

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL041923\
 Data File : VL040379.D
 Acq On : 19 Apr 2023 14:32
 Operator : SY/MD
 Sample : 02368-02DUP
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

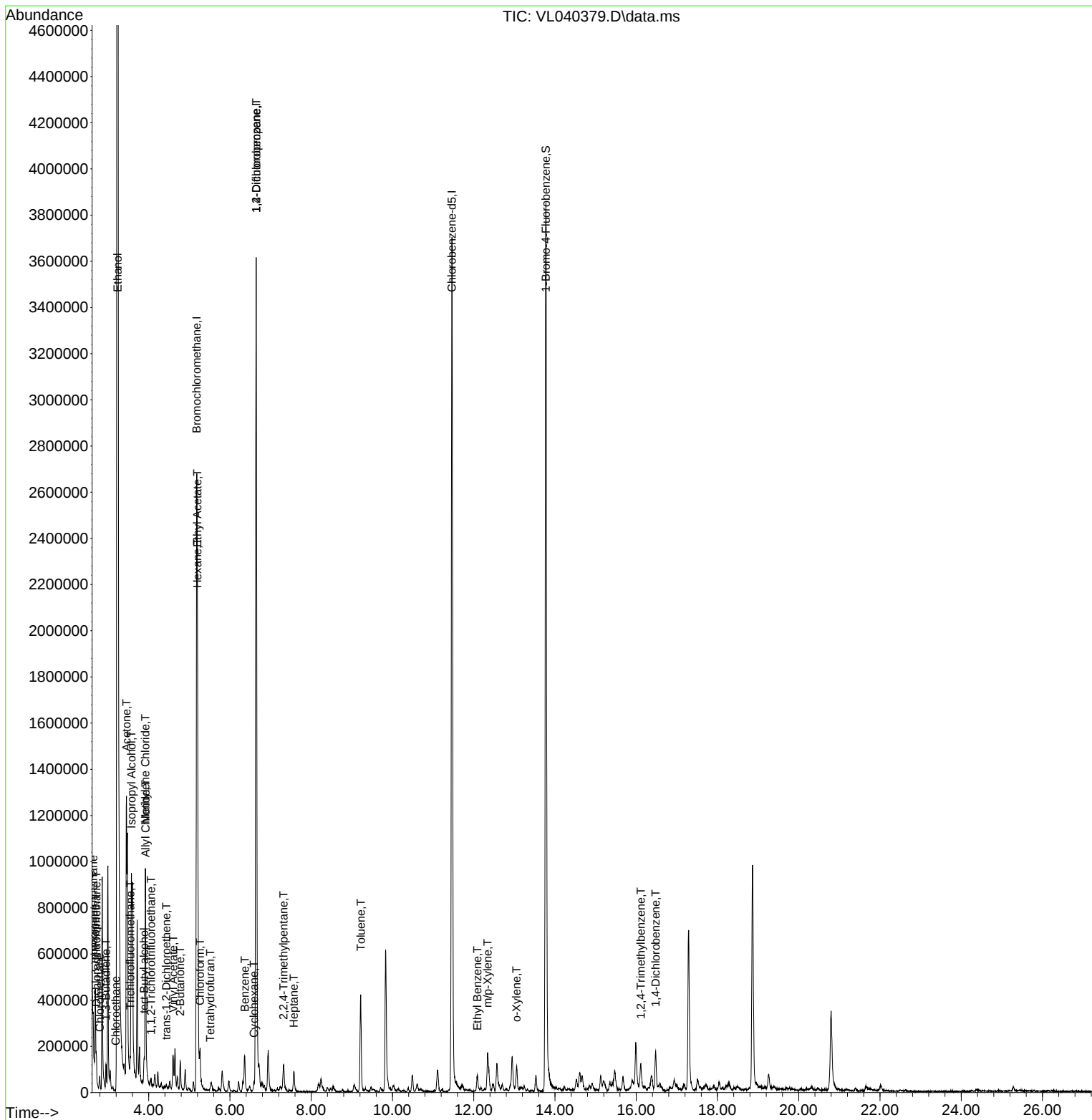
Quant Time: Apr 20 05:10:02 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL041323AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Thu Apr 13 14:37:02 2023
 Response via : Initial Calibration

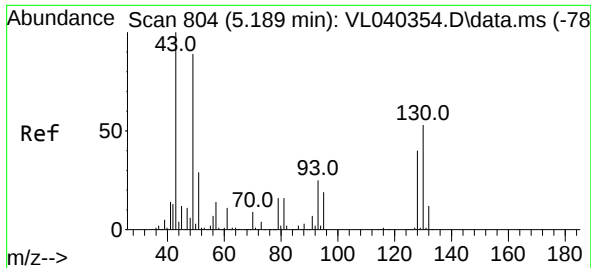
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Internal Standards						
1) Bromochloromethane	5.182	49	1090278	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	6.645	114	2655637	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.465	117	2352226	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.777	95	1920223	9.872	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.710	85	81511	0.415	ppbv	98
3) Chlorodifluoromethane	2.636	51	155585	1.092	ppbv #	74
4) Chloromethane	2.796	50	47780	0.531	ppbv	89
7) Chloroethane	3.185	64	1504	0.053	ppbv #	82
9) Propene	2.684	41	96397	1.713	ppbv #	82
10) Heptane	7.568	43	18575	0.145	ppbv #	25
11) Trichlorofluoromethane	3.549	101	23364	0.117	ppbv	94
12) 1,1,2-Trichlorotrifluo...	4.057	101	10674	0.077	ppbv	91
13) Ethanol	3.234	45	12700635	2703.044	ppbv	96
15) Acetone	3.452	43	1407127	9.112	ppbv	99
16) 1,3-Butadiene	2.951	39	27853	0.436	ppbv #	43
17) tert-Butyl alcohol	3.886	59	56348	0.397	ppbv	99
19) Isopropyl Alcohol	3.574	45	1048009	14.874	ppbv #	96
20) Methylene Chloride	3.918	84	315124	5.111	ppbv	95
21) Allyl Chloride	3.925	41	2764	0.032	ppbv #	1
22) trans-1,2-Dichloroethene	4.436	96	3467	0.055	ppbv #	56
23) Vinyl Acetate	4.607	43	128186	3.260	ppbv #	76
25) Ethyl Acetate	5.198	43	435987	1.678	ppbv #	88
26) Hexane	5.201	57	506942	4.628	ppbv #	43
29) Chloroform	5.262	83	77774	0.399	ppbv	89
30) Cyclohexane	6.587	84	6518	0.077	ppbv #	1
34) 2-Butanone	4.777	43	135165	0.944	ppbv	99
36) Benzene	6.365	78	124620	0.575	ppbv	97
39) 1,2-Dichloropropane	6.645	63	678099	7.954	ppbv #	24
41) Tetrahydrofuran	5.516	42	2455	0.031	ppbv #	24
44) 2,2,4-Trimethylpentane	7.320	57	58511	0.162	ppbv #	34
53) Toluene	9.220	91	297439	1.295	ppbv	99
58) Ethyl Benzene	12.089	91	50938	0.176	ppbv	97
59) m/p-Xylene	12.343	91	158172	0.594	ppbv	99
60) o-Xylene	13.053	91	39445	0.154	ppbv #	32
74) 1,2,4-Trimethylbenzene	16.114	105	72126	0.242	ppbv #	62
76) 1,4-Dichlorobenzene	16.481	146	8131	0.050	ppbv #	19

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

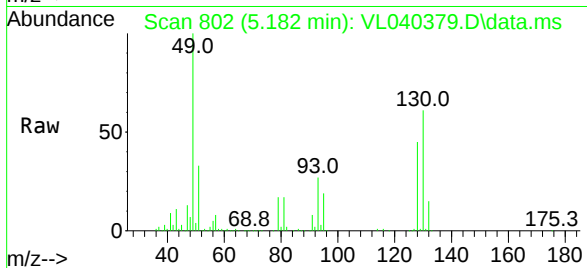
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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LFri Aug 26 06:05:16 2022
QLast Update : Thu Apr 13 14:37:02 2023
Response via : Initial Calibration



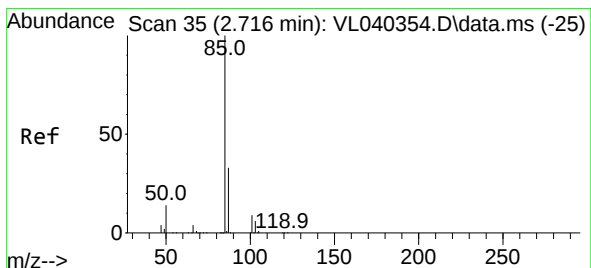
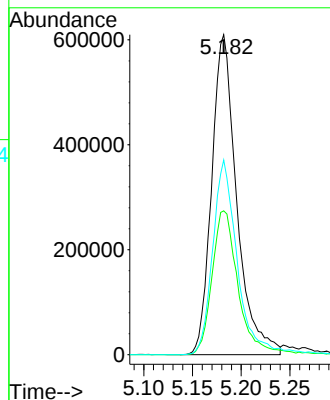
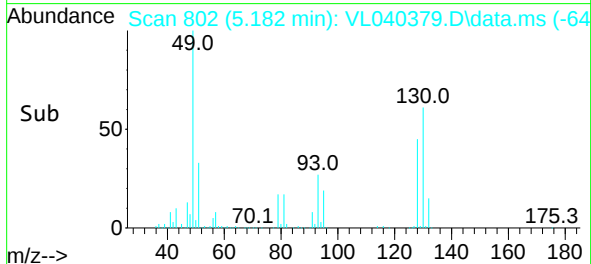


#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.182 min Scan# 80
 Delta R.T. -0.007 min
 Lab File: VL040379.D
 Acq: 19 Apr 2023 14:32

Instrument :
 MSVOA_L
 ClientSampleId :

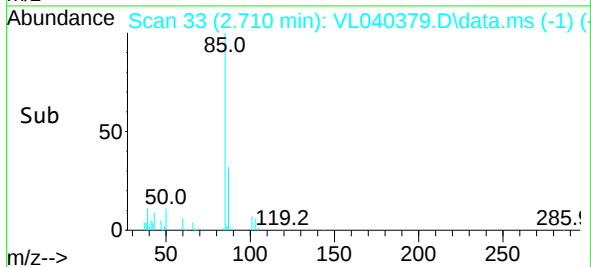
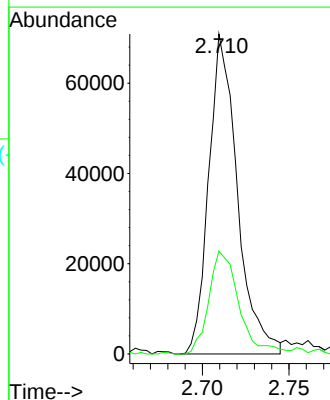
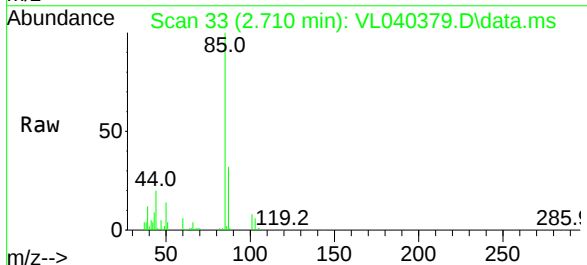


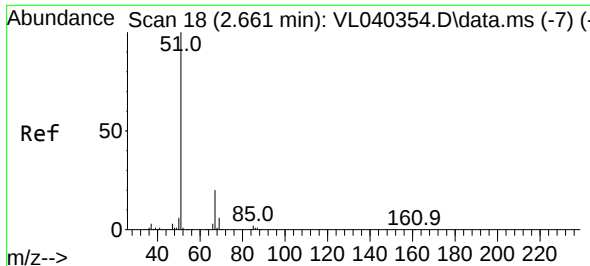
Tgt Ion: 49 Resp: 1090278
 Ion Ratio Lower Upper
 49 100
 128 47.3 23.7 71.1
 130 60.8 29.9 89.8



#2
 Dichlorodifluoromethane
 Concen: 0.415 ppbv
 RT: 2.710 min Scan# 33
 Delta R.T. -0.006 min
 Lab File: VL040379.D
 Acq: 19 Apr 2023 14:32

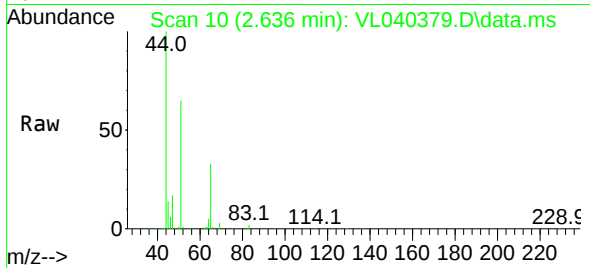
Tgt Ion: 85 Resp: 81511
 Ion Ratio Lower Upper
 85 100
 87 32.1 26.6 40.0



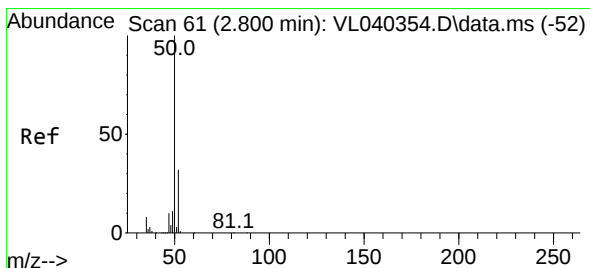
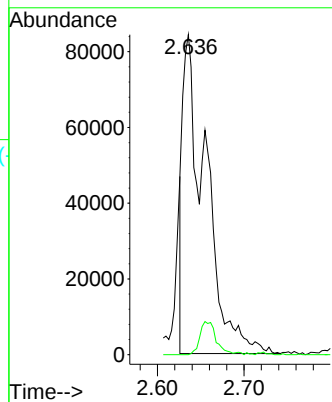
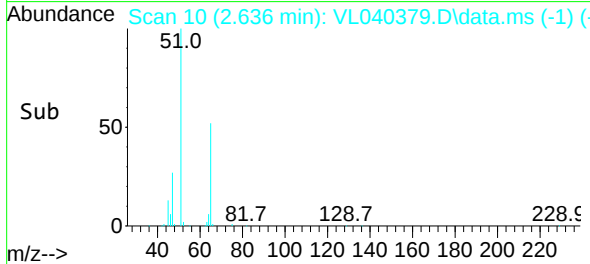


#3
Chlorodifluoromethane
Concen: 1.092 ppbv
RT: 2.636 min Scan# 10
Delta R.T. -0.025 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Instrument :
MSVOA_L
ClientSampleId :

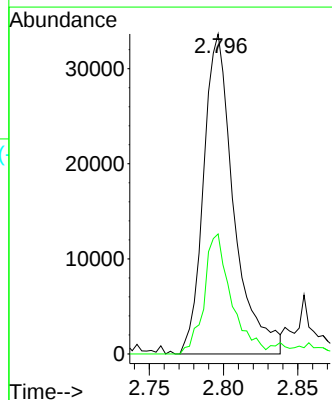
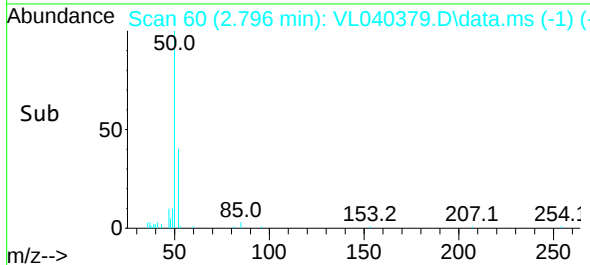
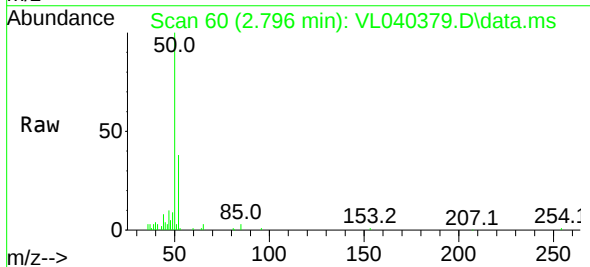


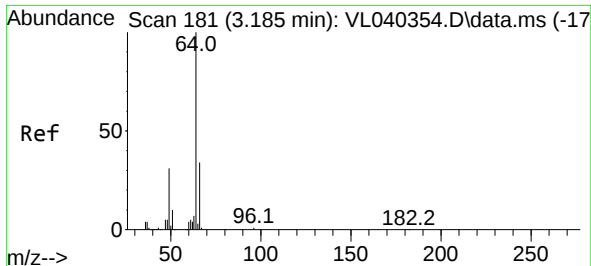
Tgt Ion: 51 Resp: 155585
Ion Ratio Lower Upper
51 100
67 7.6 15.5 23.3#



#4
Chloromethane
Concen: 0.531 ppbv
RT: 2.796 min Scan# 60
Delta R.T. -0.004 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 50 Resp: 47780
Ion Ratio Lower Upper
50 100
52 37.5 25.3 37.9

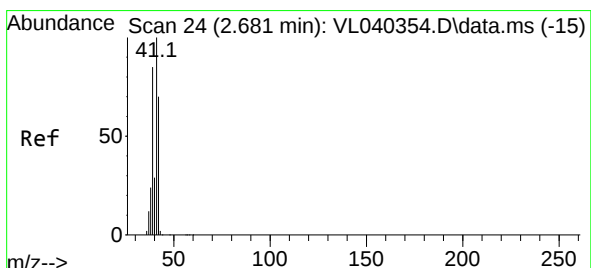
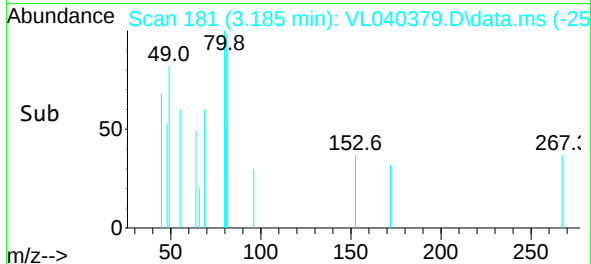
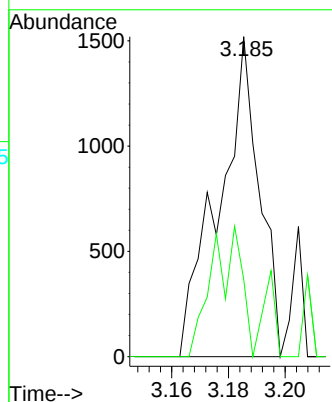
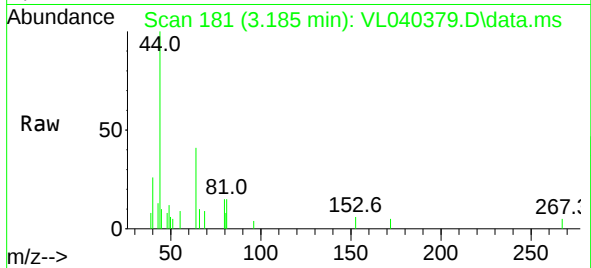




#7
Chloroethane
Concen: 0.053 ppbv
RT: 3.185 min Scan# 11
Delta R.T. 0.000 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

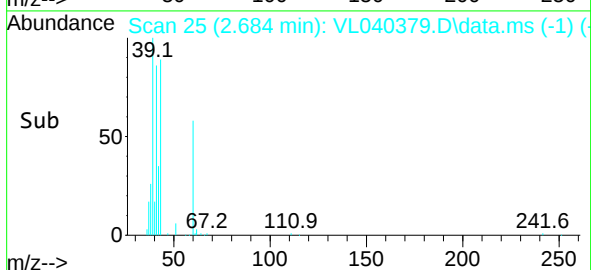
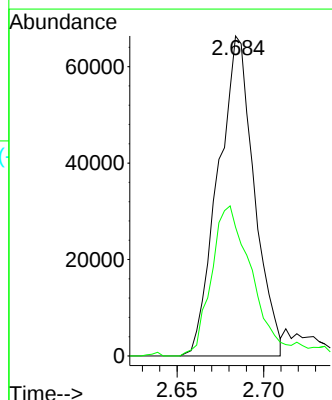
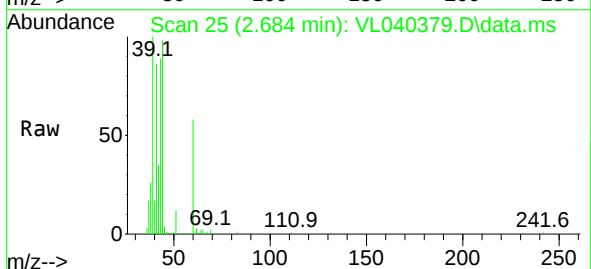
Instrument :
MSVOA_L
ClientSampleId :

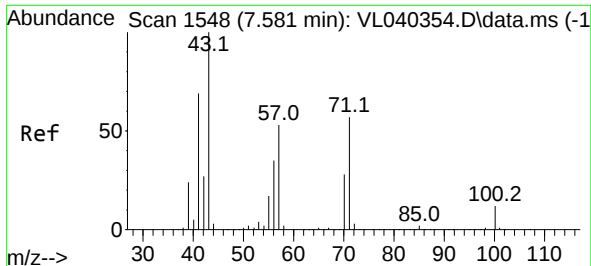
Tgt Ion: 64 Resp: 1504
Ion Ratio Lower Upper
64 100
66 24.1 27.5 41.3#



#9
Propene
Concen: 1.713 ppbv
RT: 2.684 min Scan# 25
Delta R.T. 0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 41 Resp: 96397
Ion Ratio Lower Upper
41 100
42 55.6 56.5 84.7#

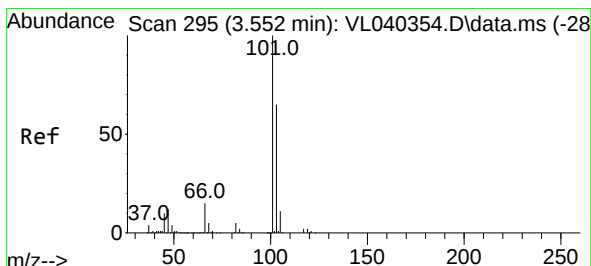
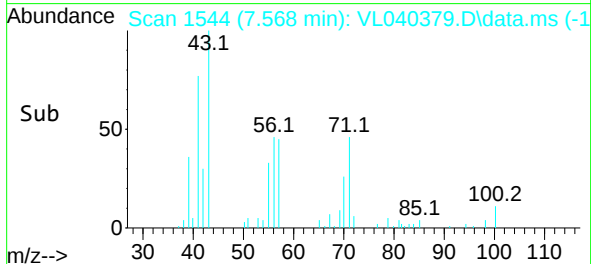
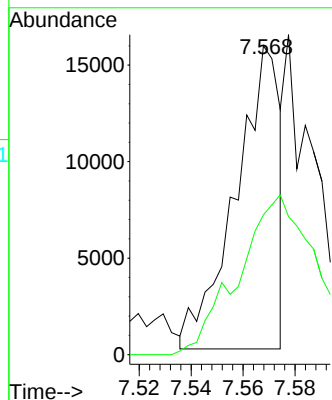
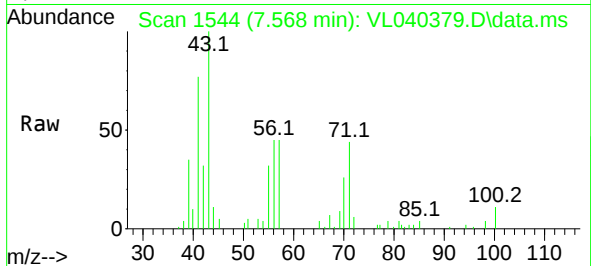




#10
Heptane
Concen: 0.145 ppbv
RT: 7.568 min Scan# 11
Delta R.T. -0.013 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

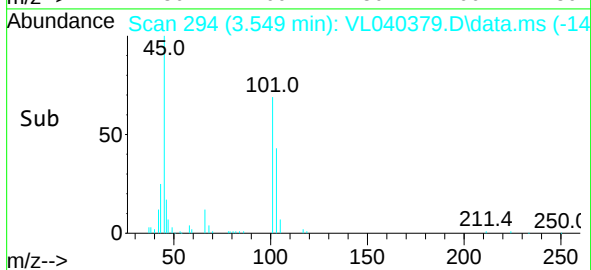
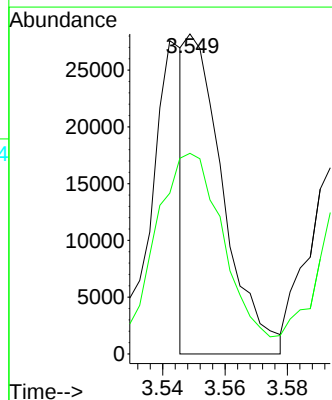
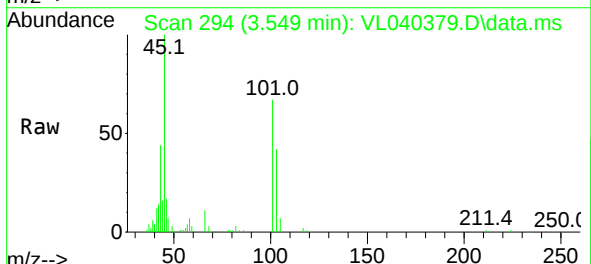
Instrument :
MSVOA_L
ClientSampleId :

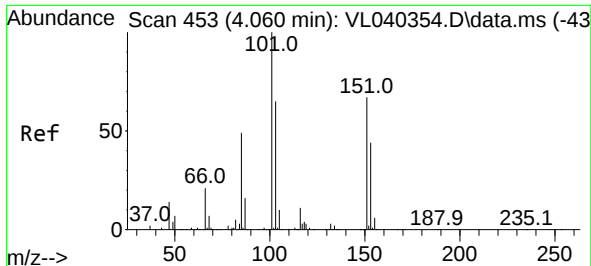
Tgt Ion: 43 Resp: 18575
Ion Ratio Lower Upper
43 100
57 0.0 42.2 63.4#



#11
Trichlorofluoromethane
Concen: 0.117 ppbv
RT: 3.549 min Scan# 294
Delta R.T. -0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion:101 Resp: 23364
Ion Ratio Lower Upper
101 100
103 60.6 52.2 78.4

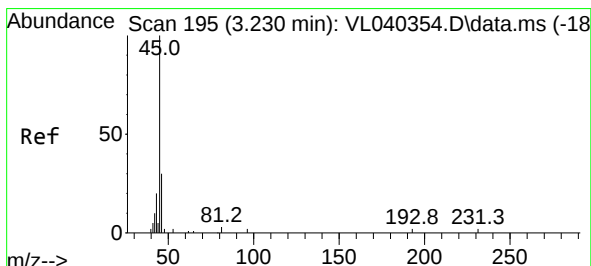
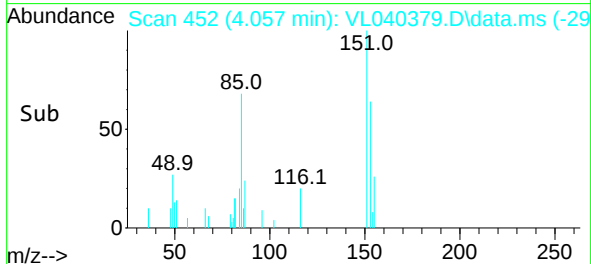
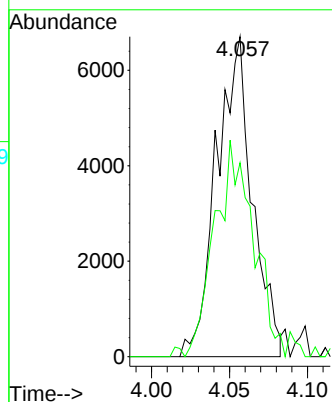
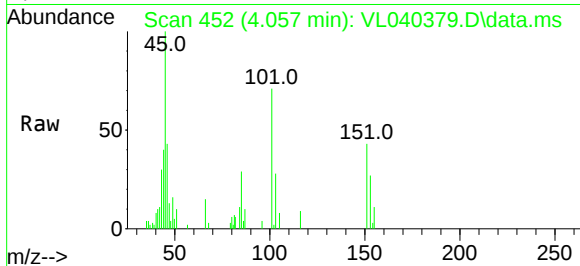




#12
1,1,2-Trichlorotrifluoroethane
Concen: 0.077 ppbv
RT: 4.057 min Scan# 41
Delta R.T. -0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

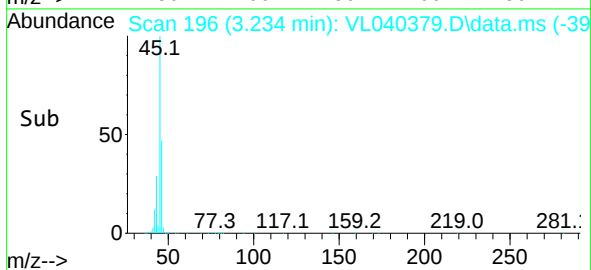
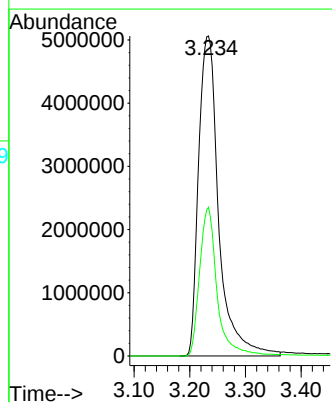
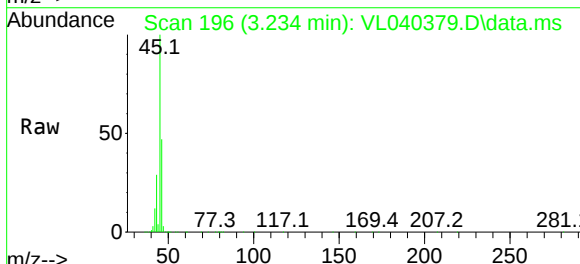
Instrument :
MSVOA_L
ClientSampleId :

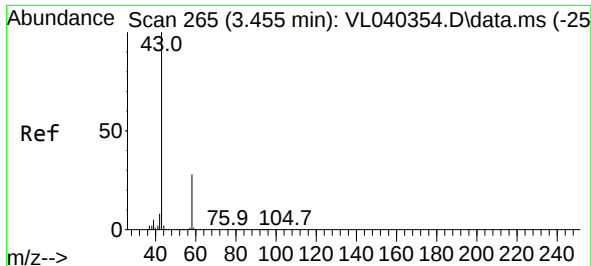
Tgt Ion:101 Resp: 10674
Ion Ratio Lower Upper
101 100
151 76.1 54.7 82.1



#13
Ethanol
Concen: 2703.044 ppbv
RT: 3.234 min Scan# 196
Delta R.T. 0.004 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 45 Resp:12700635
Ion Ratio Lower Upper
45 100
46 40.8 15.3 61.3

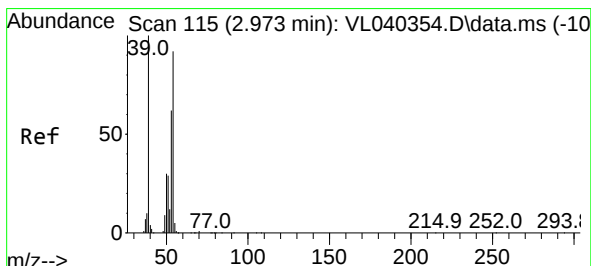
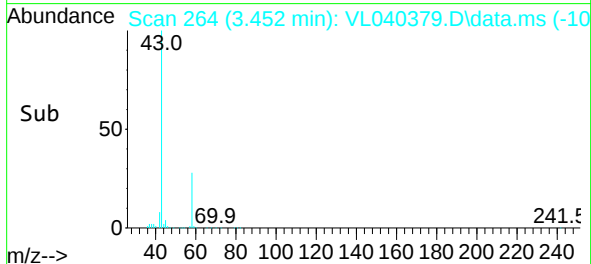
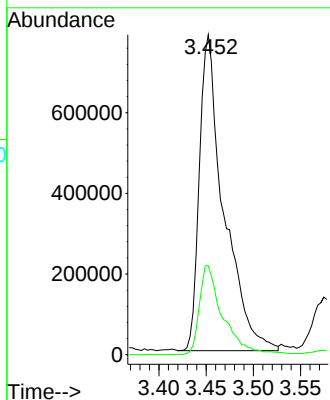
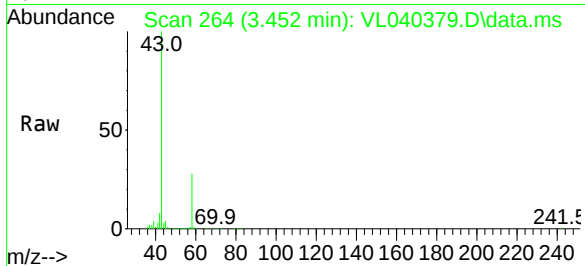




#15
Acetone
Concen: 9.112 ppbv
RT: 3.452 min Scan# 21
Delta R.T. -0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

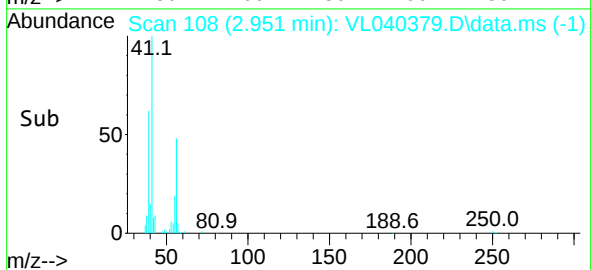
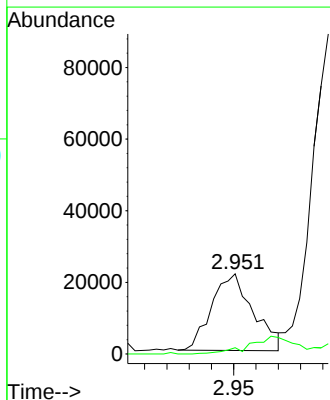
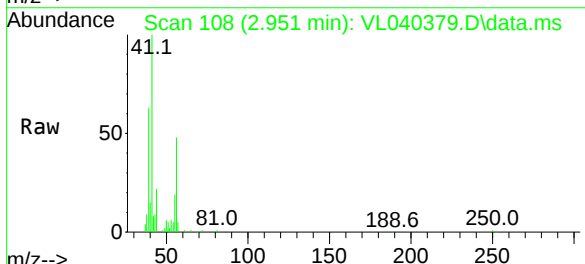
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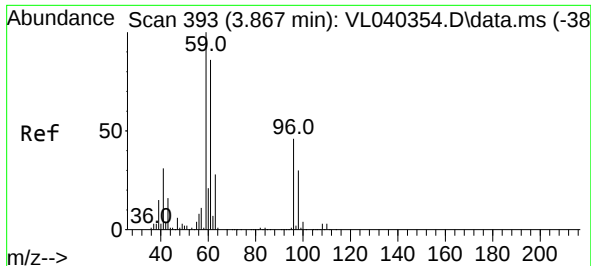
Tgt Ion: 43 Resp: 1407127
Ion Ratio Lower Upper
43 100
58 27.1 22.2 33.2



#16
1,3-Butadiene
Concen: 0.436 ppbv
RT: 2.951 min Scan# 108
Delta R.T. -0.022 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 39 Resp: 27853
Ion Ratio Lower Upper
39 100
54 33.3 68.8 103.2#





#17

tert-Butyl alcohol

Concen: 0.397 ppbv

RT: 3.886 min Scan# 393

Delta R.T. 0.019 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Instrument :

MSVOA_L

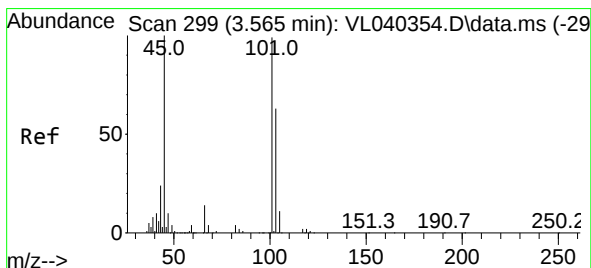
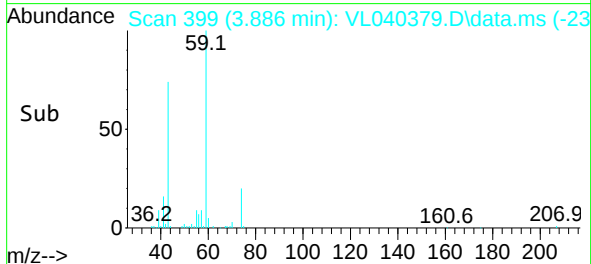
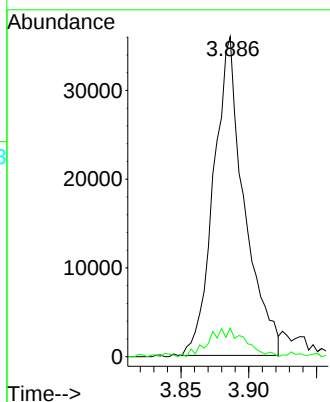
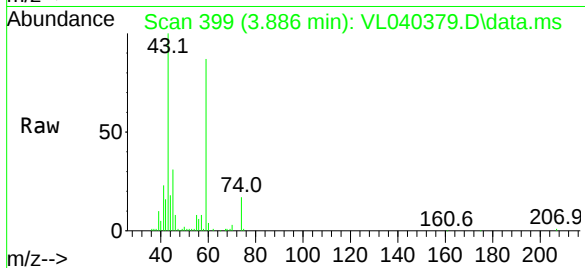
ClientSampleId :

Tgt Ion: 59 Resp: 56348

Ion Ratio Lower Upper

59 100

57 10.8 8.5 12.7



#19

Isopropyl Alcohol

Concen: 14.874 ppbv

RT: 3.574 min Scan# 302

Delta R.T. 0.009 min

Lab File: VL040379.D

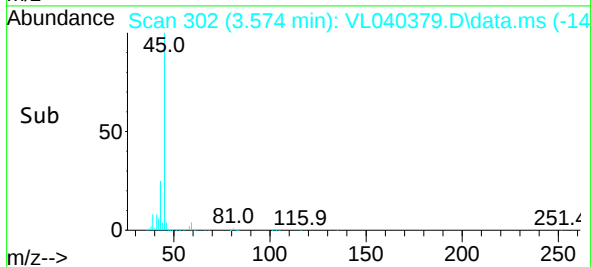
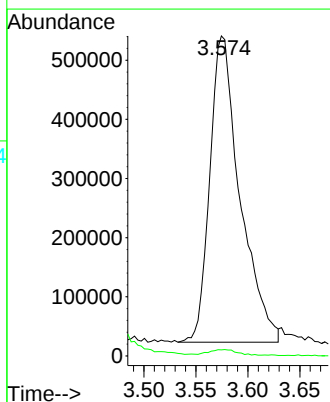
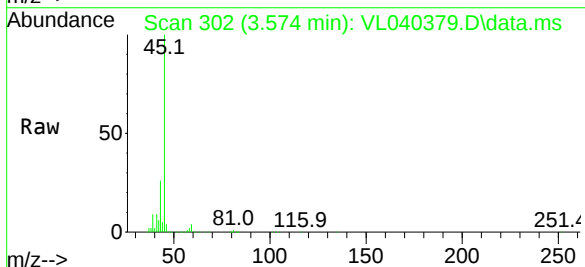
Acq: 19 Apr 2023 14:32

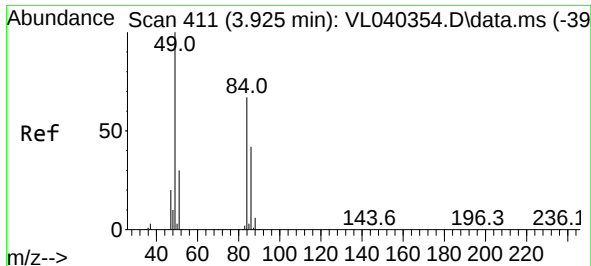
Tgt Ion: 45 Resp: 1048009

Ion Ratio Lower Upper

45 100

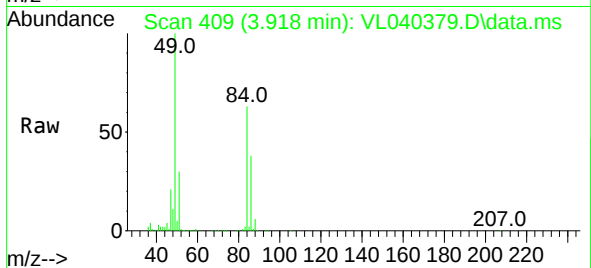
58 1.9 2.6 4.0#





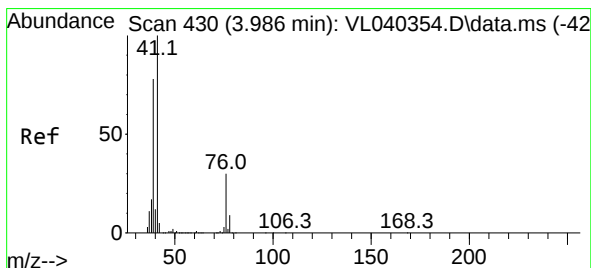
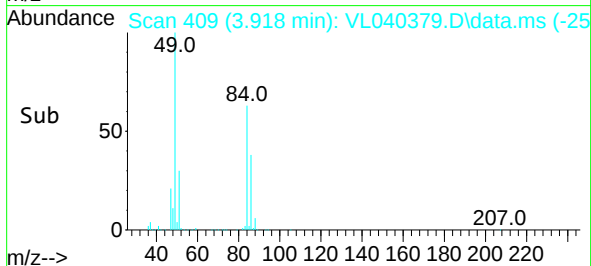
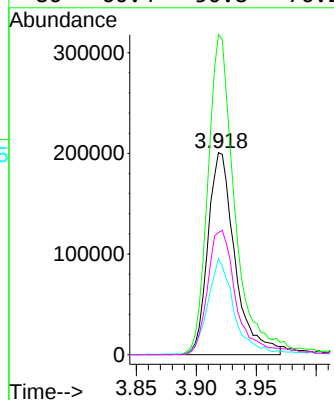
#20
Methylene Chloride
Concen: 5.111 ppbv
RT: 3.918 min Scan# 411
Delta R.T. -0.007 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Instrument :
MSVOA_L
ClientSampleId :



Tgt Ion: 84 Resp: 315124

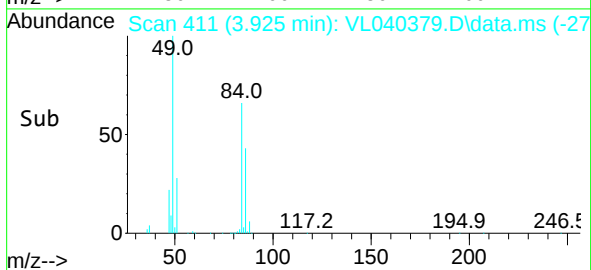
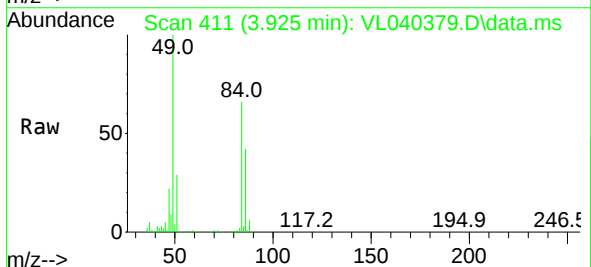
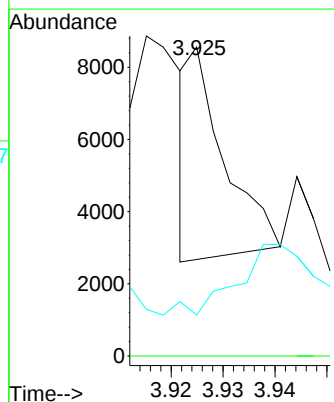
Ion	Ratio	Lower	Upper
84	100		
49	158.2	120.1	180.1
51	47.4	36.3	54.5
86	60.4	50.8	76.2

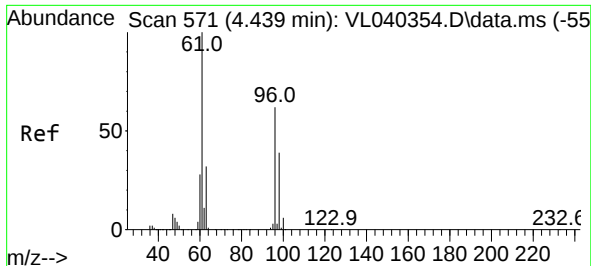


#21
Allyl Chloride
Concen: 0.032 ppbv
RT: 3.925 min Scan# 411
Delta R.T. -0.061 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 41 Resp: 2764

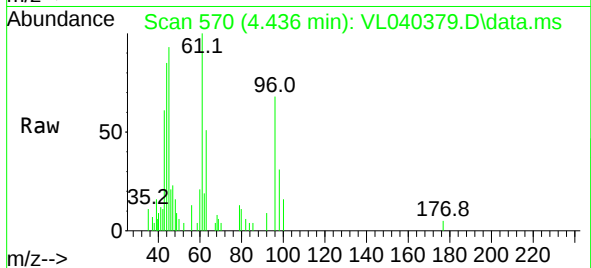
Ion	Ratio	Lower	Upper
41	100		
76	0.0	25.5	38.3#
39	226.5	64.0	96.0#



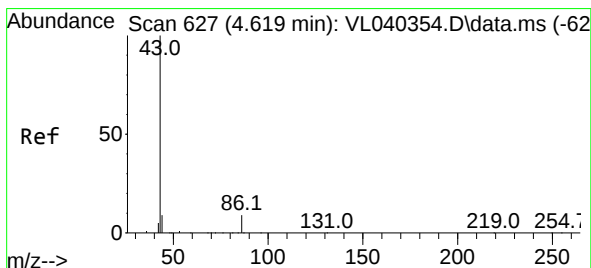
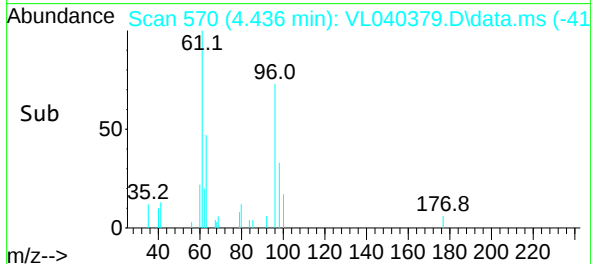
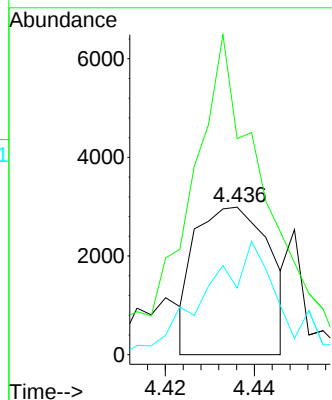


#22
trans-1,2-Dichloroethene
Concen: 0.055 ppbv
RT: 4.436 min Scan# 51
Delta R.T. -0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Instrument :
MSVOA_L
ClientSampleId :

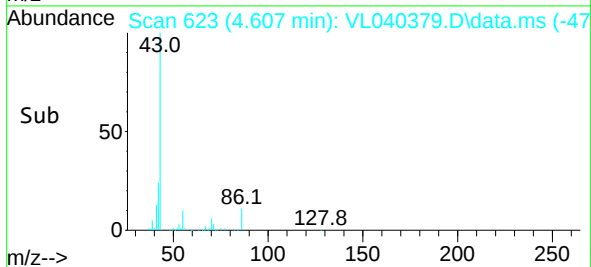
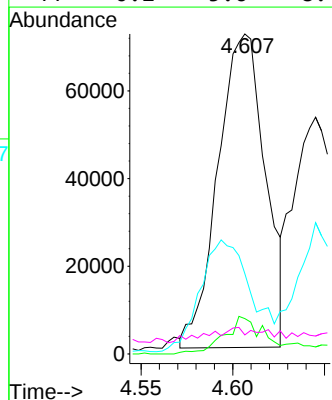
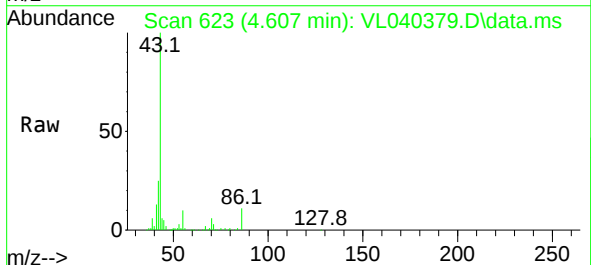


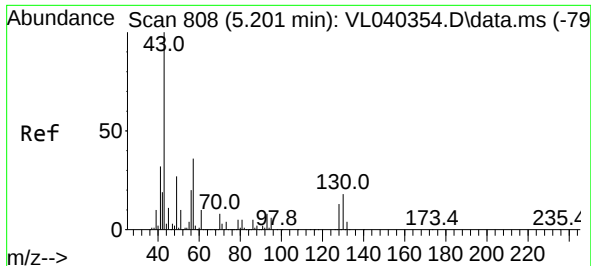
Tgt Ion: 96 Resp: 3467
Ion Ratio Lower Upper
96 100
61 111.1 129.4 194.2#
98 19.0 51.0 76.4#



#23
Vinyl Acetate
Concen: 3.260 ppbv
RT: 4.607 min Scan# 623
Delta R.T. -0.012 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

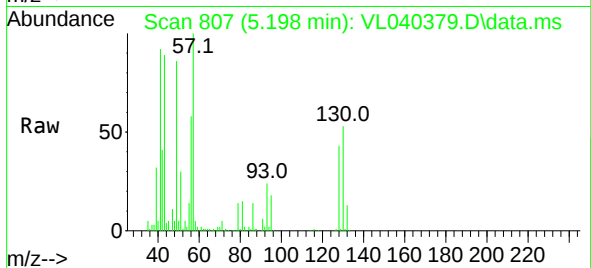
Tgt Ion: 43 Resp: 128186
Ion Ratio Lower Upper
43 100
86 11.1 6.0 9.0#
42 22.5 6.4 9.6#
44 0.2 5.6 8.4#



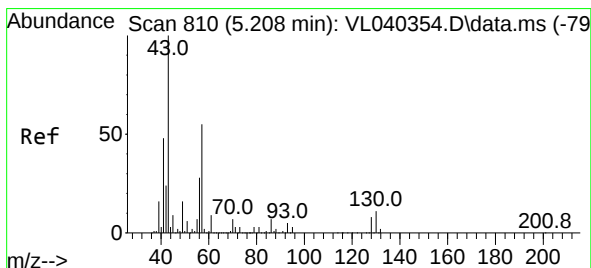
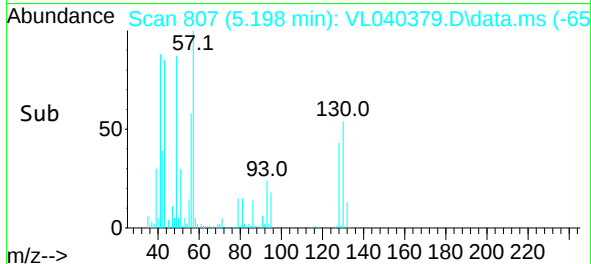
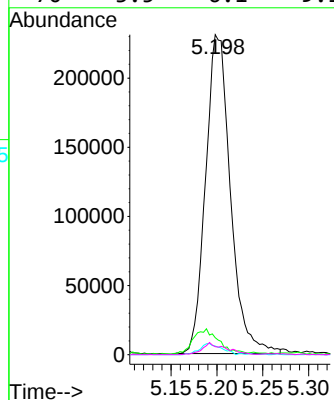


#25
Ethyl Acetate
Concen: 1.678 ppbv
RT: 5.198 min Scan# 808
Delta R.T. -0.003 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Instrument :
MSVOA_L
ClientSampleId :

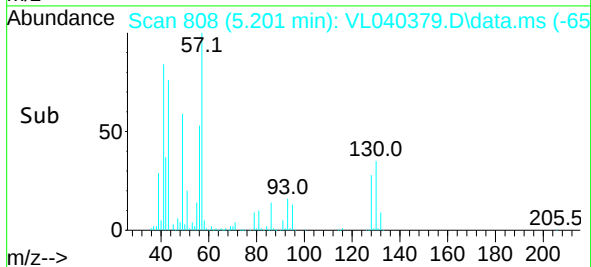
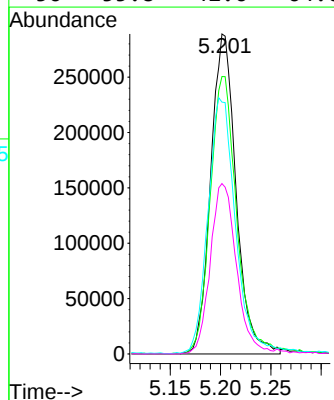
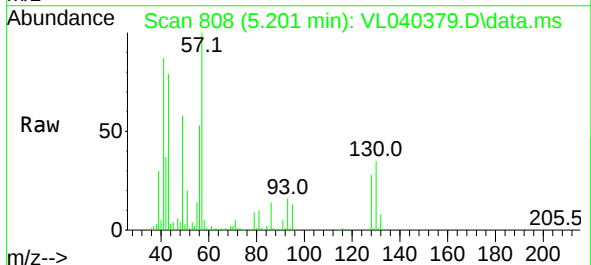


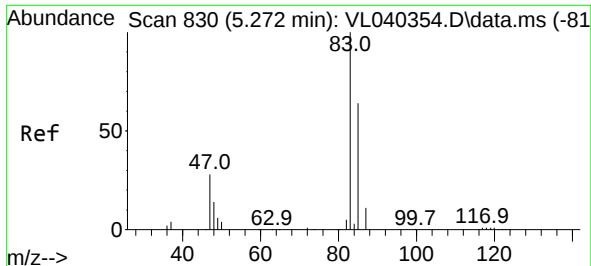
Tgt Ion:	43	Resp:	435987
Ion	Ratio	Lower	Upper
43	100		
45	8.9	8.5	12.7
61	3.3	8.5	12.7#
70	3.5	6.1	9.1#



#26
Hexane
Concen: 4.628 ppbv
RT: 5.201 min Scan# 808
Delta R.T. -0.007 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion:	57	Resp:	506942
Ion	Ratio	Lower	Upper
57	100		
41	92.5	74.8	112.2
43	87.3	192.7	289.1#
56	55.8	42.6	64.0





#29

Chloroform

Concen: 0.399 ppbv

RT: 5.262 min Scan# 81

Delta R.T. -0.010 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Instrument :

MSVOA_L

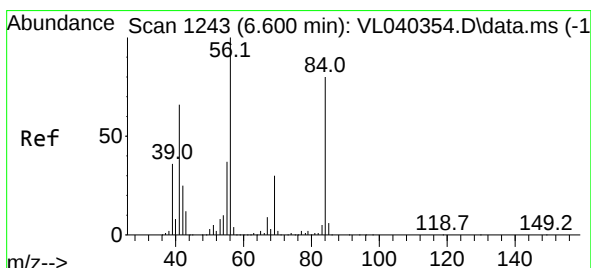
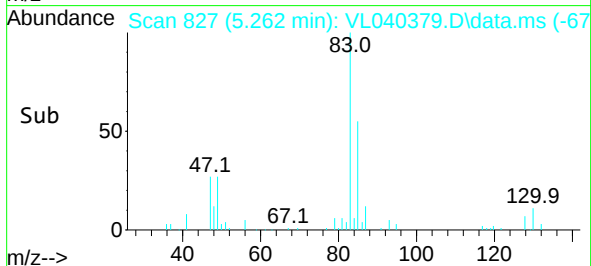
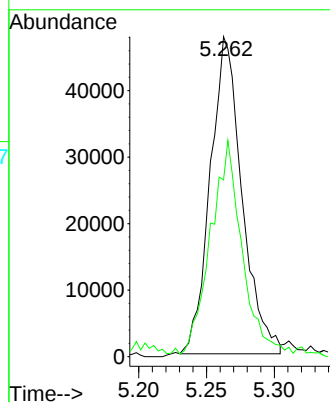
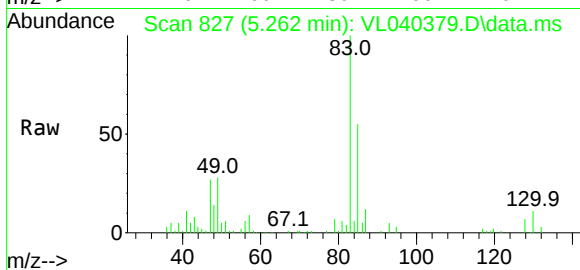
ClientSampleId :

Tgt Ion: 83 Resp: 77774

Ion Ratio Lower Upper

83 100

85 54.9 51.0 76.4



#30

Cyclohexane

Concen: 0.077 ppbv

RT: 6.587 min Scan# 1239

Delta R.T. -0.013 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

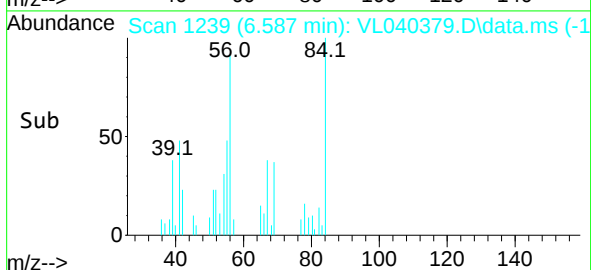
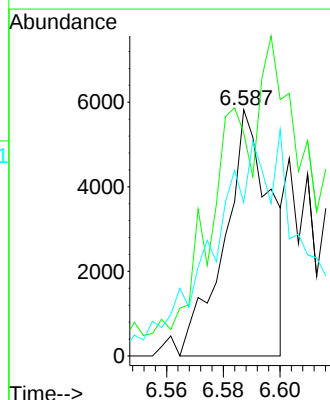
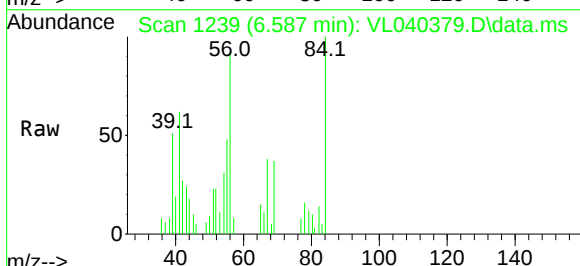
Tgt Ion: 84 Resp: 6518

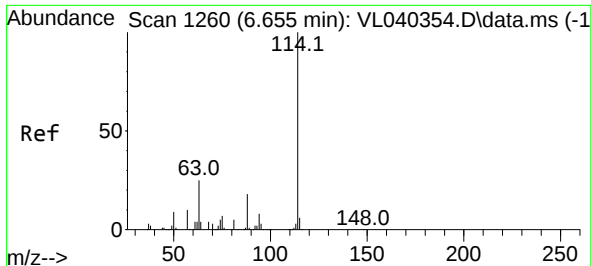
Ion Ratio Lower Upper

84 100

56 0.0 107.0 160.6#

41 0.0 66.7 100.1#





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.645 min Scan# 11

Delta R.T. -0.010 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Instrument :

MSVOA_L

ClientSampleId :

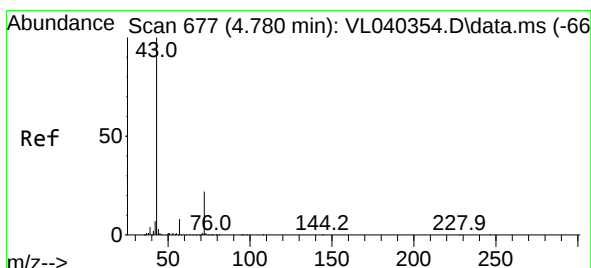
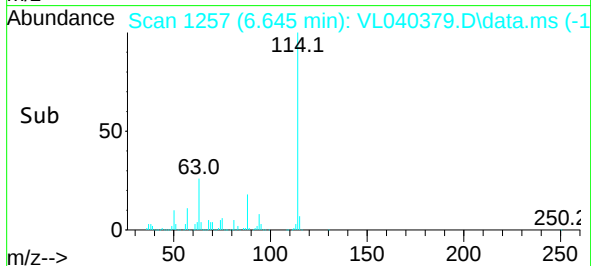
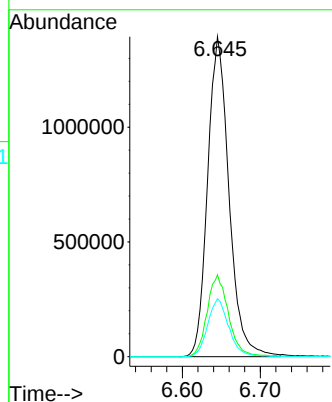
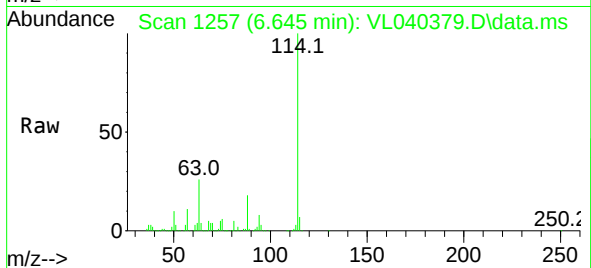
Tgt Ion:114 Resp: 2655637

Ion Ratio Lower Upper

114 100

63 25.8 21.4 32.0

88 18.0 14.6 22.0



#34

2-Butanone

Concen: 0.944 ppbv

RT: 4.777 min Scan# 676

Delta R.T. -0.003 min

Lab File: VL040379.D

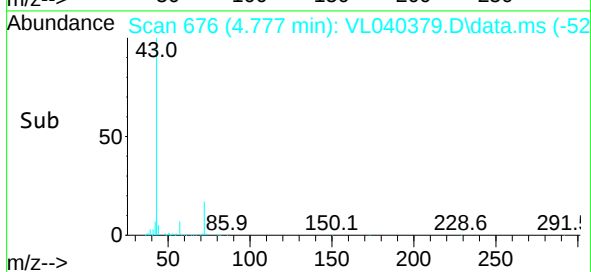
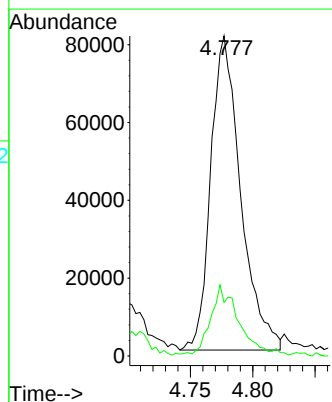
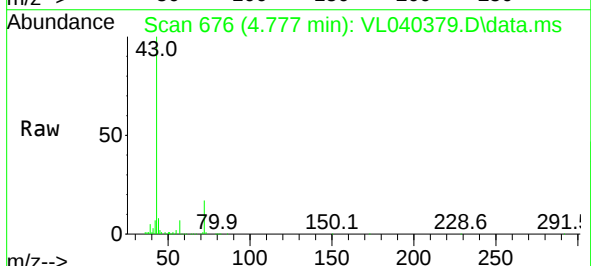
Acq: 19 Apr 2023 14:32

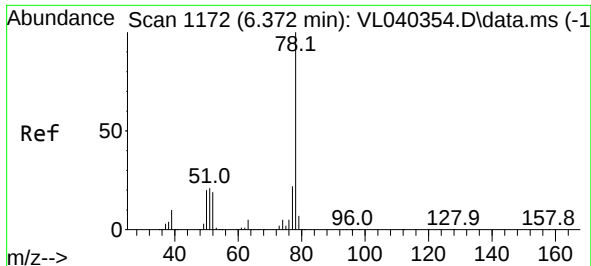
Tgt Ion: 43 Resp: 135165

Ion Ratio Lower Upper

43 100

72 22.5 18.4 27.6

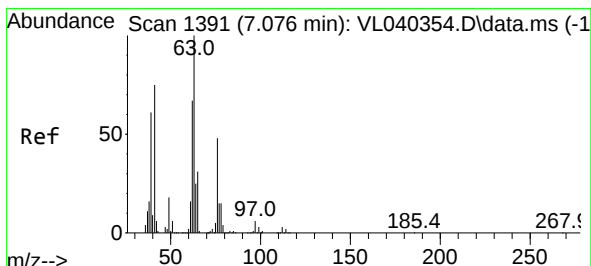
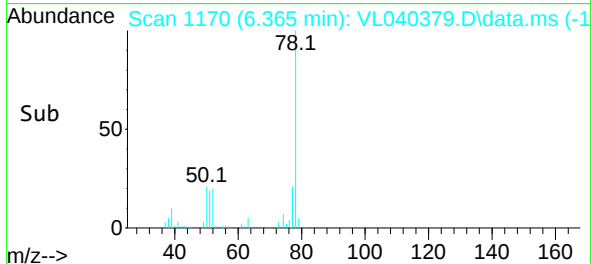
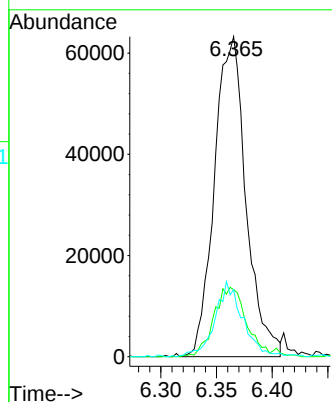
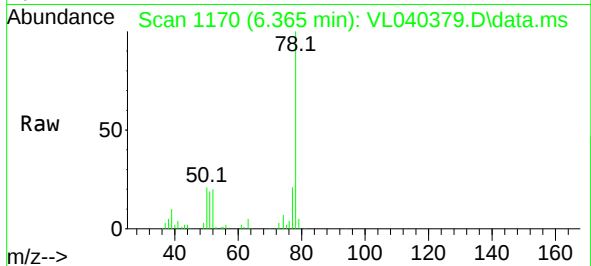




#36
Benzene
Concen: 0.575 ppbv
RT: 6.365 min Scan# 1172
Delta R.T. -0.007 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

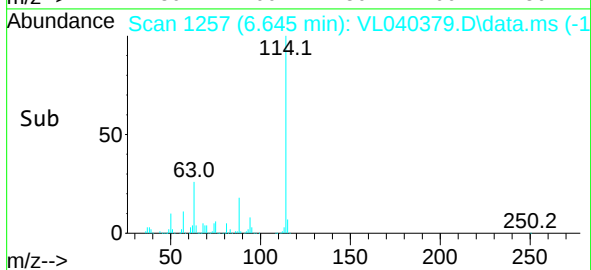
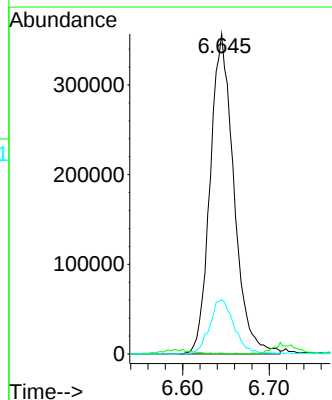
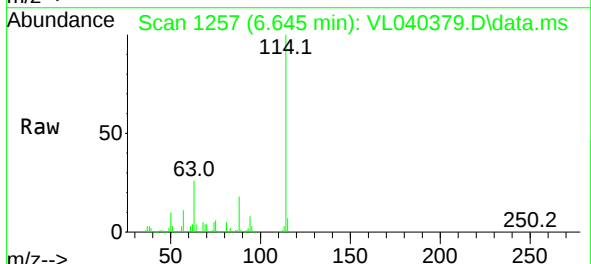
Instrument :
MSVOA_L
ClientSampleId :

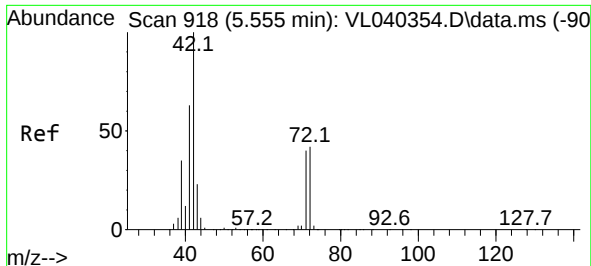
Tgt Ion: 78 Resp: 124620
Ion Ratio Lower Upper
78 100
77 20.9 17.8 26.8
50 20.6 15.6 23.4



#39
1,2-Dichloropropane
Concen: 7.954 ppbv
RT: 6.645 min Scan# 1257
Delta R.T. -0.431 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 63 Resp: 678099
Ion Ratio Lower Upper
63 100
41 0.0 59.6 89.4#
62 16.8 53.9 80.9#





#41

Tetrahydrofuran

Concen: 0.031 ppbv

RT: 5.516 min Scan# 90

Delta R.T. -0.039 min

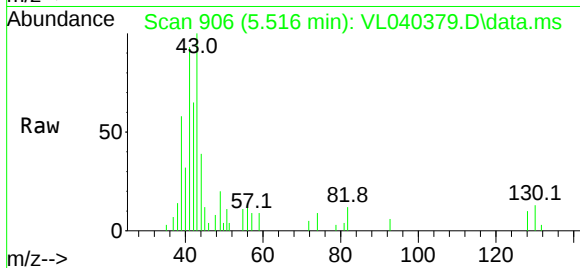
Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

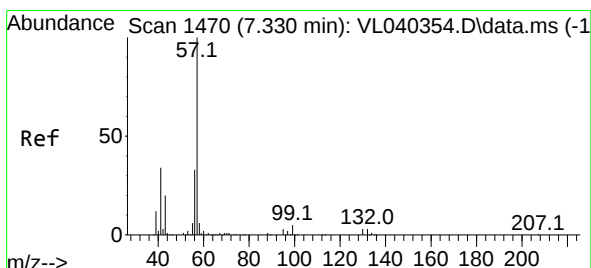
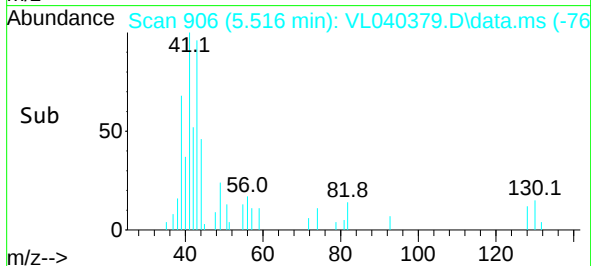
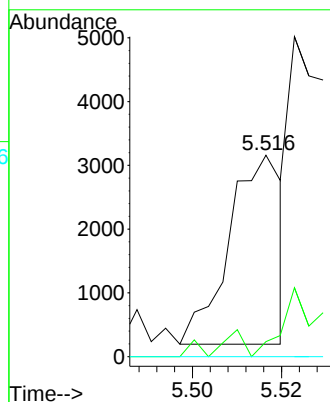
Instrument :

MSVOA_L

ClientSampleId :



Tgt Ion:	42	Resp:	2455
Ion	Ratio	Lower	Upper
42	100		
72	134.7	33.7	50.5#
71	38.6	32.2	48.2



#44

2,2,4-Trimethylpentane

Concen: 0.162 ppbv

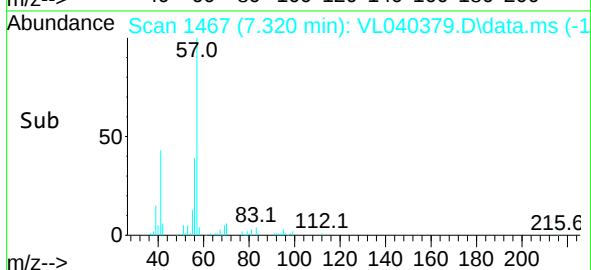
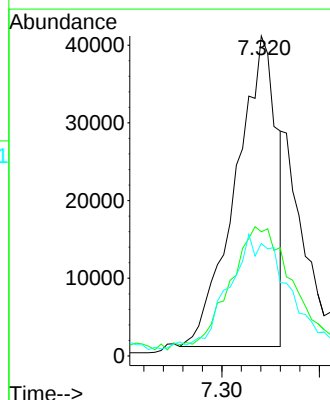
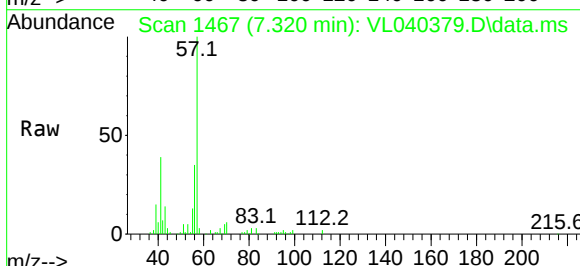
RT: 7.320 min Scan# 1467

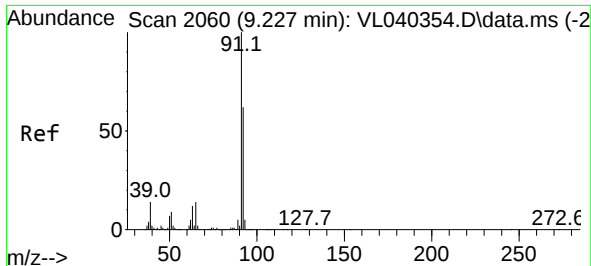
Delta R.T. -0.010 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Tgt Ion:	57	Resp:	58511
Ion	Ratio	Lower	Upper
57	100		
41	74.7	26.9	40.3#
56	64.5	25.1	37.7#

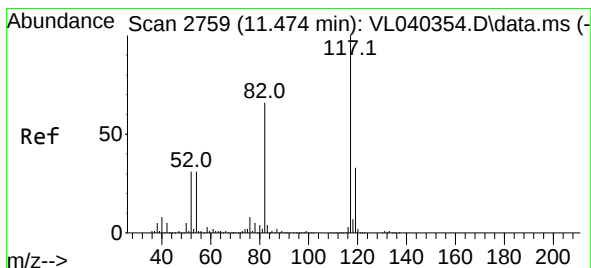
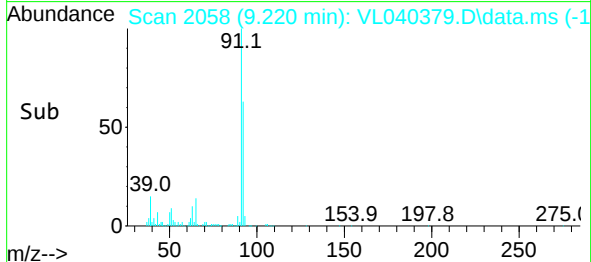
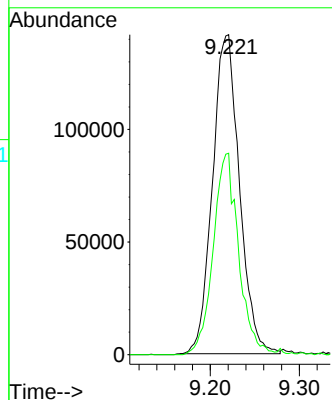
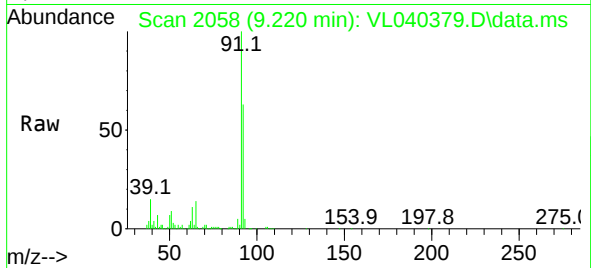




#53
Toluene
Concen: 1.295 ppbv
RT: 9.220 min Scan# 2060
Delta R.T. -0.007 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

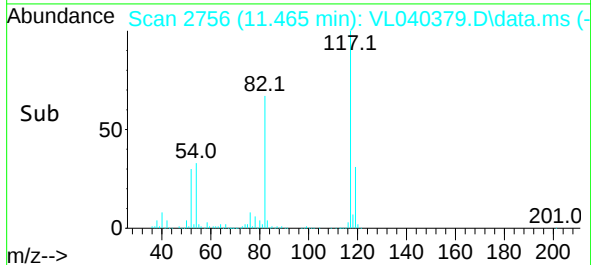
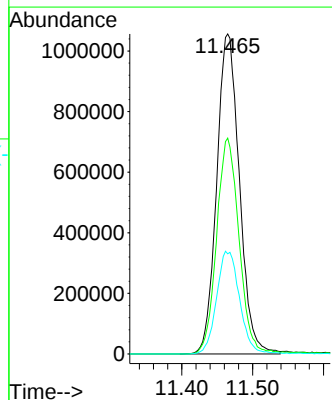
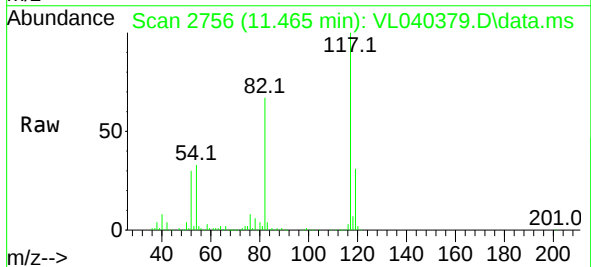
Instrument :
MSVOA_L
ClientSampleId :

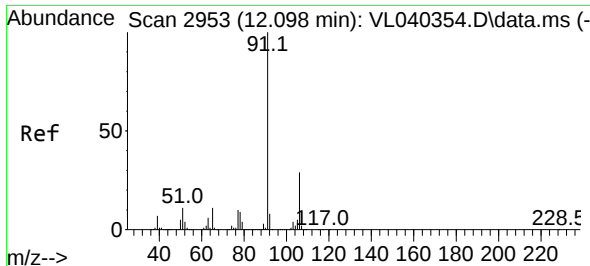
Tgt Ion: 91 Resp: 297439
Ion Ratio Lower Upper
91 100
92 60.2 48.9 73.3



#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 11.465 min Scan# 2756
Delta R.T. -0.009 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 117 Resp: 2352226
Ion Ratio Lower Upper
117 100
82 67.5 52.5 78.7
119 32.9 24.3 36.5

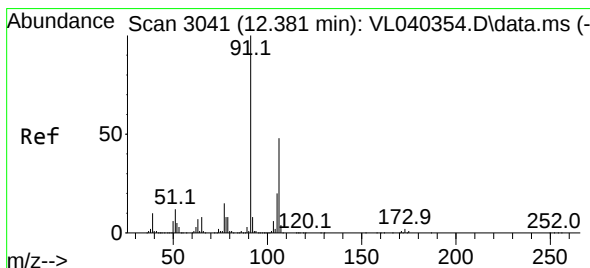
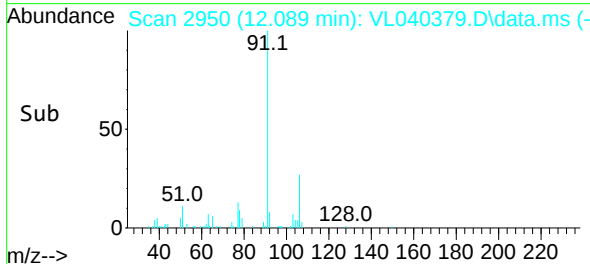
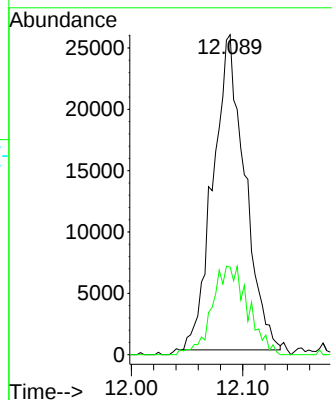
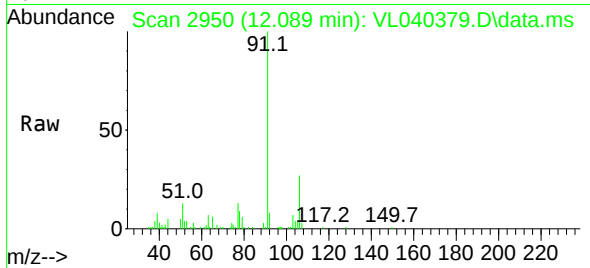




#58
Ethyl Benzene
Concen: 0.176 ppbv
RT: 12.089 min Scan# 2950
Delta R.T. -0.009 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

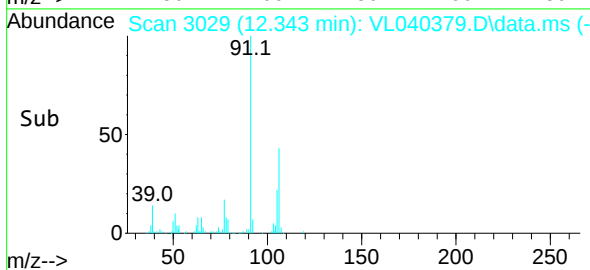
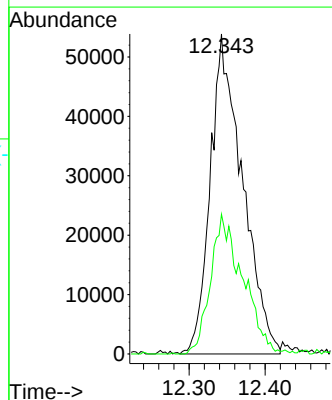
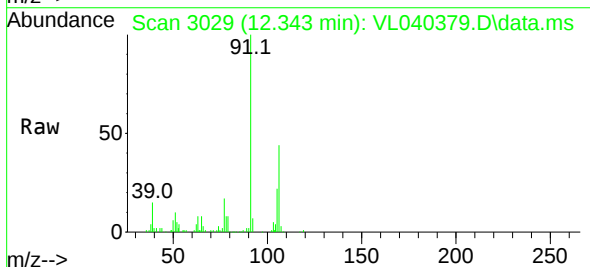
Instrument :
MSVOA_L
ClientSampleId :

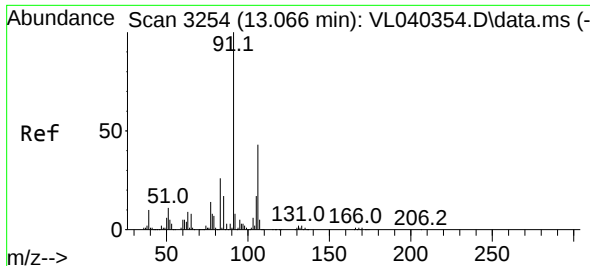
Tgt Ion: 91 Resp: 50938
Ion Ratio Lower Upper
91 100
106 27.8 23.5 35.3



#59
m/p-Xylene
Concen: 0.594 ppbv
RT: 12.343 min Scan# 3029
Delta R.T. -0.038 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 91 Resp: 158172
Ion Ratio Lower Upper
91 100
106 43.8 34.7 52.1

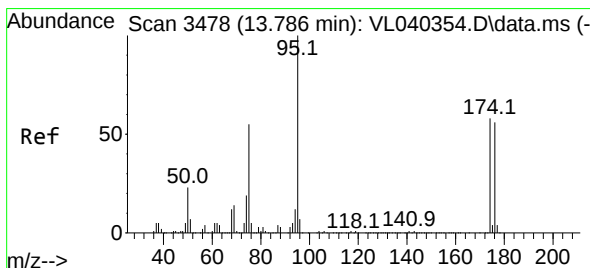
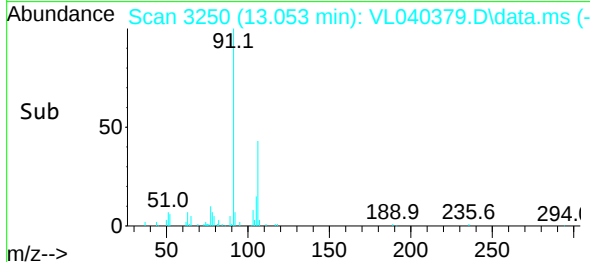
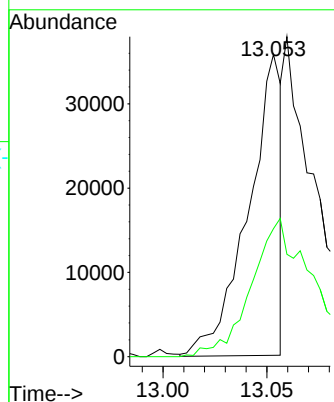
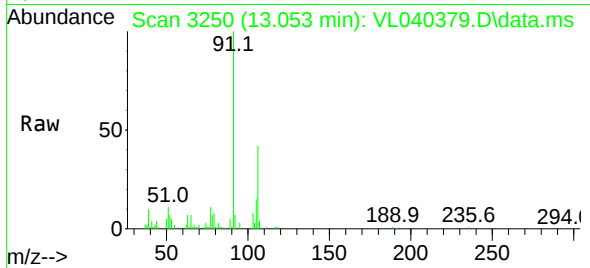




#60
o-Xylene
Concen: 0.154 ppbv
RT: 13.053 min Scan# 31
Delta R.T. -0.013 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

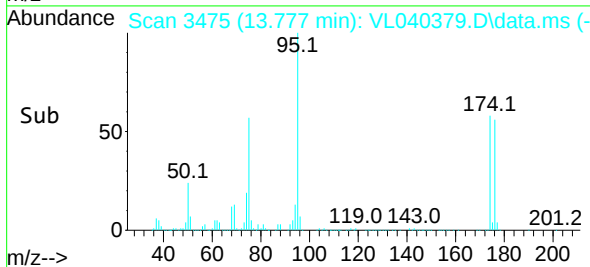
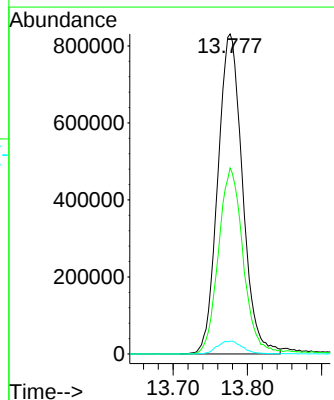
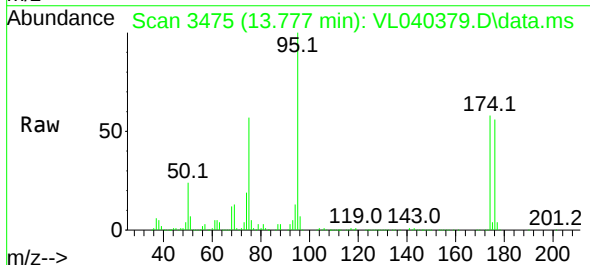
Instrument :
MSVOA_L
ClientSampleId :

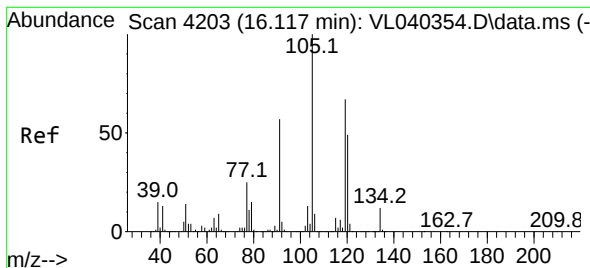
Tgt Ion: 91 Resp: 39445
Ion Ratio Lower Upper
91 100
106 0.0 21.9 65.8#



#68
1-Bromo-4-Fluorobenzene
Concen: 9.872 ppbv
RT: 13.777 min Scan# 3475
Delta R.T. -0.009 min
Lab File: VL040379.D
Acq: 19 Apr 2023 14:32

Tgt Ion: 95 Resp: 1920223
Ion Ratio Lower Upper
95 100
174 59.0 47.2 70.8
175 4.2 3.5 5.3





#74

1,2,4-Trimethylbenzene

Concen: 0.242 ppbv

RT: 16.114 min Scan# 41

Delta R.T. -0.003 min

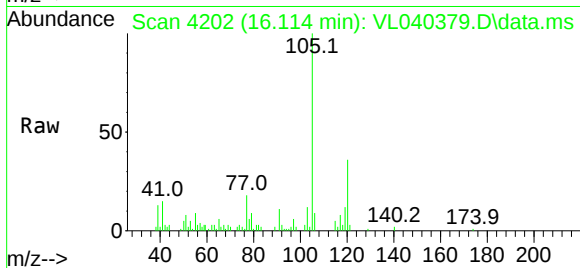
Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Instrument :

MSVOA_L

ClientSampleId :



Tgt Ion:105 Resp: 72126

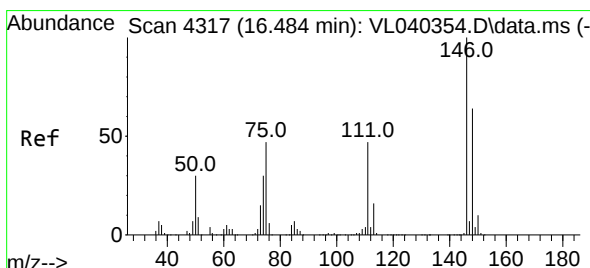
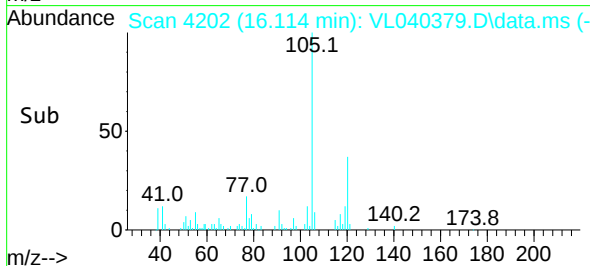
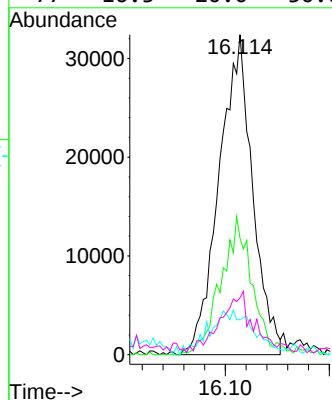
Ion Ratio Lower Upper

105 100

120 36.3 38.9 58.3#

91 11.0 46.0 69.0#

77 16.3 20.0 30.0#



#76

1,4-Dichlorobenzene

Concen: 0.050 ppbv

RT: 16.481 min Scan# 4316

Delta R.T. -0.003 min

Lab File: VL040379.D

Acq: 19 Apr 2023 14:32

Tgt Ion:146 Resp: 8131

Ion Ratio Lower Upper

146 100

111 115.8 23.8 71.4#

148 116.3 32.4 97.2#

