

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL041725\
 Data File : VL042376.D
 Acq On : 18 Apr 2025 01:30
 Operator : SY/MD
 Sample : Q1726-01DL 20X
 Misc : 400mL/MSVOA_L
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-DUP-3-03312025DL

Quant Time: Apr 18 04:39:28 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

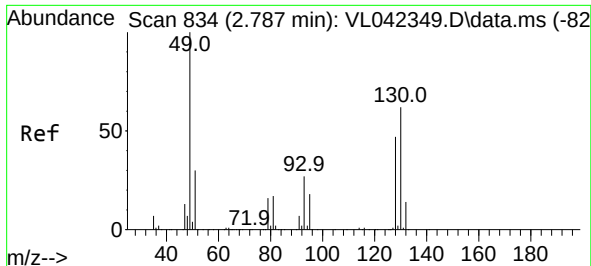
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	2.787	49	100356	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	3.959	114	288404	10.000	ppbv	0.00
55) Chlorobenzene-d5	8.882	117	249449	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	10.377	95	207163	10.106	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.100%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.499	85	930	0.052	ppbv	100
3) Chlorodifluoromethane	1.466	51	3123	0.185	ppbv #	67
4) Chloromethane	1.534	50	634	0.090	ppbv #	70
9) Propene	1.560	41	3637	0.473	ppbv	90
10) Heptane	4.978	43	10406	0.482	ppbv	91
13) Ethanol	1.722	45	20340	16.643	ppbv	80
15) Acetone	1.835	43	516180	31.420	ppbv	98
16) 1,3-Butadiene	1.622	39	1757	0.224	ppbv #	19
17) tert-Butyl alcohol	2.046	59	728	0.036	ppbv #	1
19) Isopropyl Alcohol	1.887	45	16398	1.797	ppbv #	1
20) Methylene Chloride	2.062	84	4276	0.665	ppbv #	77
23) Vinyl Acetate	2.454	43	1065	0.160	ppbv #	1
25) Ethyl Acetate	2.826	43	6629	0.164	ppbv #	83
26) Hexane	2.826	57	8480	0.517	ppbv #	34
30) Cyclohexane	3.855	84	856	0.065	ppbv #	1
34) 2-Butanone	2.564	43	1784	0.078	ppbv	93
36) Benzene	3.658	78	3080	0.099	ppbv #	62
39) 1,2-Dichloropropane	3.955	63	76957	6.639	ppbv #	21
44) 2,2,4-Trimethylpentane	4.641	57	54714	1.018	ppbv	94
53) Toluene	6.930	91	107299	2.874	ppbv	98
58) Ethyl Benzene	9.354	91	29882	0.605	ppbv	94
59) m/p-Xylene	9.529	91	88263	2.217	ppbv	99
60) o-Xylene	9.963	91	34430	0.859	ppbv	97
62) Isopropylbenzene	10.542	105	3486	0.059	ppbv	94
64) n-propylbenzene	10.992	120	2336	0.158	ppbv	75
65) tert-Butylbenzene	11.536	119	5490	0.101	ppbv #	61
66) Benzyl Chloride	11.539	91	6956	1.170	ppbv #	70
71) 2-Chlorotoluene	10.901	91	2632	0.057	ppbv	94
72) 4-Ethyltoluene	11.128	105	15927	0.325	ppbv #	56
73) 1,3,5-Trimethylbenzene	11.205	105	16220	0.375	ppbv	95
74) 1,2,4-Trimethylbenzene	11.536	105	57208	1.132	ppbv #	60
79) Naphthalene	13.516	128	4610	0.076	ppbv #	94

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

Quant Time: Apr 18 04:39:28 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041725AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Fri Apr 18 02:14:00 2025
Response via : Initial Calibration

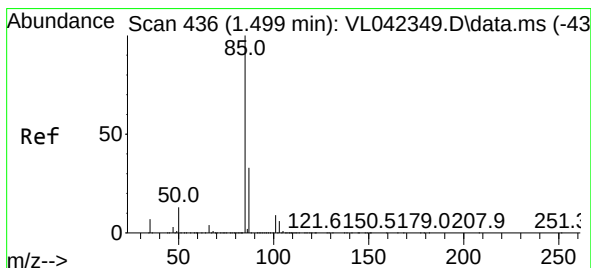
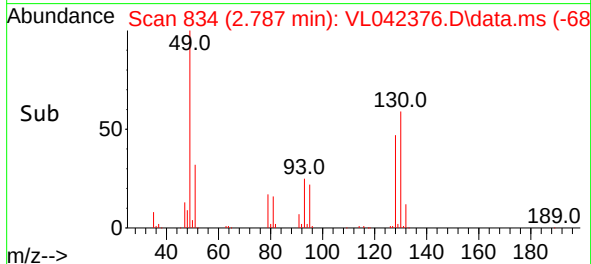
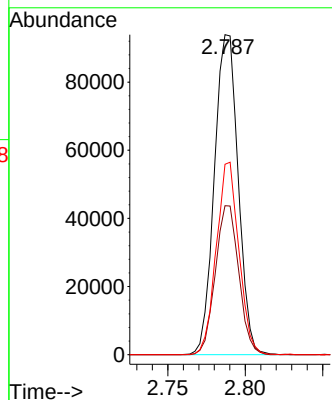
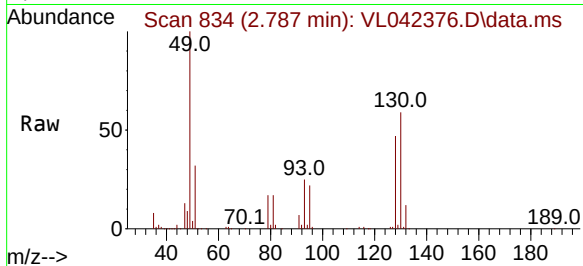




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 2.787 min Scan# 81
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

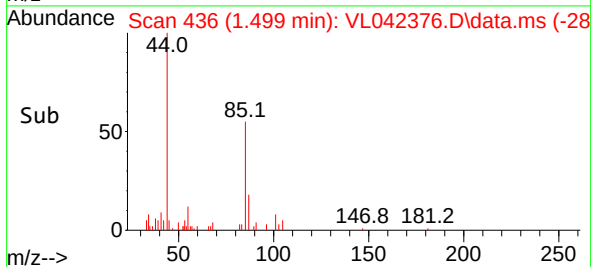
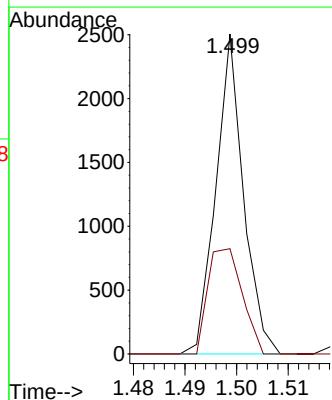
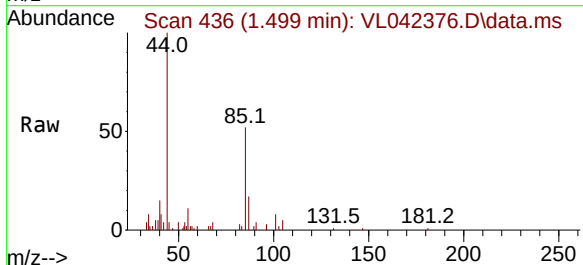
Instrument :
MSVOA_L
ClientSampleId :
IA-DUP-3-03312025DL

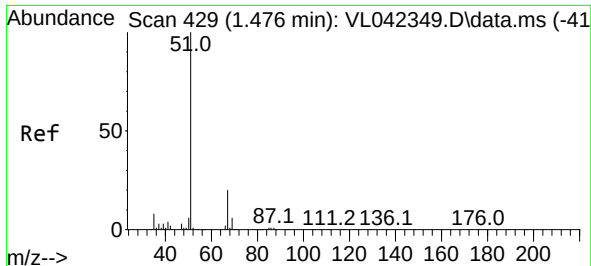
Tgt Ion: 49 Resp: 100356
Ion Ratio Lower Upper
49 100
128 45.8 22.8 68.4
130 57.1 29.3 88.0



#2
Dichlorodifluoromethane
Concen: 0.052 ppbv
RT: 1.499 min Scan# 436
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 85 Resp: 930
Ion Ratio Lower Upper
85 100
87 32.9 26.6 39.8

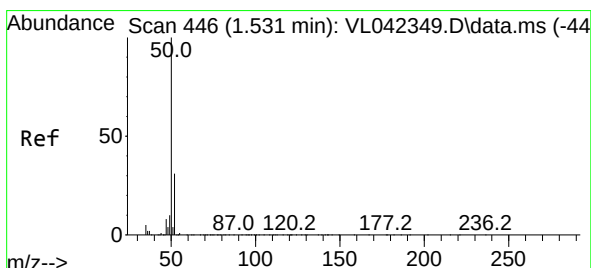
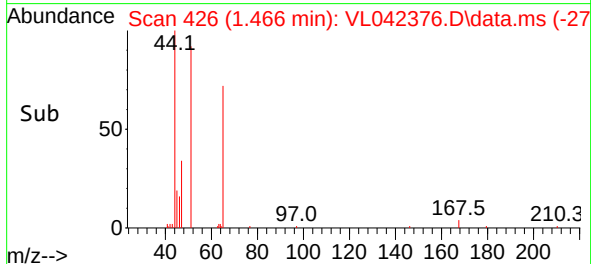
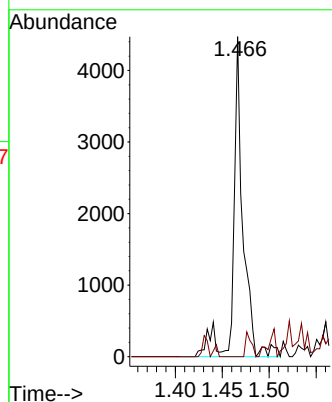
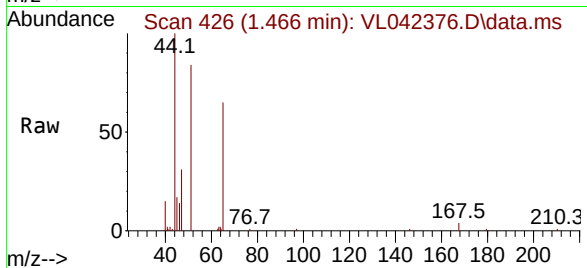




#3
Chlorodifluoromethane
Concen: 0.185 ppbv
RT: 1.466 min Scan# 41
Delta R.T. -0.010 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

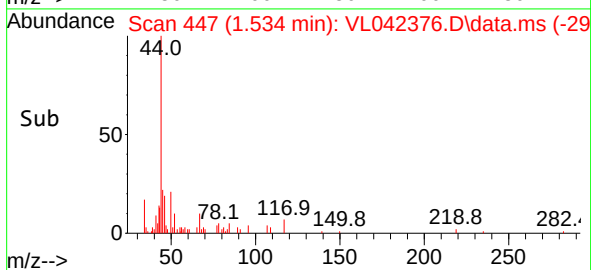
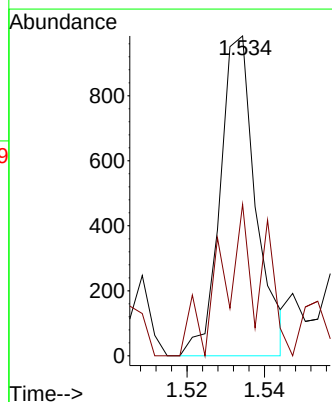
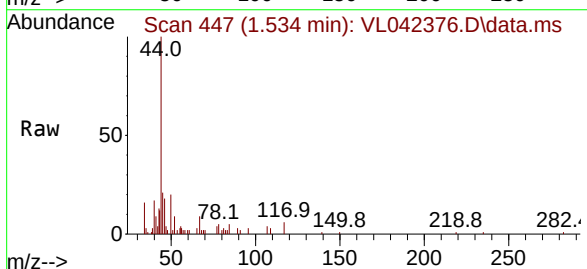
Instrument :
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ClientSampleId :
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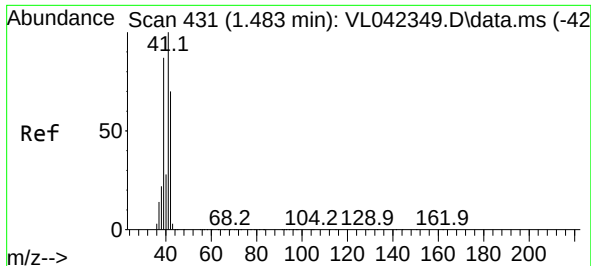
Tgt Ion: 51 Resp: 3123
Ion Ratio Lower Upper
51 100
67 5.1 16.2 24.4#



#4
Chloromethane
Concen: 0.090 ppbv
RT: 1.534 min Scan# 447
Delta R.T. 0.003 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 50 Resp: 634
Ion Ratio Lower Upper
50 100
52 47.4 24.7 37.1#

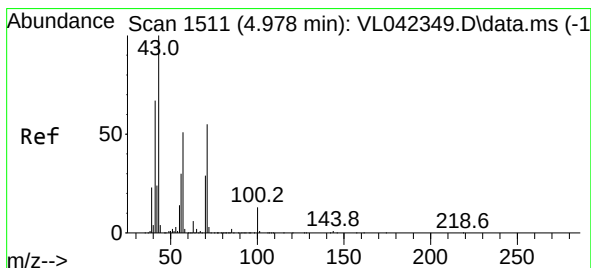
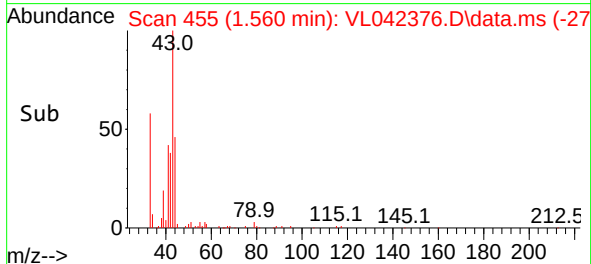
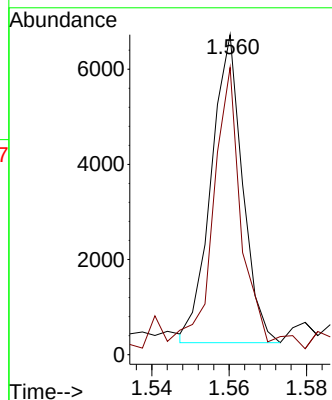
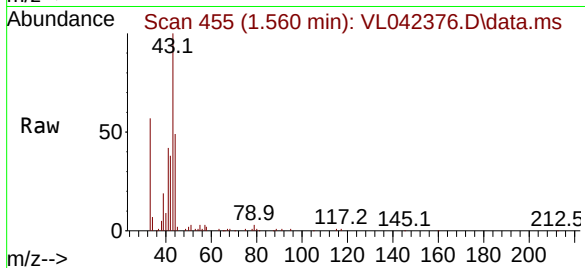




#9
Propene
Concen: 0.473 ppbv
RT: 1.560 min Scan# 41
Delta R.T. 0.078 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

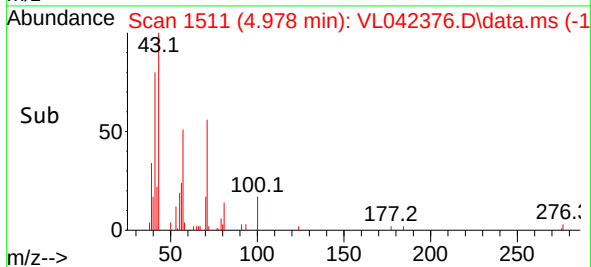
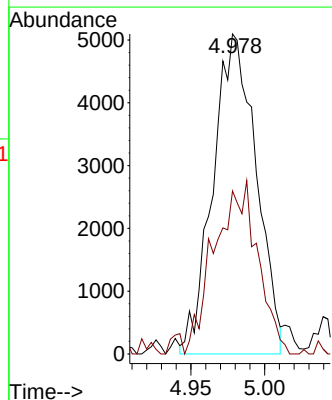
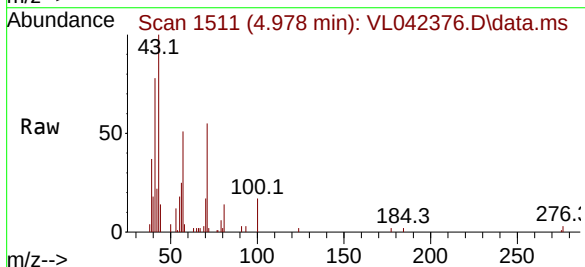
Instrument :
MSVOA_1
ClientSampleId :
IA-DUP-3-03312025DL

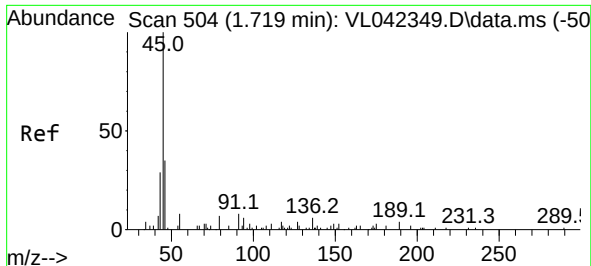
Tgt Ion: 41 Resp: 3637
Ion Ratio Lower Upper
41 100
42 78.5 56.2 84.4



#10
Heptane
Concen: 0.482 ppbv
RT: 4.978 min Scan# 1511
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 43 Resp: 10406
Ion Ratio Lower Upper
43 100
57 56.4 39.9 59.9

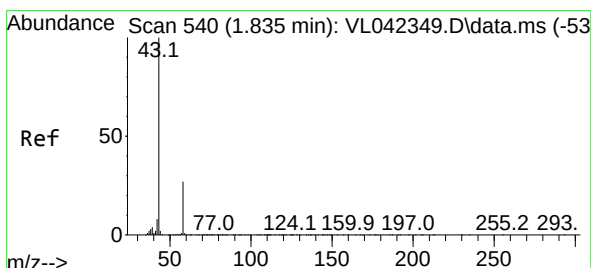
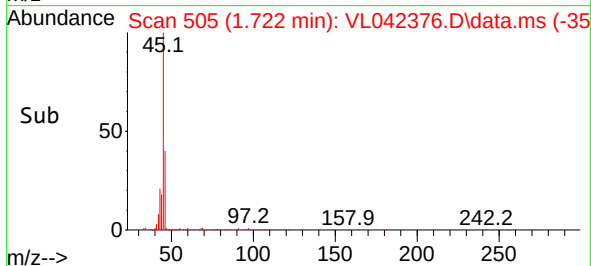
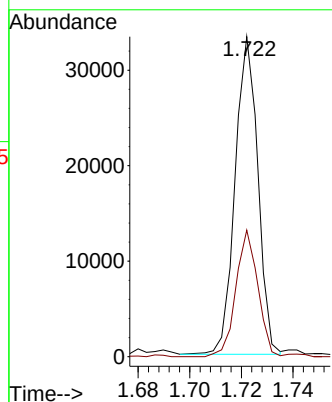
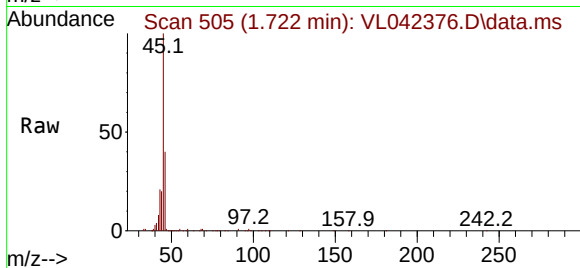




#13
Ethanol
Concen: 16.643 ppbv
RT: 1.722 min Scan# 504
Delta R.T. 0.003 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

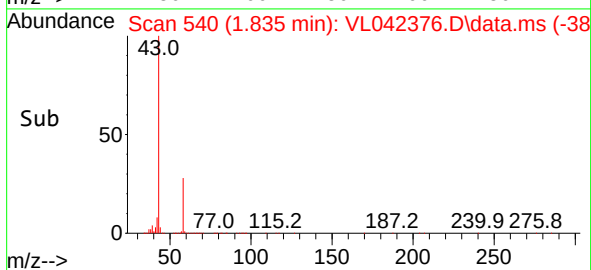
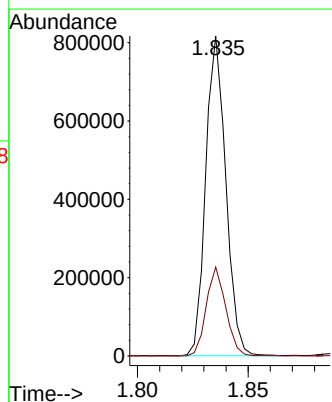
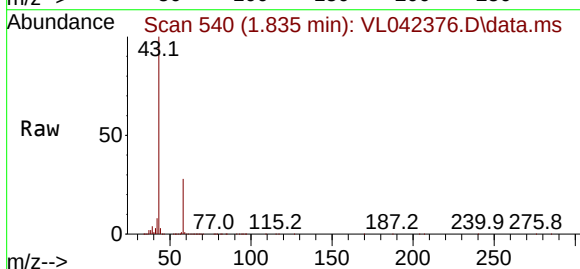
Instrument :
MSVOA_1
ClientSampleId :
IA-DUP-3-03312025DL

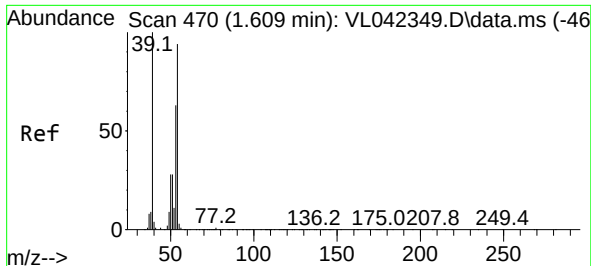
Tgt Ion: 45 Resp: 20340
Ion Ratio Lower Upper
45 100
46 40.5 21.9 87.7



#15
Acetone
Concen: 31.420 ppbv
RT: 1.835 min Scan# 540
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 43 Resp: 516180
Ion Ratio Lower Upper
43 100
58 27.1 22.4 33.6





#16

1,3-Butadiene

Concen: 0.224 ppbv

RT: 1.622 min Scan# 41

Delta R.T. 0.013 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Instrument :

MSVOA_L

ClientSampleId :

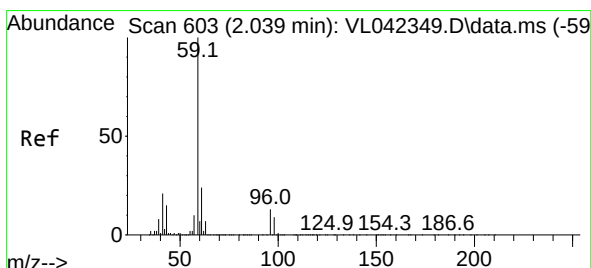
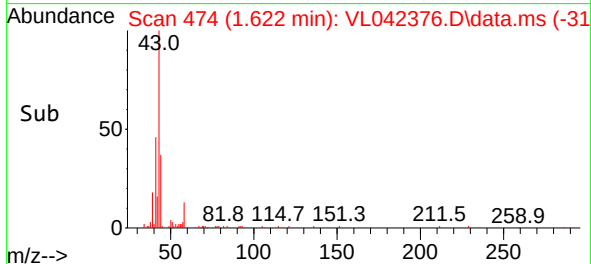
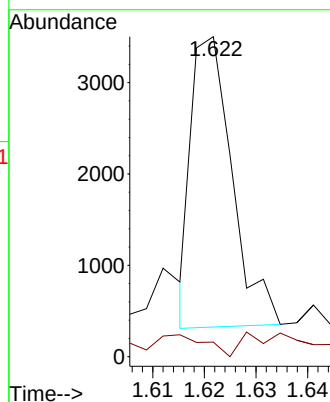
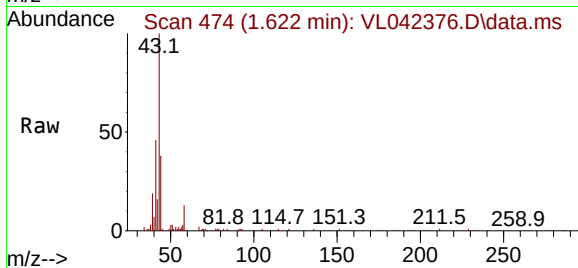
IA-DUP-3-03312025DL

Tgt Ion: 39 Resp: 1757

Ion Ratio Lower Upper

39 100

54 9.4 64.9 97.3#



#17

tert-Butyl alcohol

Concen: 0.036 ppbv

RT: 2.046 min Scan# 605

Delta R.T. 0.006 min

Lab File: VL042376.D

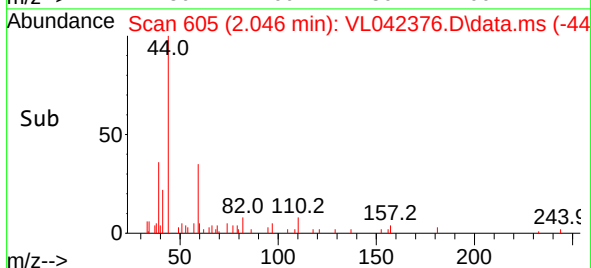
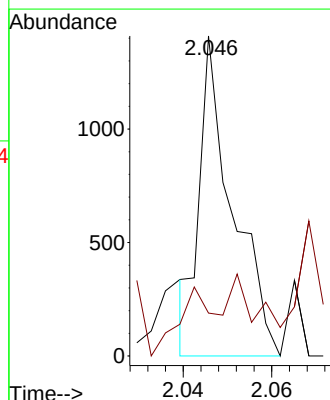
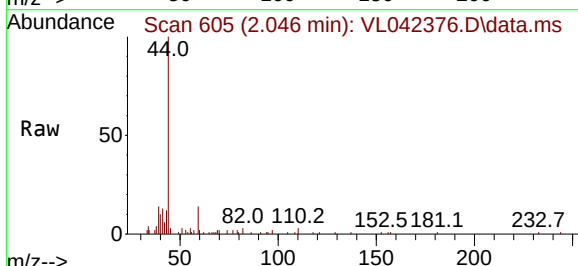
Acq: 18 Apr 2025 01:30

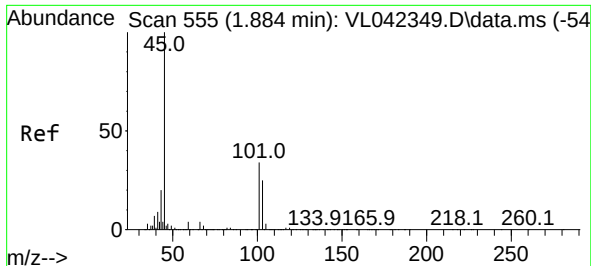
Tgt Ion: 59 Resp: 728

Ion Ratio Lower Upper

59 100

57 103.0 8.7 13.1#

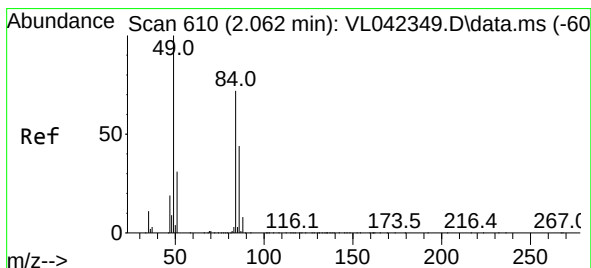
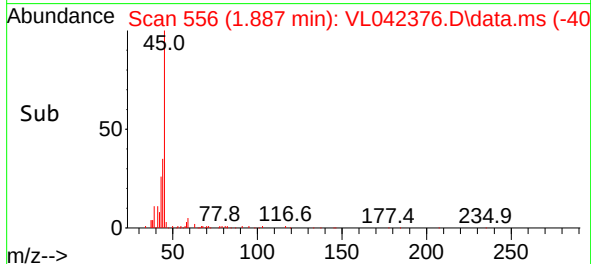
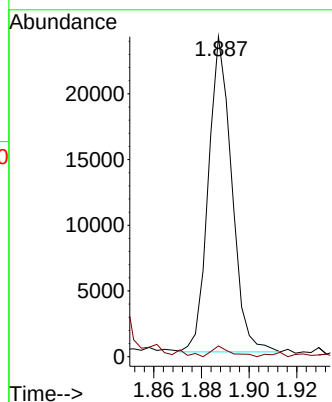
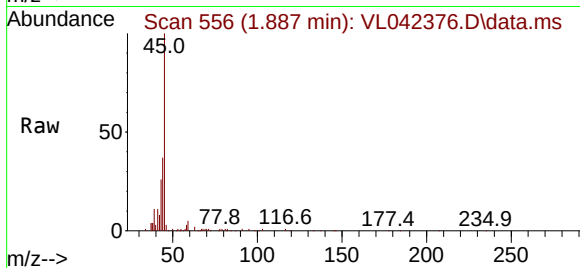




#19
Isopropyl Alcohol
Concen: 1.797 ppbv
RT: 1.887 min Scan# 51
Delta R.T. 0.003 min
Lab File: VL042376.D
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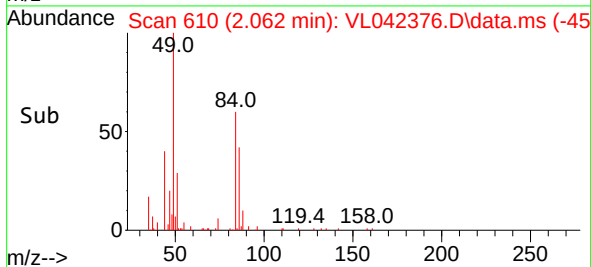
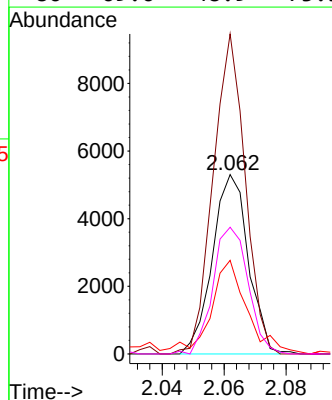
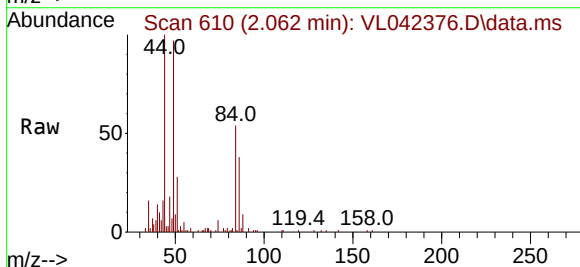
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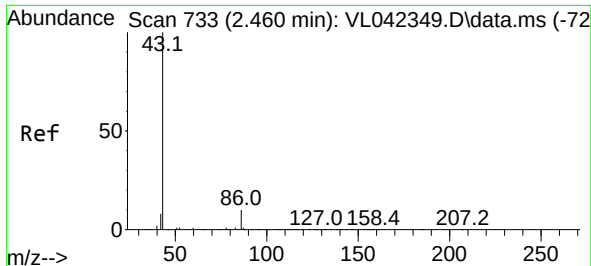
Tgt Ion: 45 Resp: 16398
Ion Ratio Lower Upper
45 100
58 851.7 34.5 51.7#



#20
Methylene Chloride
Concen: 0.665 ppbv
RT: 2.062 min Scan# 610
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 84 Resp: 4276
Ion Ratio Lower Upper
84 100
49 178.4 111.6 167.4#
51 49.6 35.1 52.7
86 69.6 48.9 73.3

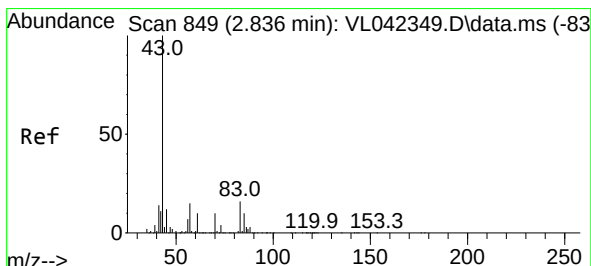
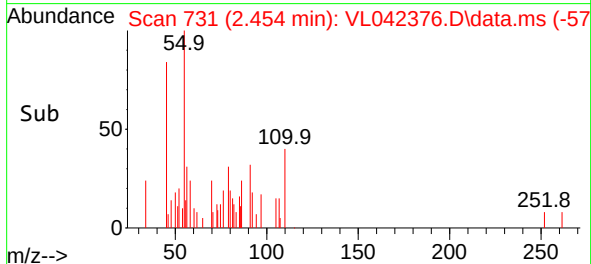
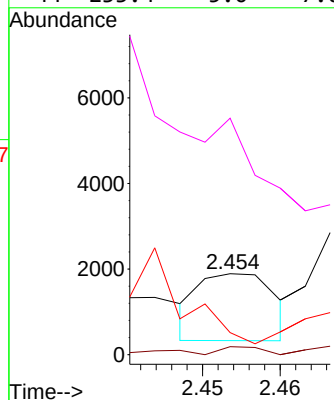
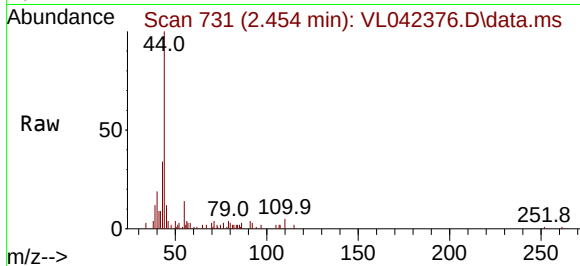




#23
 Vinyl Acetate
 Concen: 0.160 ppbv
 RT: 2.454 min Scan# 71
 Delta R.T. -0.007 min
 Lab File: VL042376.D
 Acq: 18 Apr 2025 01:30

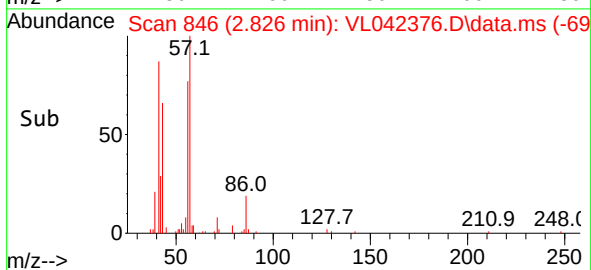
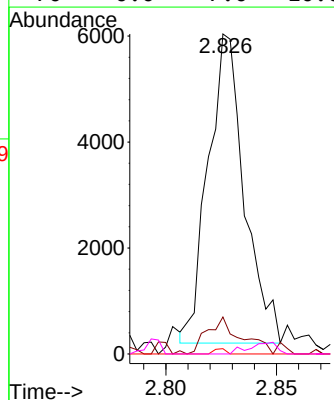
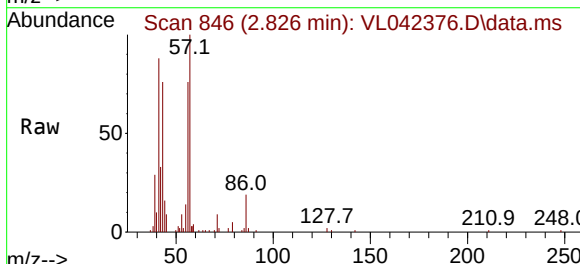
Instrument :
 MSVOA_1
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 IA-DUP-3-03312025DL

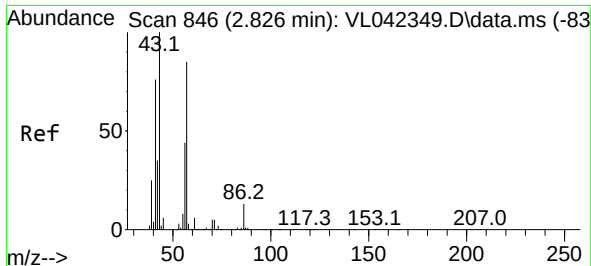
Tgt Ion:	43	Resp:	1065
Ion	Ratio	Lower	Upper
43	100		
86	26.6	6.5	9.7#
42	0.0	7.8	11.8#
44	233.4	5.0	7.6#



#25
 Ethyl Acetate
 Concen: 0.164 ppbv
 RT: 2.826 min Scan# 846
 Delta R.T. -0.010 min
 Lab File: VL042376.D
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Tgt Ion:	43	Resp:	6629
Ion	Ratio	Lower	Upper
43	100		
45	12.4	8.3	12.5
61	0.6	7.3	10.9#
70	0.0	7.0	10.6#

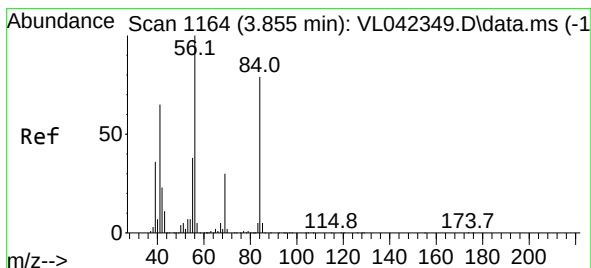
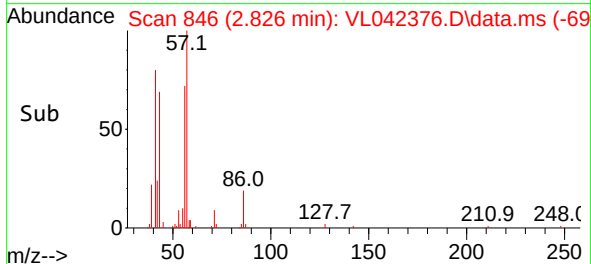
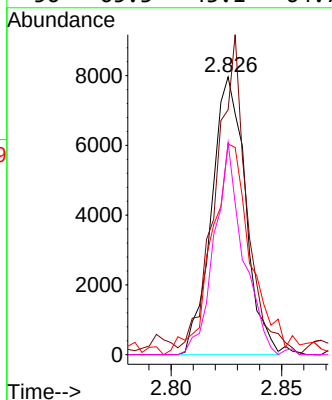
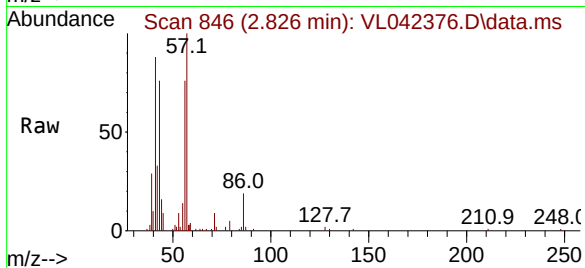




#26
Hexane
Concen: 0.517 ppbv
RT: 2.826 min Scan# 846
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

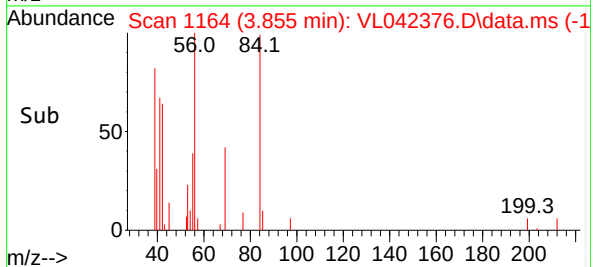
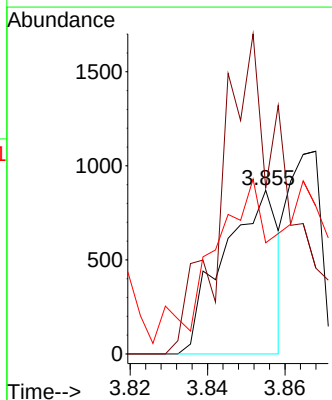
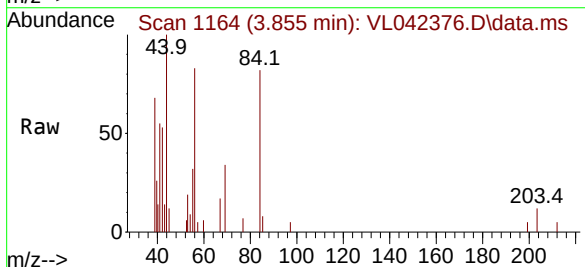
Instrument :
MSVOA_1
ClientSampleId :
IA-DUP-3-03312025DL

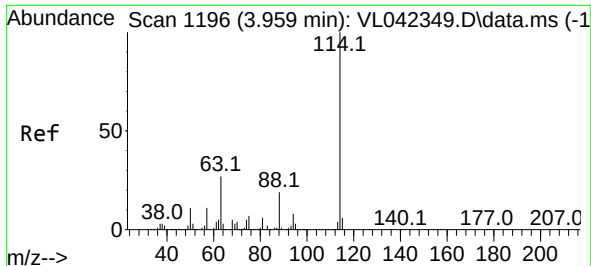
Tgt Ion: 57 Resp: 8480
Ion Ratio Lower Upper
57 100
41 104.3 77.9 116.9
43 84.6 208.4 312.6#
56 65.3 43.1 64.7#



#30
Cyclohexane
Concen: 0.065 ppbv
RT: 3.855 min Scan# 1164
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 84 Resp: 856
Ion Ratio Lower Upper
84 100
56 255.0 101.0 151.4#
41 229.6 67.4 101.0#

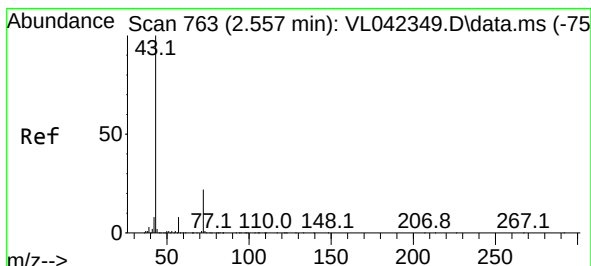
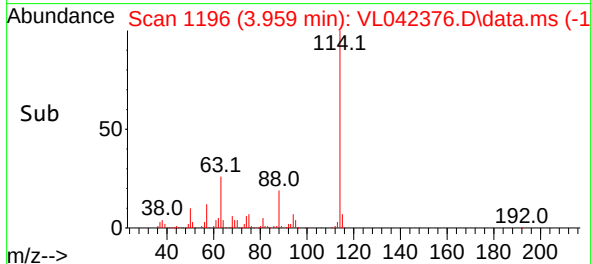
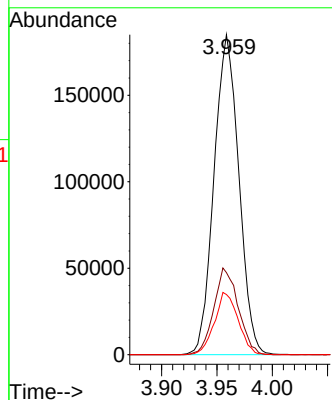
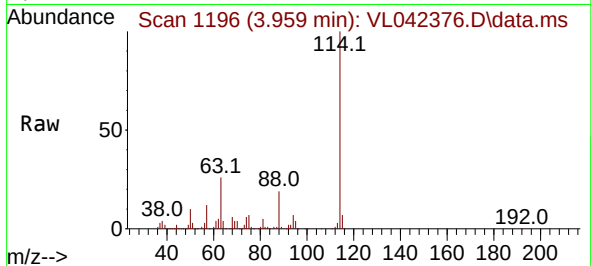




#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 3.959 min Scan# 1196
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

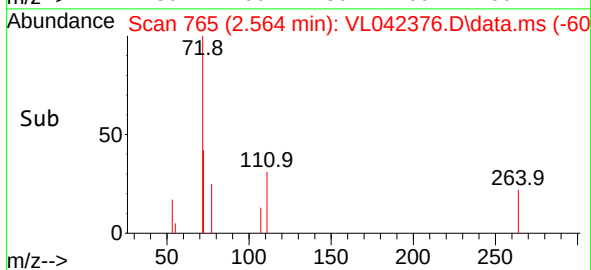
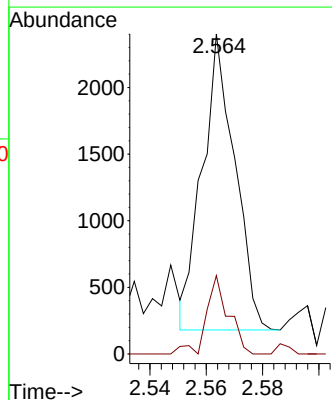
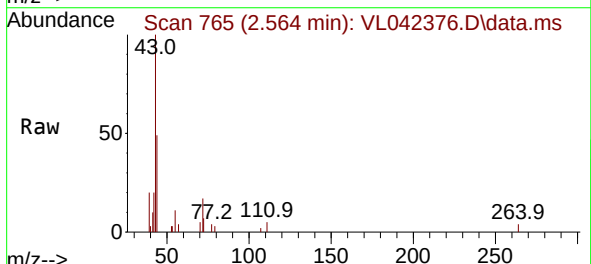
Instrument :
MSVOA_L
ClientSampleId :
IA-DUP-3-03312025DL

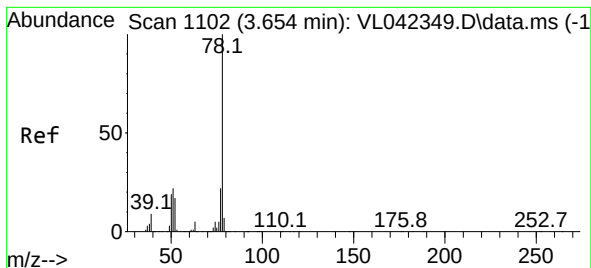
Tgt Ion:114 Resp: 288404
Ion Ratio Lower Upper
114 100
63 26.7 21.8 32.6
88 18.6 15.5 23.3



#34
2-Butanone
Concen: 0.078 ppbv
RT: 2.564 min Scan# 765
Delta R.T. 0.006 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 43 Resp: 1784
Ion Ratio Lower Upper
43 100
72 19.5 18.2 27.2





#36

Benzene

Concen: 0.099 ppbv

RT: 3.658 min Scan# 1103

Delta R.T. 0.003 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

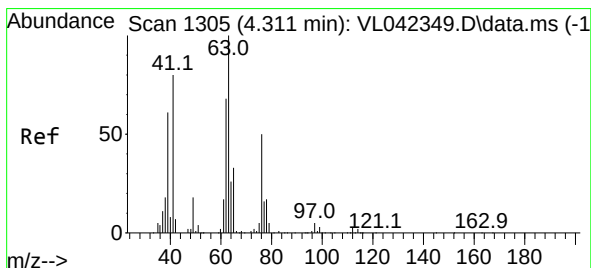
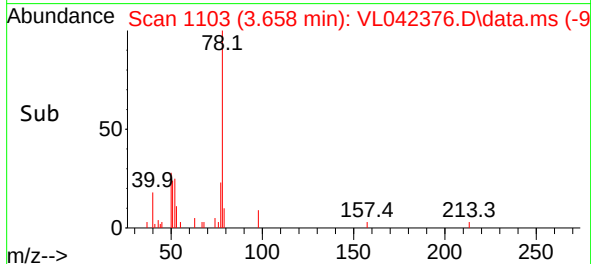
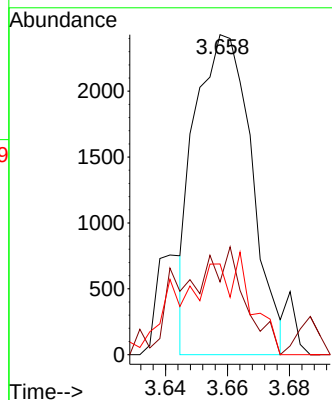
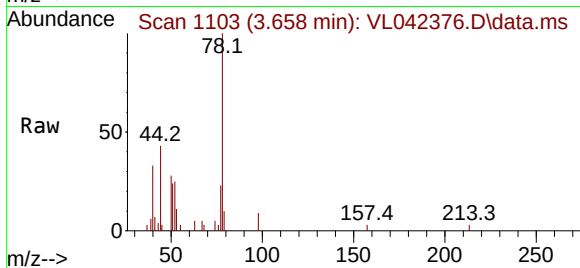
Instrument :

MSVOA_L

ClientSampleId :

IA-DUP-3-03312025DL

Tgt Ion: 78	Resp: 3080
Ion Ratio	Lower Upper
78 100	
77 25.5	17.4 26.0
50 52.0	15.5 23.3



#39

1,2-Dichloropropane

Concen: 6.639 ppbv

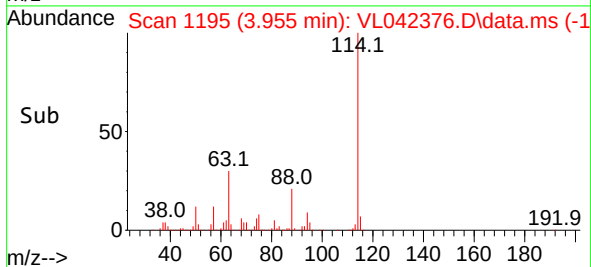
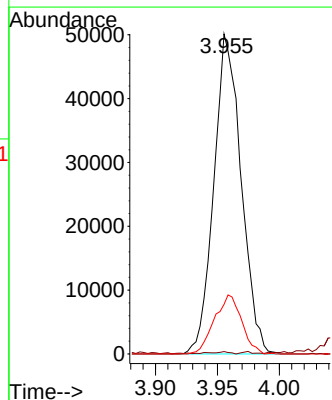
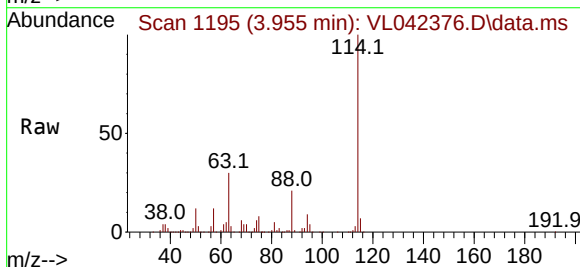
RT: 3.955 min Scan# 1195

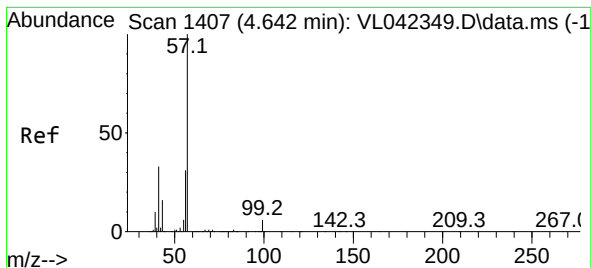
Delta R.T. -0.356 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Tgt Ion: 63	Resp: 76957
Ion Ratio	Lower Upper
63 100	
41 0.5	64.2 96.2
62 15.5	54.3 81.5





#44

2,2,4-Trimethylpentane

Concen: 1.018 ppbv

RT: 4.641 min Scan# 1407

Delta R.T. -0.000 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

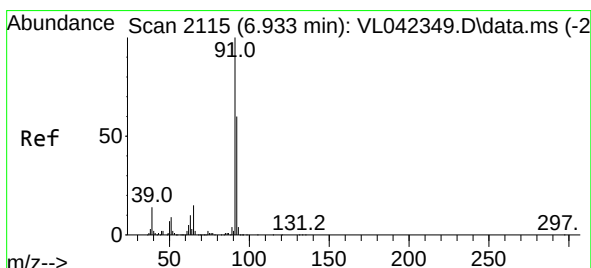
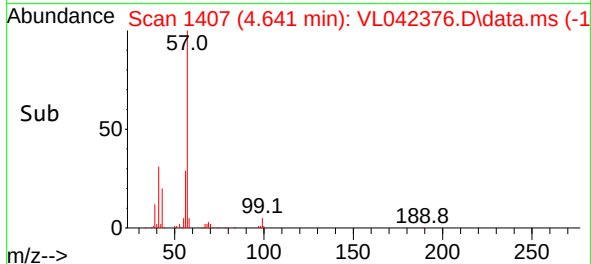
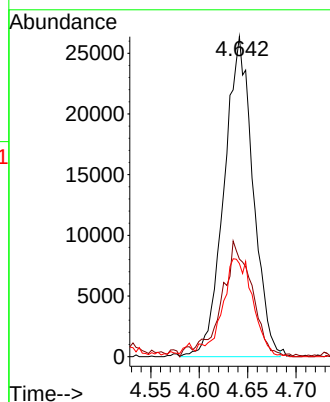
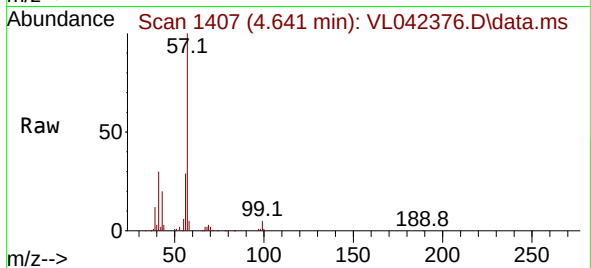
Instrument :

MSVOA_L

ClientSampleId :

IA-DUP-3-03312025DL

Tgt Ion:	57	Resp:	54714
Ion	Ratio	Lower	Upper
57	100		
41	38.6	27.2	40.8
56	34.7	25.7	38.5



#53

Toluene

Concen: 2.874 ppbv

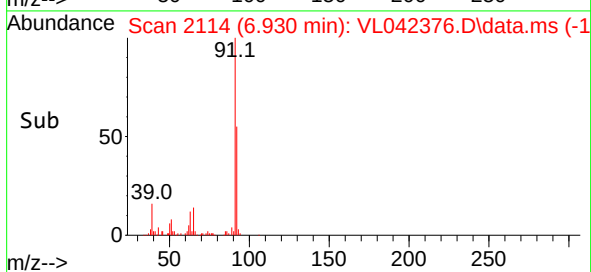
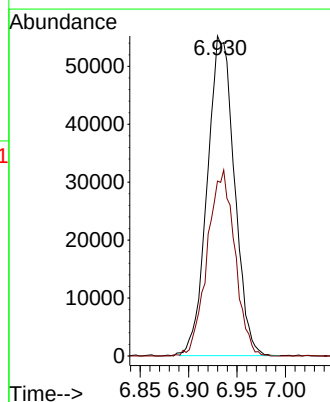
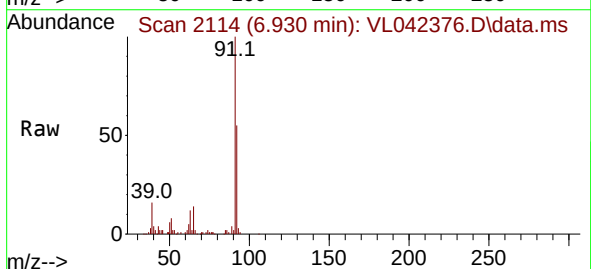
RT: 6.930 min Scan# 2114

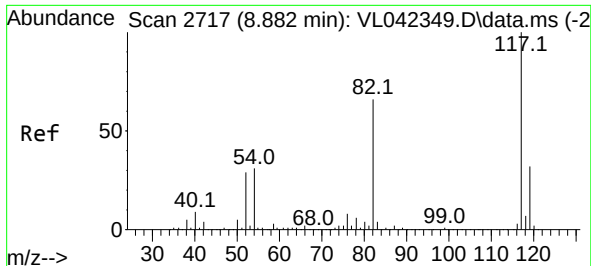
Delta R.T. -0.003 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Tgt Ion:	91	Resp:	107299
Ion	Ratio	Lower	Upper
91	100		
92	59.1	48.2	72.4

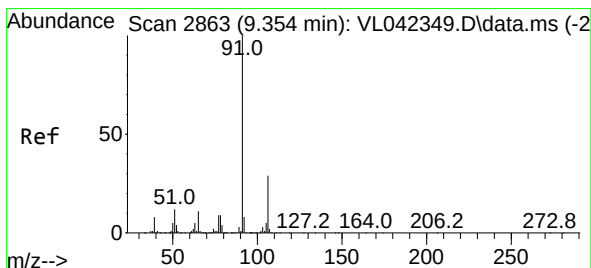
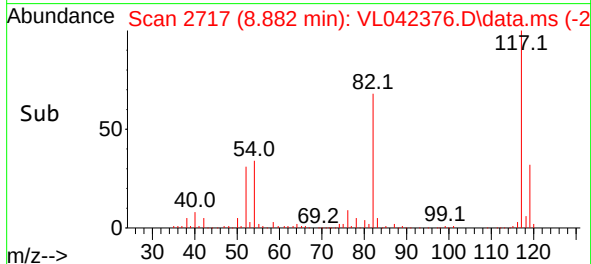
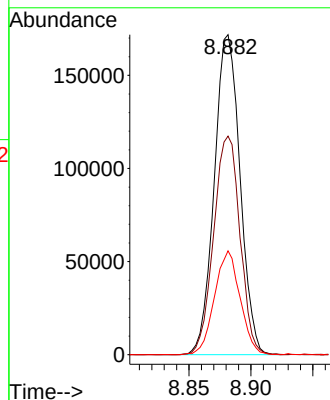
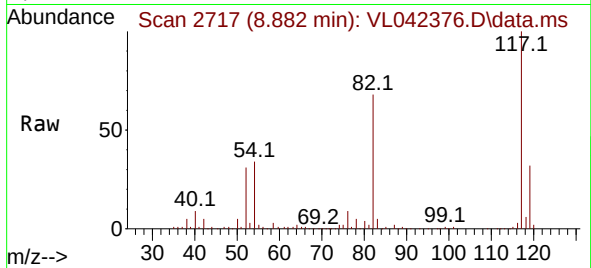




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 8.882 min Scan# 21
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

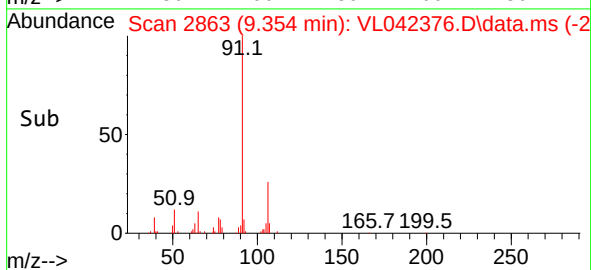
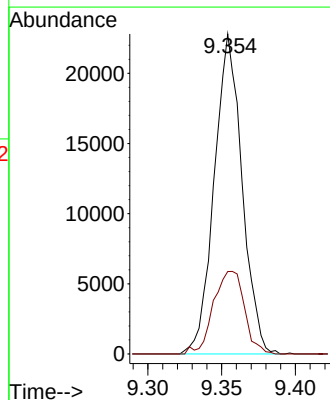
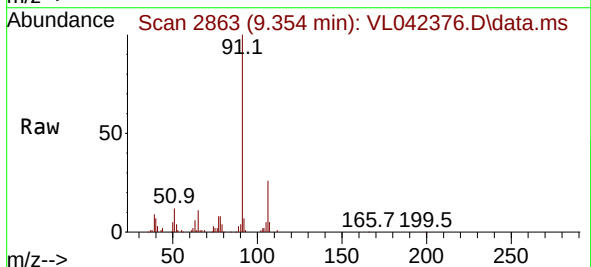
Instrument :
MSVOA_L
ClientSampleId :
IA-DUP-3-03312025DL

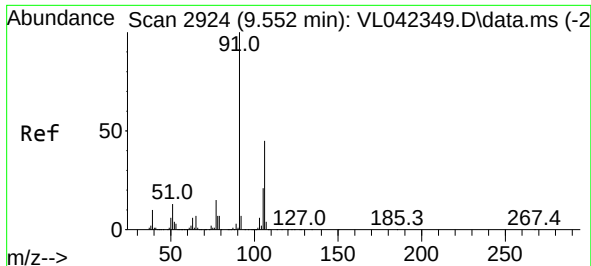
Tgt Ion:117 Resp: 249449
Ion Ratio Lower Upper
117 100
82 69.7 57.8 86.6
119 32.2 25.2 37.8



#58
Ethyl Benzene
Concen: 0.605 ppbv
RT: 9.354 min Scan# 2863
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 91 Resp: 29882
Ion Ratio Lower Upper
91 100
106 25.8 23.0 34.4





#59

m/p-Xylene

Concen: 2.217 ppbv

RT: 9.529 min Scan# 2917

Delta R.T. -0.023 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Instrument :

MSVOA_L

ClientSampleId :

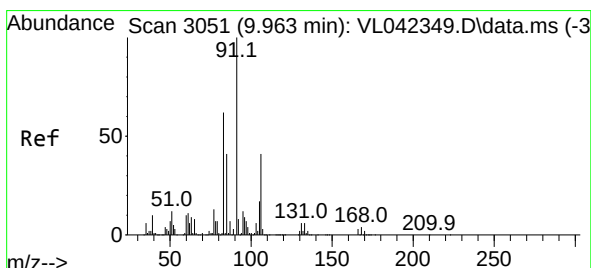
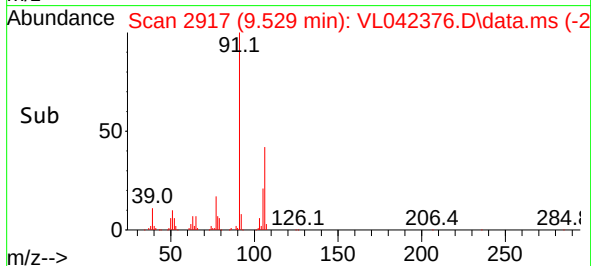
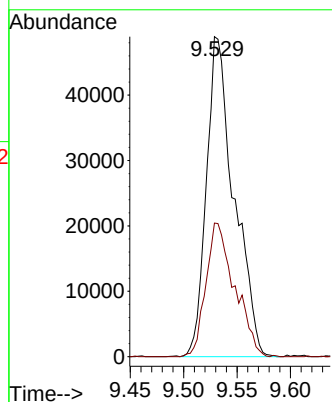
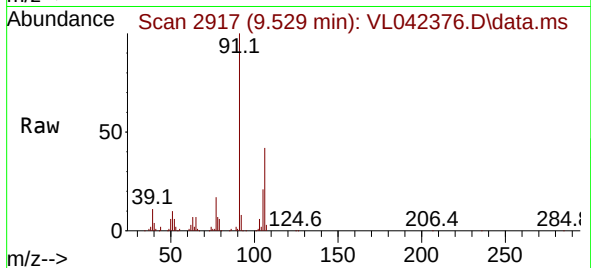
IA-DUP-3-03312025DL

Tgt Ion: 91 Resp: 88263

Ion Ratio Lower Upper

91 100

106 43.4 35.4 53.2



#60

o-Xylene

Concen: 0.859 ppbv

RT: 9.963 min Scan# 3051

Delta R.T. -0.000 min

Lab File: VL042376.D

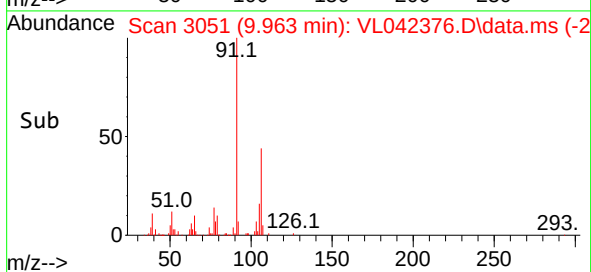
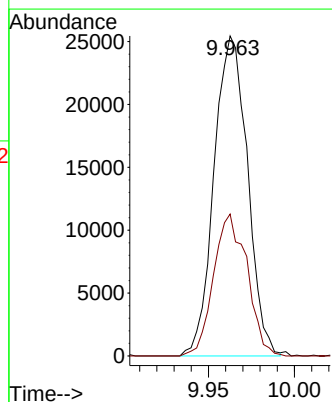
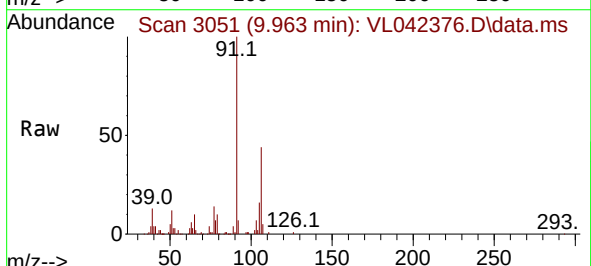
Acq: 18 Apr 2025 01:30

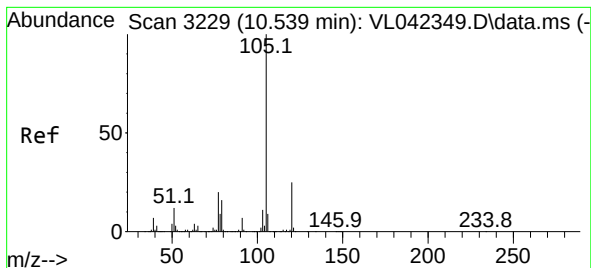
Tgt Ion: 91 Resp: 34430

Ion Ratio Lower Upper

91 100

106 44.3 21.1 63.4





#62

Isopropylbenzene

Concen: 0.059 ppbv

RT: 10.542 min Scan# 31

Delta R.T. 0.003 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Instrument :

MSVOA_L

ClientSampleId :

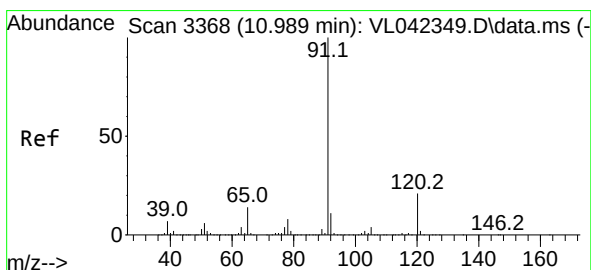
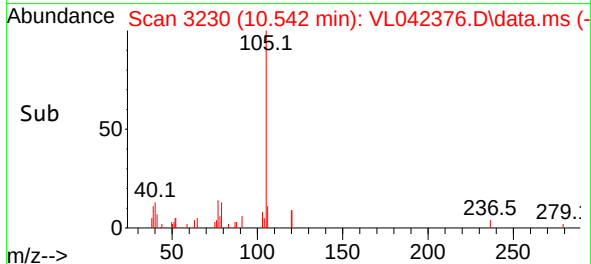
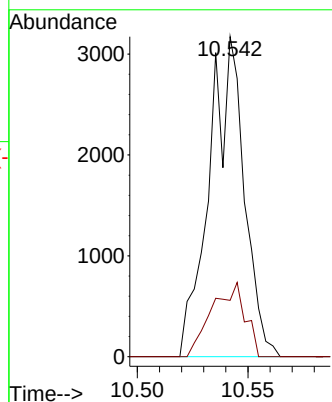
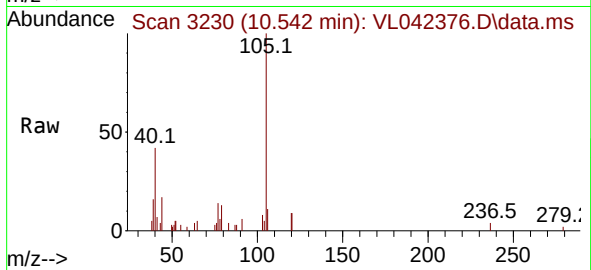
IA-DUP-3-03312025DL

Tgt Ion:105 Resp: 3486

Ion Ratio Lower Upper

105 100

120 22.0 19.8 29.8



#64

n-propylbenzene

Concen: 0.158 ppbv

RT: 10.992 min Scan# 3369

Delta R.T. 0.003 min

Lab File: VL042376.D

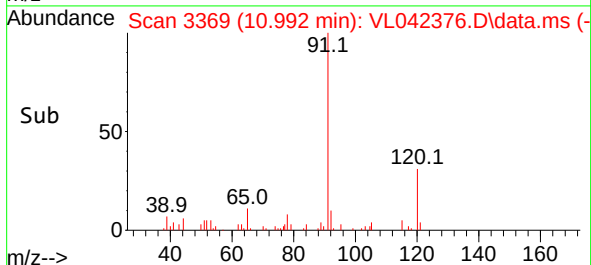
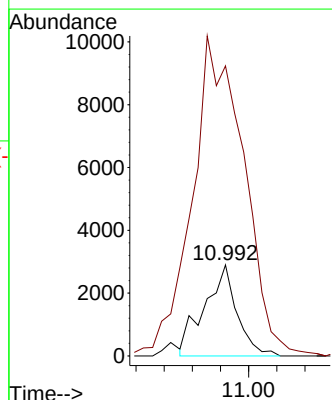
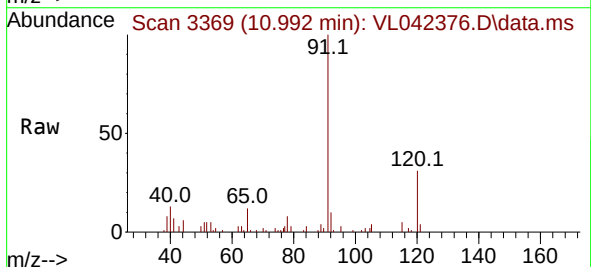
Acq: 18 Apr 2025 01:30

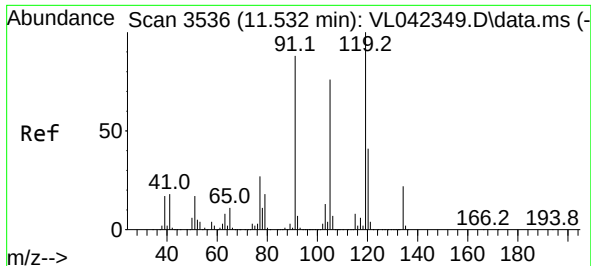
Tgt Ion:120 Resp: 2336

Ion Ratio Lower Upper

120 100

91 559.2 392.4 588.6

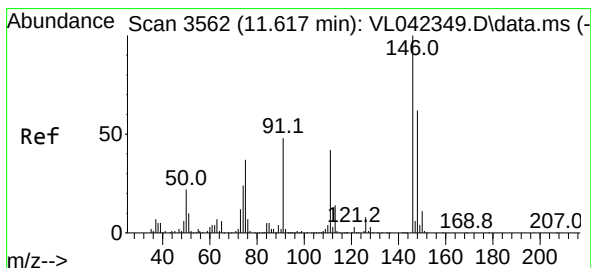
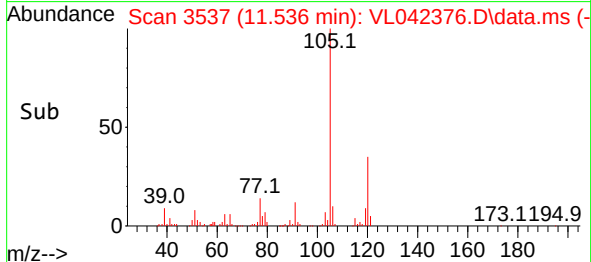
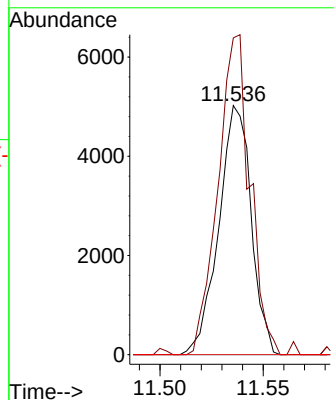
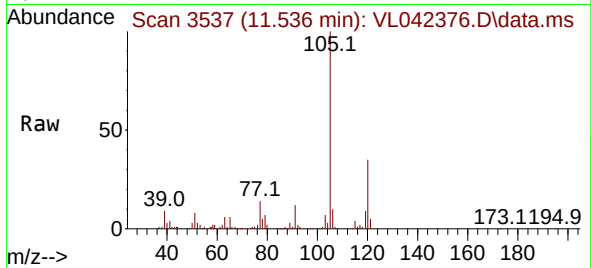




#65
tert-Butylbenzene
Concen: 0.101 ppbv
RT: 11.536 min Scan# 3536
Delta R.T. 0.003 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

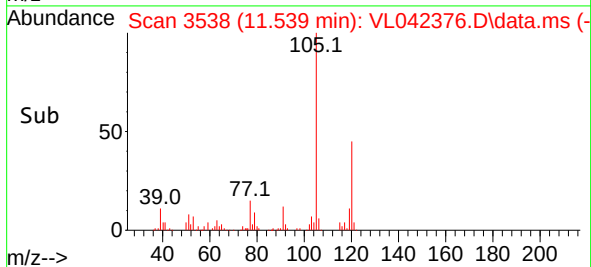
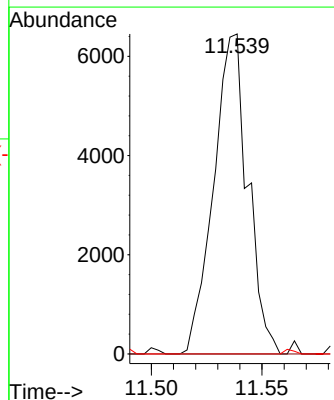
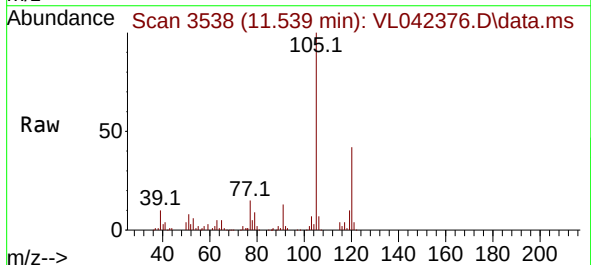
Instrument :
MSVOA_L
ClientSampleId :
IA-DUP-3-03312025DL

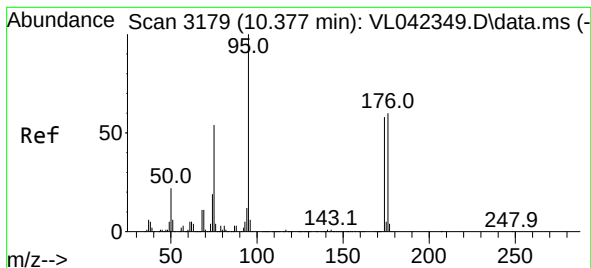
Tgt Ion:119 Resp: 5490
Ion Ratio Lower Upper
119 100
91 128.3 74.6 111.8#
134 0.0 18.8 28.2#



#66
Benzyl Chloride
Concen: 1.170 ppbv
RT: 11.539 min Scan# 3538
Delta R.T. -0.078 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 91 Resp: 6956
Ion Ratio Lower Upper
91 100
126 0.1 11.8 17.6#
128 0.4 4.5 6.7#

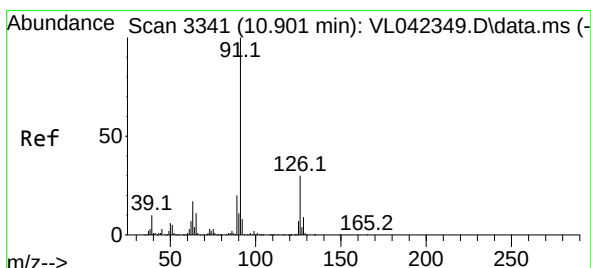
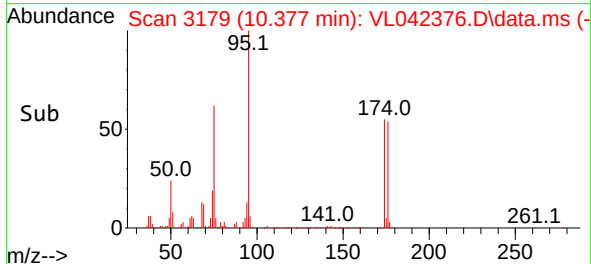
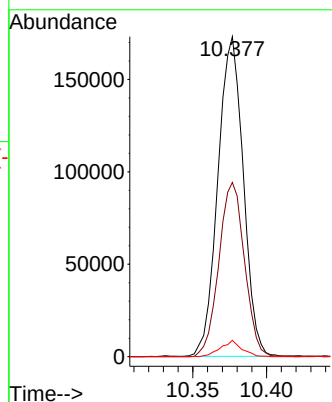
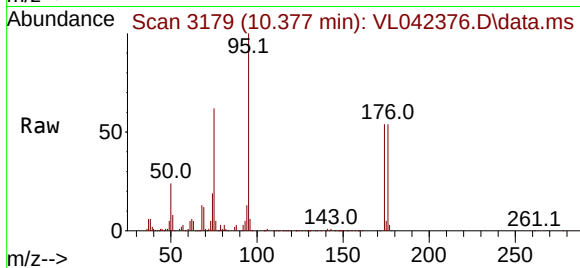




#68
1-Bromo-4-Fluorobenzene
Concen: 10.106 ppbv
RT: 10.377 min Scan# 3179
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

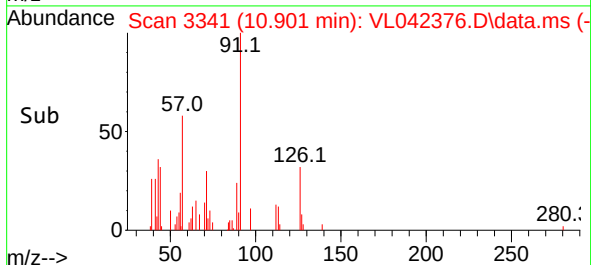
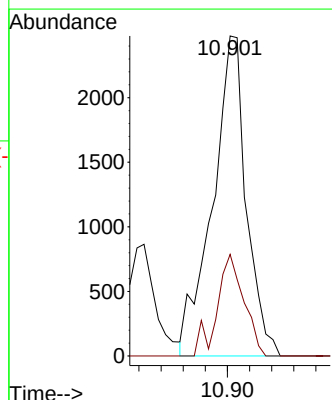
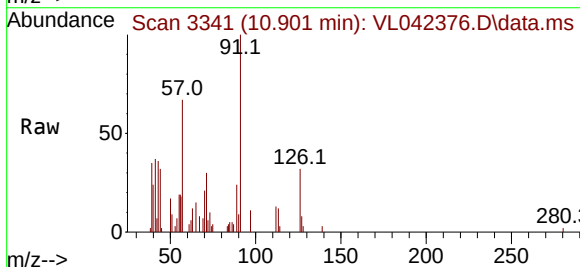
Instrument :
MSVOA_L
ClientSampleId :
IA-DUP-3-03312025DL

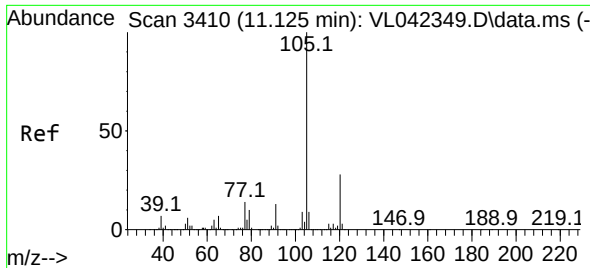
Tgt Ion: 95 Resp: 207163
Ion Ratio Lower Upper
95 100
174 54.9 48.5 72.7
175 4.3 3.7 5.5



#71
2-Chlorotoluene
Concen: 0.057 ppbv
RT: 10.901 min Scan# 3341
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion: 91 Resp: 2632
Ion Ratio Lower Upper
91 100
126 25.2 11.4 45.4

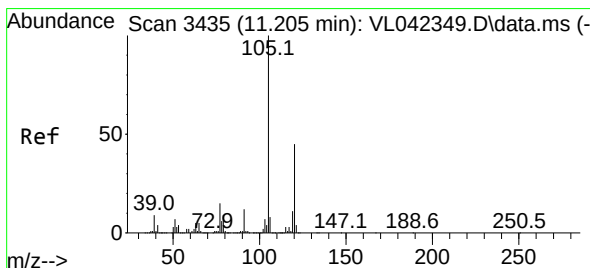
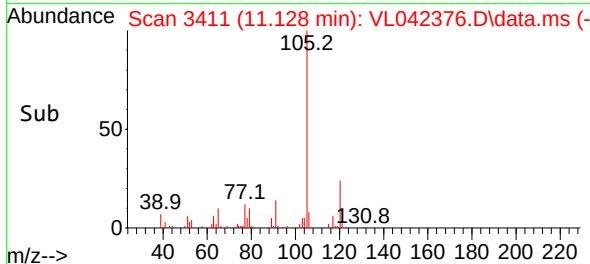
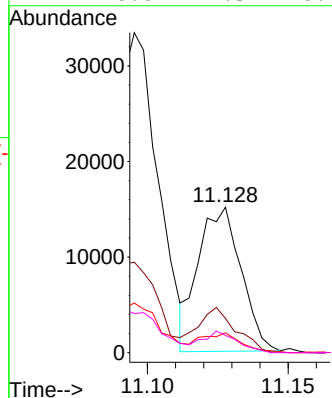
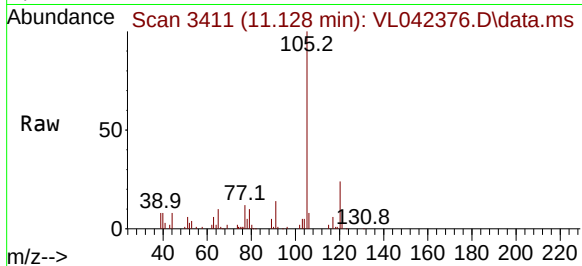




#72
4-Ethyltoluene
Concen: 0.325 ppbv
RT: 11.128 min Scan# 3410
Delta R.T. 0.003 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

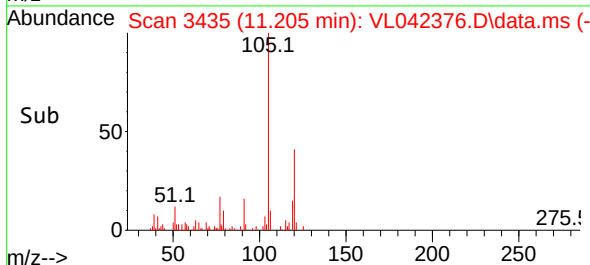
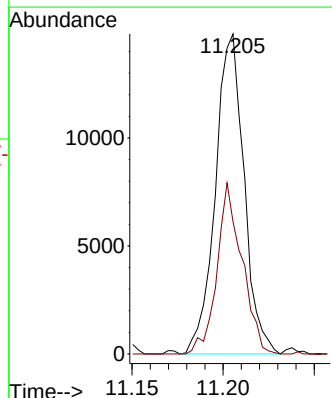
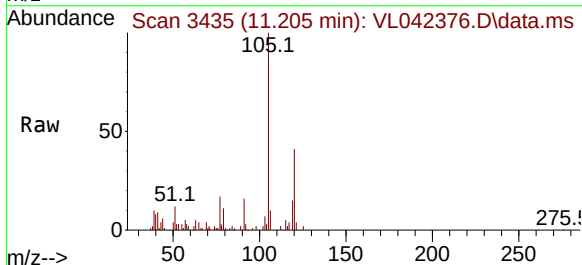
Instrument :
MSVOA_1
ClientSampleId :
IA-DUP-3-03312025DL

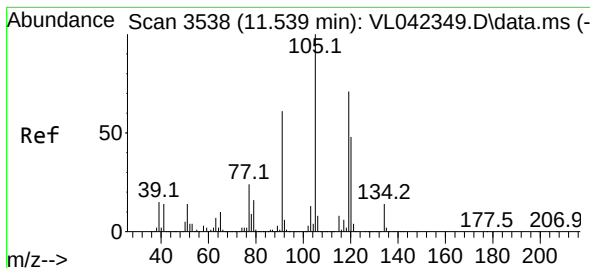
Tgt Ion:	105	Resp:	15927
Ion	Ratio	Lower	Upper
105	100		
120	0.0	23.2	34.8#
91	0.0	10.4	15.6#
77	0.0	11.3	16.9#



#73
1,3,5-Trimethylbenzene
Concen: 0.375 ppbv
RT: 11.205 min Scan# 3435
Delta R.T. -0.000 min
Lab File: VL042376.D
Acq: 18 Apr 2025 01:30

Tgt Ion:	105	Resp:	16220
Ion	Ratio	Lower	Upper
105	100		
120	41.4	35.6	53.4





#74

1,2,4-Trimethylbenzene

Concen: 1.132 ppbv

RT: 11.536 min Scan# 3537

Delta R.T. -0.003 min

Lab File: VL042376.D

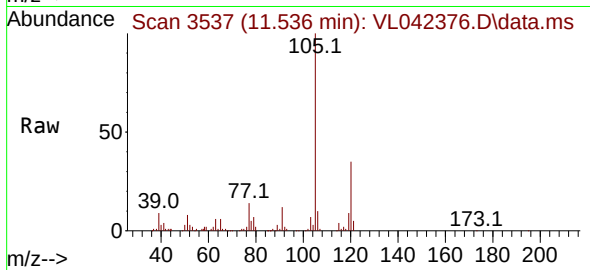
Acq: 18 Apr 2025 01:30

Instrument :

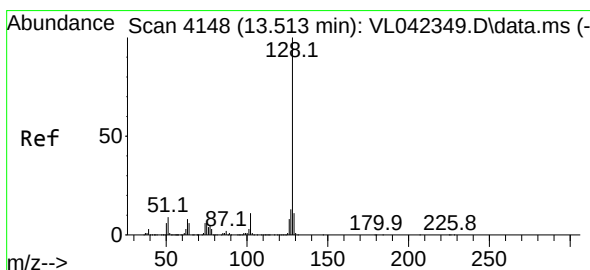
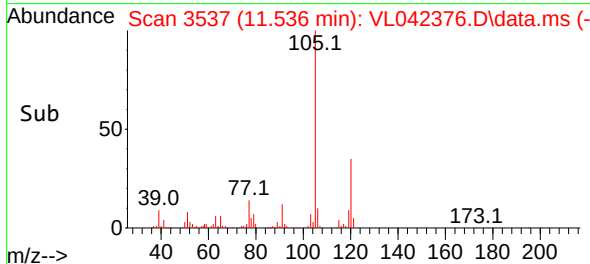
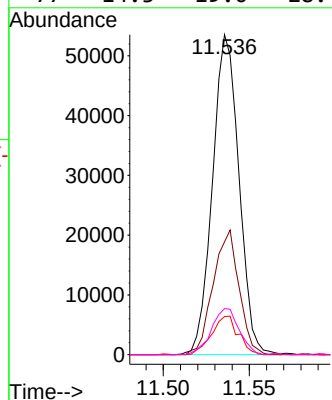
MSVOA_L

ClientSampleId :

IA-DUP-3-03312025DL



Tgt Ion:	105	Resp:	57208
Ion Ratio	Lower	Upper	
105	100		
120	35.2	38.1	57.1#
91	11.9	48.8	73.2#
77	14.3	19.0	28.4#



#79

Naphthalene

Concen: 0.076 ppbv

RT: 13.516 min Scan# 4149

Delta R.T. 0.003 min

Lab File: VL042376.D

Acq: 18 Apr 2025 01:30

Tgt Ion:	128	Resp:	4610
Ion Ratio	Lower	Upper	
128	100		
127	10.9	10.6	15.8
129	8.4	8.6	12.8#

