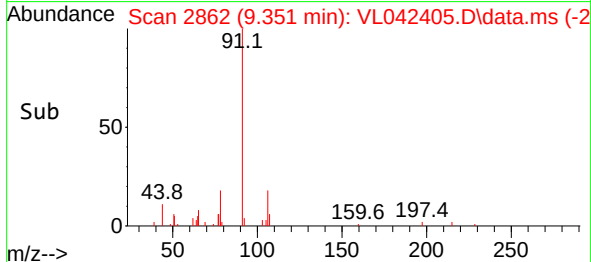
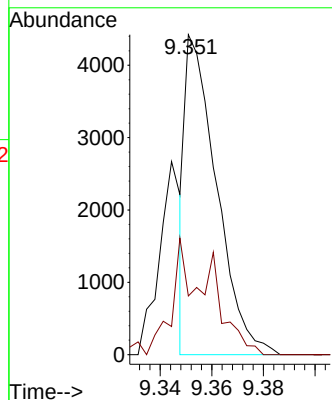
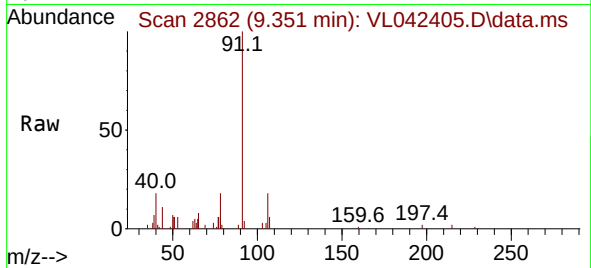




#58
Ethyl Benzene
Concen: 0.063 ppbv
RT: 9.351 min Scan# 218
Delta R.T. -0.003 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

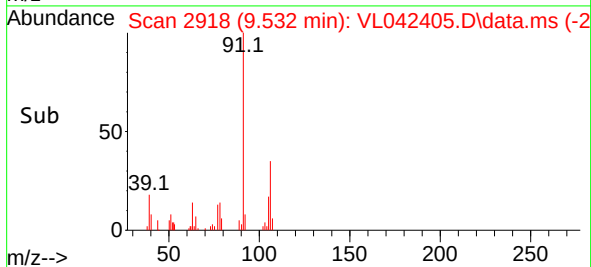
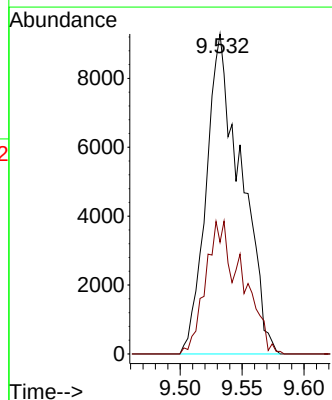
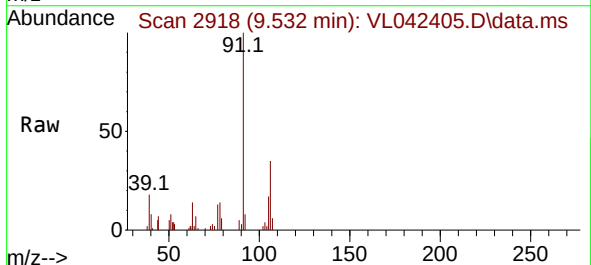
Instrument :
MSVOA_L
ClientSampleId :
IA1

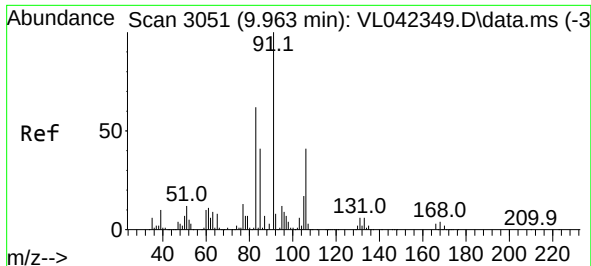
Tgt Ion: 91 Resp: 3726
Ion Ratio Lower Upper
91 100
106 18.3 23.0 34.4#



#59
m/p-Xylene
Concen: 0.382 ppbv
RT: 9.532 min Scan# 2918
Delta R.T. -0.019 min
Lab File: VL042405.D
Acq: 21 Apr 2025 15:18

Tgt Ion: 91 Resp: 18242
Ion Ratio Lower Upper
91 100
106 43.7 35.4 53.2





#60

o-Xylene

Concen: 0.116 ppbv

RT: 9.963 min Scan# 3051

Delta R.T. 0.000 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

Instrument :

MSVOA_L

ClientSampleId :

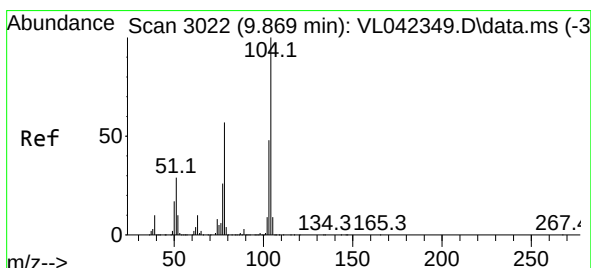
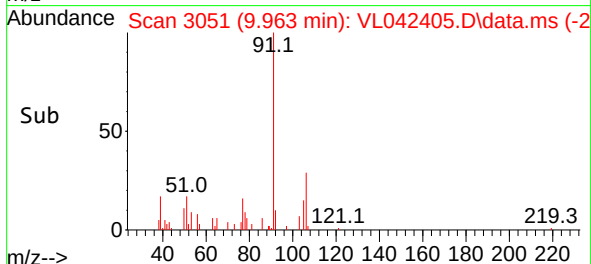
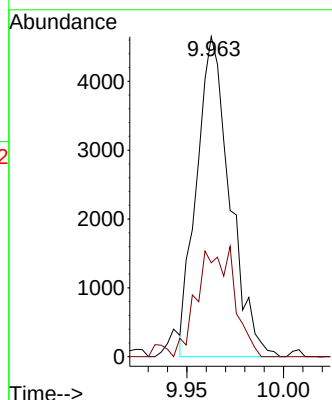
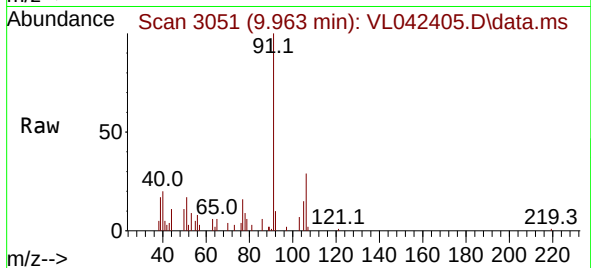
IA1

Tgt Ion: 91 Resp: 5556

Ion Ratio Lower Upper

91 100

106 39.3 21.1 63.4



#61

Styrene

Concen: 0.049 ppbv

RT: 9.875 min Scan# 3024

Delta R.T. 0.007 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

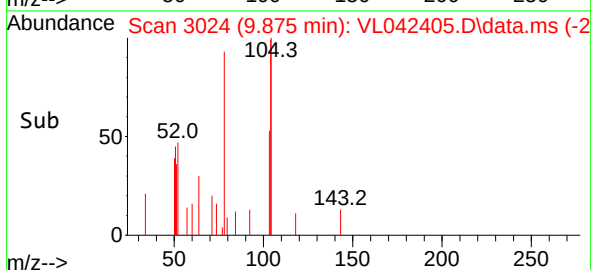
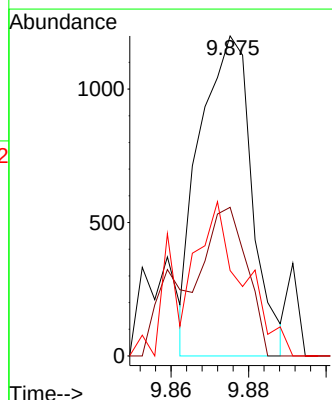
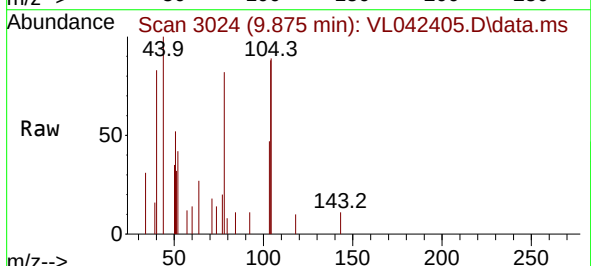
Tgt Ion: 104 Resp: 1120

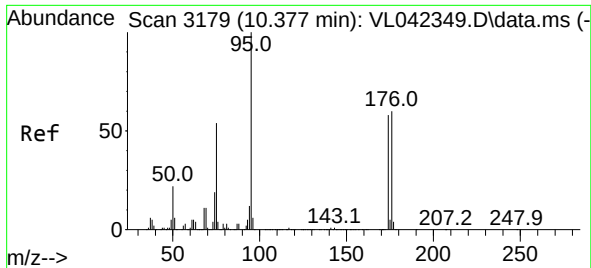
Ion Ratio Lower Upper

104 100

78 53.5 44.6 66.8

103 54.0 37.4 56.0

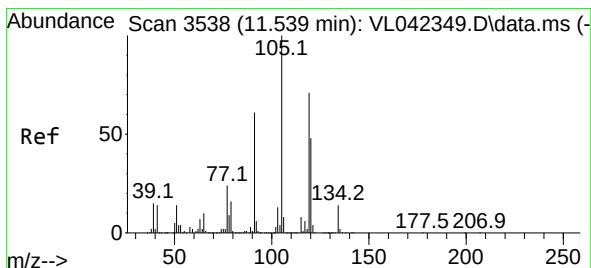
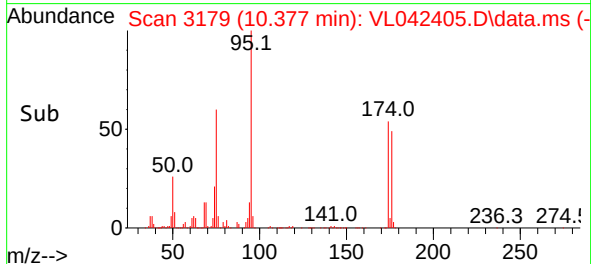
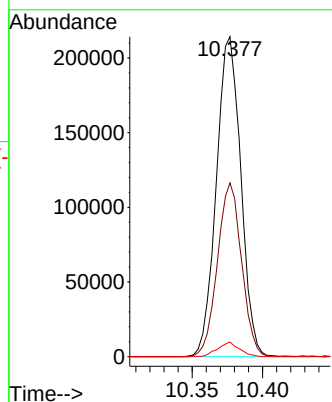
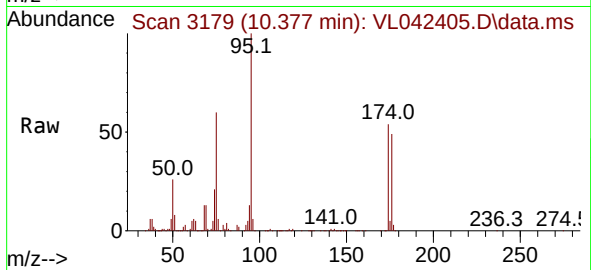




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.567 ppbv
 RT: 10.377 min Scan# 3179
 Delta R.T. 0.000 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

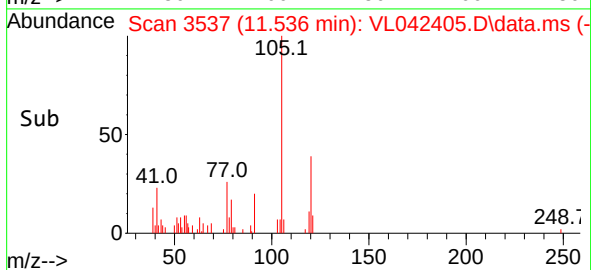
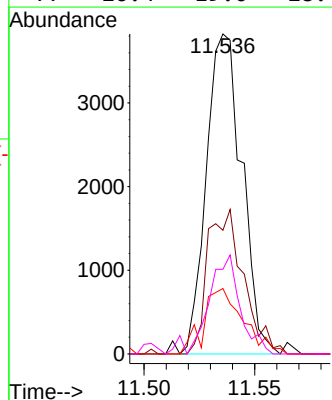
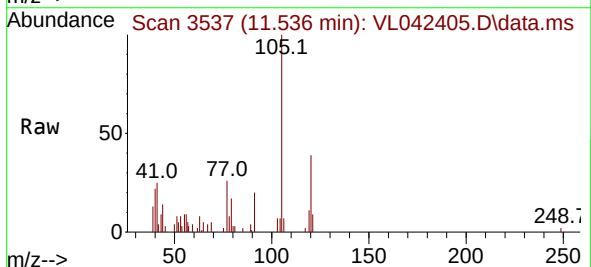
Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

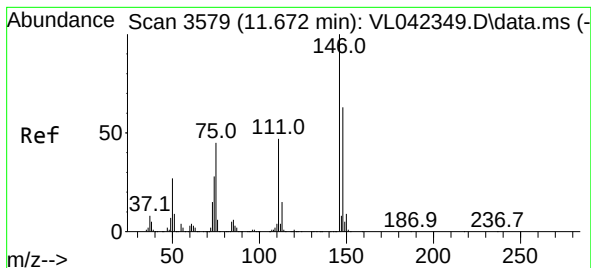
Tgt Ion: 95 Resp: 259568
 Ion Ratio Lower Upper
 95 100
 174 53.6 48.5 72.7
 175 4.1 3.7 5.5



#74
 1,2,4-Trimethylbenzene
 Concen: 0.070 ppbv
 RT: 11.536 min Scan# 3537
 Delta R.T. -0.003 min
 Lab File: VL042405.D
 Acq: 21 Apr 2025 15:18

Tgt Ion: 105 Resp: 4269
 Ion Ratio Lower Upper
 105 100
 120 38.7 38.1 57.1
 91 20.5 48.8 73.2#
 77 26.4 19.0 28.4





#76

1,4-Dichlorobenzene

Concen: 0.032 ppbv

RT: 11.672 min Scan# 3579

Delta R.T. 0.000 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

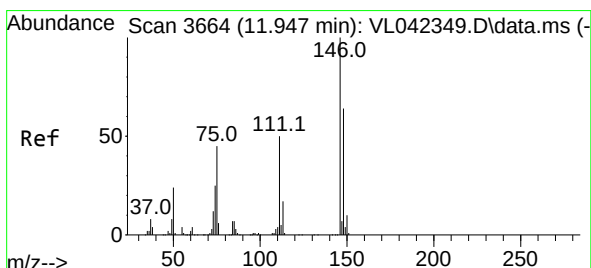
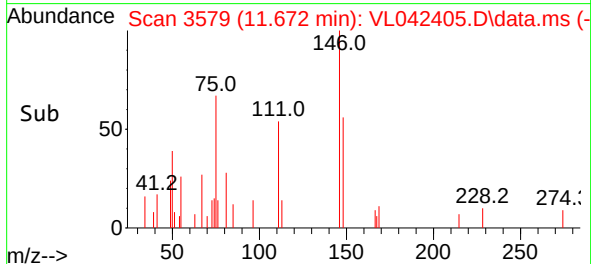
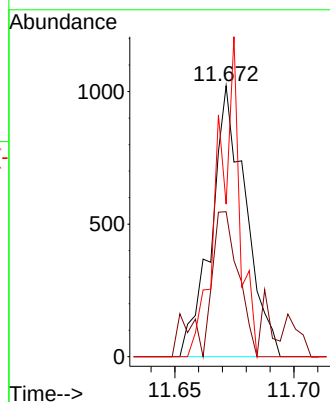
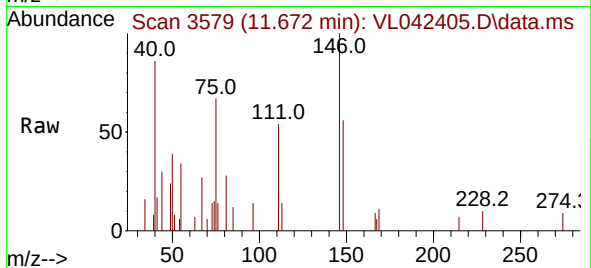
Instrument :

MSVOA_L

ClientSampleId :

IA1

Tgt Ion:146	Resp:	1026
Ion	Ratio	Lower Upper
146	100	
111	61.2	24.2 72.6
148	73.4	32.1 96.5



#77

1,2-Dichlorobenzene

Concen: 0.034 ppbv

RT: 11.672 min Scan# 3579

Delta R.T. -0.275 min

Lab File: VL042405.D

Acq: 21 Apr 2025 15:18

Tgt Ion:146	Resp:	1026
Ion	Ratio	Lower Upper
146	100	
111	61.1	25.3 75.9
148	73.4	31.5 94.5

