

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL041125\
 Data File : VL042319.D
 Acq On : 11 Apr 2025 14:27
 Operator : SY/MD
 Sample : Q1665-10
 Misc : 400mL/MSVOA_L
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B10-4-3242025

Quant Time: Apr 11 23:00:29 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

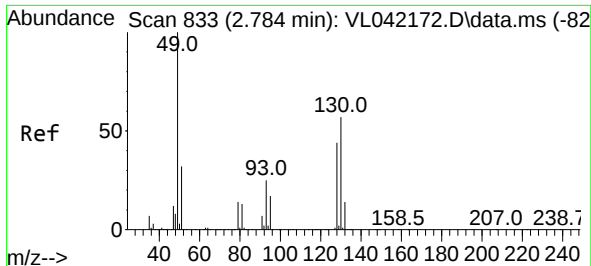
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	190778	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.962	114	461210	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.885	117	383940	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	301822	9.573	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	10940	0.388	ppbv	100
3) Chlorodifluoromethane	1.476	51	18717	0.650	ppbv #	84
4) Chloromethane	1.531	50	6976	0.606	ppbv	98
9) Propene	1.561	41	78643	5.962	ppbv	90
10) Heptane	4.985	43	2838	0.081	ppbv	98
11) Trichlorofluoromethane	1.878	101	5102	0.186	ppbv	87
12) 1,1,2-Trichlorotrifluo...	2.140	101	1629	0.072	ppbv	98
13) Ethanol	1.722	45	1088476	872.986	ppbv	86
15) Acetone	1.836	43	2047600	76.743	ppbv #	79
16) 1,3-Butadiene	1.561	39	34457	2.644	ppbv #	13
17) tert-Butyl alcohol	2.046	59	6995	0.210	ppbv #	37
19) Isopropyl Alcohol	1.891	45	3151010	209.311	ppbv #	32
20) Methylene Chloride	2.062	84	5890	0.593	ppbv	86
21) Allyl Chloride	1.962	41	8745	0.465	ppbv #	21
23) Vinyl Acetate	2.564	43	5516146	477.676	ppbv #	72
25) Ethyl Acetate	2.829	43	65016	0.939	ppbv #	89
26) Hexane	2.826	57	60038	2.245	ppbv #	4
28) Methyl tert-Butyl Ether	2.564	73	206262	12.386	ppbv #	1
29) Chloroform	2.849	83	22740	0.581	ppbv	100
34) 2-Butanone	2.564	43	5516146	164.939	ppbv #	36
36) Benzene	3.655	78	21386	0.468	ppbv #	93
39) 1,2-Dichloropropane	3.962	63	118114	7.093	ppbv #	24
41) Tetrahydrofuran	2.826	42	29308	1.522	ppbv #	49
53) Toluene	6.946	91	6234	0.115	ppbv #	20
58) Ethyl Benzene	9.354	91	3931	0.058	ppbv	95
60) o-Xylene	9.966	91	4483	0.082	ppbv	93
66) Benzyl Chloride	11.546	91	609	0.076	ppbv #	69
69) p-Isopropyltoluene	11.927	119	3908	0.043	ppbv #	87
73) 1,3,5-Trimethylbenzene	11.206	105	2285	0.038	ppbv	89
74) 1,2,4-Trimethylbenzene	11.539	105	7147	0.105	ppbv #	67
79) Naphthalene	13.517	128	5078	0.068	ppbv #	94
81) 1,2,4-Trichlorobenzene	13.400	180	82529	2.392	ppbv #	19

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

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QLast Update : Fri Mar 28 02:00:52 2025
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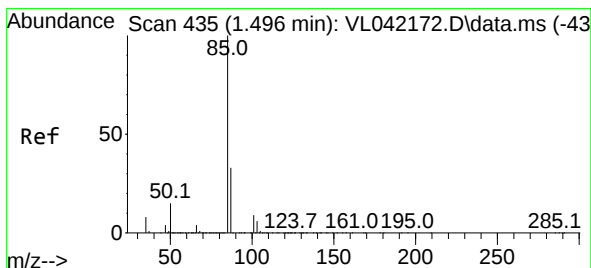
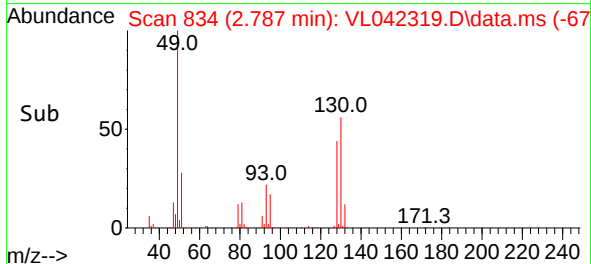
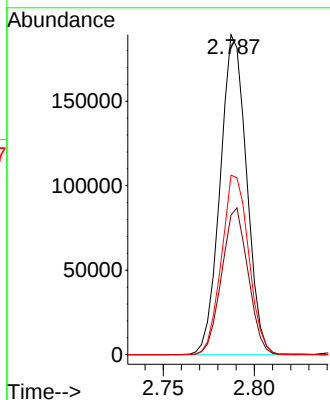
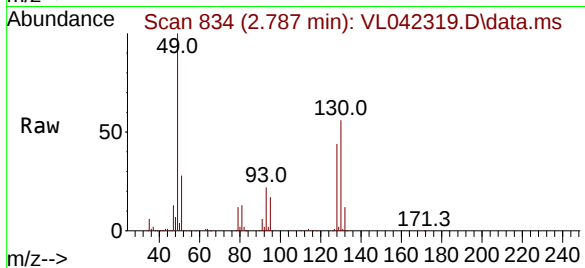




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

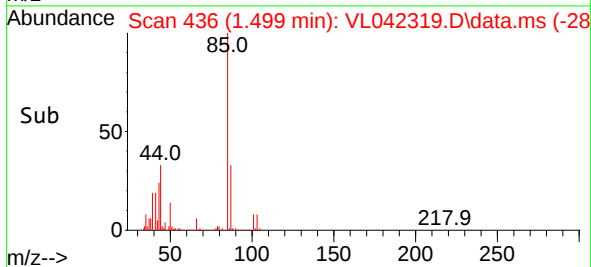
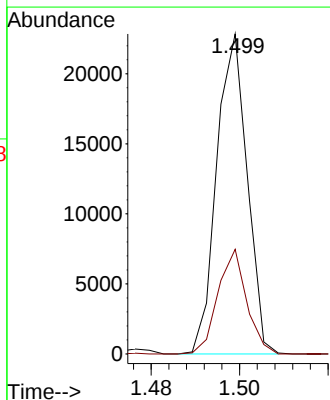
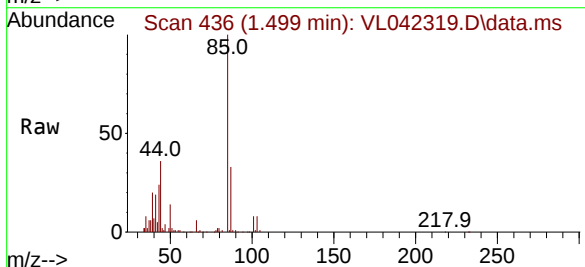
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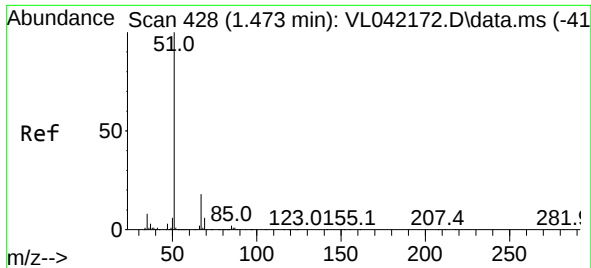
Tgt Ion: 49 Resp: 190778
Ion Ratio Lower Upper
49 100
128 45.7 22.9 68.5
130 57.8 28.8 86.4



#2
Dichlorodifluoromethane
Concen: 0.388 ppbv
RT: 1.499 min Scan# 436
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 85 Resp: 10940
Ion Ratio Lower Upper
85 100
87 32.7 26.1 39.1

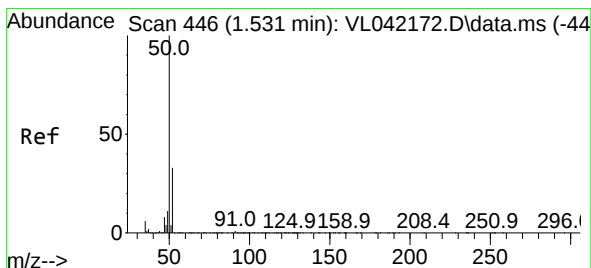
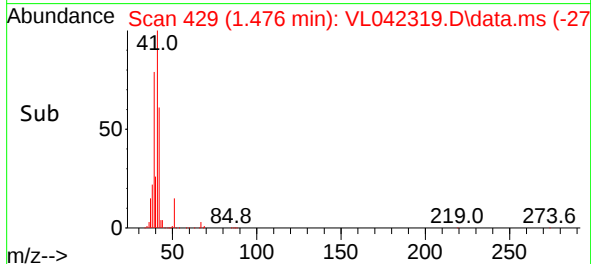
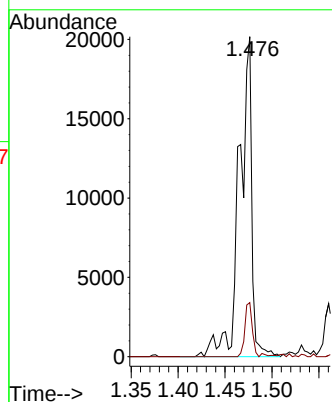
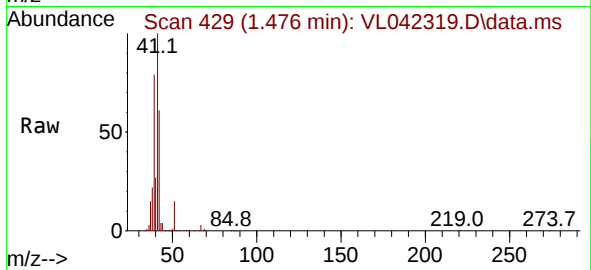




#3
Chlorodifluoromethane
Concen: 0.650 ppbv
RT: 1.476 min Scan# 41
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

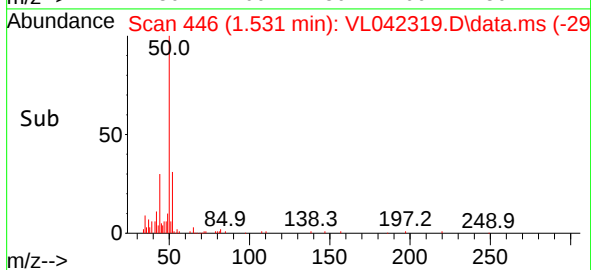
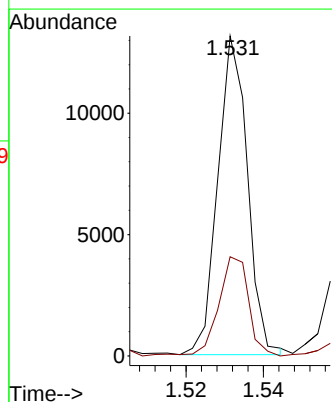
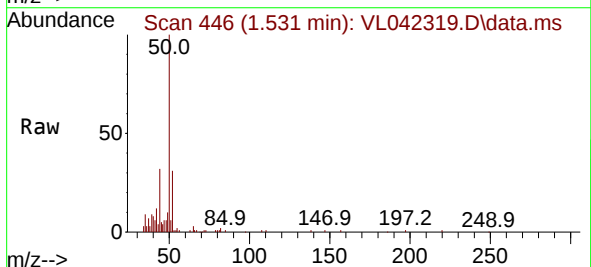
Instrument :
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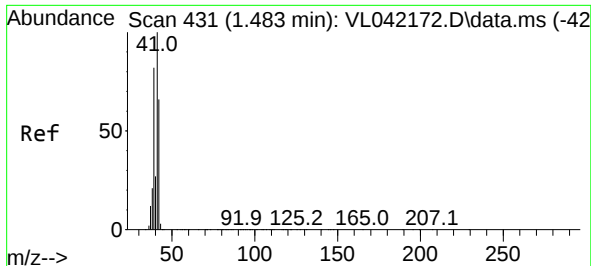
Tgt Ion: 51 Resp: 18717
Ion Ratio Lower Upper
51 100
67 11.4 15.0 22.6#



#4
Chloromethane
Concen: 0.606 ppbv
RT: 1.531 min Scan# 446
Delta R.T. 0.000 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 50 Resp: 6976
Ion Ratio Lower Upper
50 100
52 31.5 26.1 39.1





#9

Propene

Concen: 5.962 ppbv

RT: 1.561 min Scan# 41

Delta R.T. 0.078 min

Lab File: VL042319.D

Acq: 11 Apr 2025 14:27

Instrument :

MSVOA_L

ClientSampleId :

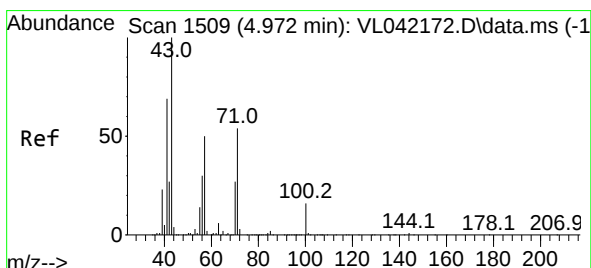
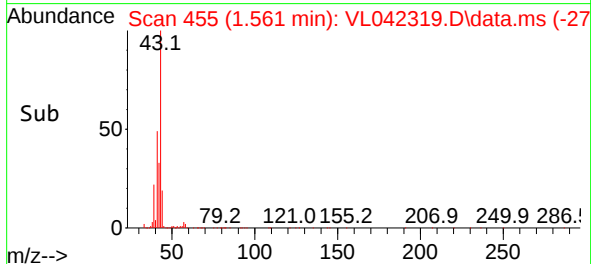
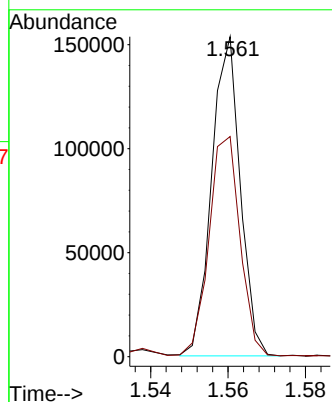
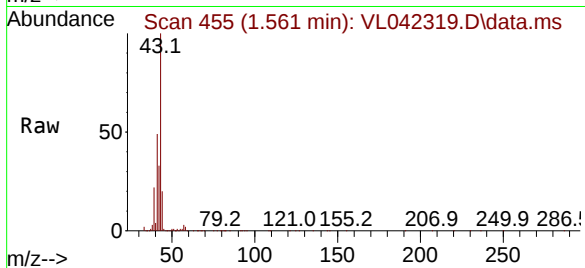
IA-B10-4-3242025

Tgt Ion: 41 Resp: 78643

Ion Ratio Lower Upper

41 100

42 77.3 55.4 83.2



#10

Heptane

Concen: 0.081 ppbv

RT: 4.985 min Scan# 1513

Delta R.T. 0.013 min

Lab File: VL042319.D

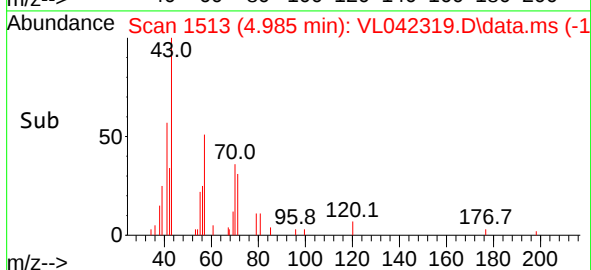
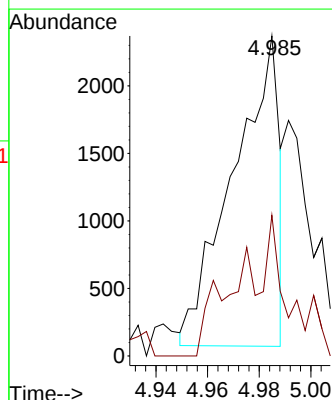
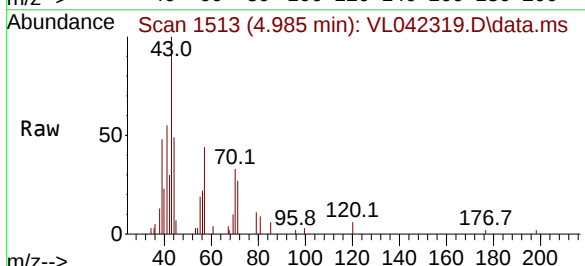
Acq: 11 Apr 2025 14:27

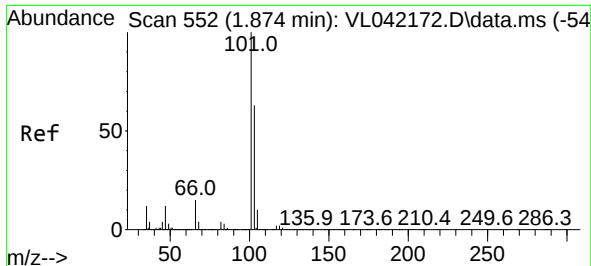
Tgt Ion: 43 Resp: 2838

Ion Ratio Lower Upper

43 100

57 48.2 39.4 59.2

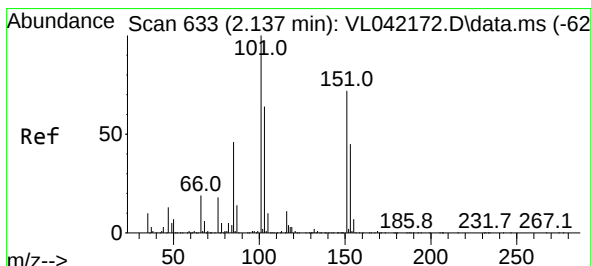
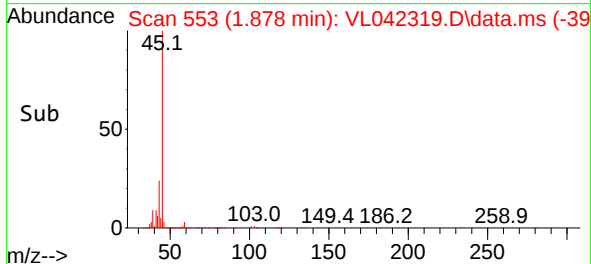
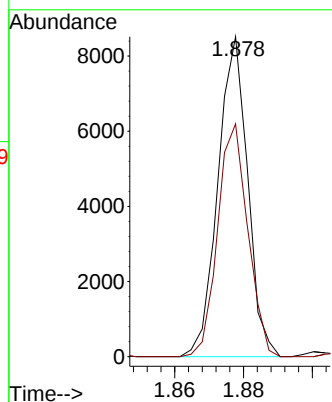
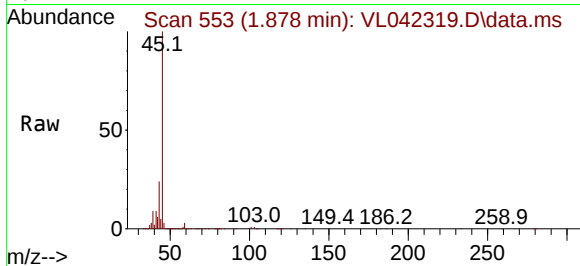




#11
Trichlorofluoromethane
Concen: 0.186 ppbv
RT: 1.878 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

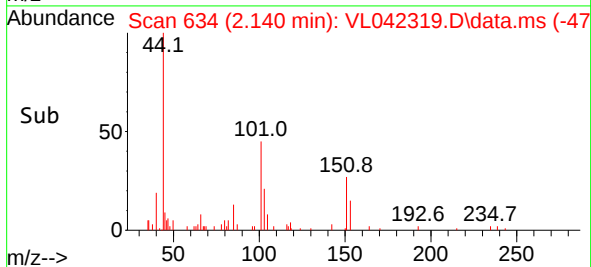
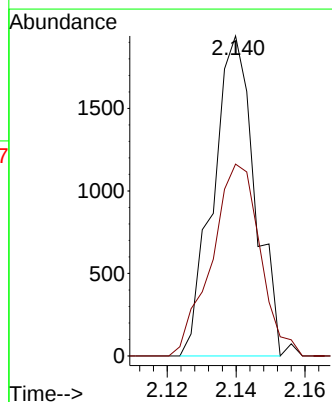
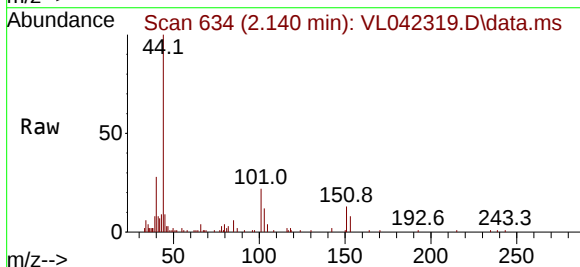
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

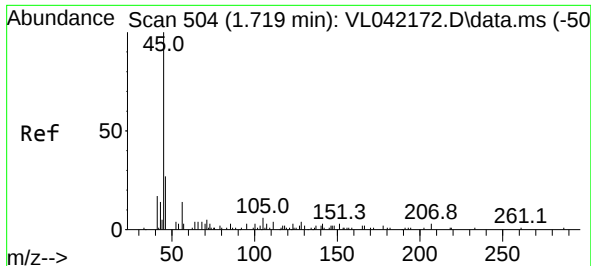
Tgt Ion:101 Resp: 5102
Ion Ratio Lower Upper
101 100
103 72.7 50.2 75.2



#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.072 ppbv
RT: 2.140 min Scan# 634
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion:101 Resp: 1629
Ion Ratio Lower Upper
101 100
151 70.0 57.1 85.7

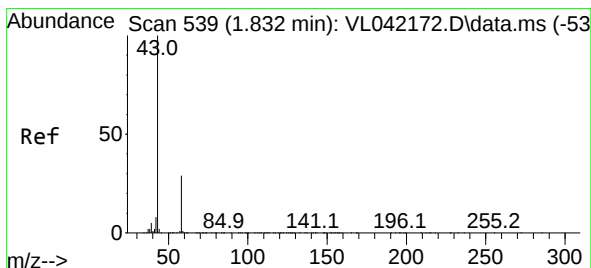
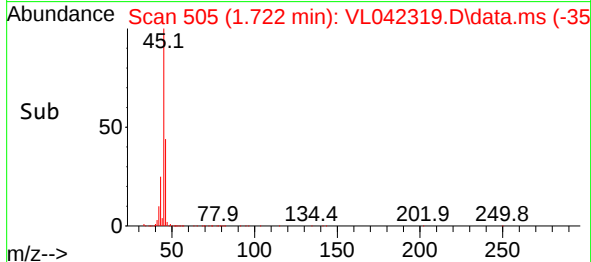
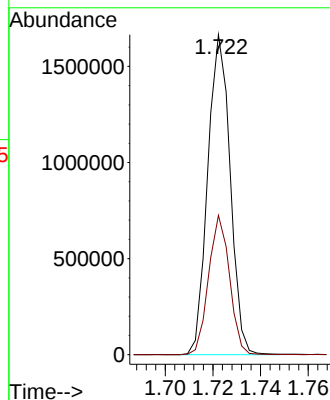
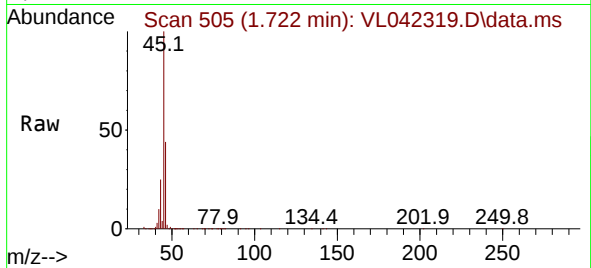




#13
Ethanol
Concen: 872.986 ppbv
RT: 1.722 min Scan# 504
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

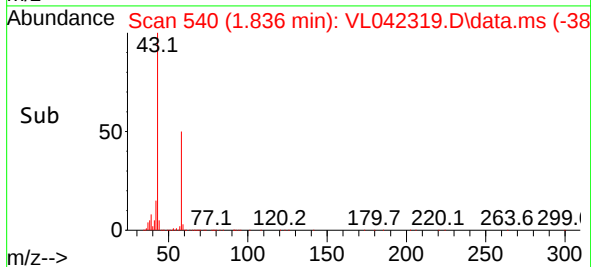
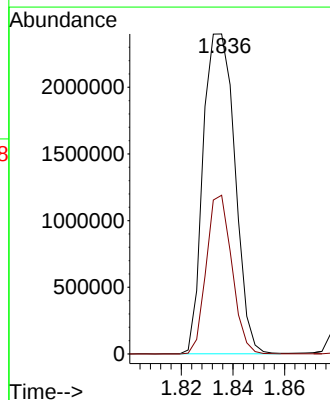
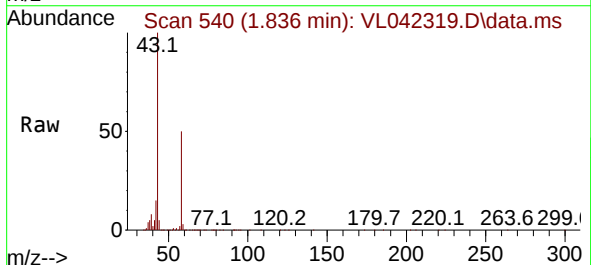
Instrument :
MSVOA_1
ClientSampleId :
IA-B10-4-3242025

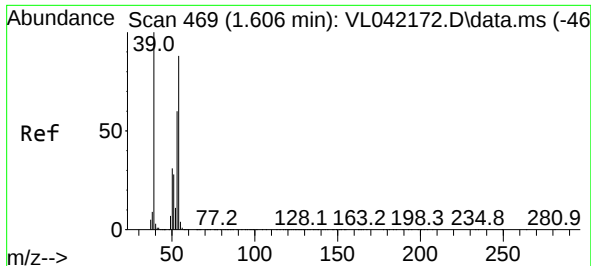
Tgt Ion: 45 Resp: 1088476
Ion Ratio Lower Upper
45 100
46 40.7 20.2 80.8



#15
Acetone
Concen: 76.743 ppbv
RT: 1.836 min Scan# 540
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 43 Resp: 2047600
Ion Ratio Lower Upper
43 100
58 40.0 23.2 34.8#

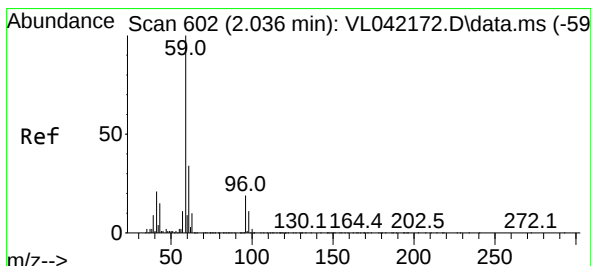
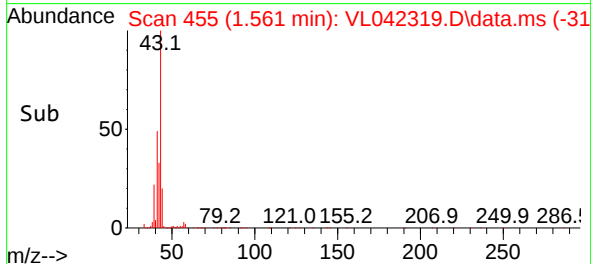
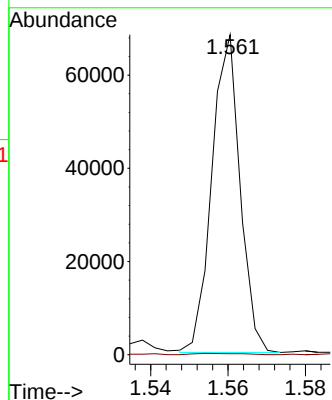
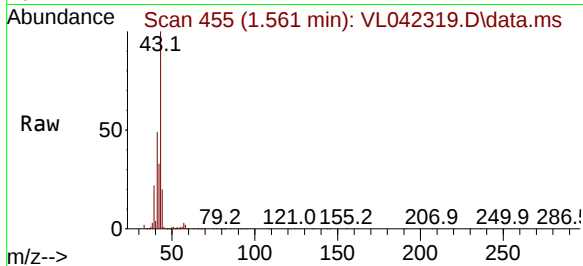




#16
1,3-Butadiene
Concen: 2.644 ppbv
RT: 1.561 min Scan# 41
Delta R.T. -0.045 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

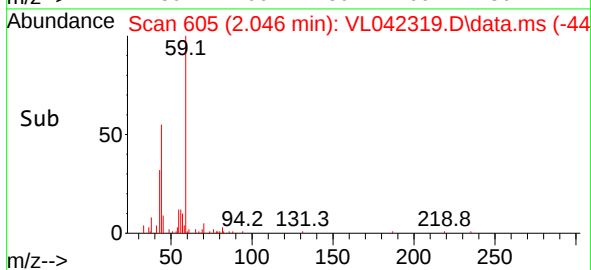
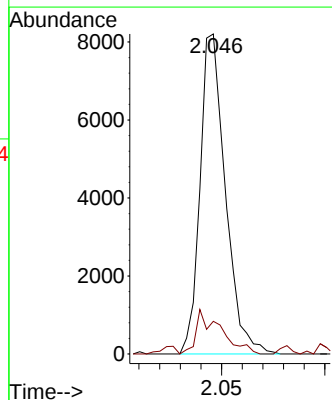
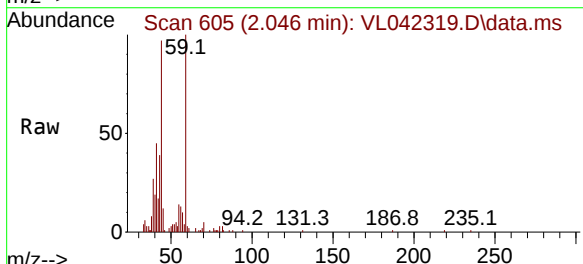
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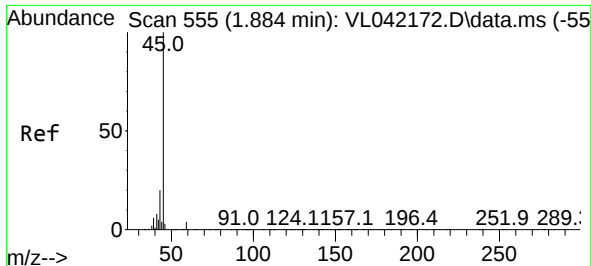
Tgt Ion: 39 Resp: 34457
Ion Ratio Lower Upper
39 100
54 0.9 60.7 91.1#



#17
tert-Butyl alcohol
Concen: 0.210 ppbv
RT: 2.046 min Scan# 605
Delta R.T. 0.010 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 59 Resp: 6995
Ion Ratio Lower Upper
59 100
57 35.0 8.9 13.3#

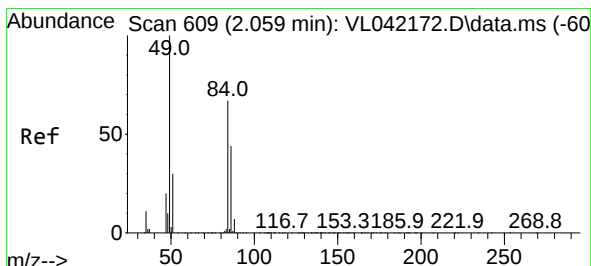
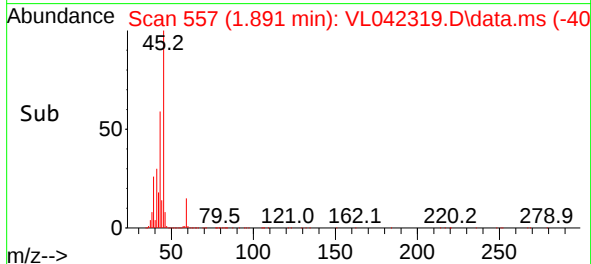
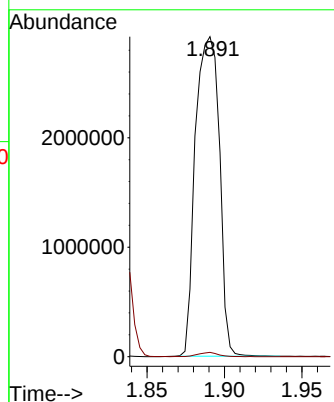
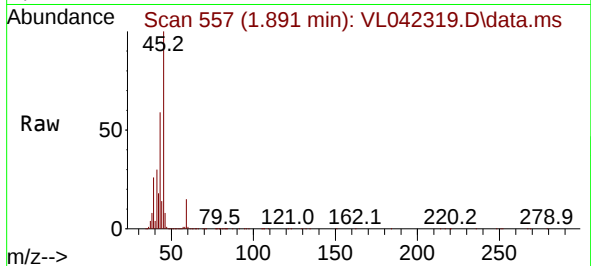




#19
Isopropyl Alcohol
Concen: 209.311 ppbv
RT: 1.891 min Scan# 51
Delta R.T. 0.006 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

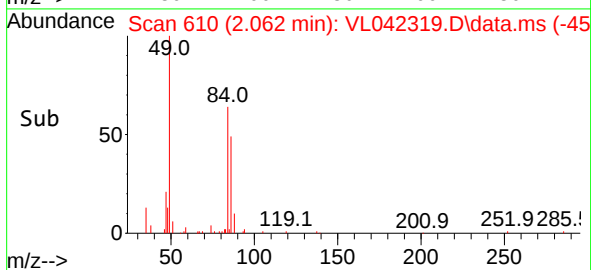
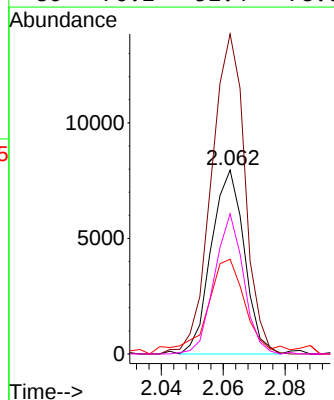
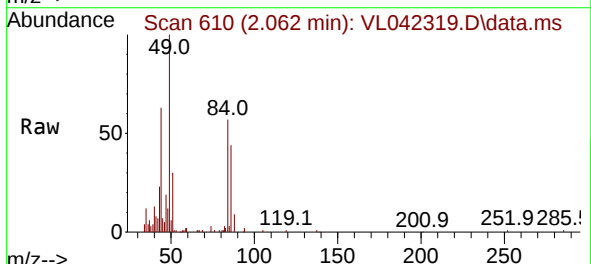
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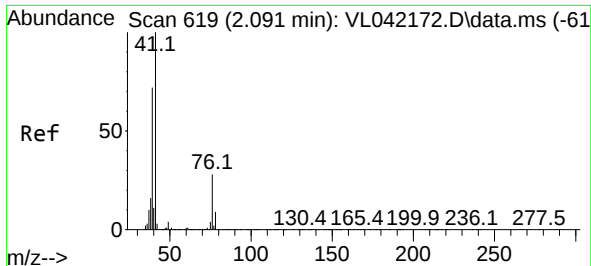
Tgt Ion: 45 Resp: 3151010
Ion Ratio Lower Upper
45 100
58 1.1 36.9 55.3#



#20
Methylene Chloride
Concen: 0.593 ppbv
RT: 2.062 min Scan# 610
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 84 Resp: 5890
Ion Ratio Lower Upper
84 100
49 173.3 120.2 180.4
51 47.2 37.4 56.0
86 76.2 52.4 78.6

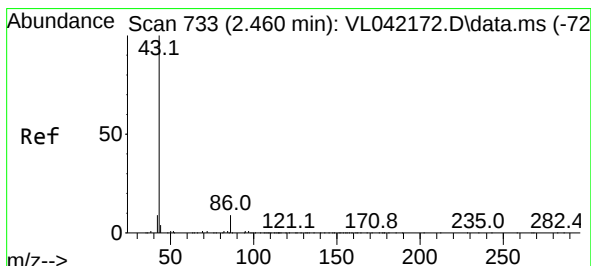
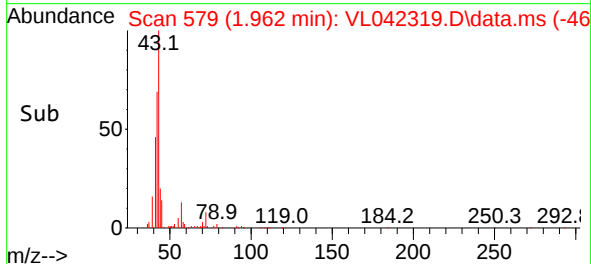
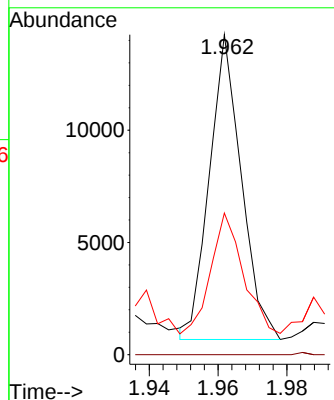
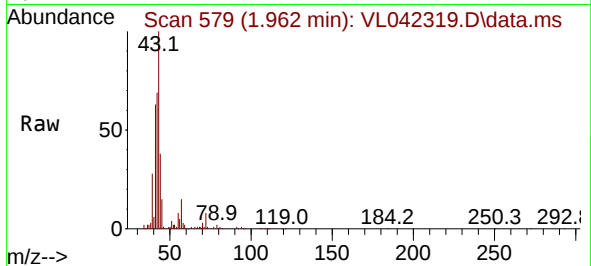




#21
 Allyl Chloride
 Concen: 0.465 ppbv
 RT: 1.962 min Scan# 51
 Delta R.T. -0.129 min
 Lab File: VL042319.D
 Acq: 11 Apr 2025 14:27

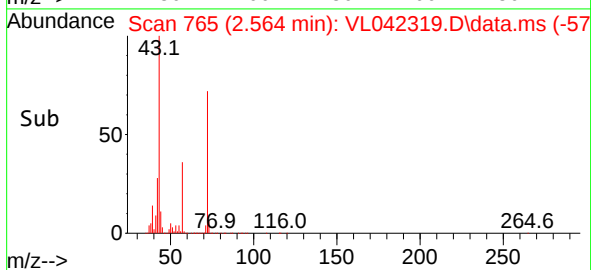
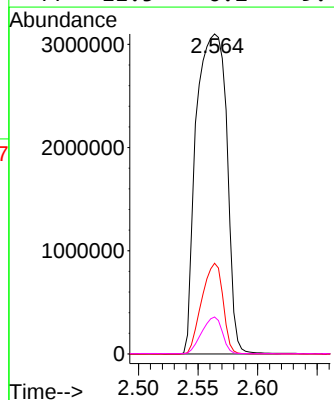
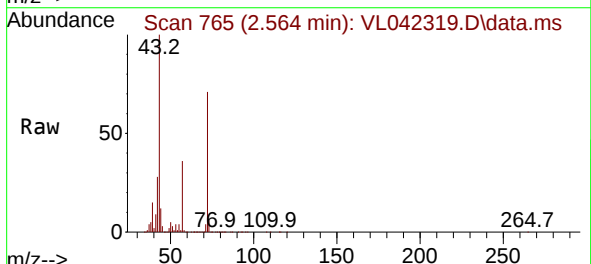
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-B10-4-3242025

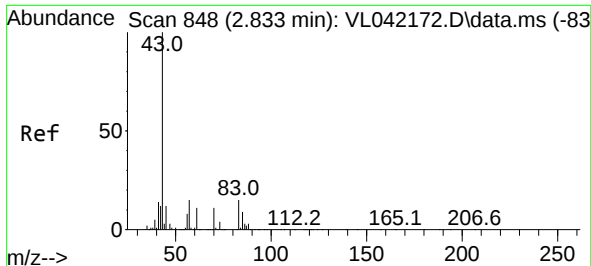
Tgt Ion: 41 Resp: 8745
 Ion Ratio Lower Upper
 41 100
 76 1.4 24.1 36.1#
 39 0.0 61.1 91.7#



#23
 Vinyl Acetate
 Concen: 477.676 ppbv
 RT: 2.564 min Scan# 765
 Delta R.T. 0.104 min
 Lab File: VL042319.D
 Acq: 11 Apr 2025 14:27

Tgt Ion: 43 Resp: 5516146
 Ion Ratio Lower Upper
 43 100
 86 0.0 5.5 8.3#
 42 28.3 8.6 13.0#
 44 11.5 6.2 9.4#

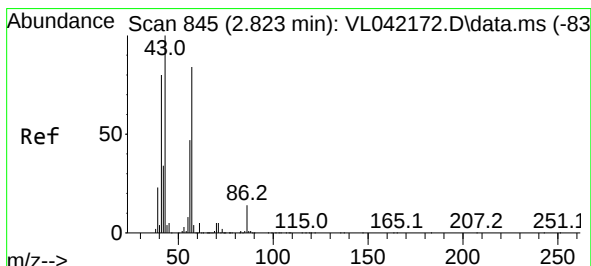
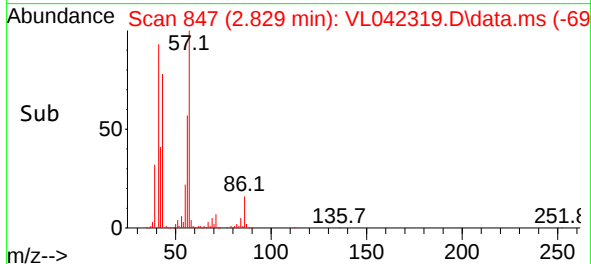
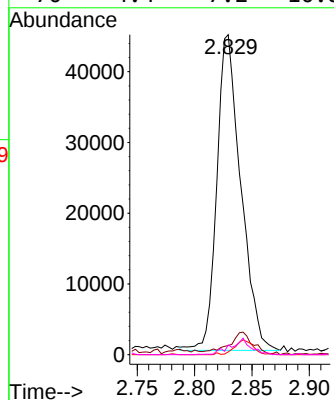
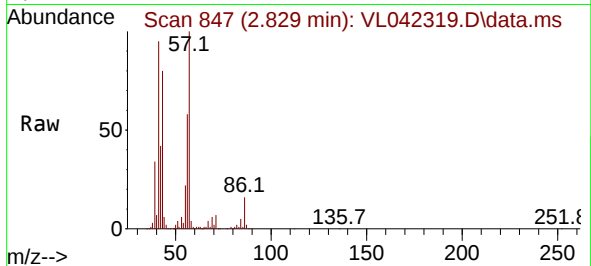




#25
Ethyl Acetate
Concen: 0.939 ppbv
RT: 2.829 min Scan# 84
Delta R.T. -0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

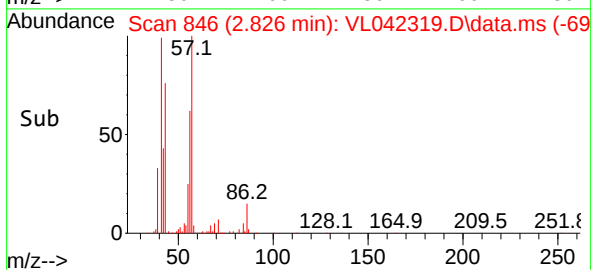
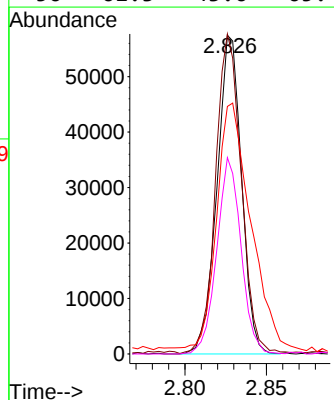
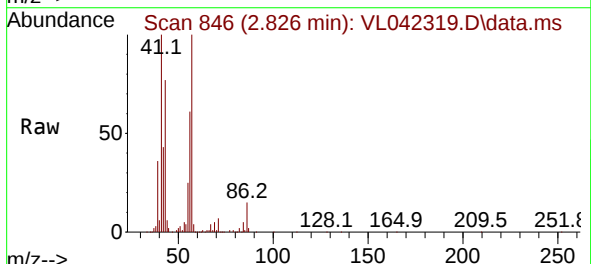
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

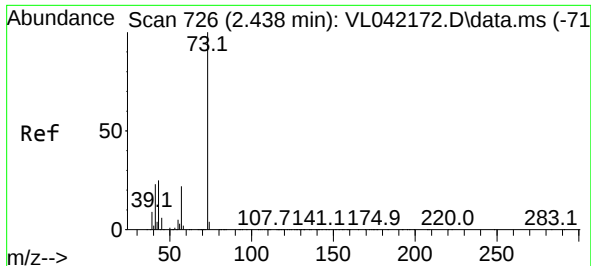
Tgt Ion: 43	Resp: 65016
Ion Ratio	Lower Upper
43 100	
45 8.3	8.2 12.2
61 3.6	7.3 10.9#
70 4.4	7.2 10.8#



#26
Hexane
Concen: 2.245 ppbv
RT: 2.826 min Scan# 846
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 57	Resp: 60038
Ion Ratio	Lower Upper
57 100	
41 106.2	76.6 114.8
43 0.0	207.8 311.8#
56 61.3	43.6 65.4

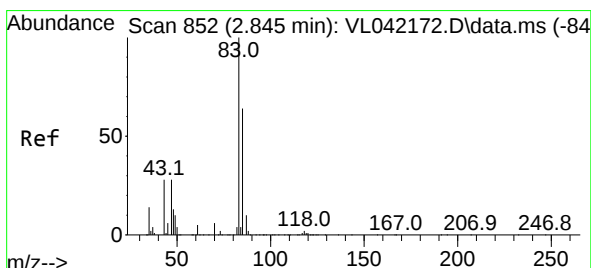
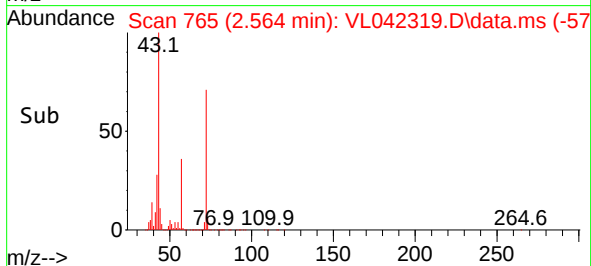
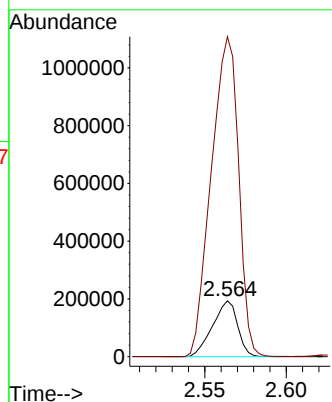
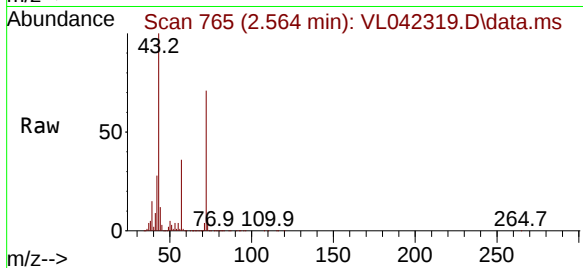




#28
Methyl tert-Butyl Ether
Concen: 12.386 ppbv
RT: 2.564 min Scan# 70
Delta R.T. 0.126 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

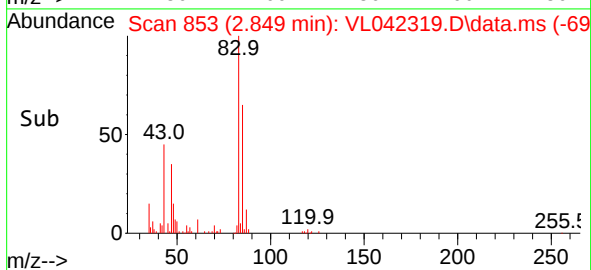
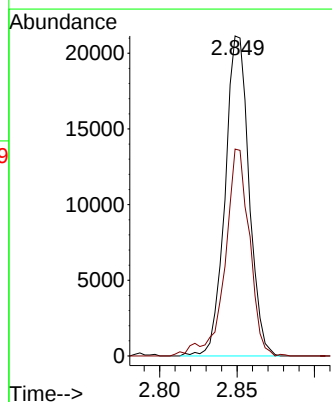
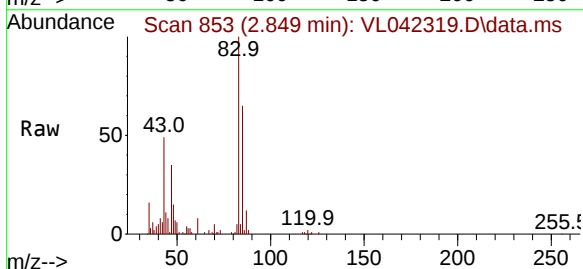
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

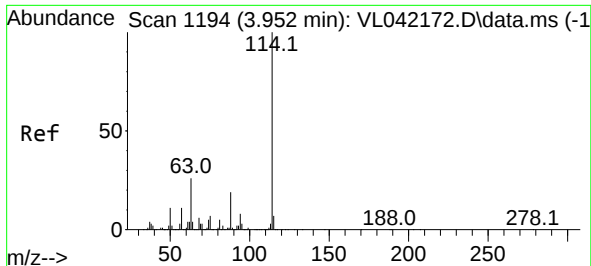
Tgt Ion: 73 Resp: 206262
Ion Ratio Lower Upper
73 100
57 627.1 20.5 30.7#



#29
Chloroform
Concen: 0.581 ppbv
RT: 2.849 min Scan# 853
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 83 Resp: 22740
Ion Ratio Lower Upper
83 100
85 64.2 51.4 77.2





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 3.962 min Scan# 1197

Delta R.T. 0.010 min

Lab File: VL042319.D

Acq: 11 Apr 2025 14:27

Instrument :

MSVOA_L

ClientSampleId :

IA-B10-4-3242025

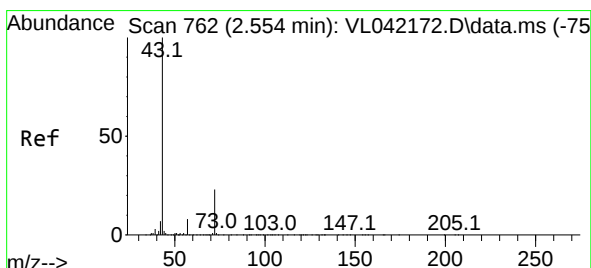
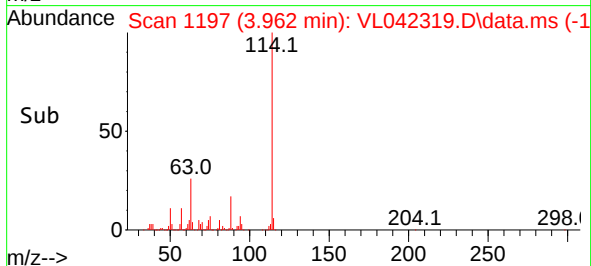
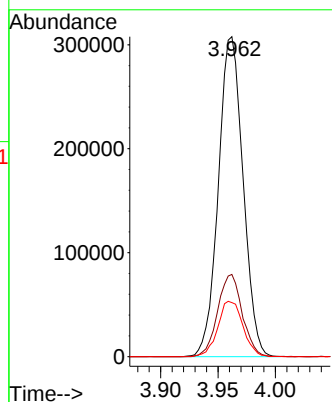
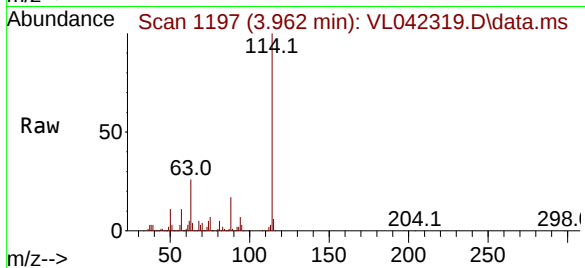
Tgt Ion:114 Resp: 461210

Ion Ratio Lower Upper

114 100

63 25.6 20.7 31.1

88 17.7 15.0 22.4



#34

2-Butanone

Concen: 164.939 ppbv

RT: 2.564 min Scan# 765

Delta R.T. 0.010 min

Lab File: VL042319.D

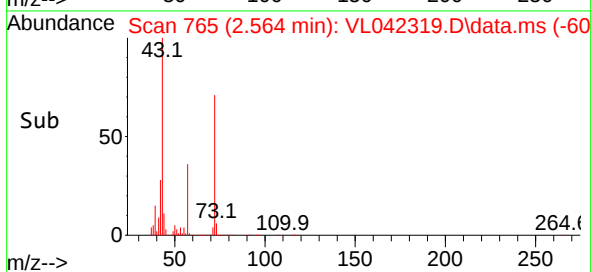
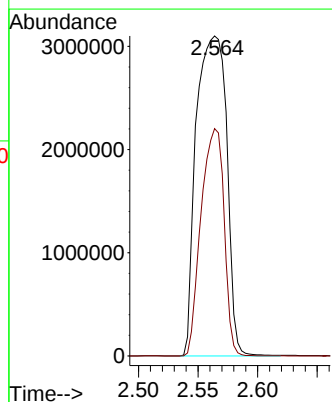
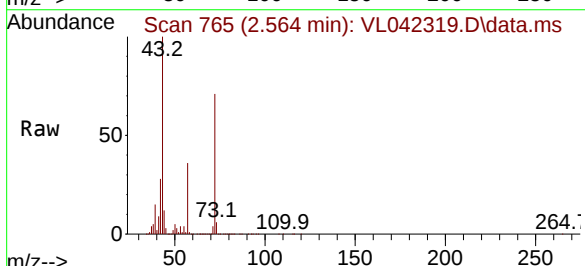
Acq: 11 Apr 2025 14:27

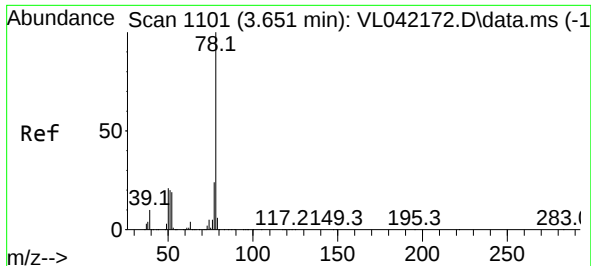
Tgt Ion: 43 Resp: 5516146

Ion Ratio Lower Upper

43 100

72 53.8 18.2 27.2#

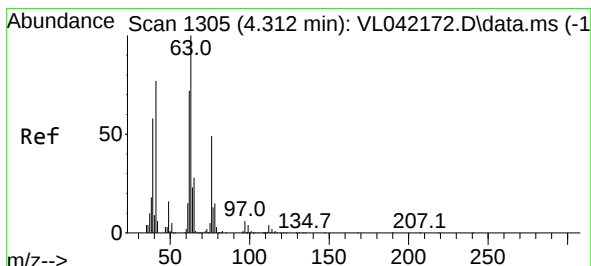
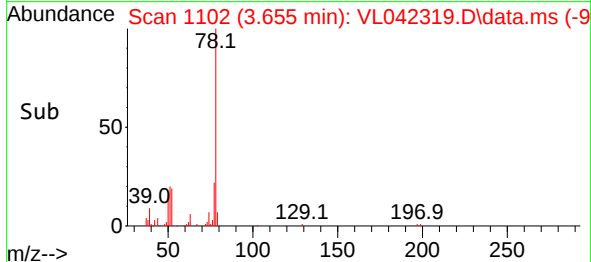
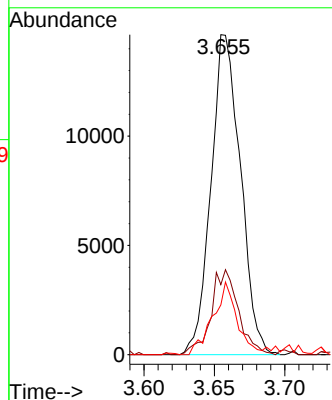
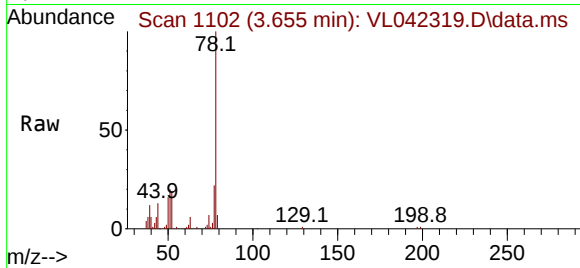




#36
Benzene
Concen: 0.468 ppbv
RT: 3.655 min Scan# 1101
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

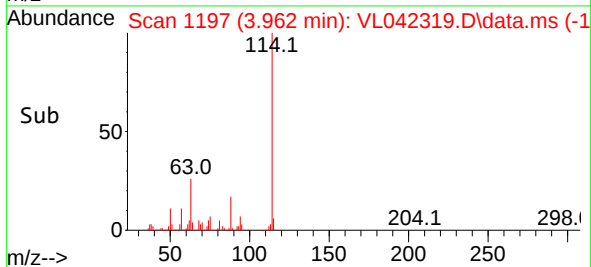
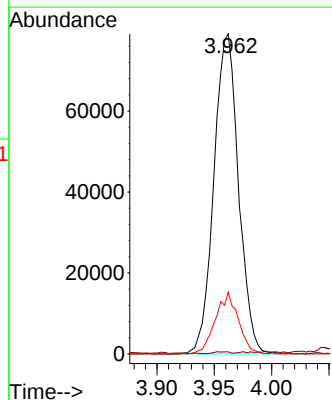
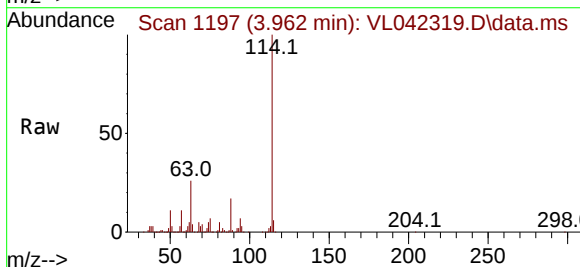
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

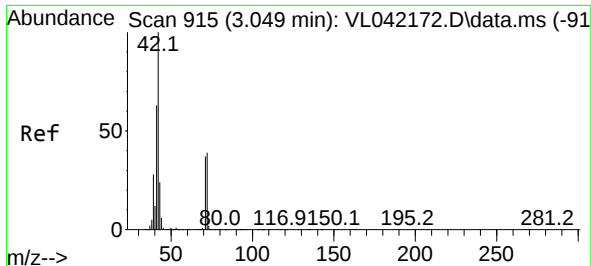
Tgt Ion: 78 Resp: 21386
Ion Ratio Lower Upper
78 100
77 21.9 19.1 28.7
50 15.6 16.6 24.8#



#39
1,2-Dichloropropane
Concen: 7.093 ppbv
RT: 3.962 min Scan# 1197
Delta R.T. -0.350 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 63 Resp: 118114
Ion Ratio Lower Upper
63 100
41 0.3 61.7 92.5#
62 19.2 57.6 86.4#

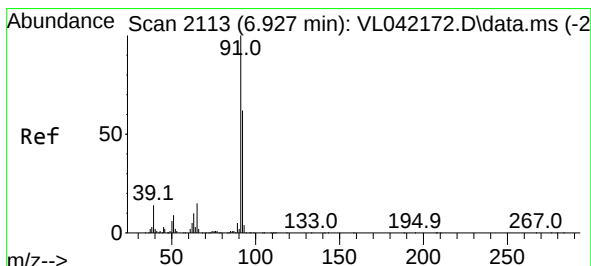
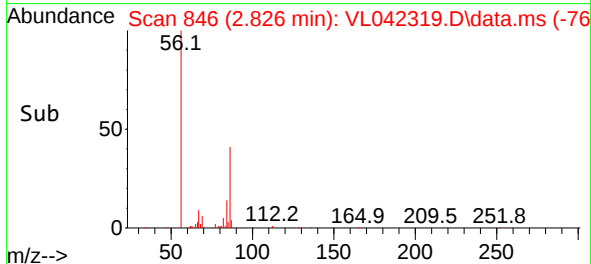
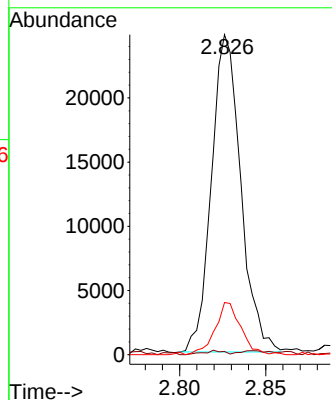
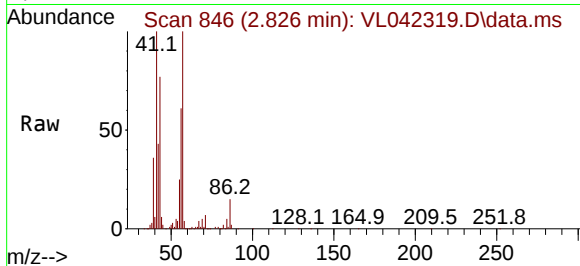




#41
Tetrahydrofuran
Concen: 1.522 ppbv
RT: 2.826 min Scan# 841
Delta R.T. -0.223 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

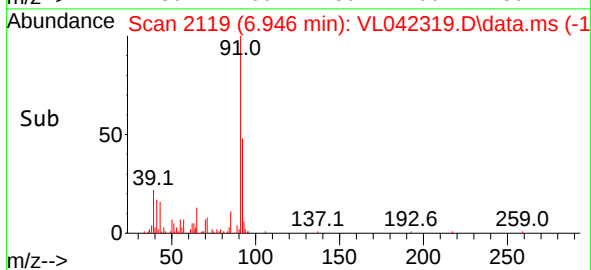
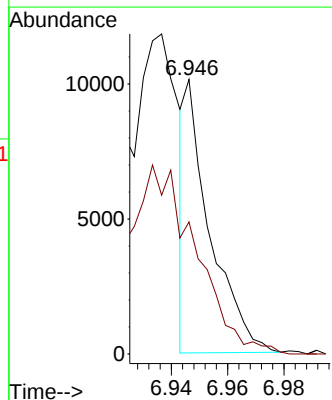
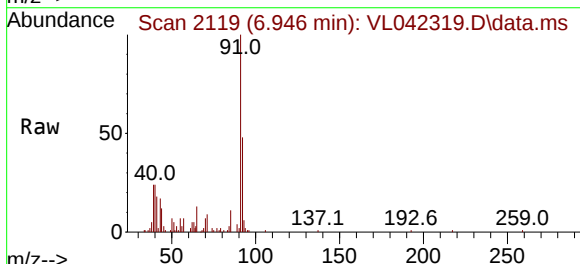
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

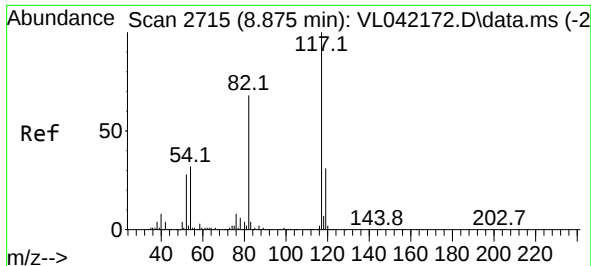
Tgt Ion: 42 Resp: 29308
Ion Ratio Lower Upper
42 100
72 0.0 31.4 47.0#
71 14.7 30.2 45.4#



#53
Toluene
Concen: 0.115 ppbv
RT: 6.946 min Scan# 2119
Delta R.T. 0.019 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 91 Resp: 6234
Ion Ratio Lower Upper
91 100
92 0.0 48.4 72.6#

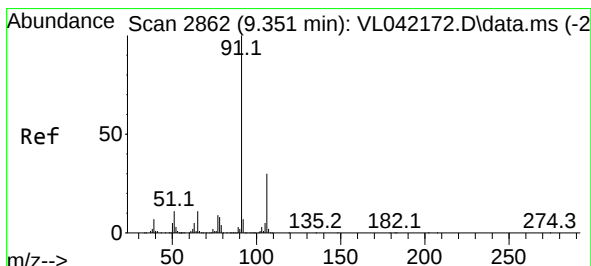
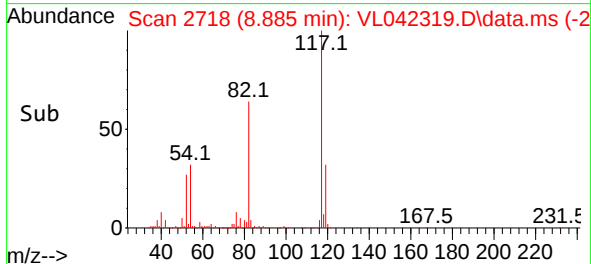
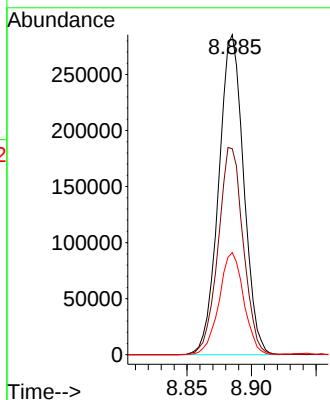
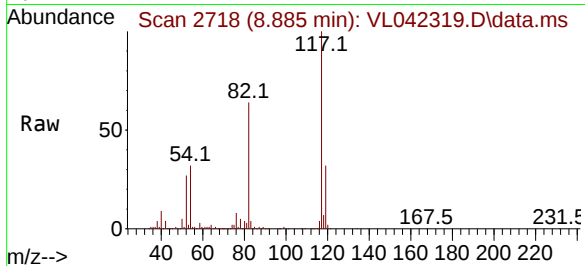




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.885 min Scan# 21
Delta R.T. 0.010 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

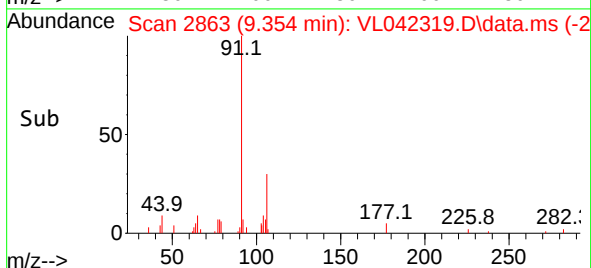
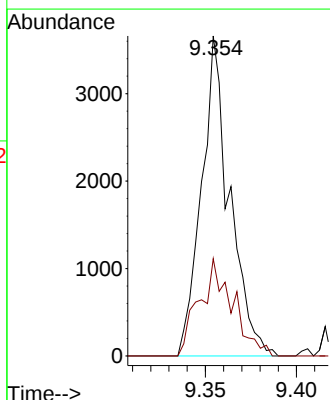
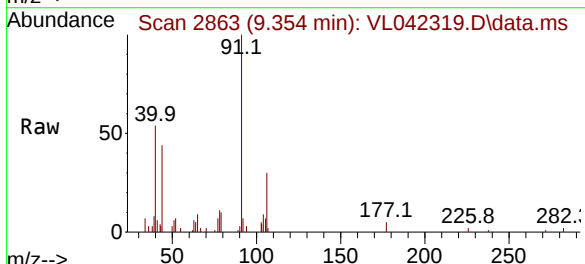
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

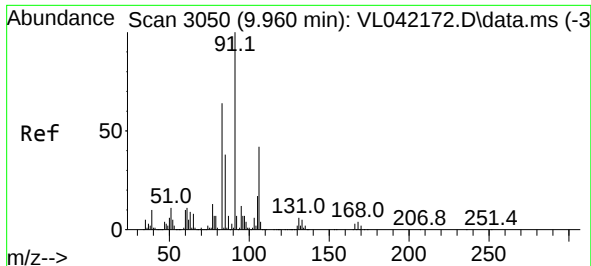
Tgt Ion:117 Resp: 383940
Ion Ratio Lower Upper
117 100
82 65.1 55.8 83.6
119 31.7 25.5 38.3



#58
Ethyl Benzene
Concen: 0.058 ppbv
RT: 9.354 min Scan# 2863
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 91 Resp: 3931
Ion Ratio Lower Upper
91 100
106 32.7 24.2 36.2

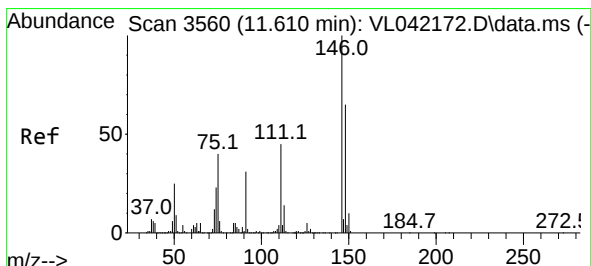
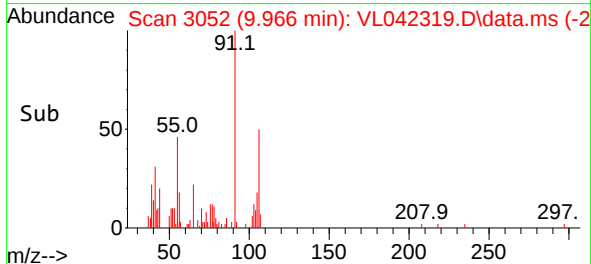
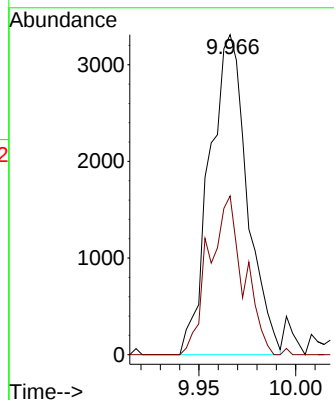
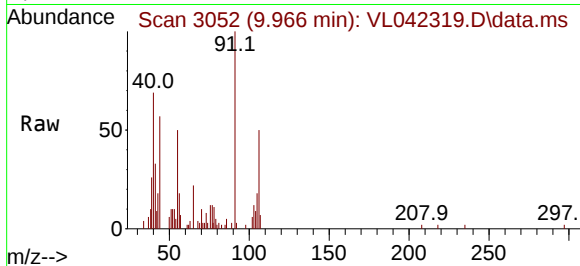




#60
o-Xylene
Concen: 0.082 ppbv
RT: 9.966 min Scan# 3050
Delta R.T. 0.006 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

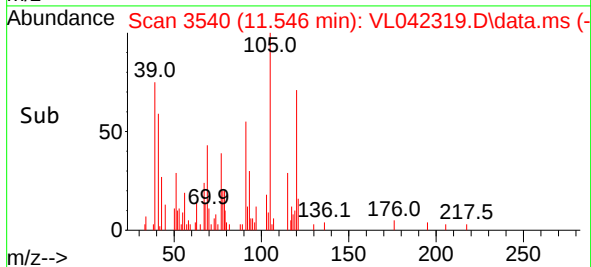
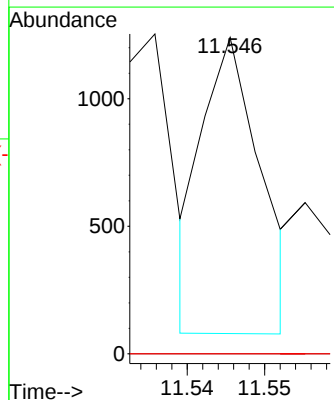
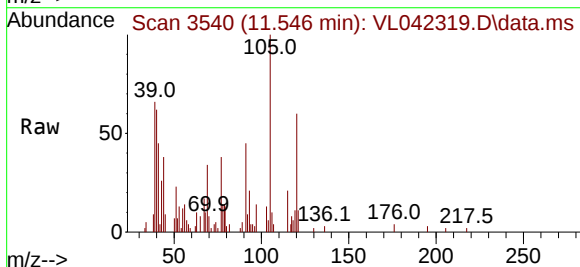
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

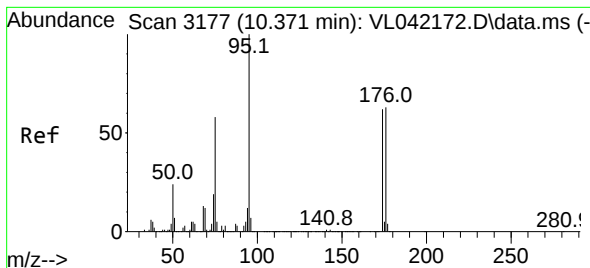
Tgt Ion: 91 Resp: 4483
Ion Ratio Lower Upper
91 100
106 46.1 20.8 62.5



#66
Benzyl Chloride
Concen: 0.076 ppbv
RT: 11.546 min Scan# 3540
Delta R.T. -0.065 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 91 Resp: 609
Ion Ratio Lower Upper
91 100
126 0.0 13.8 20.6#
128 3.4 4.5 6.7#

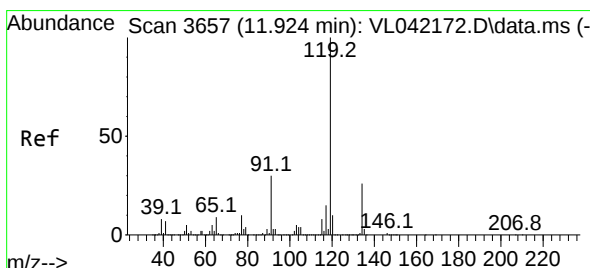
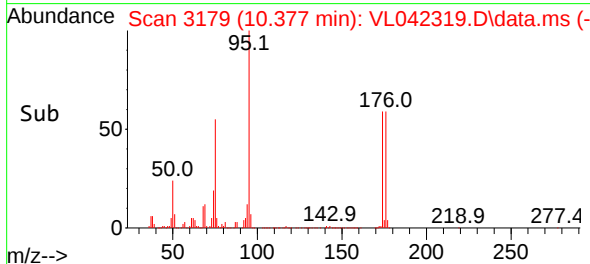
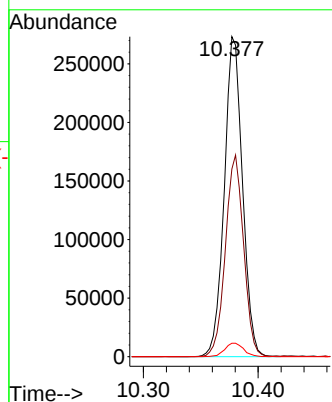
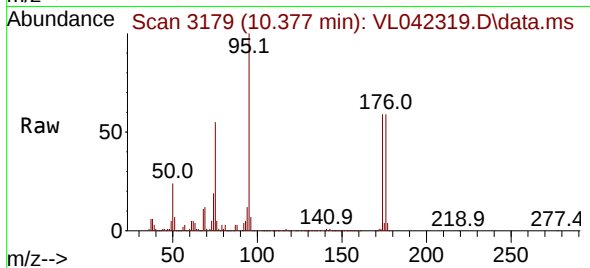




#68
1-Bromo-4-Fluorobenzene
Concen: 9.573 ppbv
RT: 10.377 min Scan# 3177
Delta R.T. 0.006 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

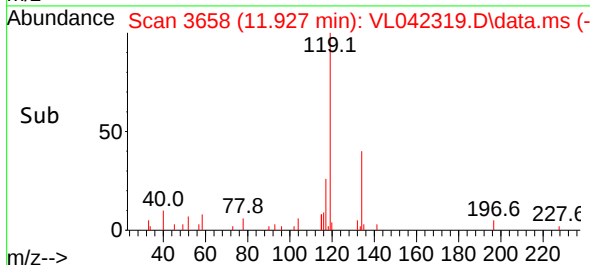
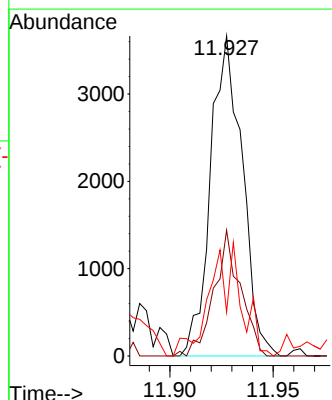
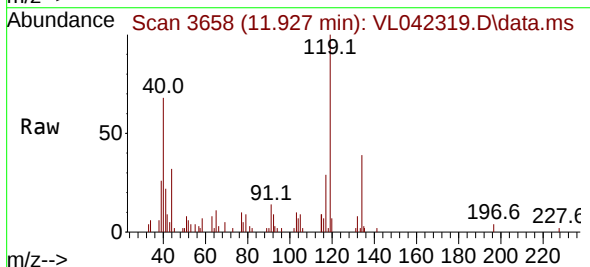
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

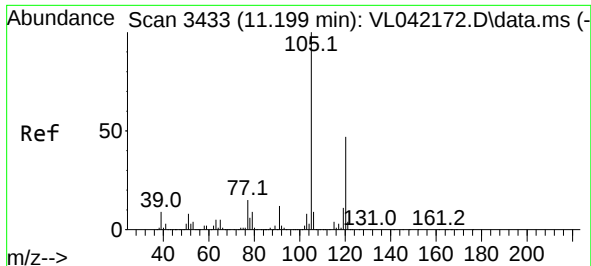
Tgt Ion: 95 Resp: 301822
Ion Ratio Lower Upper
95 100
174 63.1 50.6 76.0
175 4.4 3.8 5.6



#69
p-Isopropyltoluene
Concen: 0.043 ppbv
RT: 11.927 min Scan# 3658
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion: 119 Resp: 3908
Ion Ratio Lower Upper
119 100
134 32.7 20.4 30.6#
91 36.4 23.7 35.5#

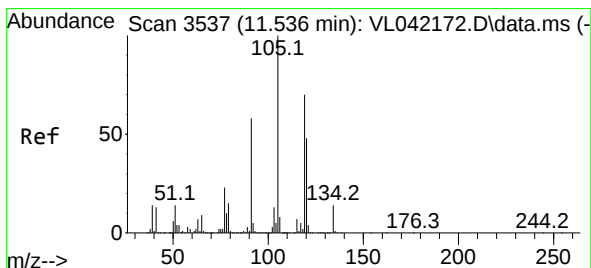
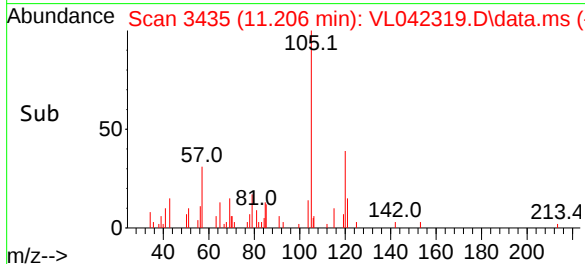
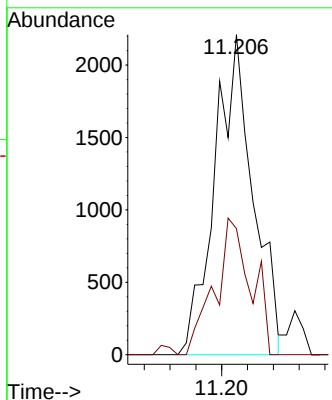
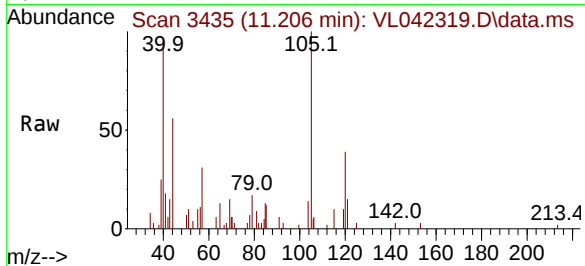




#73
1,3,5-Trimethylbenzene
Concen: 0.038 ppbv
RT: 11.206 min Scan# 3435
Delta R.T. 0.006 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

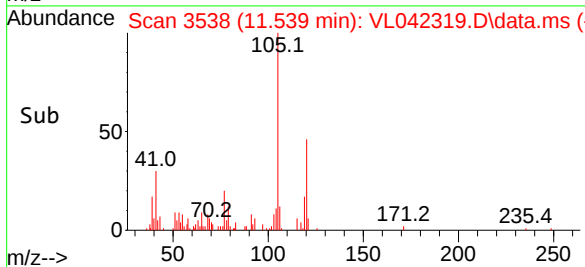
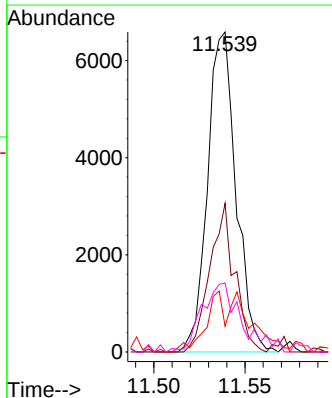
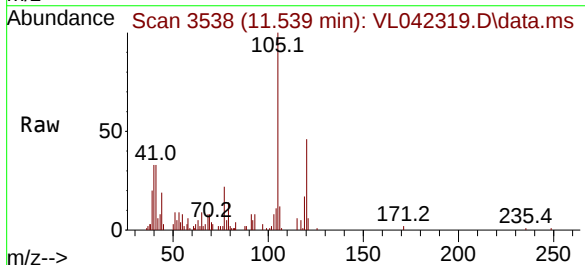
Instrument :
MSVOA_L
ClientSampleId :
IA-B10-4-3242025

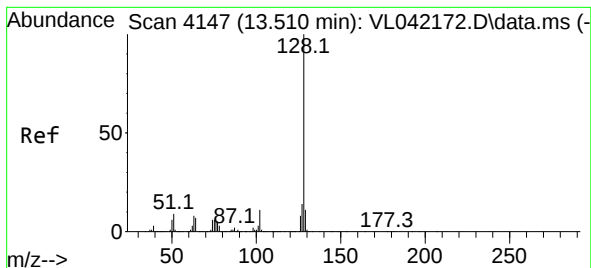
Tgt Ion:105 Resp: 2285
Ion Ratio Lower Upper
105 100
120 39.4 37.4 56.0



#74
1,2,4-Trimethylbenzene
Concen: 0.105 ppbv
RT: 11.539 min Scan# 3538
Delta R.T. 0.003 min
Lab File: VL042319.D
Acq: 11 Apr 2025 14:27

Tgt Ion:105 Resp: 7147
Ion Ratio Lower Upper
105 100
120 46.5 38.6 58.0
91 6.7 46.2 69.2#
77 20.8 18.6 27.8





#79

Naphthalene

Concen: 0.068 ppbv

RT: 13.517 min Scan# 4113

Delta R.T. 0.006 min

Lab File: VL042319.D

Acq: 11 Apr 2025 14:27

Instrument :

MSVOA_L

ClientSampleId :

IA-B10-4-3242025

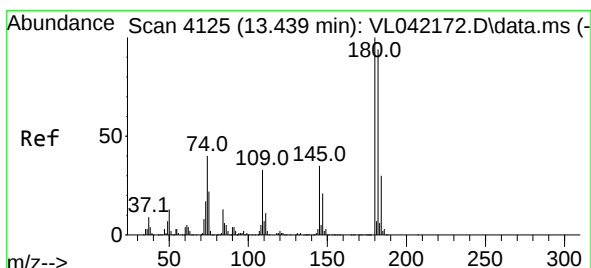
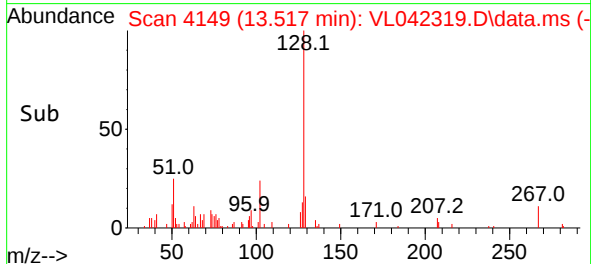
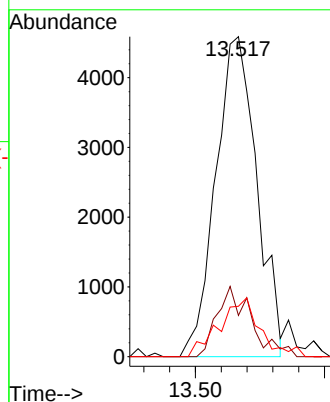
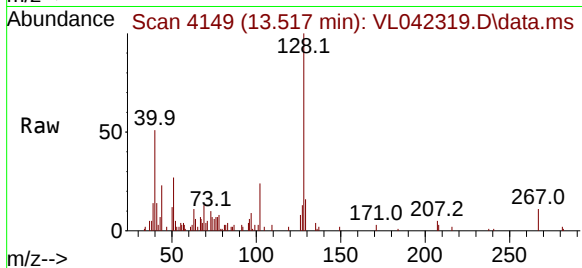
Tgt Ion:128 Resp: 5078

Ion Ratio Lower Upper

128 100

127 12.9 10.8 16.2

129 15.7 9.0 13.4#



#81

1,2,4-Trichlorobenzene

Concen: 2.392 ppbv

RT: 13.400 min Scan# 4113

Delta R.T. -0.039 min

Lab File: VL042319.D

Acq: 11 Apr 2025 14:27

Tgt Ion:180 Resp: 82529

Ion Ratio Lower Upper

180 100

182 7.7 75.1 112.7#

184 0.5 24.4 36.6#

