

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL040425\
 Data File : VL042222.D
 Acq On : 04 Apr 2025 13:20
 Operator : SY/MD
 Sample : Q1691-01DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA2RDUP

Quant Time: Apr 05 02:02:50 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL032725AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Fri Mar 28 02:00:52 2025
 Response via : Initial Calibration

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

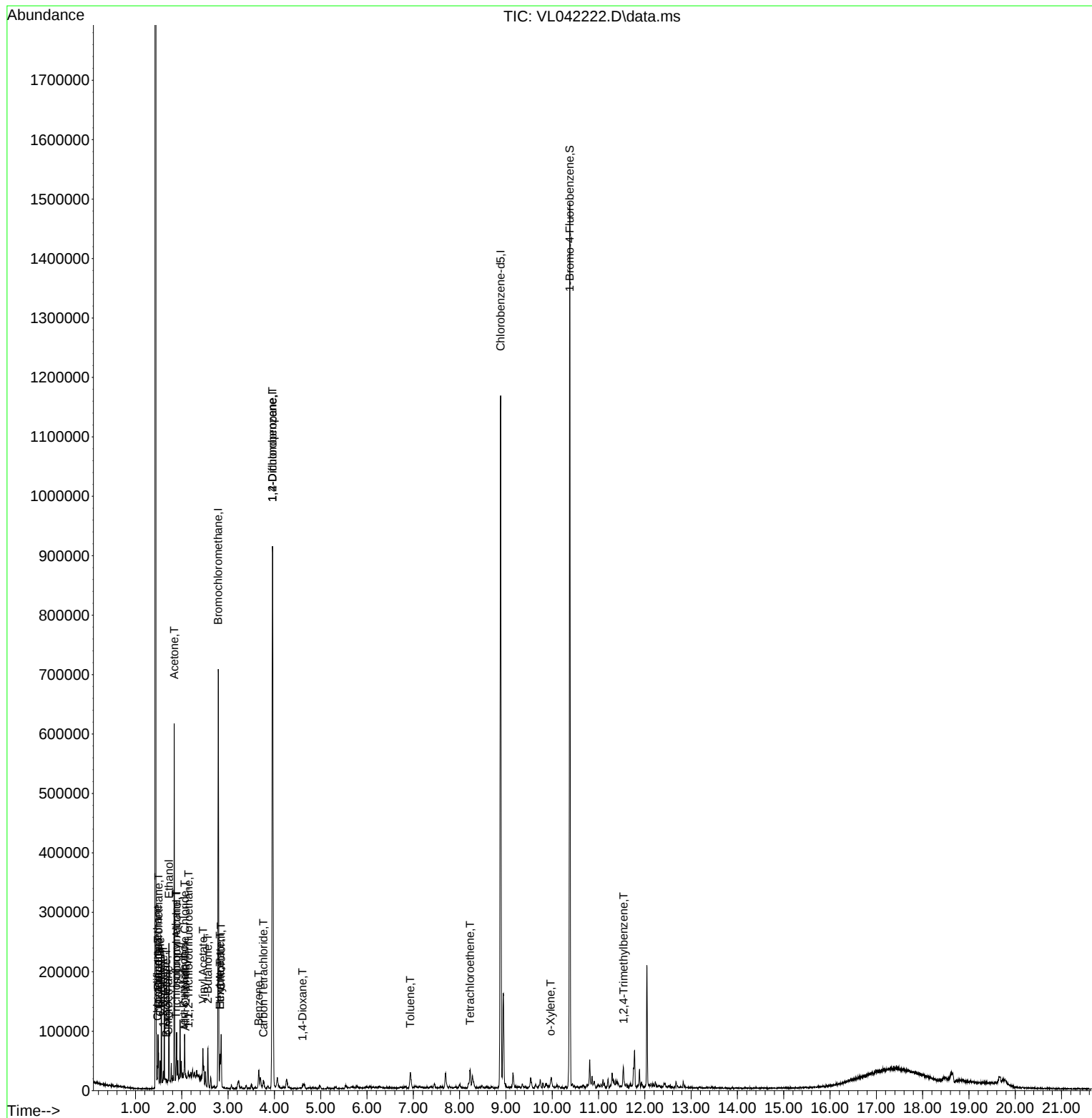
Internal Standards						
1) Bromochloromethane	2.787	49	190677	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	525113	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	459228	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.380	95	373558	9.905	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	11629	0.413	ppbv #	85
3) Chlorodifluoromethane	1.476	51	15734	0.547	ppbv #	86
4) Chloromethane	1.532	50	11024	0.958	ppbv	100
6) Bromomethane	1.664	94	239	0.046	ppbv #	64
7) Chloroethane	1.706	64	382	0.083	ppbv #	84
9) Propene	1.486	41	7874	0.597	ppbv	93
11) Trichlorofluoromethane	1.878	101	6192	0.226	ppbv	99
12) 1,1,2-Trichlorotrifluo...	2.143	101	1394	0.062	ppbv	97
13) Ethanol	1.722	45	80444	64.552	ppbv	80
15) Acetone	1.836	43	258037	9.676	ppbv	95
16) 1,3-Butadiene	1.599	39	2284	0.175	ppbv #	68
17) tert-Butyl alcohol	2.046	59	2627	0.079	ppbv #	57
19) Isopropyl Alcohol	1.888	45	32145	2.136	ppbv #	1
20) Methylene Chloride	2.062	84	10300	1.037	ppbv	91
21) Allyl Chloride	2.079	41	625	0.033	ppbv #	32
23) Vinyl Acetate	2.457	43	37490	3.248	ppbv #	84
25) Ethyl Acetate	2.826	43	10806	0.156	ppbv #	92
26) Hexane	2.826	57	11149	0.417	ppbv #	40
29) Chloroform	2.849	83	32730	0.837	ppbv	98
34) 2-Butanone	2.564	43	41009	1.077	ppbv	96
35) Carbon Tetrachloride	3.765	117	4649	0.113	ppbv	94
36) Benzene	3.661	78	9467	0.182	ppbv	94
39) 1,2-Dichloropropane	3.959	63	136532	7.202	ppbv #	22
40) 1,4-Dioxane	4.606	88	607	0.060	ppbv #	4
52) Tetrachloroethene	8.228	164	3686	0.179	ppbv	94
53) Toluene	6.937	91	16978	0.275	ppbv	100
60) o-Xylene	9.966	91	3973	0.061	ppbv	93
74) 1,2,4-Trimethylbenzene	11.539	105	8662	0.106	ppbv #	72

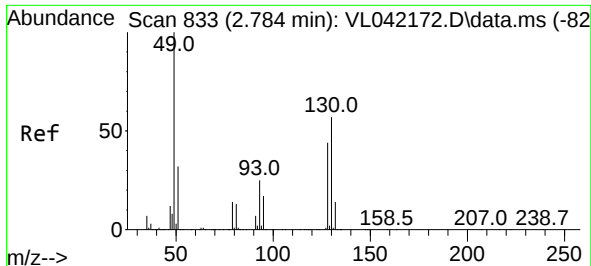
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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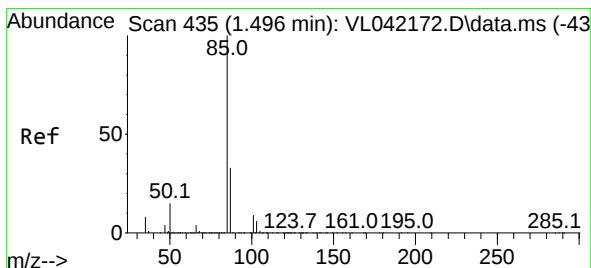
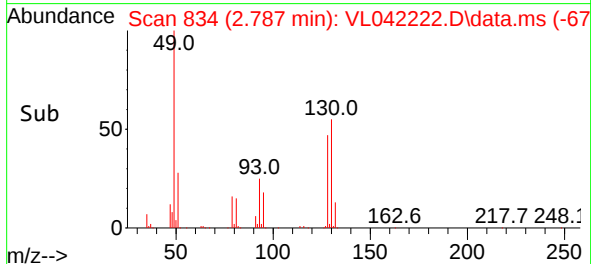
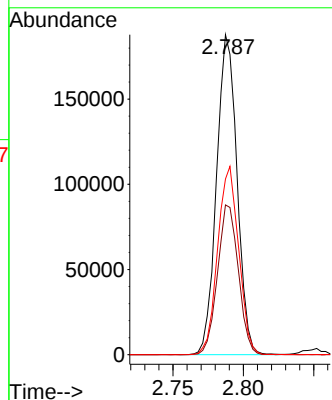
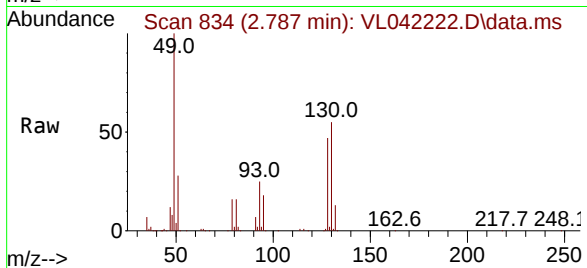




#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 2.787 min Scan# 81
 Delta R.T. 0.003 min
 Lab File: VL042222.D
 Acq: 04 Apr 2025 13:20

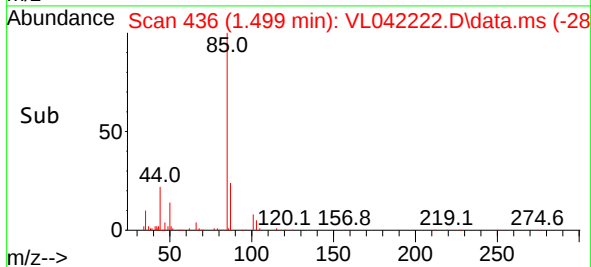
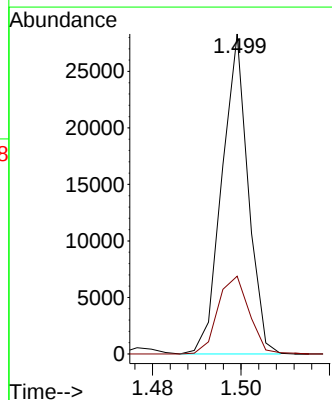
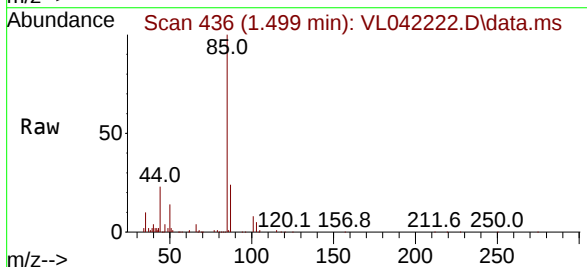
Instrument :
 MSVOA_L
 ClientSampleId :
 IA2RDUP

Tgt Ion: 49 Resp: 190677
 Ion Ratio Lower Upper
 49 100
 128 47.6 22.9 68.5
 130 60.3 28.8 86.4



#2
 Dichlorodifluoromethane
 Concen: 0.413 ppbv
 RT: 1.499 min Scan# 436
 Delta R.T. 0.003 min
 Lab File: VL042222.D
 Acq: 04 Apr 2025 13:20

Tgt Ion: 85 Resp: 11629
 Ion Ratio Lower Upper
 85 100
 87 24.3 26.1 39.1#

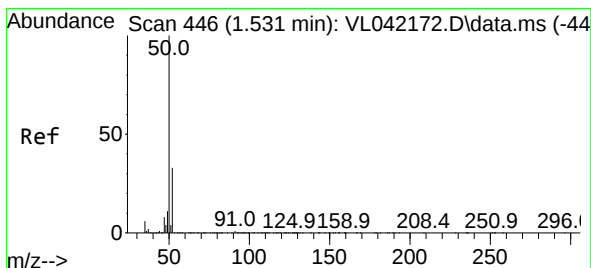
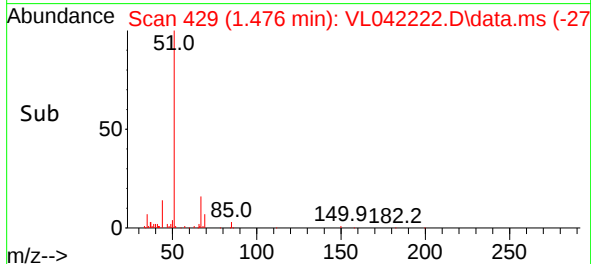
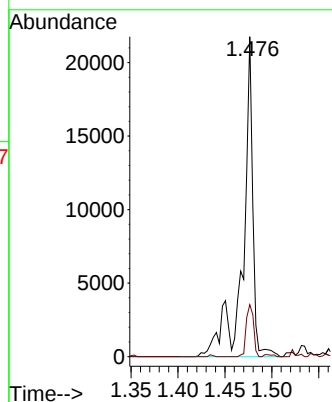
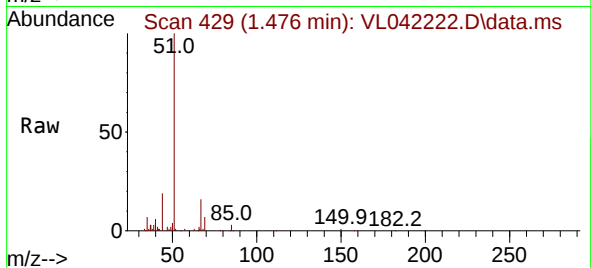




#3
Chlorodifluoromethane
Concen: 0.547 ppbv
RT: 1.476 min Scan# 428
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

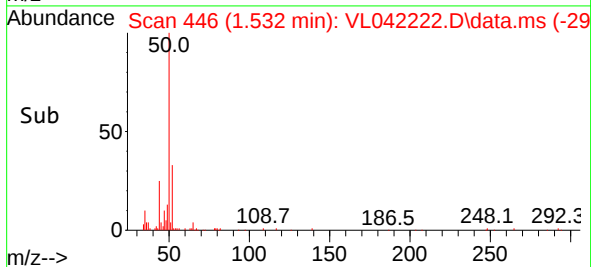
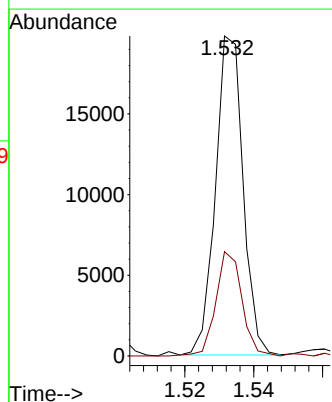
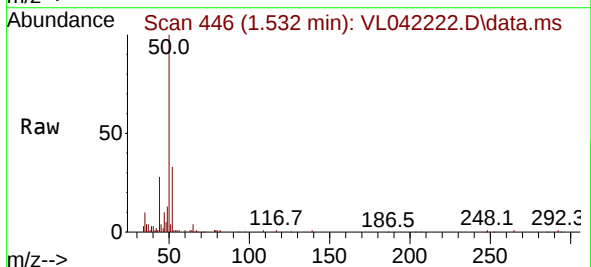
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

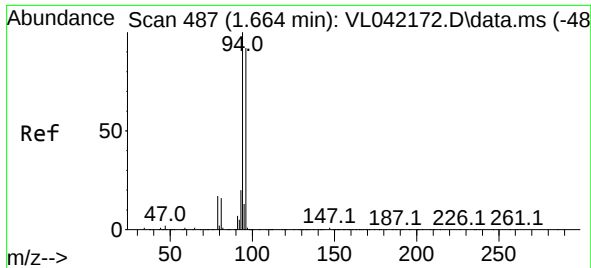
Tgt Ion: 51 Resp: 15734
Ion Ratio Lower Upper
51 100
67 12.7 15.0 22.6#



#4
Chloromethane
Concen: 0.958 ppbv
RT: 1.532 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 50 Resp: 11024
Ion Ratio Lower Upper
50 100
52 32.7 26.1 39.1

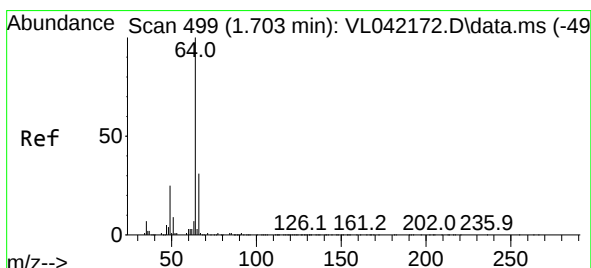
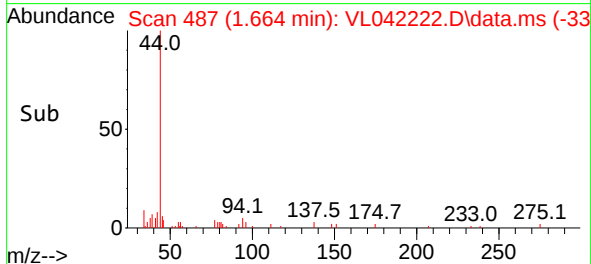
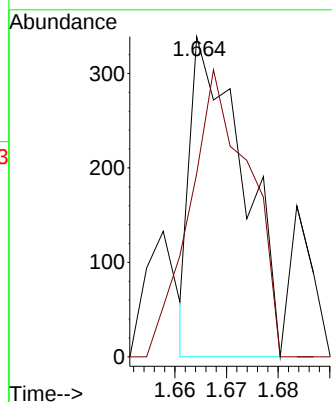
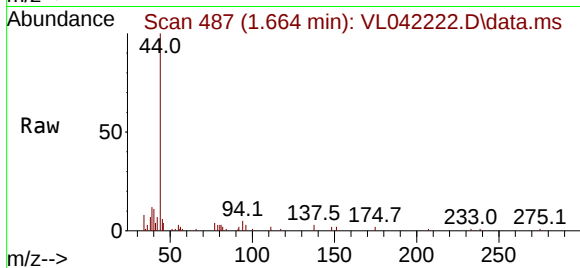




#6
Bromomethane
Concen: 0.046 ppbv
RT: 1.664 min Scan# 41
Delta R.T. 0.000 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

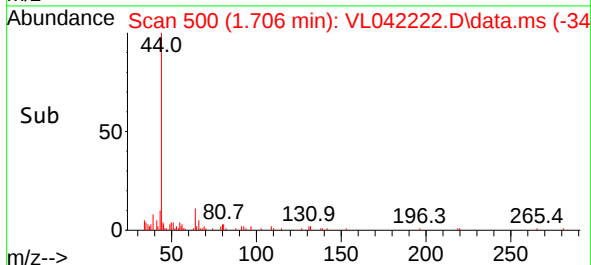
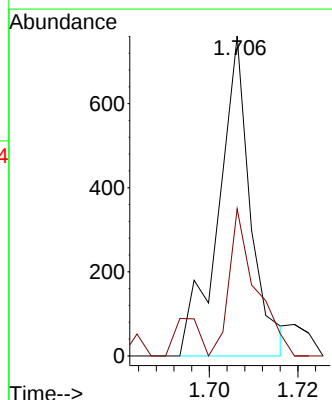
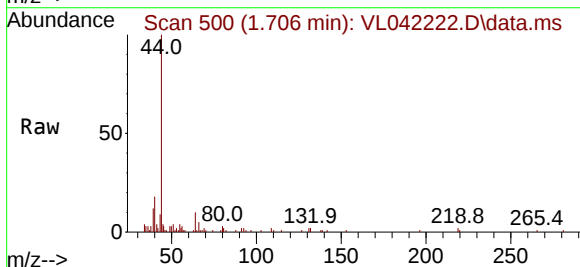
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

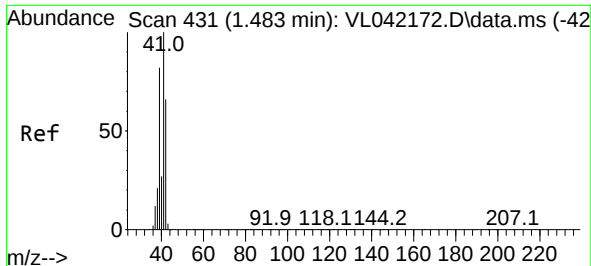
Tgt Ion: 94 Resp: 239
Ion Ratio Lower Upper
94 100
96 57.2 73.1 109.7#



#7
Chloroethane
Concen: 0.083 ppbv
RT: 1.706 min Scan# 500
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 64 Resp: 382
Ion Ratio Lower Upper
64 100
66 40.3 25.2 37.8#





#9

Propene

Concen: 0.597 ppbv

RT: 1.486 min Scan# 41

Delta R.T. 0.003 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

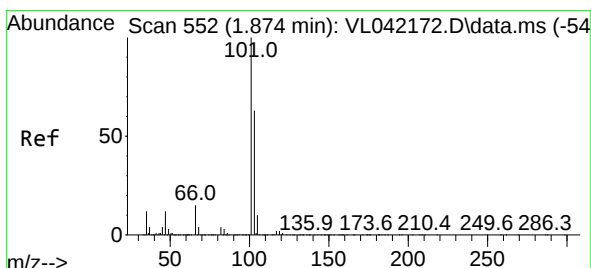
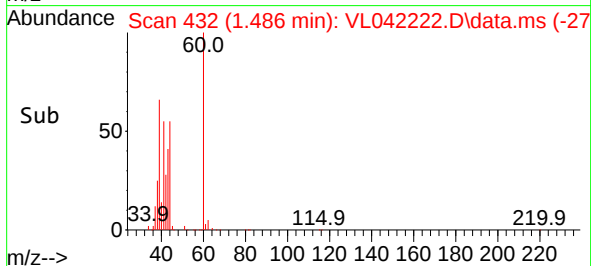
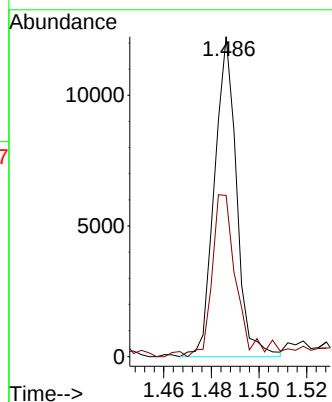
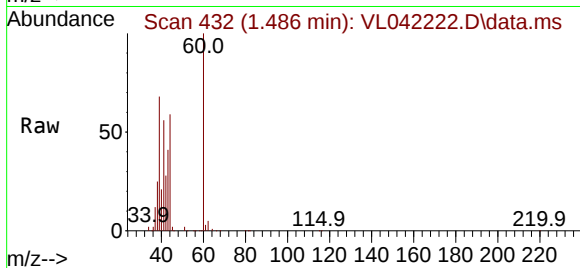
IA2RDUP

Tgt Ion: 41 Resp: 7874

Ion Ratio Lower Upper

41 100

42 63.6 55.4 83.2



#11

Trichlorofluoromethane

Concen: 0.226 ppbv

RT: 1.878 min Scan# 553

Delta R.T. 0.003 min

Lab File: VL042222.D

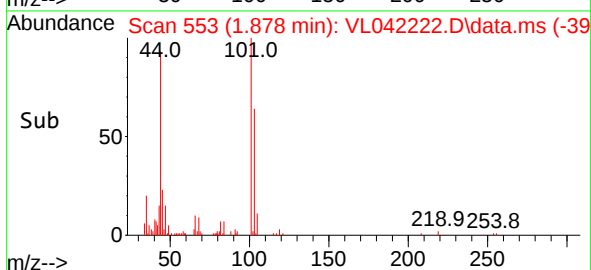
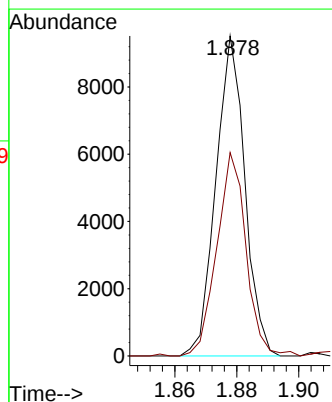
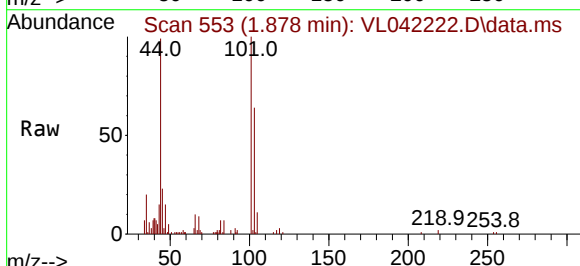
Acq: 04 Apr 2025 13:20

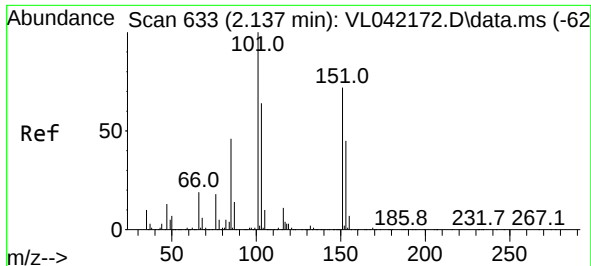
Tgt Ion: 101 Resp: 6192

Ion Ratio Lower Upper

101 100

103 63.5 50.2 75.2

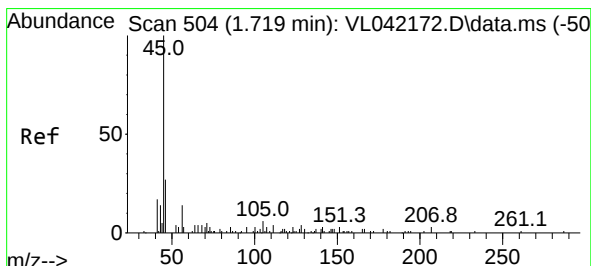
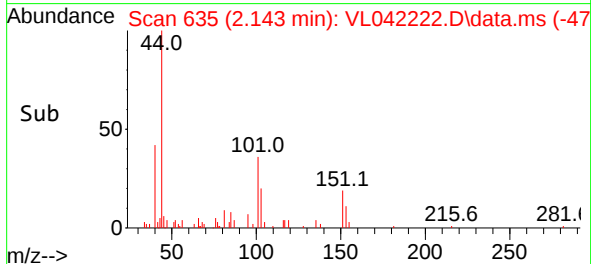
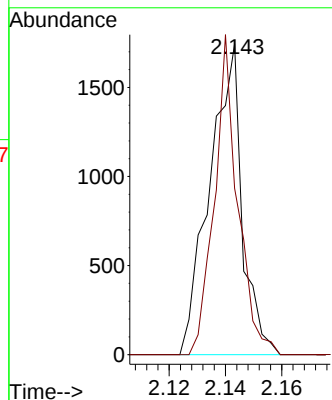
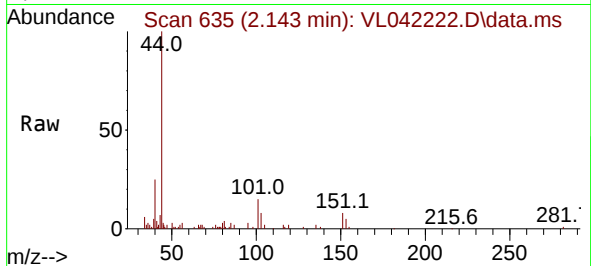




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.062 ppbv
RT: 2.143 min Scan# 61
Delta R.T. 0.007 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

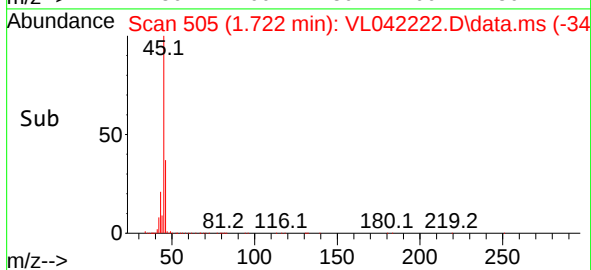
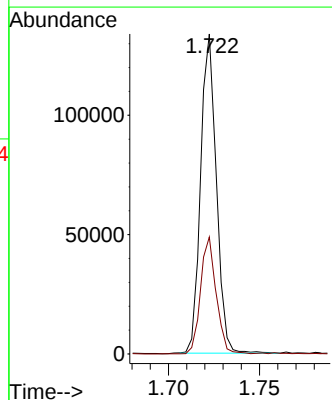
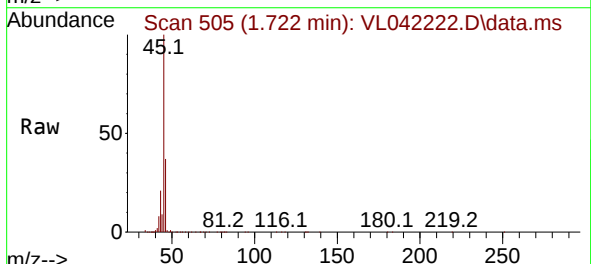
Instrument :
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IA2RDUP

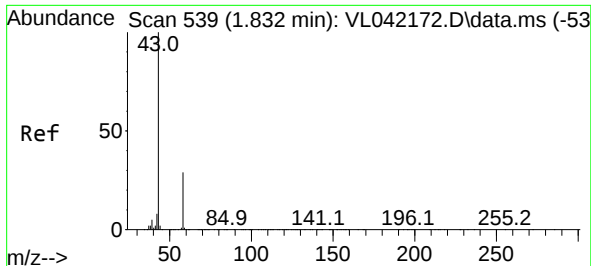
Tgt Ion:101 Resp: 1394
Ion Ratio Lower Upper
101 100
151 73.9 57.1 85.7



#13
Ethanol
Concen: 64.552 ppbv
RT: 1.722 min Scan# 505
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 45 Resp: 80444
Ion Ratio Lower Upper
45 100
46 36.7 20.2 80.8





#15

Acetone

Concen: 9.676 ppbv

RT: 1.836 min Scan# 54

Delta R.T. 0.003 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

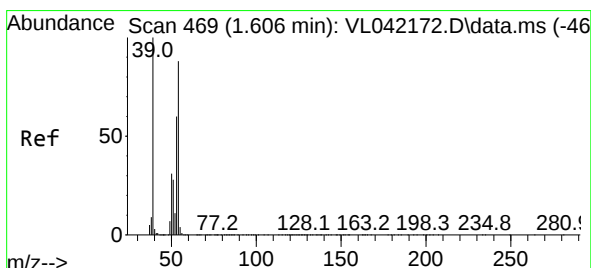
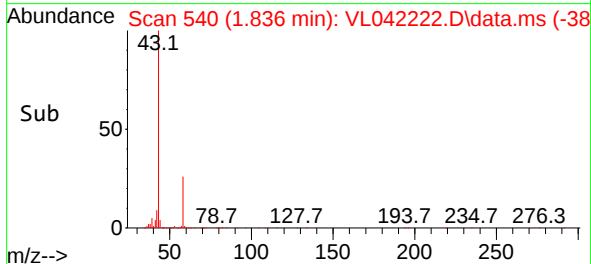
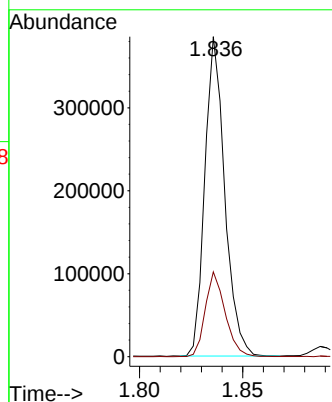
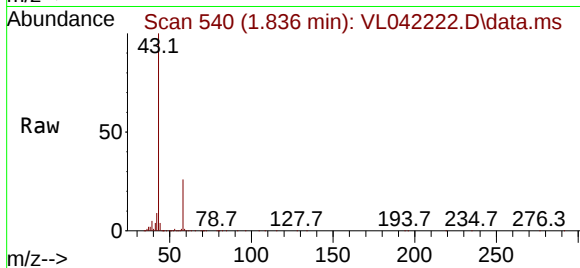
IA2RDUP

Tgt Ion: 43 Resp: 258037

Ion Ratio Lower Upper

43 100

58 26.5 23.2 34.8



#16

1,3-Butadiene

Concen: 0.175 ppbv

RT: 1.599 min Scan# 467

Delta R.T. -0.006 min

Lab File: VL042222.D

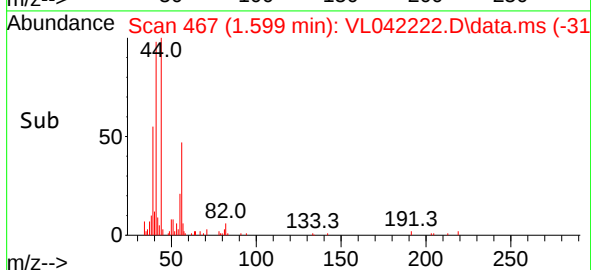
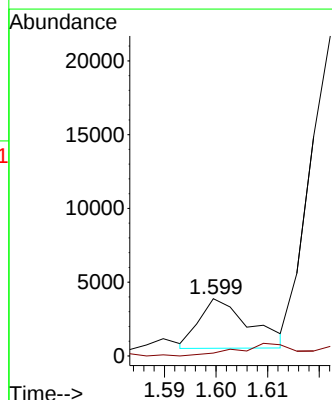
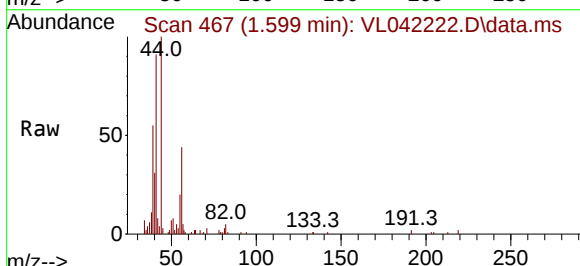
Acq: 04 Apr 2025 13:20

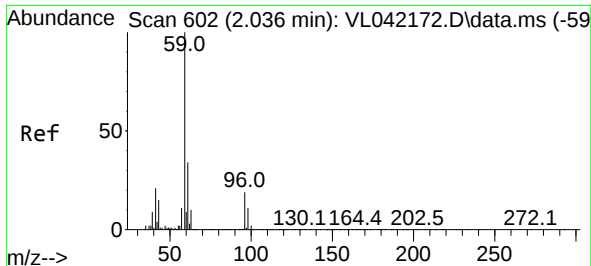
Tgt Ion: 39 Resp: 2284

Ion Ratio Lower Upper

39 100

54 48.6 60.7 91.1#

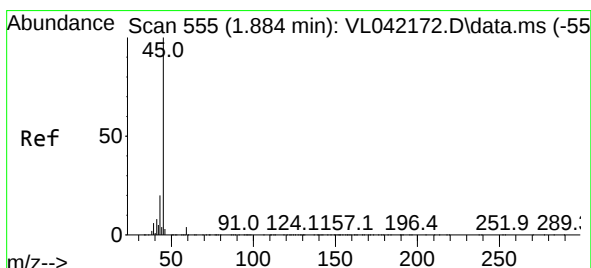
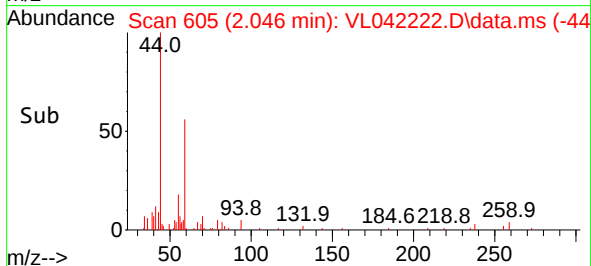
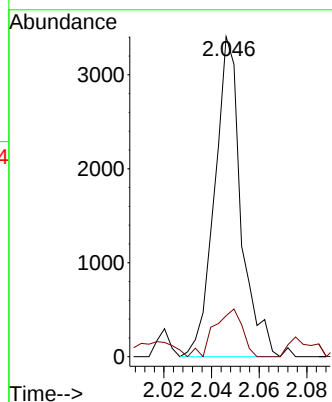
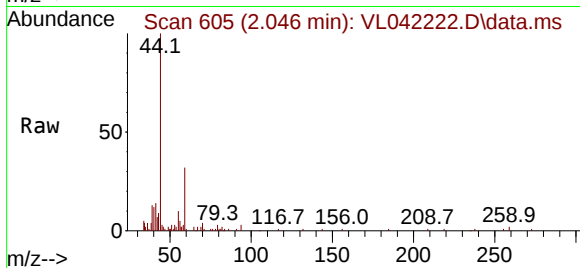




#17
tert-Butyl alcohol
Concen: 0.079 ppbv
RT: 2.046 min Scan# 602
Delta R.T. 0.010 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

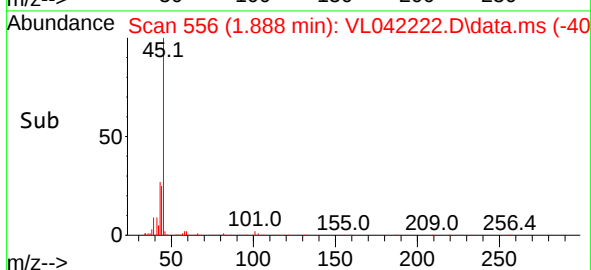
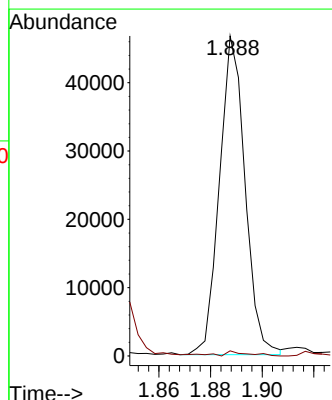
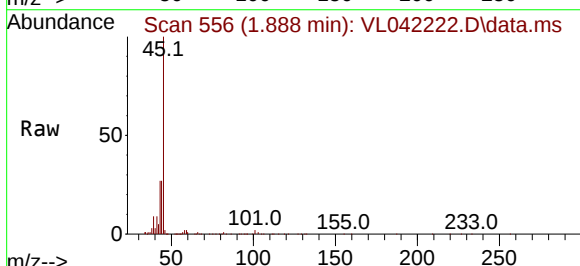
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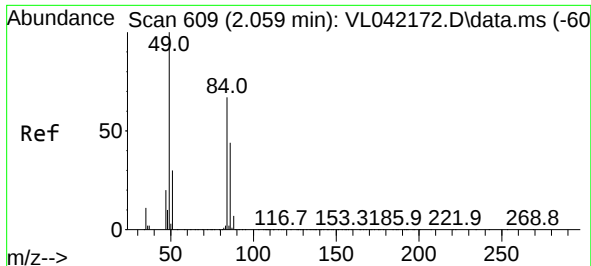
Tgt Ion: 59 Resp: 2627
Ion Ratio Lower Upper
59 100
57 27.6 8.9 13.3#



#19
Isopropyl Alcohol
Concen: 2.136 ppbv
RT: 1.888 min Scan# 556
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 45 Resp: 32145
Ion Ratio Lower Upper
45 100
58 212.8 36.9 55.3#





#20

Methylene Chloride

Concen: 1.037 ppbv

RT: 2.062 min Scan# 610

Delta R.T. 0.003 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

IA2RDUP

Tgt Ion: 84 Resp: 10300

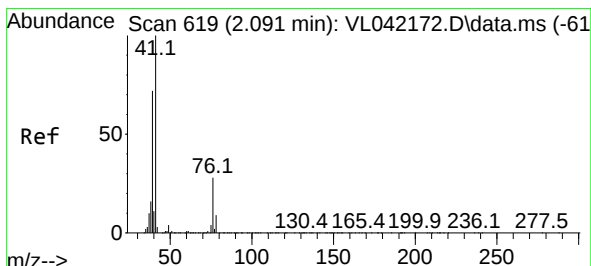
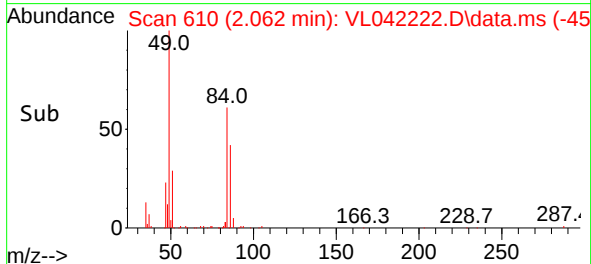
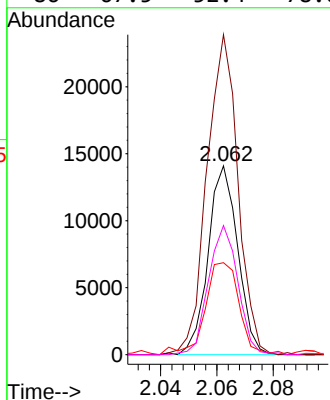
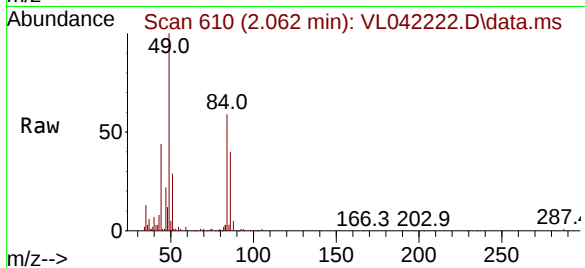
Ion Ratio Lower Upper

84 100

49 168.2 120.2 180.4

51 48.0 37.4 56.0

86 67.5 52.4 78.6



#21

Allyl Chloride

Concen: 0.033 ppbv

RT: 2.079 min Scan# 615

Delta R.T. -0.013 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

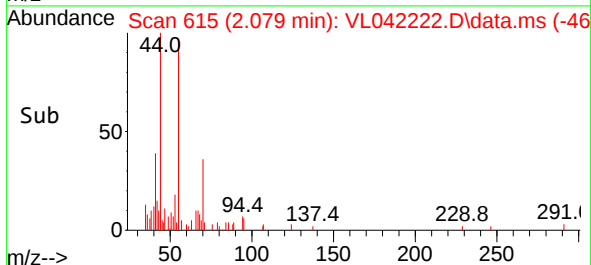
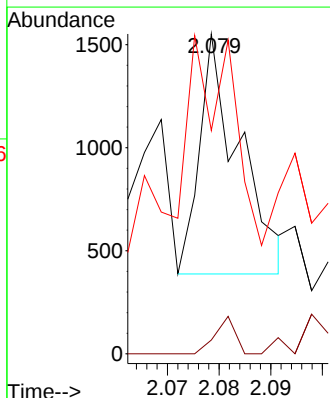
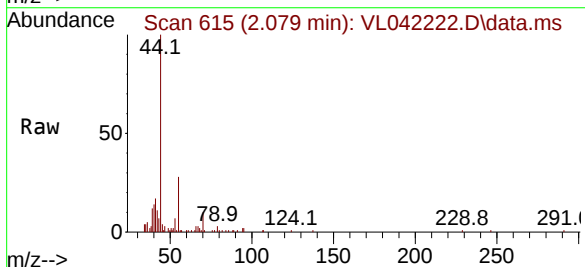
Tgt Ion: 41 Resp: 625

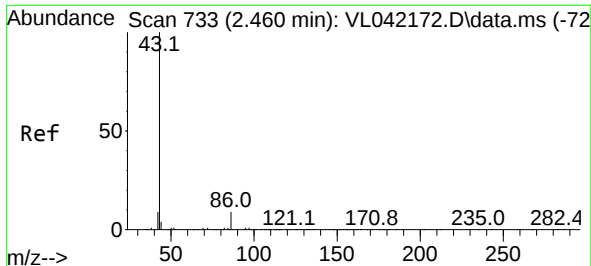
Ion Ratio Lower Upper

41 100

76 22.4 24.1 36.1#

39 0.0 61.1 91.7#

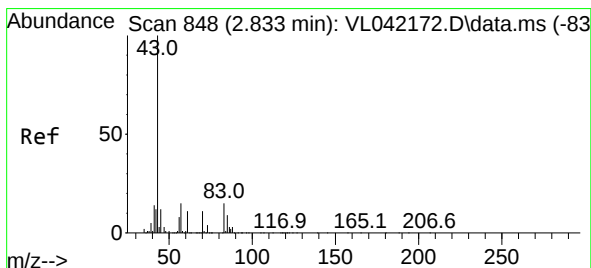
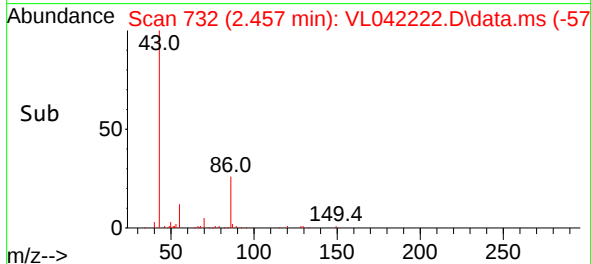
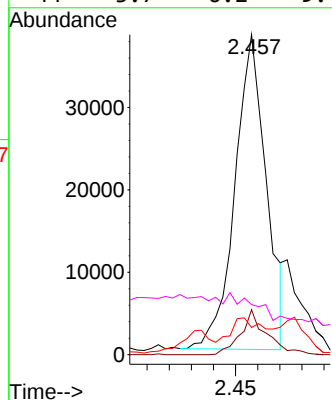
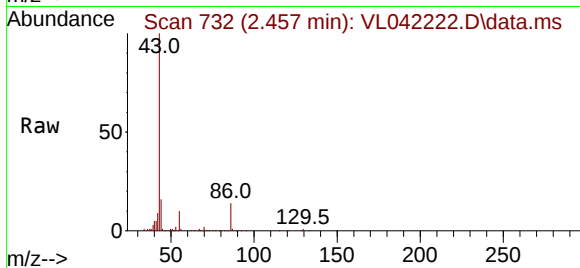




#23
 Vinyl Acetate
 Concen: 3.248 ppbv
 RT: 2.457 min Scan# 71
 Delta R.T. -0.003 min
 Lab File: VL042222.D
 Acq: 04 Apr 2025 13:20

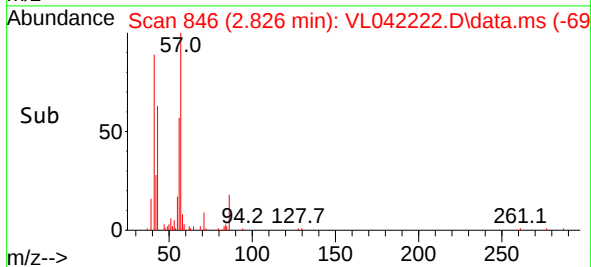
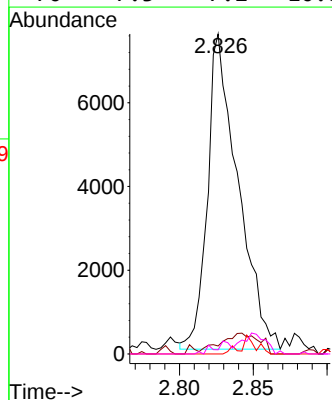
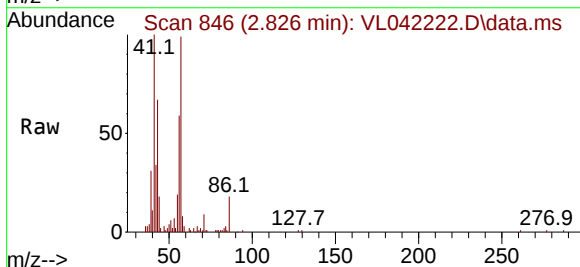
Instrument :
 MSVOA_1
 ClientSampleId :
 IA2RDUP

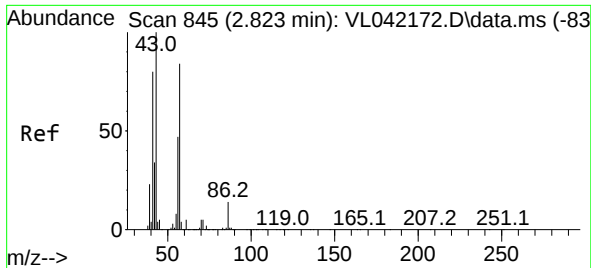
Tgt Ion: 43	Resp: 37490
Ion Ratio	Lower Upper
43 100	
86 14.4	5.5 8.3#
42 5.0	8.6 13.0#
44 3.7	6.2 9.4#



#25
 Ethyl Acetate
 Concen: 0.156 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.006 min
 Lab File: VL042222.D
 Acq: 04 Apr 2025 13:20

Tgt Ion: 43	Resp: 10806
Ion Ratio	Lower Upper
43 100	
45 9.0	8.2 12.2
61 2.8	7.3 10.9#
70 7.3	7.2 10.8

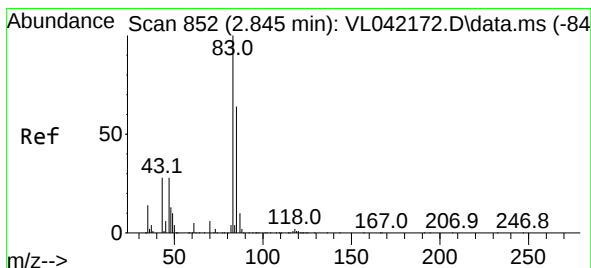
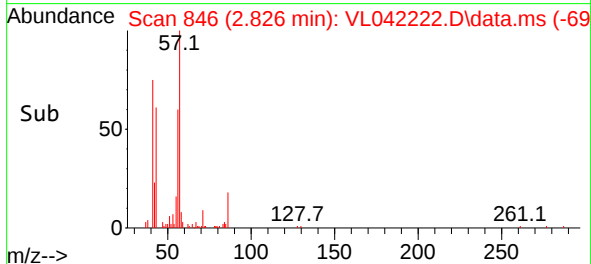
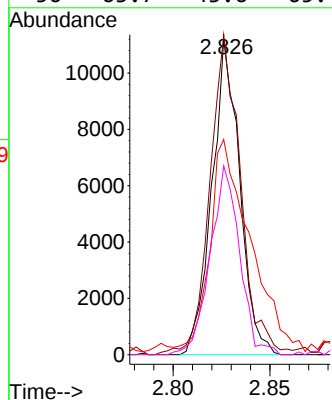
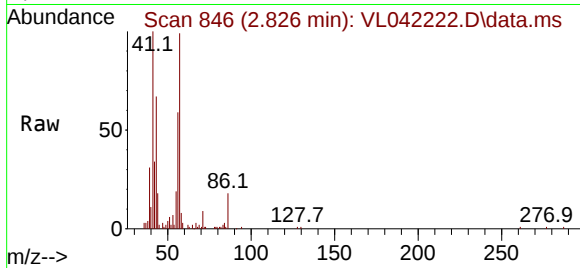




#26
Hexane
Concen: 0.417 ppbv
RT: 2.826 min Scan# 84
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

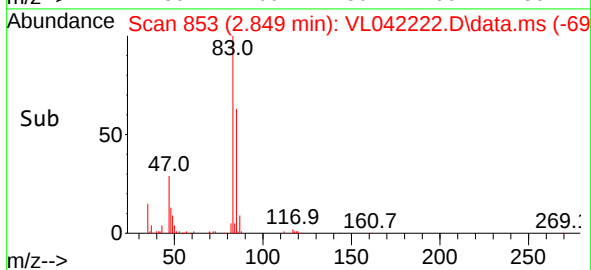
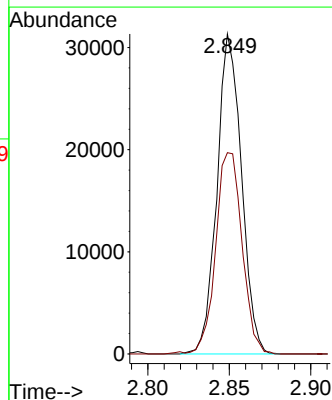
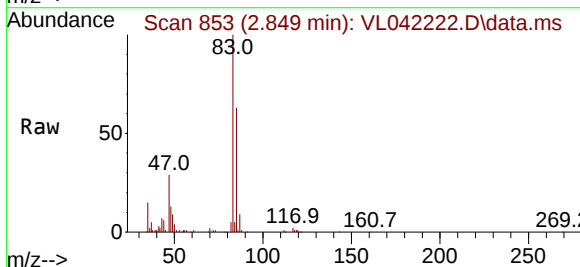
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

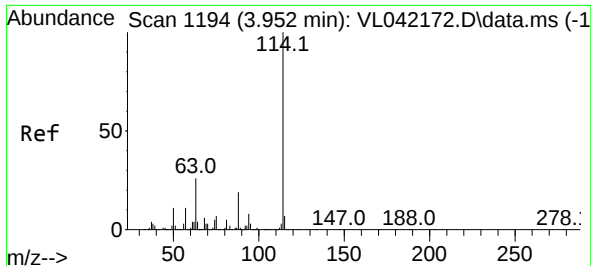
Tgt Ion: 57 Resp: 11149
Ion Ratio Lower Upper
57 100
41 113.3 76.6 114.8
43 107.2 207.8 311.8#
56 63.7 43.6 65.4



#29
Chloroform
Concen: 0.837 ppbv
RT: 2.849 min Scan# 853
Delta R.T. 0.003 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 83 Resp: 32730
Ion Ratio Lower Upper
83 100
85 62.9 51.4 77.2





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. 0.007 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

IA2RDUP

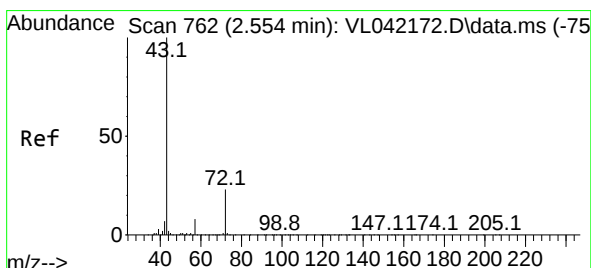
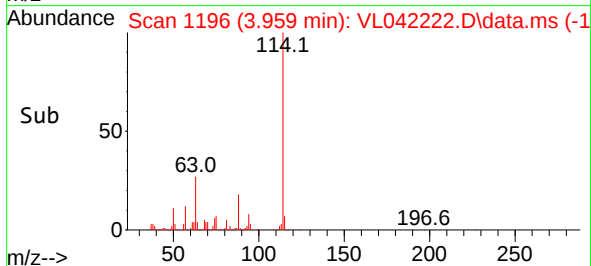
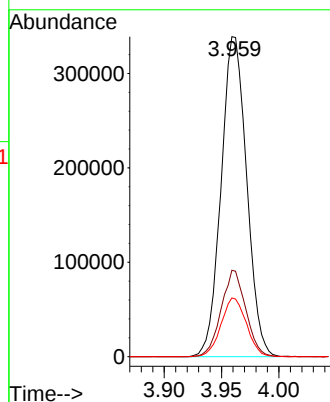
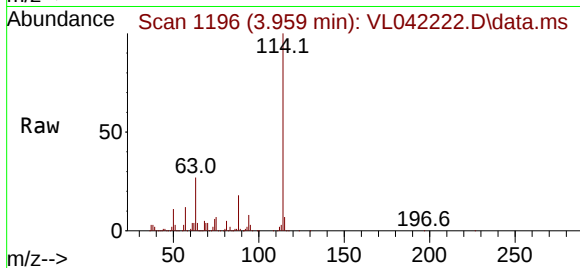
Tgt Ion:114 Resp: 525113

Ion Ratio Lower Upper

114 100

63 26.0 20.7 31.1

88 18.2 15.0 22.4



#34

2-Butanone

Concen: 1.077 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.010 min

Lab File: VL042222.D

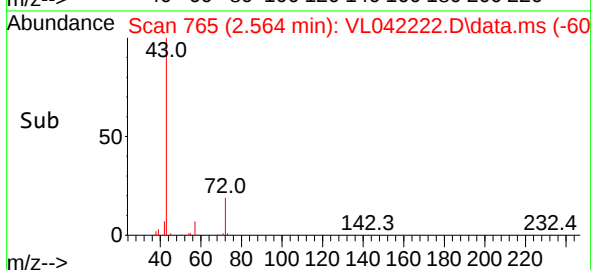
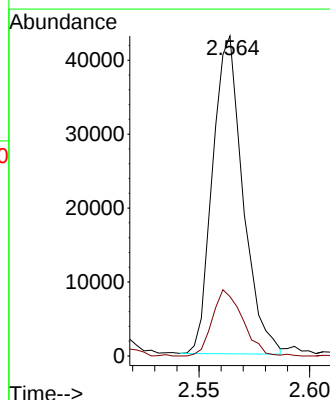
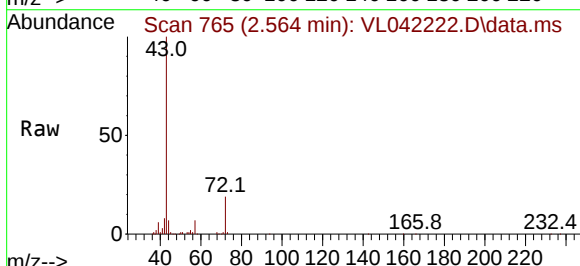
Acq: 04 Apr 2025 13:20

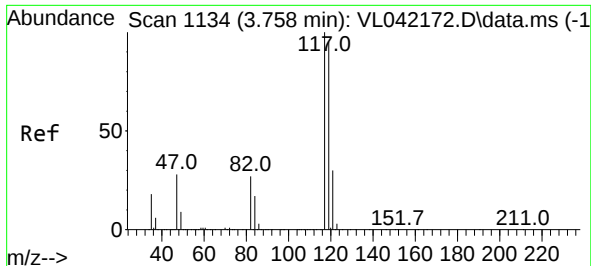
Tgt Ion: 43 Resp: 41009

Ion Ratio Lower Upper

43 100

72 21.0 18.2 27.2

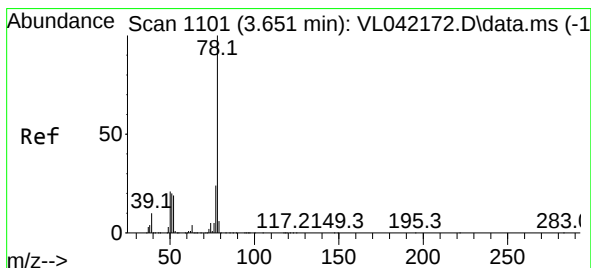
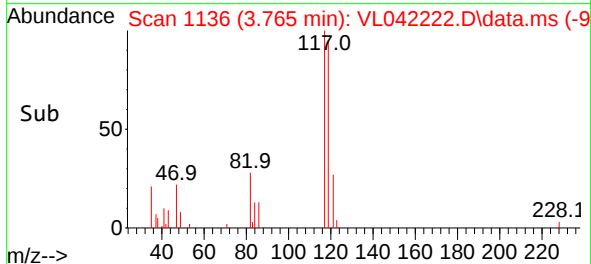
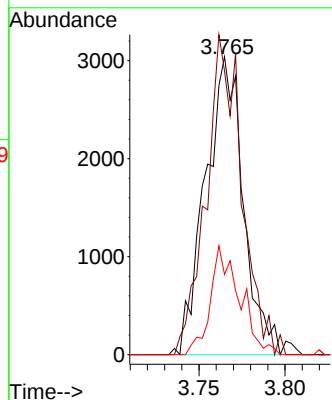
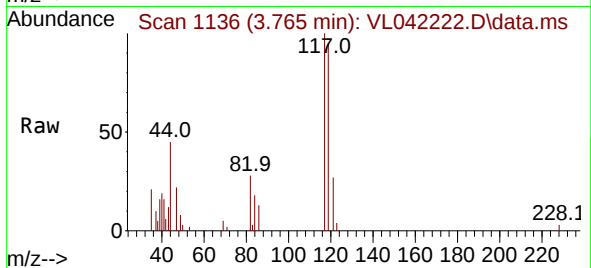




#35
Carbon Tetrachloride
Concen: 0.113 ppbv
RT: 3.765 min Scan# 1136
Delta R.T. 0.007 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

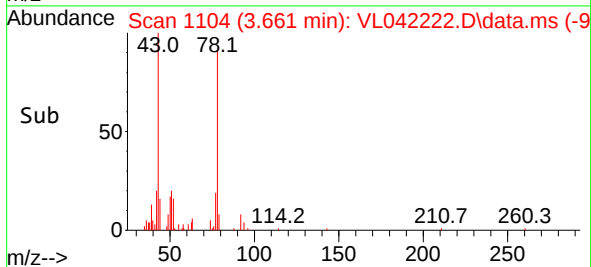
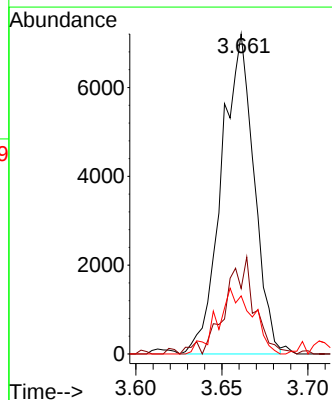
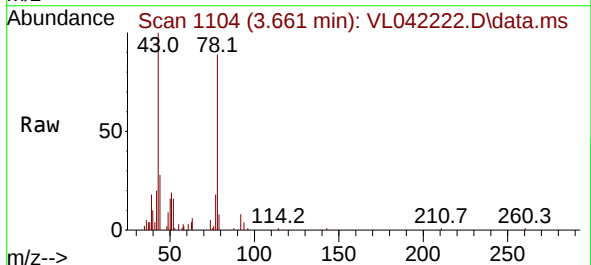
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

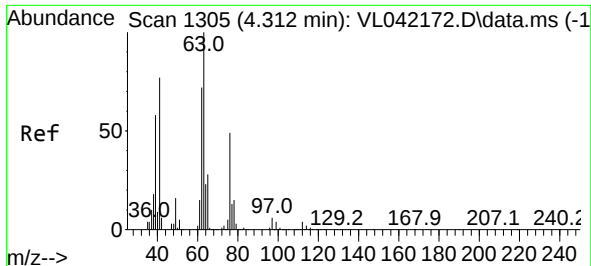
Tgt Ion:117 Resp: 4649
Ion Ratio Lower Upper
117 100
119 89.3 76.2 114.2
121 26.9 24.2 36.4



#36
Benzene
Concen: 0.182 ppbv
RT: 3.661 min Scan# 1104
Delta R.T. 0.010 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 78 Resp: 9467
Ion Ratio Lower Upper
78 100
77 20.5 19.1 28.7
50 18.1 16.6 24.8





#39

1,2-Dichloropropane

Concen: 7.202 ppbv

RT: 3.959 min Scan# 1196

Delta R.T. -0.353 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

IA2RDUP

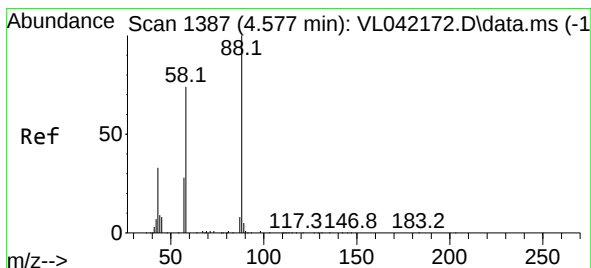
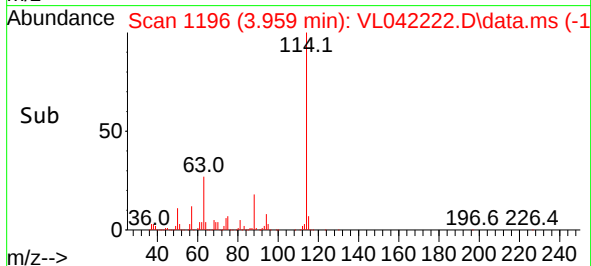
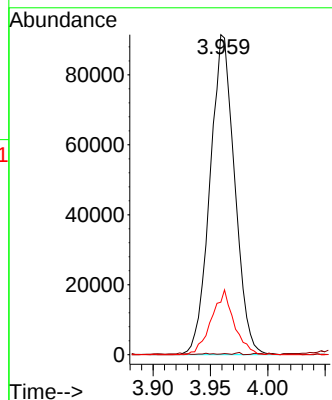
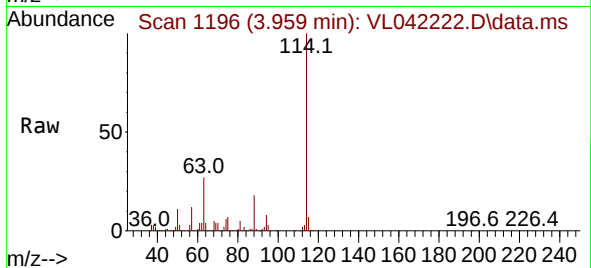
Tgt Ion: 63 Resp: 136532

Ion Ratio Lower Upper

63 100

41 0.2 61.7 92.5#

62 16.4 57.6 86.4#



#40

1,4-Dioxane

Concen: 0.060 ppbv

RT: 4.606 min Scan# 1396

Delta R.T. 0.029 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Tgt Ion: 88 Resp: 607

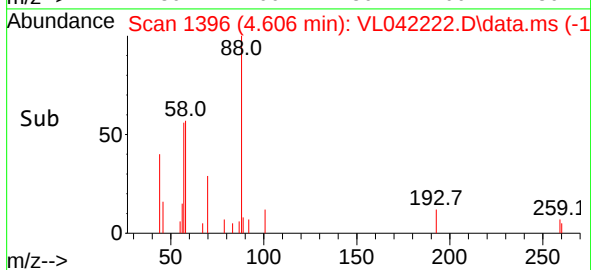
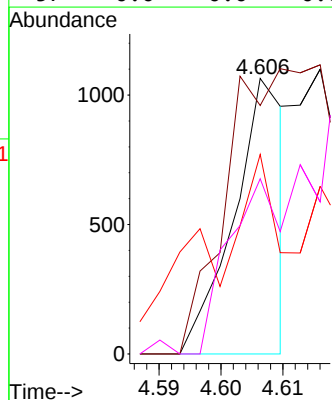
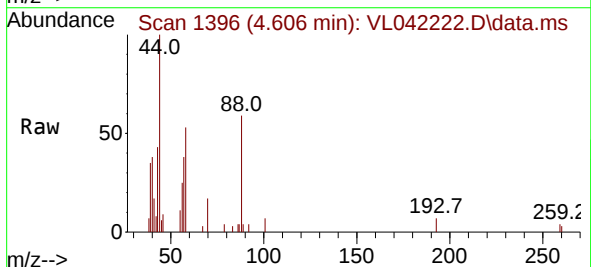
Ion Ratio Lower Upper

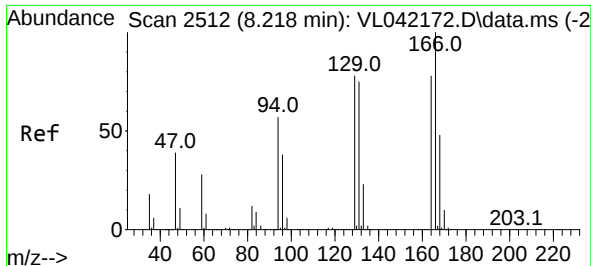
88 100

58 0.0 62.7 94.1#

43 88.8 23.0 34.4#

57 0.0 0.0 0.0

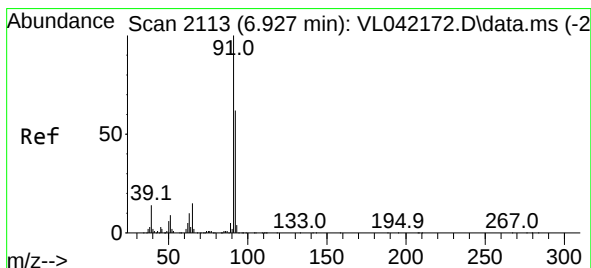
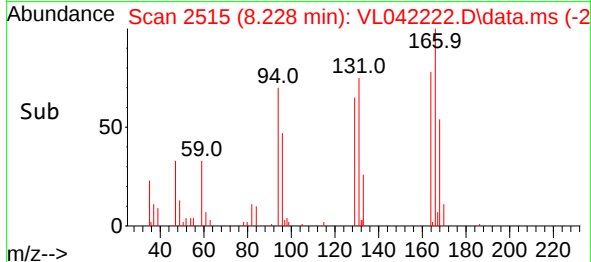
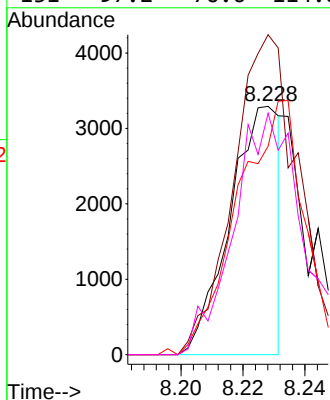
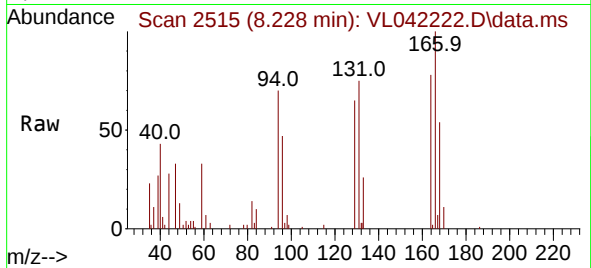




#52
Tetrachloroethene
Concen: 0.179 ppbv
RT: 8.228 min Scan# 2116
Delta R.T. 0.010 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

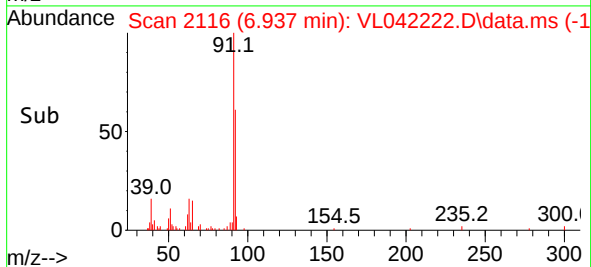
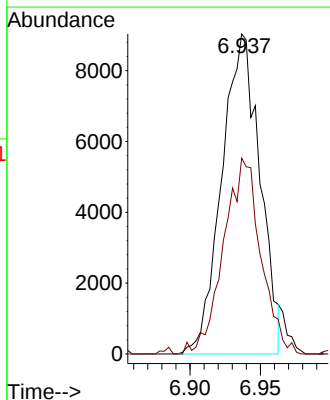
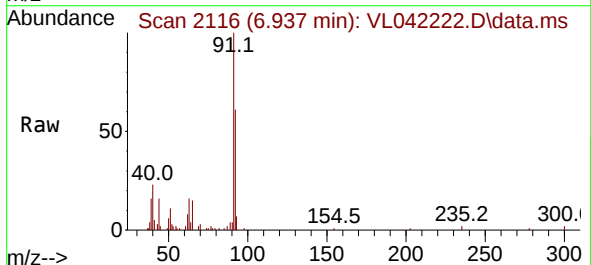
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

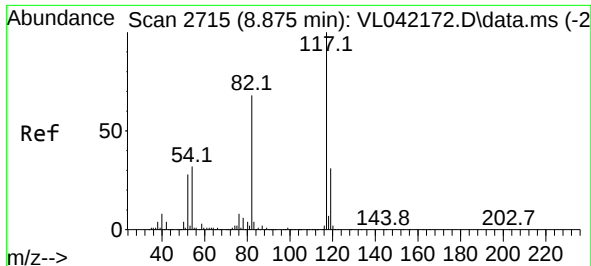
Tgt Ion:164 Resp: 3686
Ion Ratio Lower Upper
164 100
166 128.8 102.5 153.7
129 84.0 79.8 119.8
131 97.2 76.6 114.8



#53
Toluene
Concen: 0.275 ppbv
RT: 6.937 min Scan# 2116
Delta R.T. 0.010 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 91 Resp: 16978
Ion Ratio Lower Upper
91 100
92 60.2 48.4 72.6

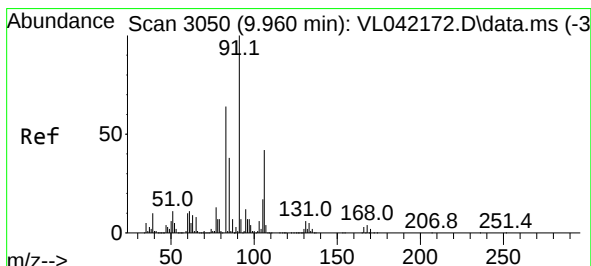
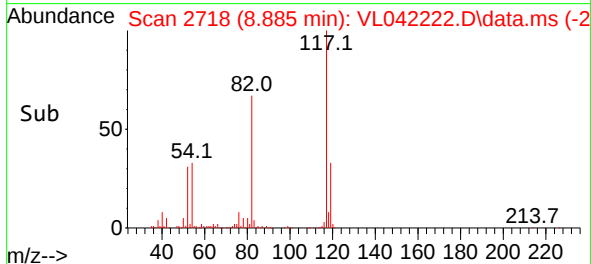
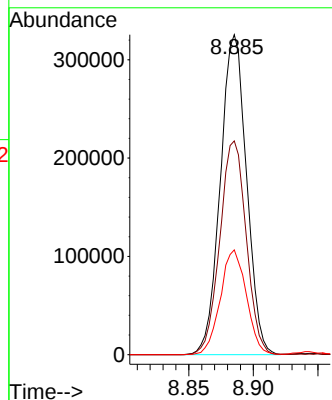
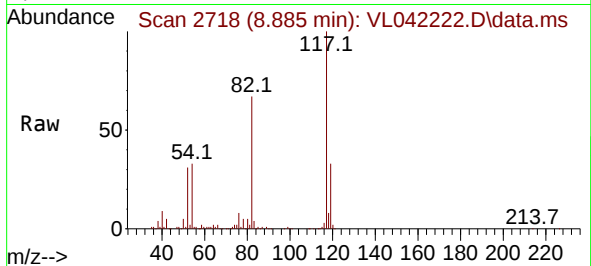




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 21
Delta R.T. 0.010 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

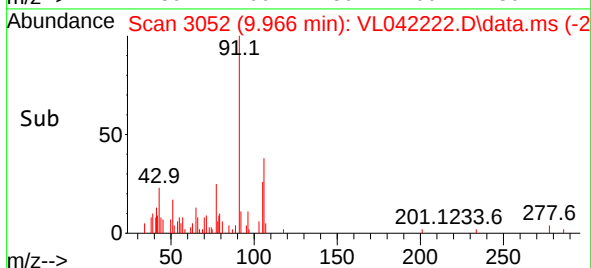
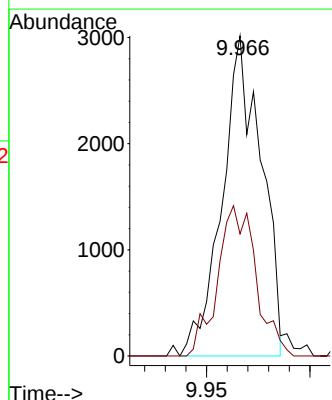
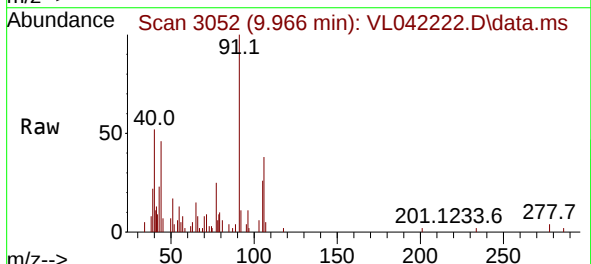
Instrument :
MSVOA_L
ClientSampleId :
IA2RDUP

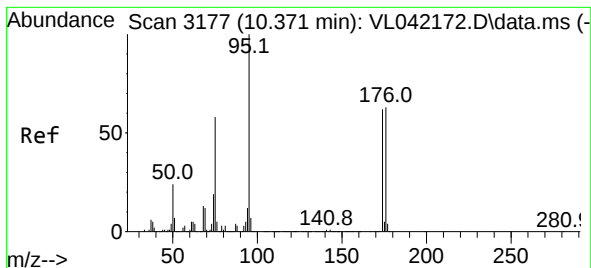
Tgt Ion:117 Resp: 459228
Ion Ratio Lower Upper
117 100
82 67.2 55.8 83.6
119 32.6 25.5 38.3



#60
o-Xylene
Concen: 0.061 ppbv
RT: 9.966 min Scan# 3052
Delta R.T. 0.007 min
Lab File: VL042222.D
Acq: 04 Apr 2025 13:20

Tgt Ion: 91 Resp: 3973
Ion Ratio Lower Upper
91 100
106 46.1 20.8 62.5





#68

1-Bromo-4-Fluorobenzene

Concen: 9.905 ppbv

RT: 10.380 min Scan# 3177

Delta R.T. 0.010 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Instrument :

MSVOA_L

ClientSampleId :

IA2RDUP

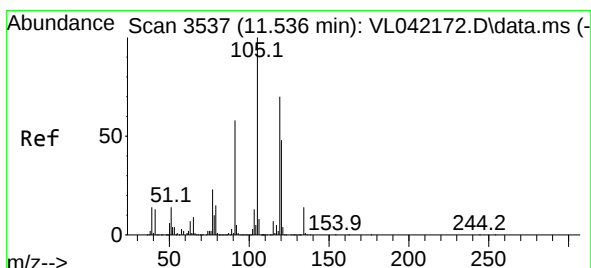
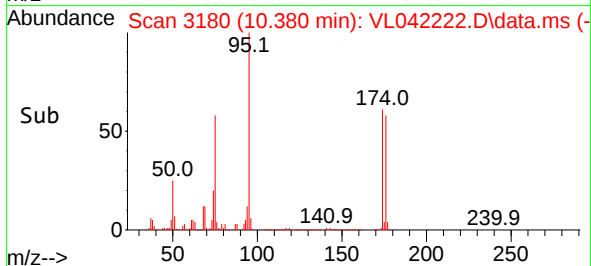
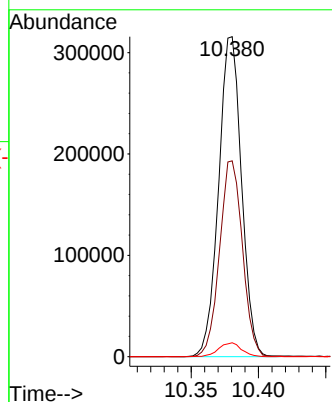
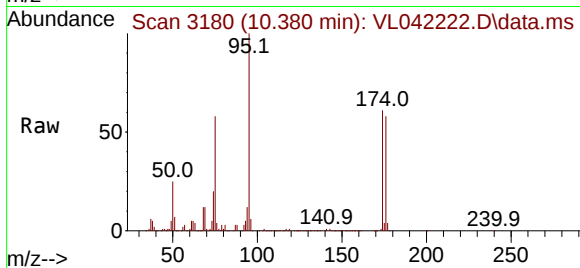
Tgt Ion: 95 Resp: 373558

Ion Ratio Lower Upper

95 100

174 61.2 50.6 76.0

175 4.4 3.8 5.6



#74

1,2,4-Trimethylbenzene

Concen: 0.106 ppbv

RT: 11.539 min Scan# 3538

Delta R.T. 0.003 min

Lab File: VL042222.D

Acq: 04 Apr 2025 13:20

Tgt Ion: 105 Resp: 8662

Ion Ratio Lower Upper

105 100

120 47.5 38.6 58.0

91 15.5 46.2 69.2#

77 17.3 18.6 27.8#

