

Data Path : Z:\voasrv\HPCHEM1\MSVOA_L\Data\VL041223\
 Data File : VL040341.D
 Acq On : 12 Apr 2023 16:28
 Operator : SY/MD
 Sample : 02311-02
 Misc : 400mL/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA1

Quant Time: Apr 13 05:39:04 2023
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_L\methods\VL031523AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
 QLast Update : Tue Apr 11 04:15:53 2023
 Response via : Initial Calibration

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

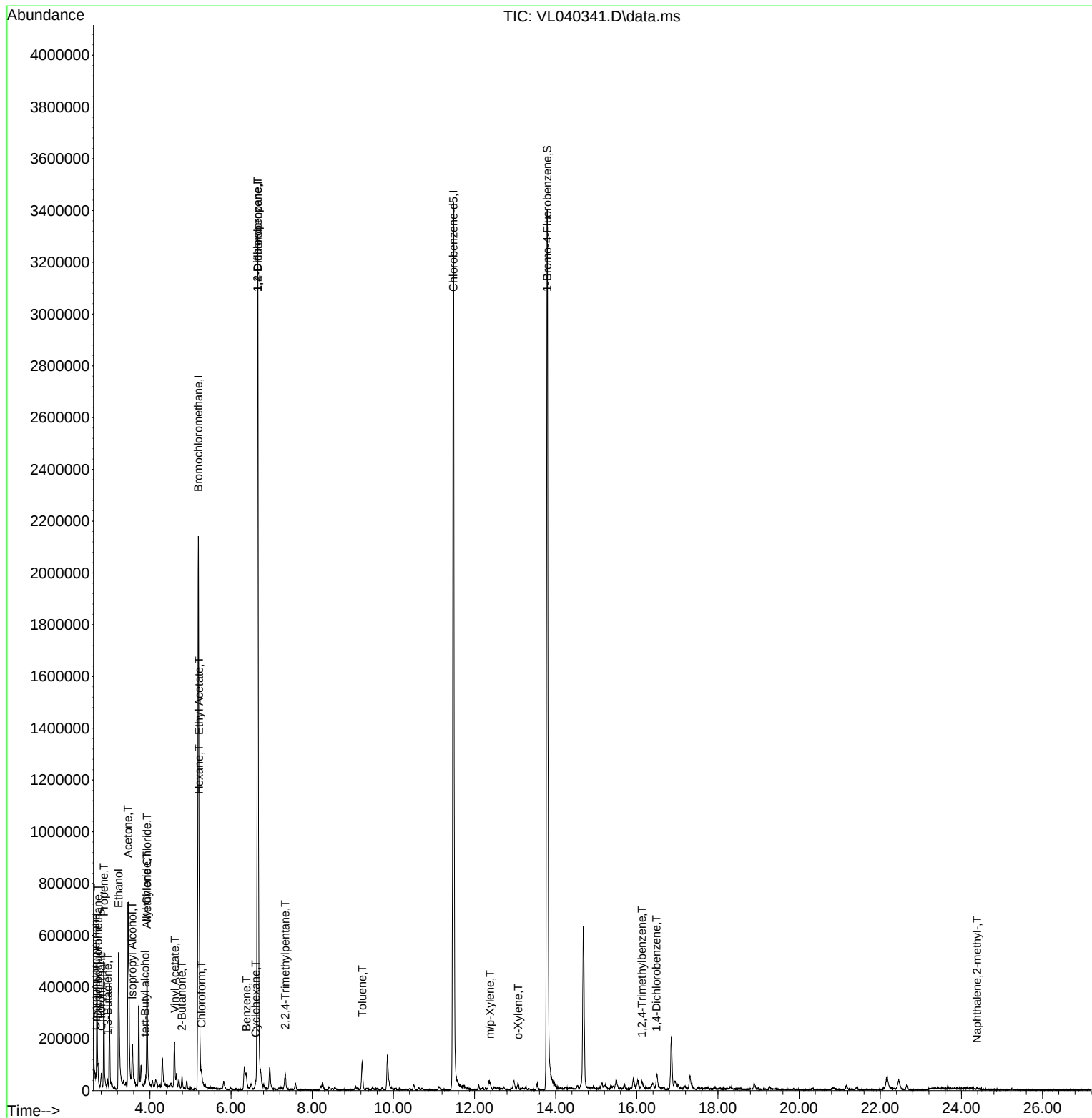
Internal Standards						
1) Bromochloromethane	5.192	49	985290	10.000	ppbv	0.00
33) 1,4-Difluorobenzene	6.658	114	2517222	10.000	ppbv	0.00
55) Chlorobenzene-d5	11.481	117	2178799	10.000	ppbv	0.00
System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	13.793	95	1728649	9.474	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	94.700%
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	2.719	85	37090	0.192	ppbv	99
3) Chlorodifluoromethane	2.661	51	66456	0.536	ppbv #	83
4) Chloromethane	2.803	50	37082	0.485	ppbv	100
9) Propene	2.864	41	114263	2.407	ppbv	96
13) Ethanol	3.227	45	613915	176.353	ppbv	100
15) Acetone	3.462	43	780168	6.504	ppbv	98
16) 1,3-Butadiene	2.957	39	6697	0.123	ppbv #	63
17) tert-Butyl alcohol	3.883	59	4319	0.038	ppbv #	72
19) Isopropyl Alcohol	3.568	45	125826	2.190	ppbv #	1
20) Methylene Chloride	3.928	84	155018	3.072	ppbv	95
21) Allyl Chloride	3.925	41	3264	0.042	ppbv #	52
23) Vinyl Acetate	4.616	43	13030	0.390	ppbv #	1
25) Ethyl Acetate	5.208	43	125024	0.557	ppbv #	91
26) Hexane	5.211	57	120025	1.302	ppbv #	48
29) Chloroform	5.272	83	7125	0.044	ppbv	90
30) Cyclohexane	6.606	84	6103	0.084	ppbv #	1
34) 2-Butanone	4.790	43	53099	0.427	ppbv	96
36) Benzene	6.381	78	10815	0.056	ppbv	94
39) 1,2-Dichloropropane	6.655	63	626855	8.329	ppbv #	24
44) 2,2,4-Trimethylpentane	7.336	57	22502	0.070	ppbv #	1
53) Toluene	9.233	91	37956	0.189	ppbv #	21
59) m/p-Xylene	12.384	91	10542	0.046	ppbv #	33
60) o-Xylene	13.079	91	7671	0.035	ppbv #	18
74) 1,2,4-Trimethylbenzene	16.127	105	11958	0.049	ppbv #	55
76) 1,4-Dichlorobenzene	16.487	146	7482	0.059	ppbv #	23
80) Naphthalene,2-methyl-	24.384	142	5928	0.161	ppbv #	78

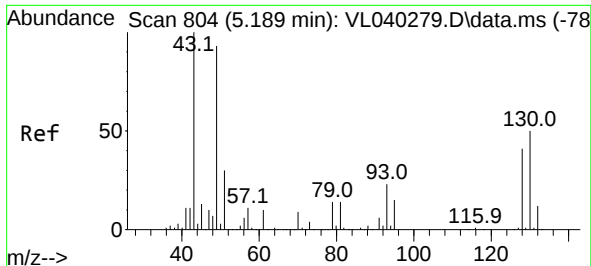
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Aug 26 06:05:16 2022
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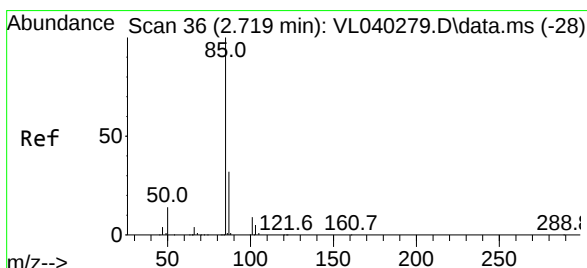
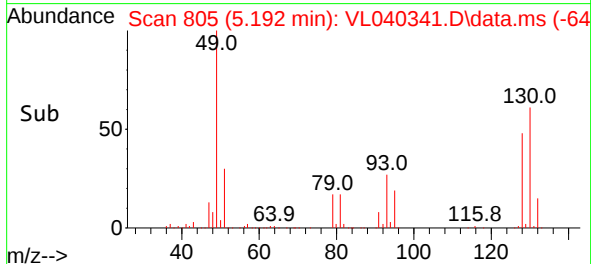
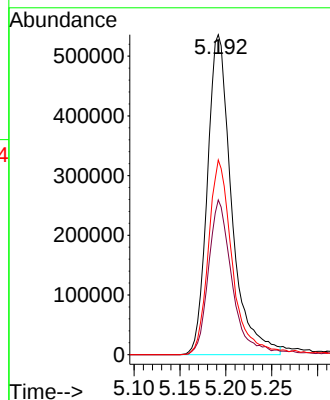
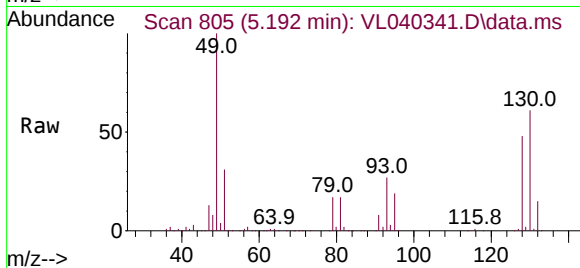




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.192 min Scan# 804
Delta R.T. 0.003 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

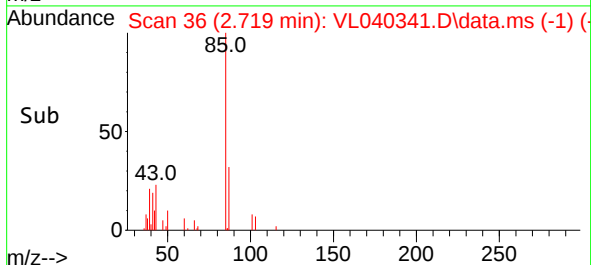
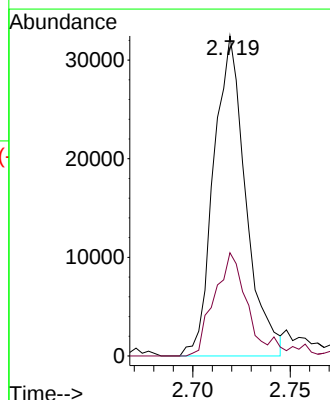
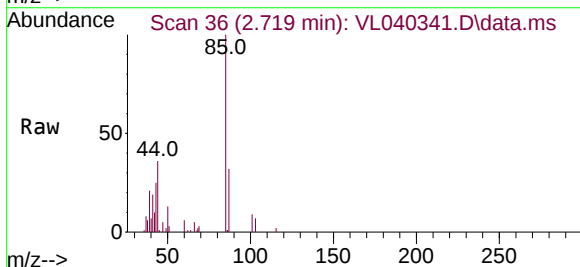
Instrument :
MSVOA_L
ClientSampleId :
IA1

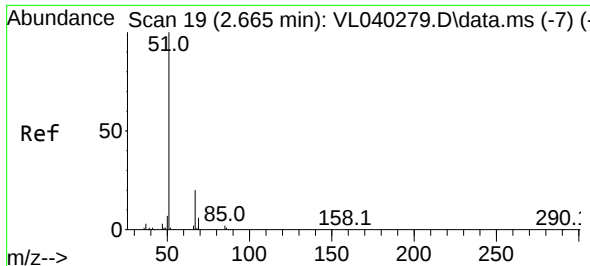
Tgt Ion: 49 Resp: 985290
Ion Ratio Lower Upper
49 100
128 48.3 22.4 67.3
130 61.9 28.7 86.1



#2
Dichlorodifluoromethane
Concen: 0.192 ppbv
RT: 2.719 min Scan# 36
Delta R.T. 0.000 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 85 Resp: 37090
Ion Ratio Lower Upper
85 100
87 32.2 25.5 38.3

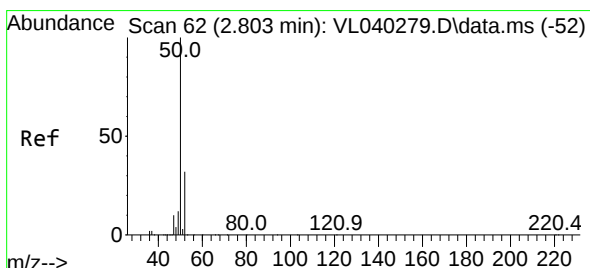
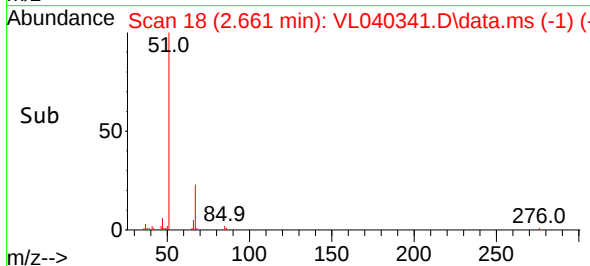
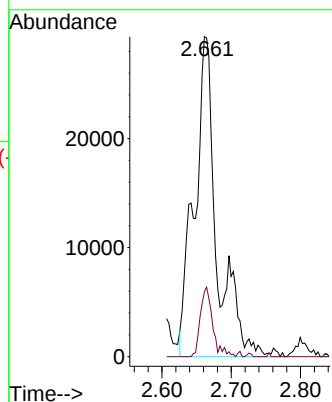
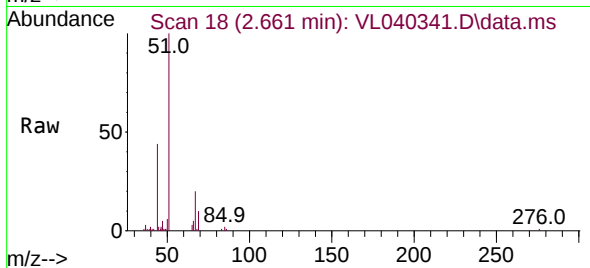




#3
Chlorodifluoromethane
Concen: 0.536 ppbv
RT: 2.661 min Scan# 18
Delta R.T. -0.004 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

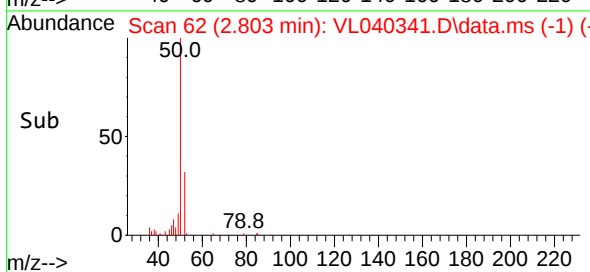
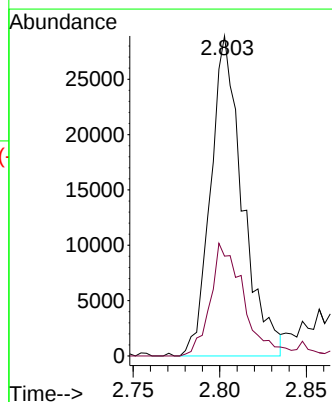
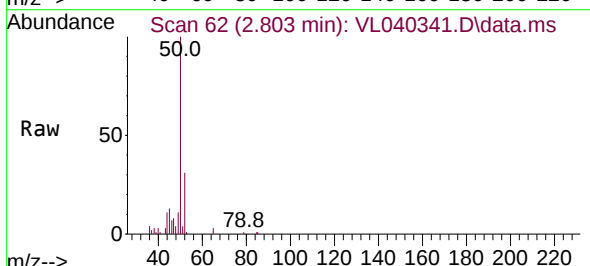
Instrument :
MSVOA_L
ClientSampleId :
IA1

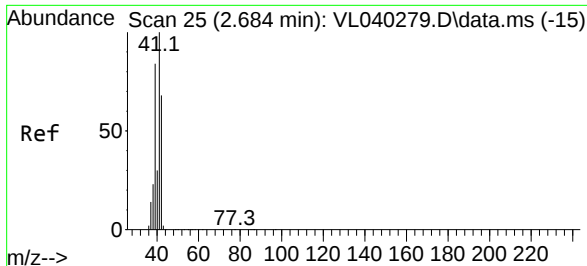
Tgt Ion: 51 Resp: 66456
Ion Ratio Lower Upper
51 100
67 12.3 16.0 24.0#



#4
Chloromethane
Concen: 0.485 ppbv
RT: 2.803 min Scan# 62
Delta R.T. -0.000 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 50 Resp: 37082
Ion Ratio Lower Upper
50 100
52 32.2 25.9 38.9

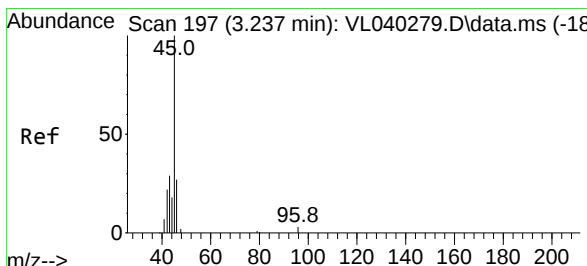
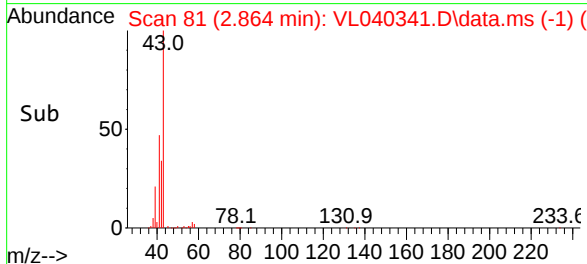
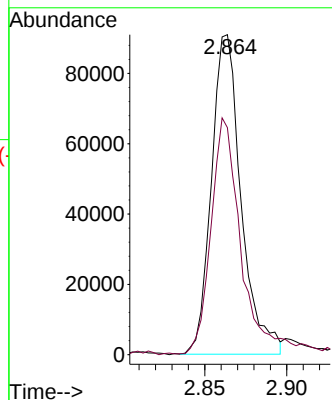
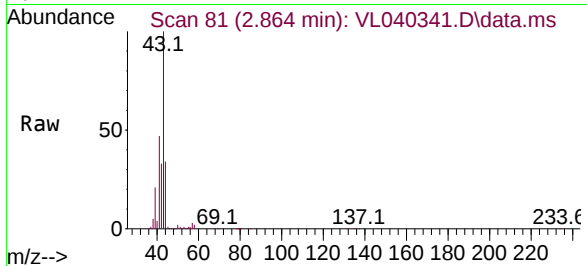




#9
Propene
Concen: 2.407 ppbv
RT: 2.864 min Scan# 81
Delta R.T. 0.180 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

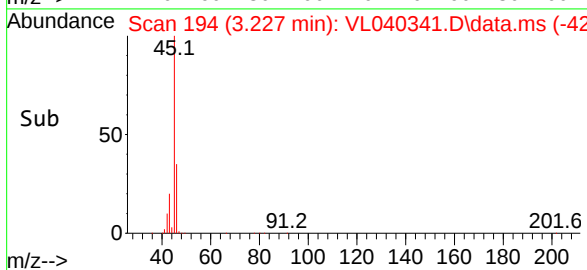
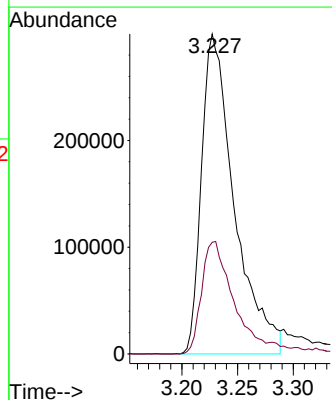
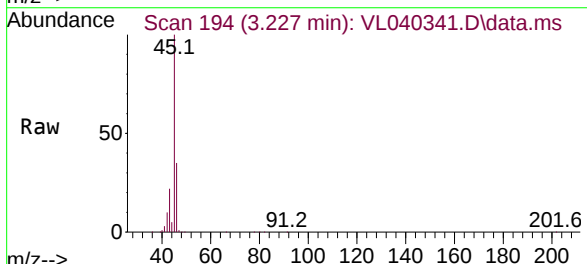
Instrument :
MSVOA_L
ClientSampleId :
IA1

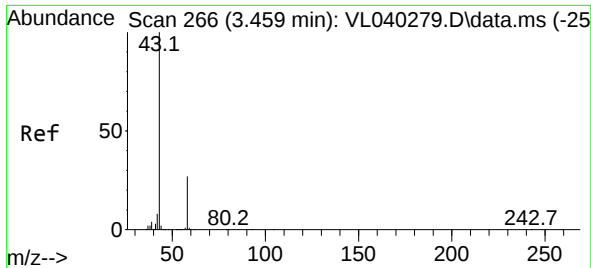
Tgt Ion: 41 Resp: 114263
Ion Ratio Lower Upper
41 100
42 76.9 59.0 88.4



#13
Ethanol
Concen: 176.353 ppbv
RT: 3.227 min Scan# 194
Delta R.T. -0.010 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 45 Resp: 613915
Ion Ratio Lower Upper
45 100
46 37.7 15.0 60.2





#15

Acetone

Concen: 6.504 ppbv

RT: 3.462 min Scan# 2

Delta R.T. 0.003 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

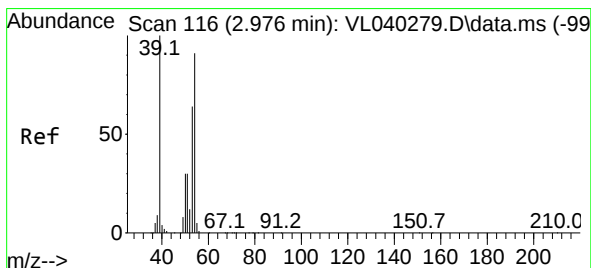
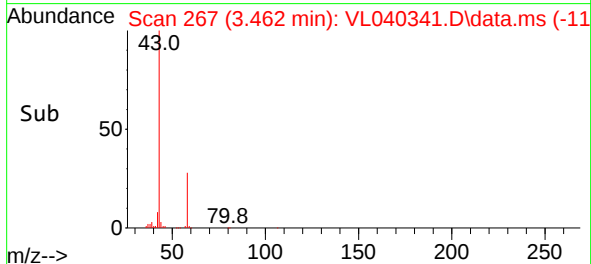
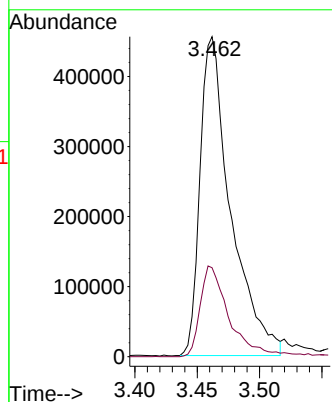
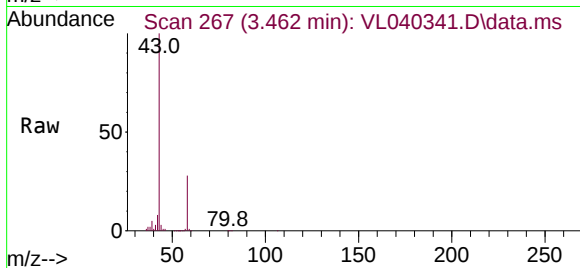
IA1

Tgt Ion: 43 Resp: 780168

Ion Ratio Lower Upper

43 100

58 28.5 21.8 32.8



#16

1,3-Butadiene

Concen: 0.123 ppbv

RT: 2.957 min Scan# 110

Delta R.T. -0.019 min

Lab File: VL040341.D

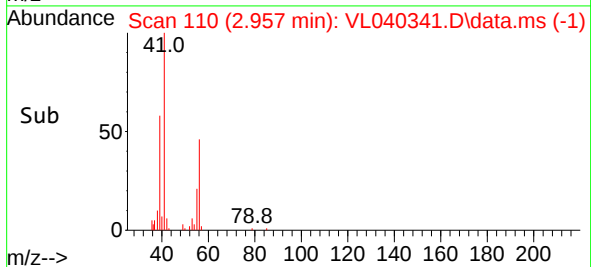
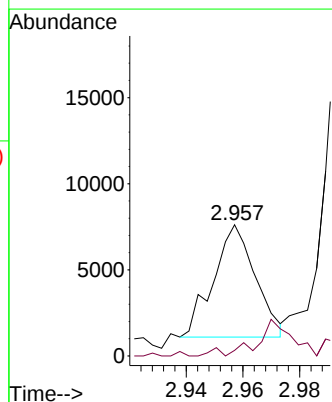
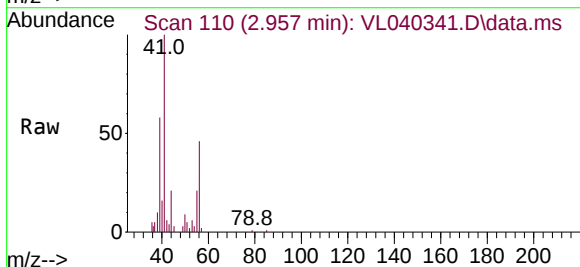
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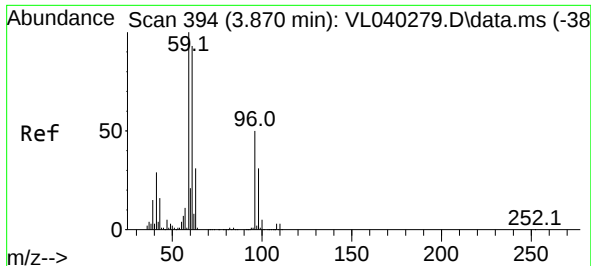
Tgt Ion: 39 Resp: 6697

Ion Ratio Lower Upper

39 100

54 51.2 68.4 102.6#





#17

tert-Butyl alcohol

Concen: 0.038 ppbv

RT: 3.883 min Scan# 394

Delta R.T. 0.013 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

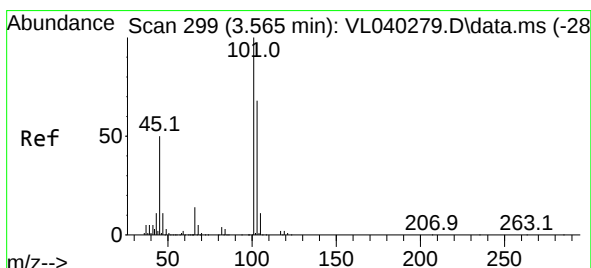
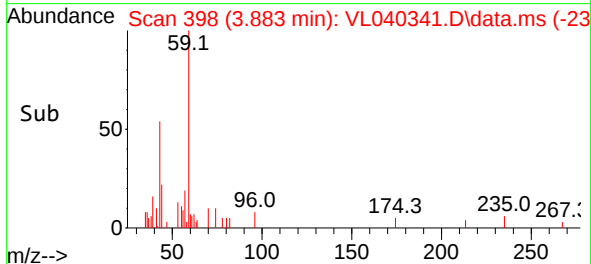
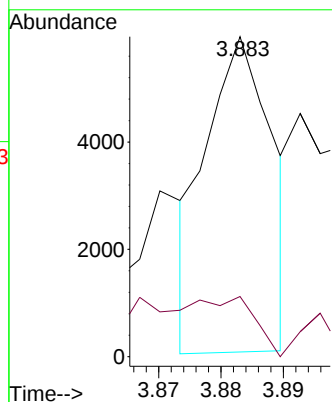
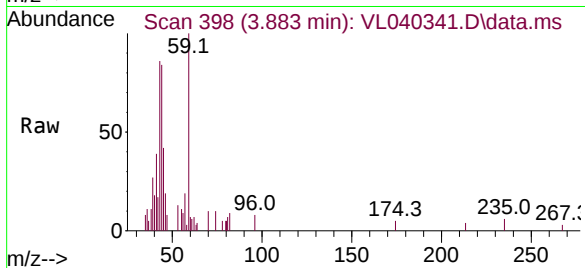
IA1

Tgt Ion: 59 Resp: 4319

Ion Ratio Lower Upper

59 100

57 0.0 8.5 12.7#



#19

Isopropyl Alcohol

Concen: 2.190 ppbv

RT: 3.568 min Scan# 300

Delta R.T. 0.003 min

Lab File: VL040341.D

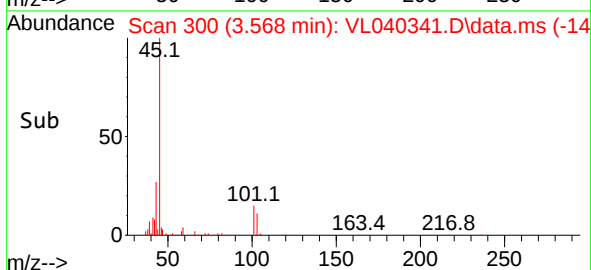
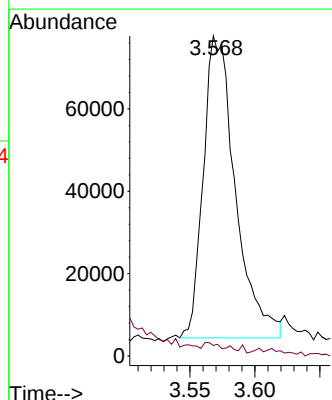
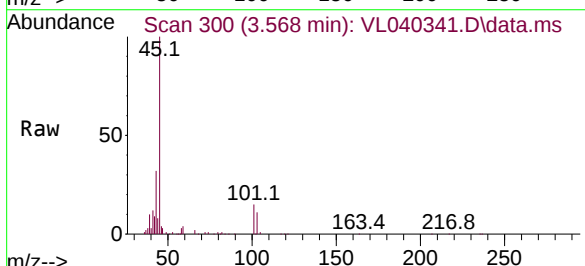
Acq: 12 Apr 2023 16:28

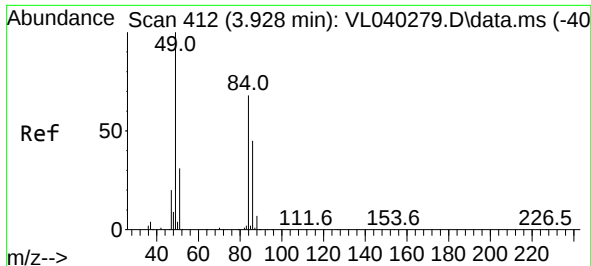
Tgt Ion: 45 Resp: 125826

Ion Ratio Lower Upper

45 100

58 176.8 2.7 4.1#





#20

Methylene Chloride

Concen: 3.072 ppbv

RT: 3.928 min Scan# 412

Delta R.T. 0.000 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

IA1

Tgt Ion: 84 Resp: 155018

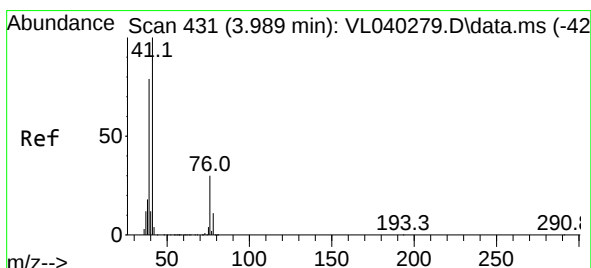
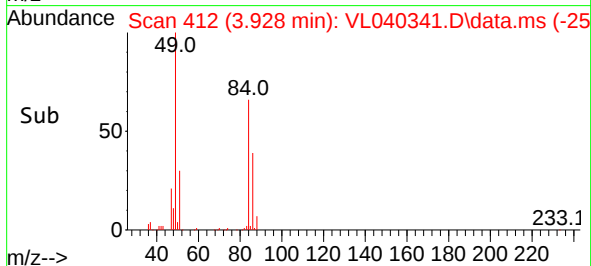
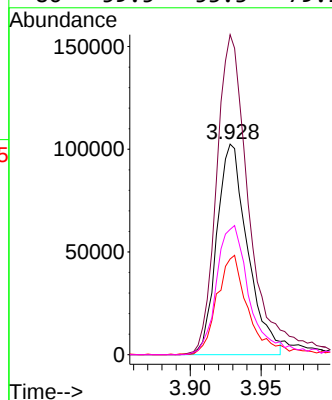
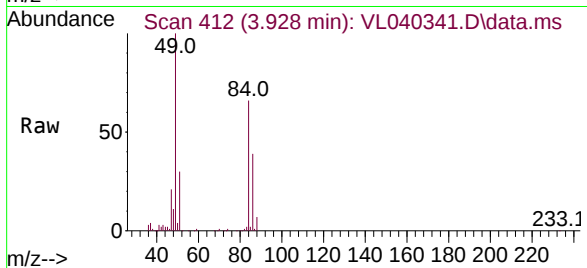
Ion Ratio Lower Upper

84 100

49 152.0 117.5 176.3

51 45.1 36.9 55.3

86 59.5 53.3 79.9



#21

Allyl Chloride

Concen: 0.042 ppbv

RT: 3.925 min Scan# 411

Delta R.T. -0.064 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

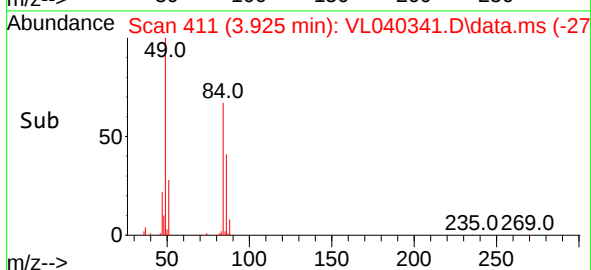
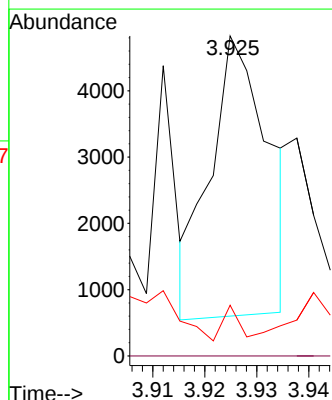
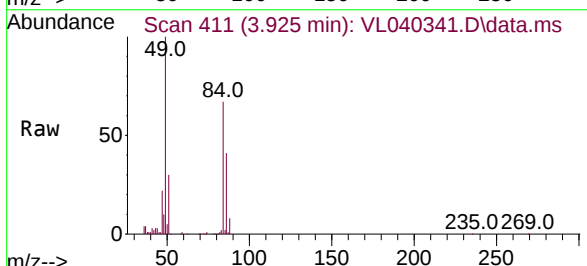
Tgt Ion: 41 Resp: 3264

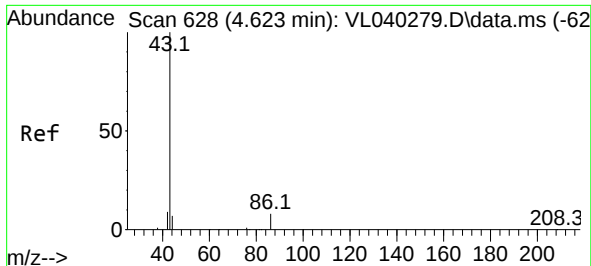
Ion Ratio Lower Upper

41 100

76 4.3 25.4 38.0#

39 39.2 65.4 98.2#

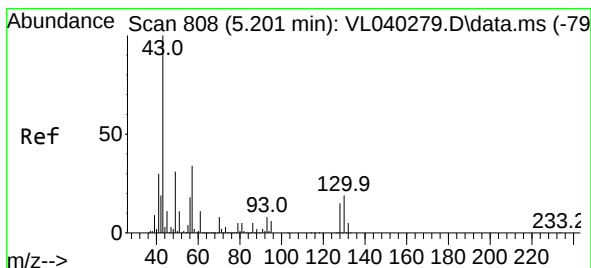
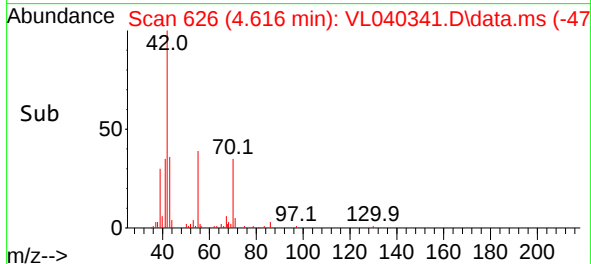
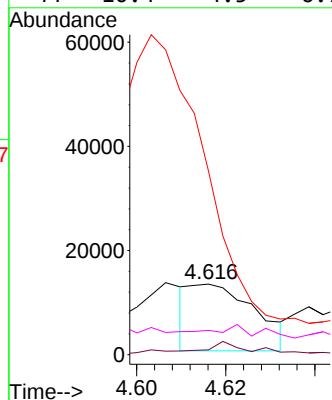
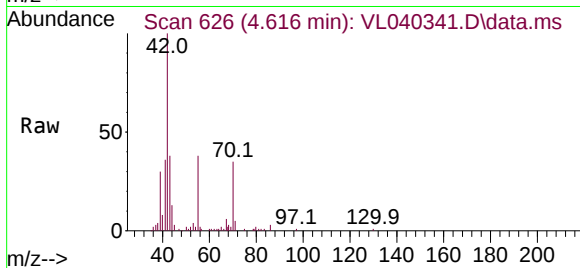




#23
 Vinyl Acetate
 Concen: 0.390 ppbv
 RT: 4.616 min Scan# 61
 Delta R.T. -0.007 min
 Lab File: VL040341.D
 Acq: 12 Apr 2023 16:28

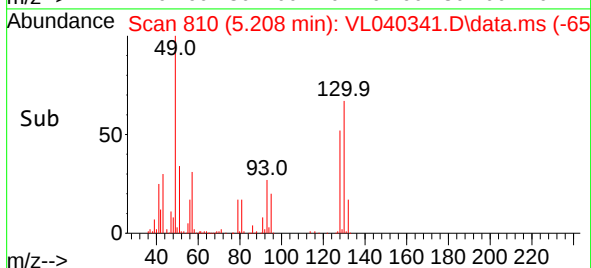
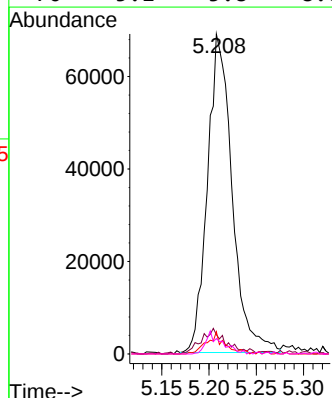
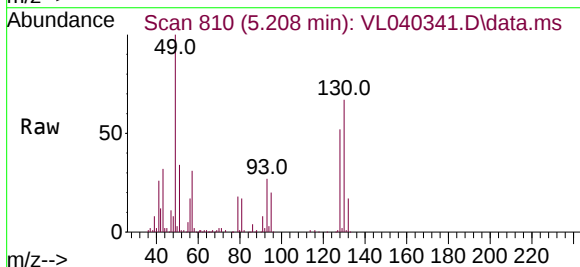
Instrument :
 MSVOA_L
 ClientSampleId :
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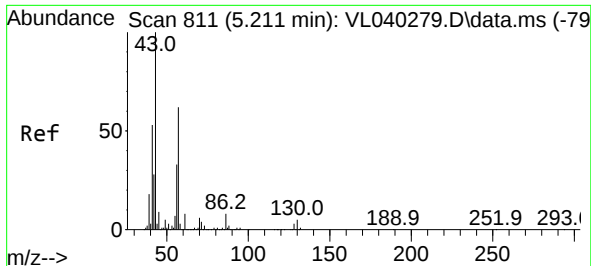
Tgt Ion:	43	Resp:	13030
Ion	Ratio	Lower	Upper
43	100		
86	5.7	5.0	7.4
42	389.5	9.1	13.7#
44	10.4	4.5	6.7#



#25
 Ethyl Acetate
 Concen: 0.557 ppbv
 RT: 5.208 min Scan# 810
 Delta R.T. 0.007 min
 Lab File: VL040341.D
 Acq: 12 Apr 2023 16:28

Tgt Ion:	43	Resp:	125024
Ion	Ratio	Lower	Upper
43	100		
45	8.6	8.6	12.8
61	5.3	8.4	12.6#
70	5.1	5.8	8.6#

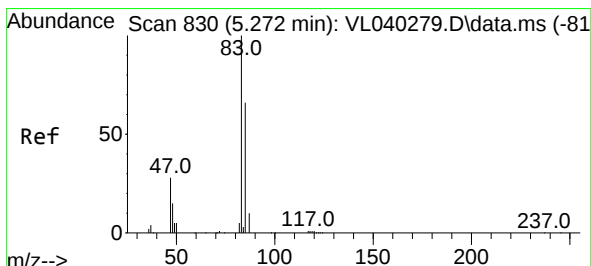
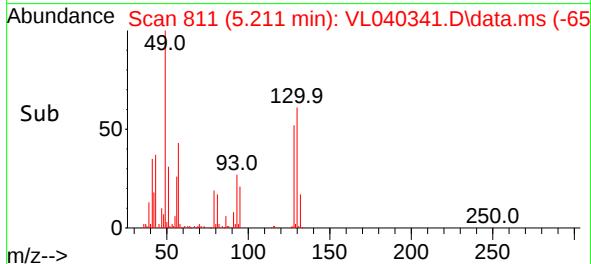
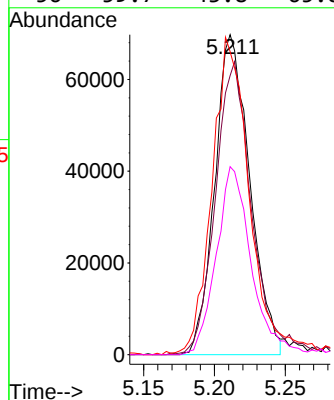
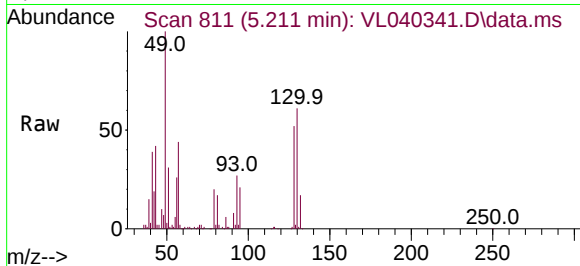




#26
Hexane
Concen: 1.302 ppbv
RT: 5.211 min Scan# 811
Delta R.T. -0.000 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

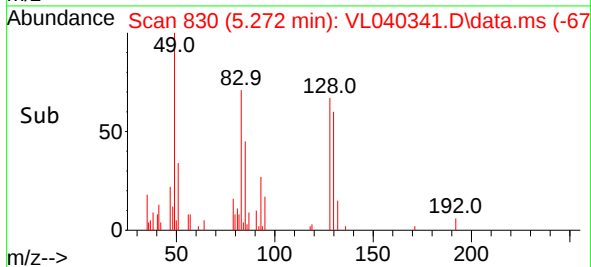
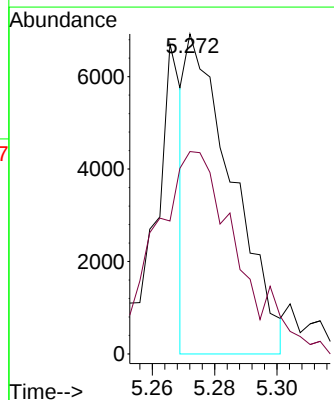
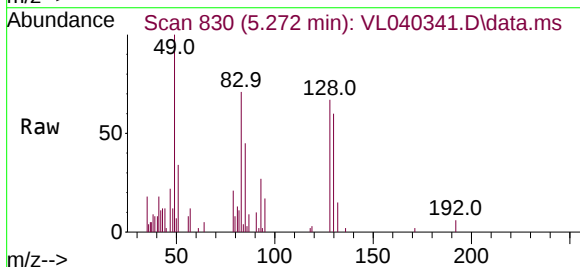
Instrument :
MSVOA_L
ClientSampleId :
IA1

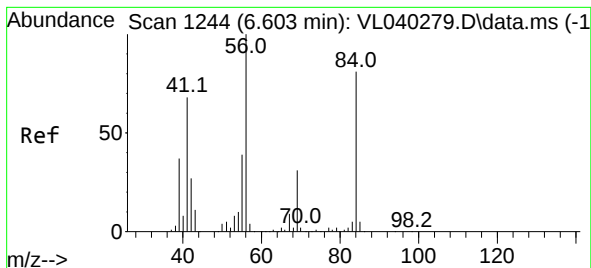
Tgt Ion: 57 Resp: 120025
Ion Ratio Lower Upper
57 100
41 97.0 73.5 110.3
43 109.4 196.3 294.5#
56 59.7 43.8 65.8



#29
Chloroform
Concen: 0.044 ppbv
RT: 5.272 min Scan# 830
Delta R.T. 0.000 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 83 Resp: 7125
Ion Ratio Lower Upper
83 100
85 57.9 52.8 79.2





#30

Cyclohexane

Concen: 0.084 ppbv

RT: 6.606 min Scan# 1245

Delta R.T. 0.003 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

IA1

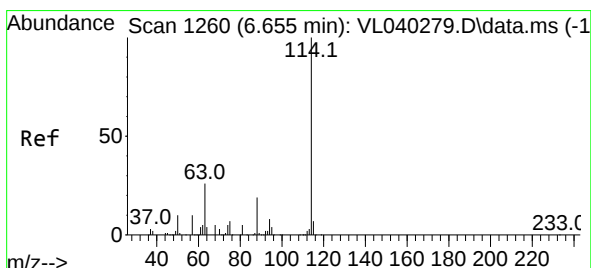
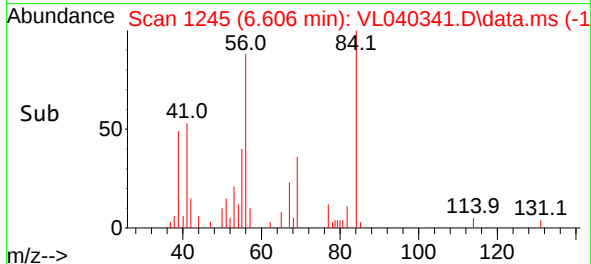
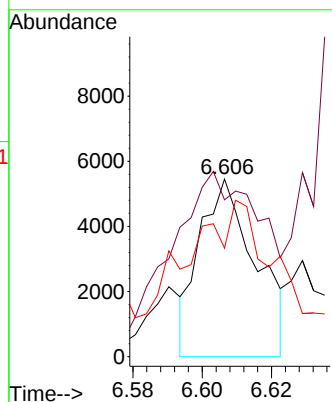
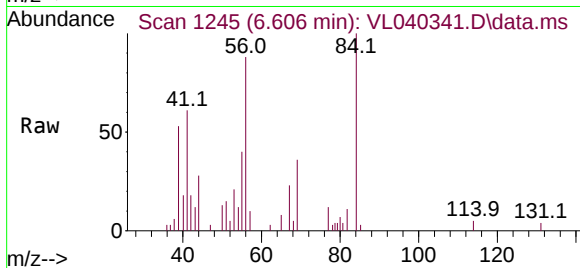
Tgt Ion: 84 Resp: 6103

Ion Ratio Lower Upper

84 100

56 0.0 109.0 163.4#

41 212.7 67.9 101.9#



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 6.658 min Scan# 1261

Delta R.T. 0.003 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

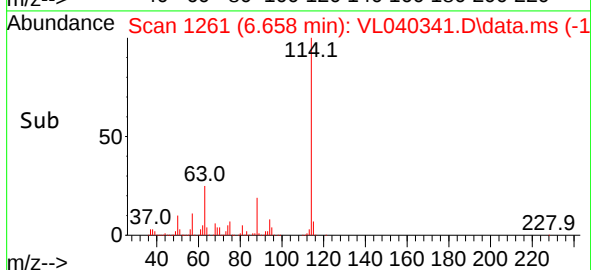
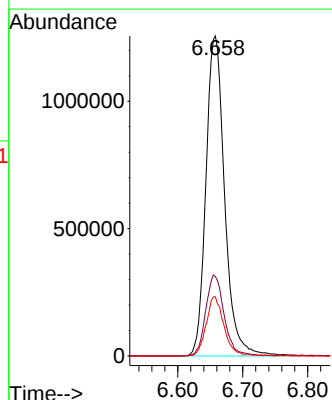
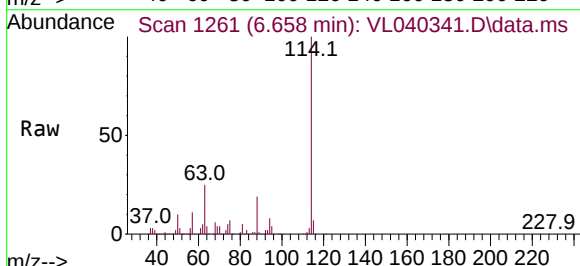
Tgt Ion: 114 Resp: 2517222

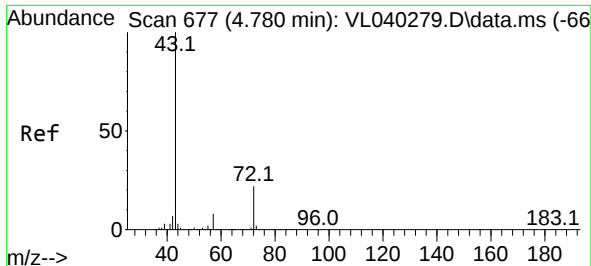
Ion Ratio Lower Upper

114 100

63 25.2 21.2 31.8

88 17.7 14.5 21.7

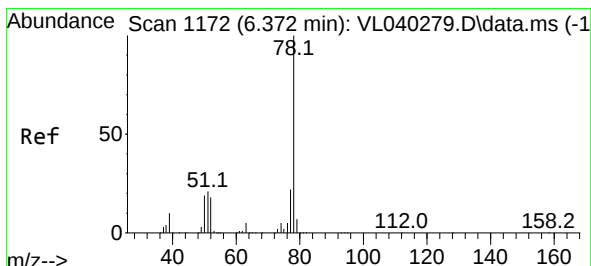
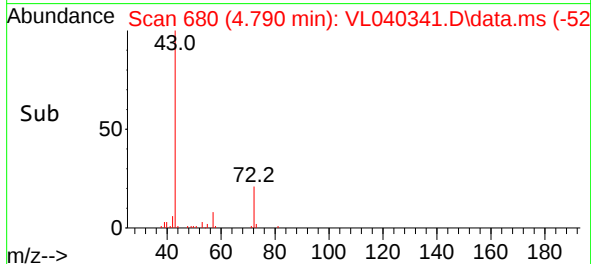
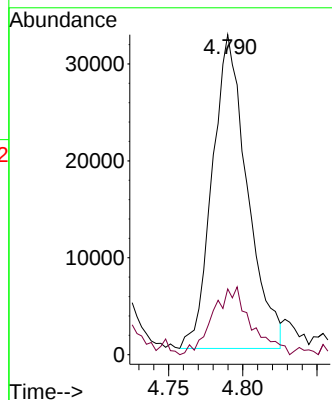
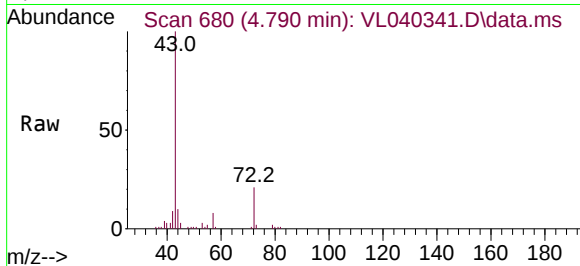




#34
2-Butanone
Concen: 0.427 ppbv
RT: 4.790 min Scan# 61
Delta R.T. 0.010 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

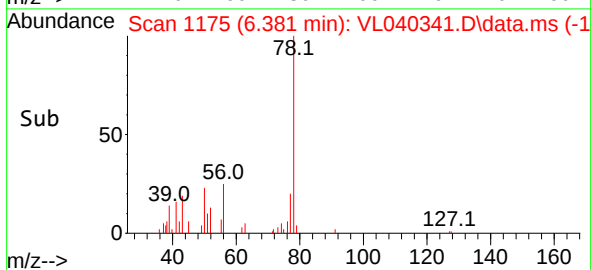
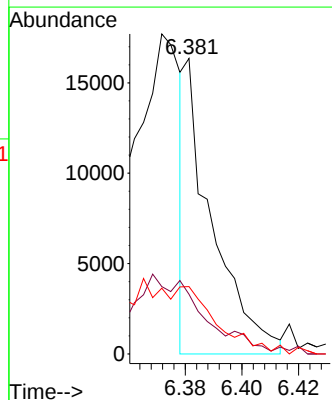
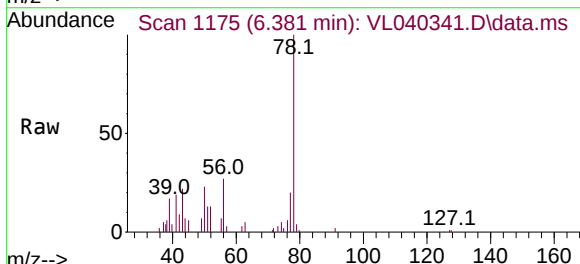
Instrument :
MSVOA_L
ClientSampleId :
IA1

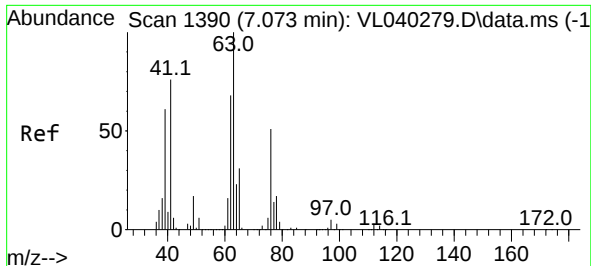
Tgt Ion: 43 Resp: 53099
Ion Ratio Lower Upper
43 100
72 25.1 18.3 27.5



#36
Benzene
Concen: 0.056 ppbv
RT: 6.381 min Scan# 1175
Delta R.T. 0.009 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 78 Resp: 10815
Ion Ratio Lower Upper
78 100
77 18.8 17.8 26.8
50 20.8 15.4 23.2





#39

1,2-Dichloropropane

Concen: 8.329 ppbv

RT: 6.655 min Scan# 11

Delta R.T. -0.418 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

IA1

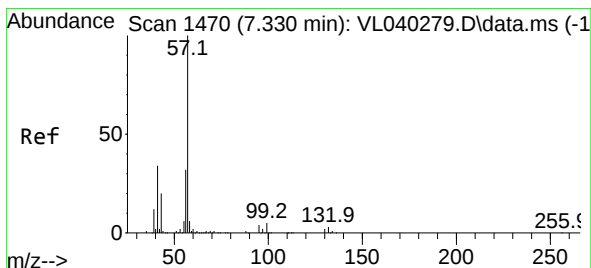
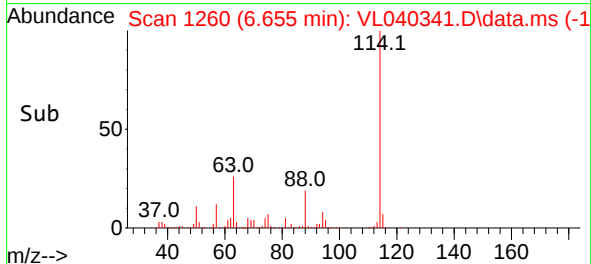
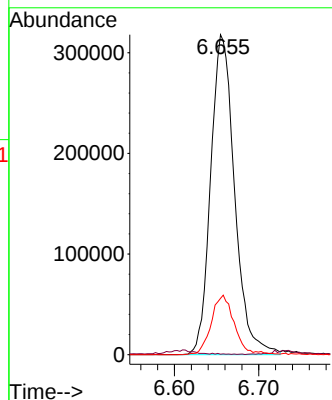
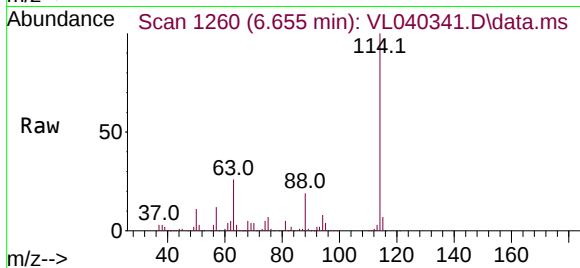
Tgt Ion: 63 Resp: 626855

Ion Ratio Lower Upper

63 100

41 0.0 60.8 91.2#

62 17.6 54.1 81.1#



#44

2,2,4-Trimethylpentane

Concen: 0.070 ppbv

RT: 7.336 min Scan# 1472

Delta R.T. 0.006 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

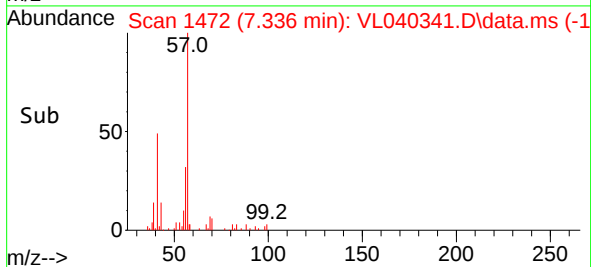
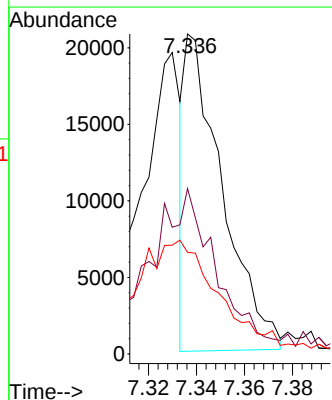
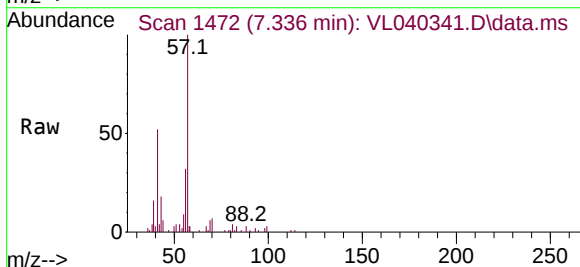
Tgt Ion: 57 Resp: 22502

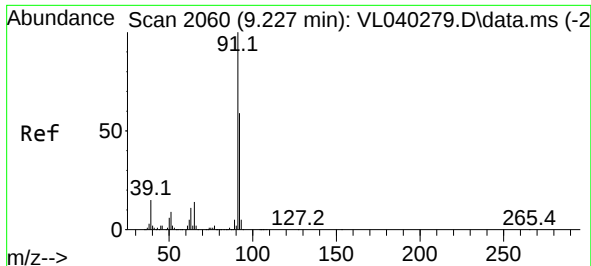
Ion Ratio Lower Upper

57 100

41 103.6 26.8 40.2#

56 88.2 25.0 37.6#





#53

Toluene

Concen: 0.189 ppbv

RT: 9.233 min Scan# 2060

Delta R.T. 0.006 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

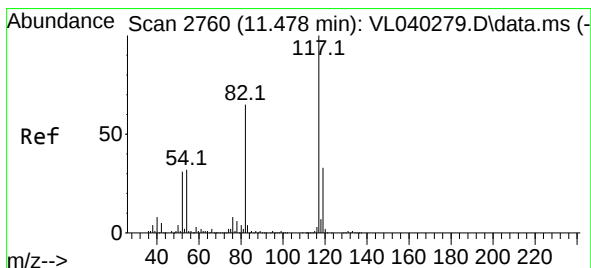
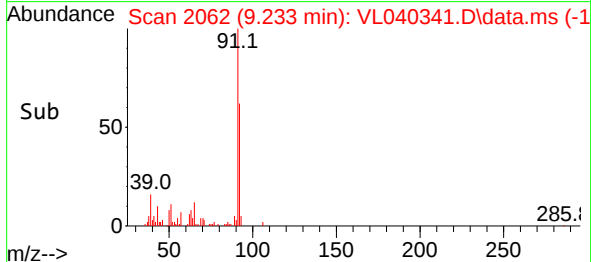
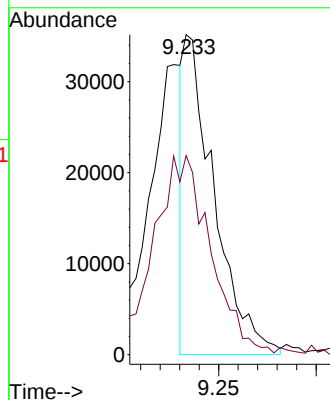
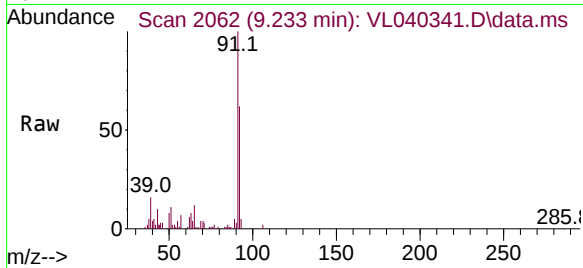
IA1

Tgt Ion: 91 Resp: 37956

Ion Ratio Lower Upper

91 100

92 119.5 48.0 72.0#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 11.481 min Scan# 2761

Delta R.T. 0.003 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

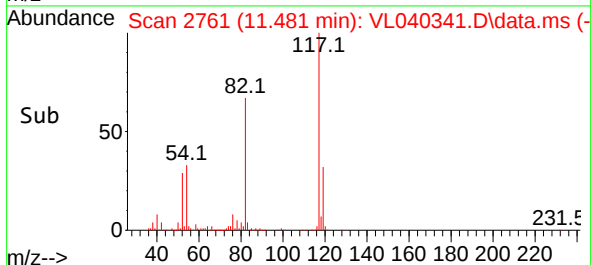
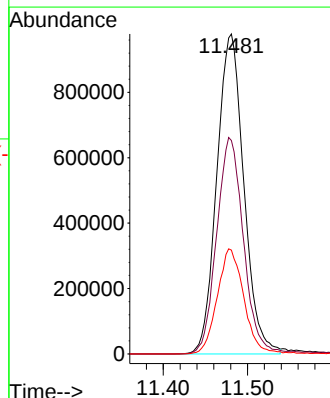
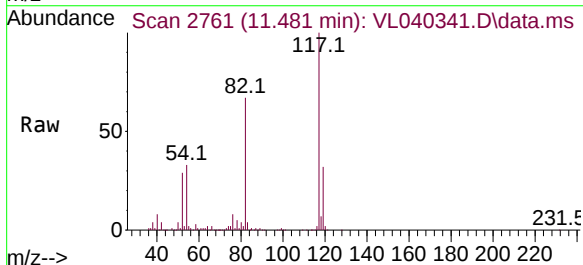
Tgt Ion: 117 Resp: 2178799

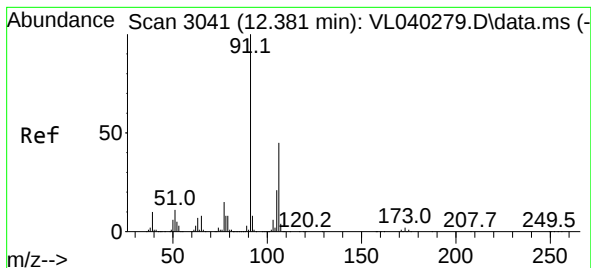
Ion Ratio Lower Upper

117 100

82 68.0 51.4 77.2

119 32.7 24.0 36.0





#59

m/p-Xylene

Concen: 0.046 ppbv

RT: 12.384 min Scan# 3041

Delta R.T. 0.003 min

Lab File: VL040341.D

Acq: 12 Apr 2023 16:28

Instrument :

MSVOA_L

ClientSampleId :

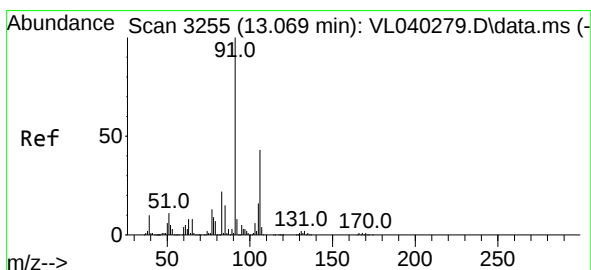
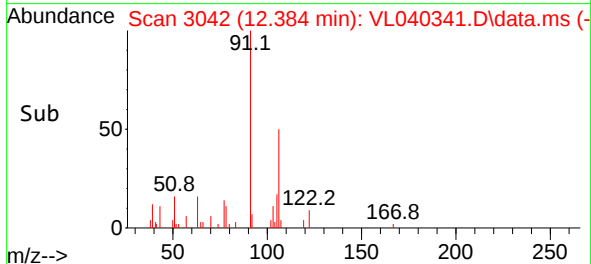
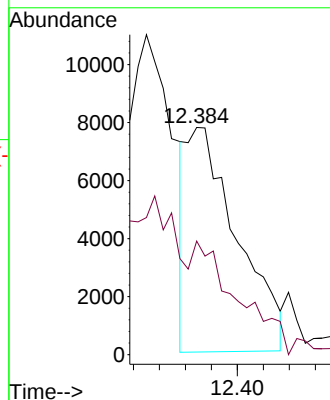
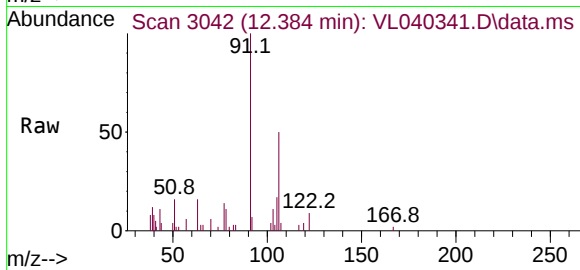
IA1

Tgt Ion: 91 Resp: 10542

Ion Ratio Lower Upper

91 100

106 0.0 34.0 51.0#



#60

o-Xylene

Concen: 0.035 ppbv

RT: 13.079 min Scan# 3258

Delta R.T. 0.010 min

Lab File: VL040341.D

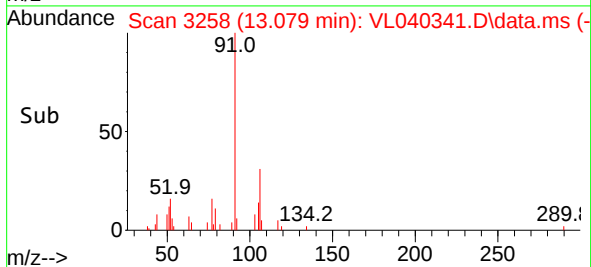
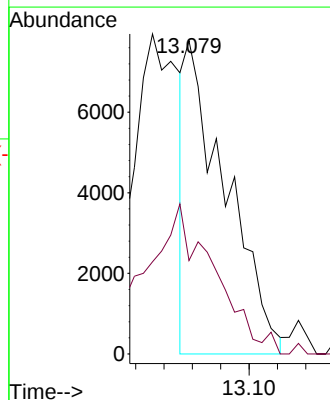
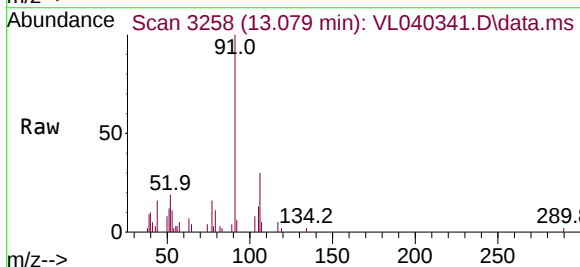
Acq: 12 Apr 2023 16:28

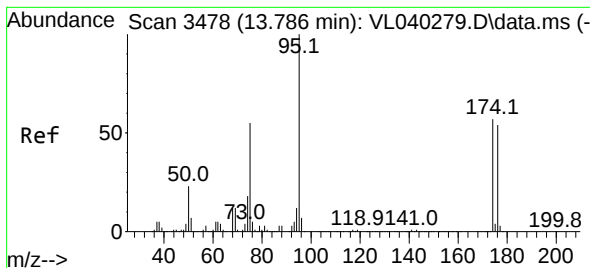
Tgt Ion: 91 Resp: 7671

Ion Ratio Lower Upper

91 100

106 96.0 21.7 65.1#

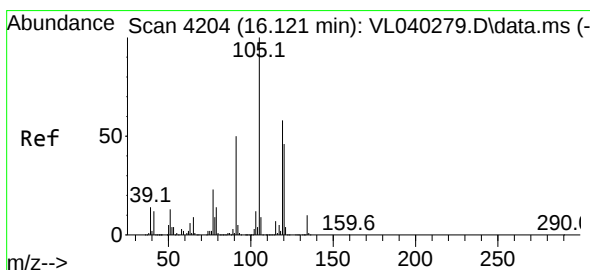
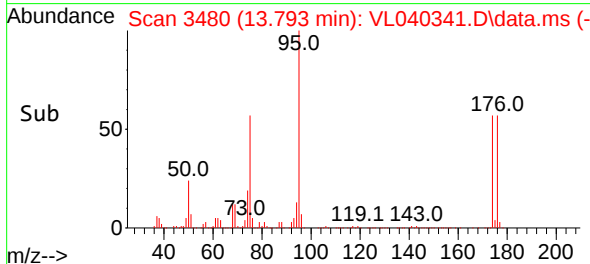
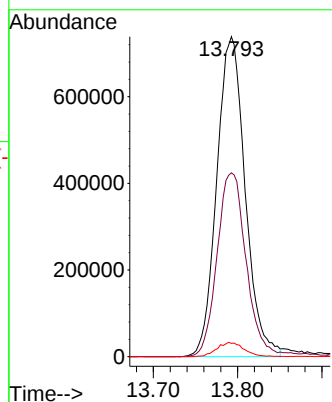
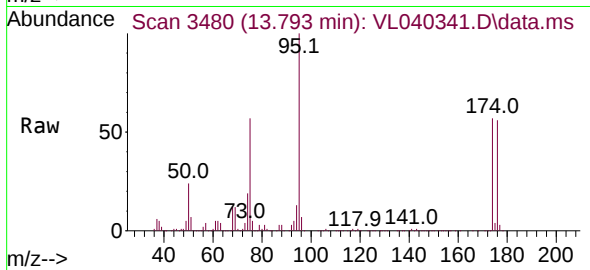




#68
1-Bromo-4-Fluorobenzene
Concen: 9.474 ppbv
RT: 13.793 min Scan# 3478
Delta R.T. 0.007 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

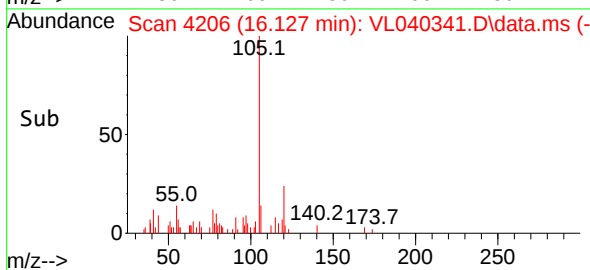
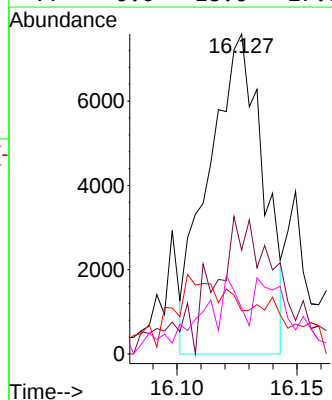
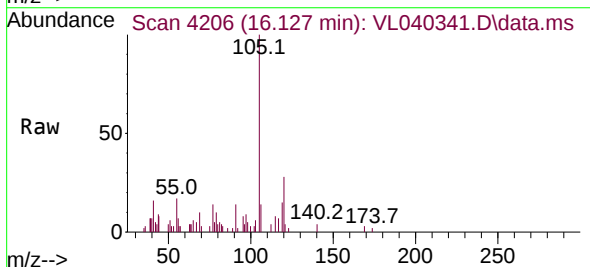
Instrument :
MSVOA_1
ClientSampleId :
IA1

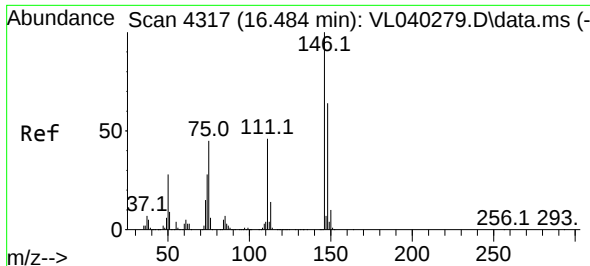
Tgt Ion: 95 Resp: 1728649
Ion Ratio Lower Upper
95 100
174 60.7 47.0 70.6
175 4.3 3.4 5.2



#74
1,2,4-Trimethylbenzene
Concen: 0.049 ppbv
RT: 16.127 min Scan# 4206
Delta R.T. 0.006 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion: 105 Resp: 11958
Ion Ratio Lower Upper
105 100
120 30.6 36.6 54.8#
91 2.2 39.9 59.9#
77 6.0 18.6 27.8#

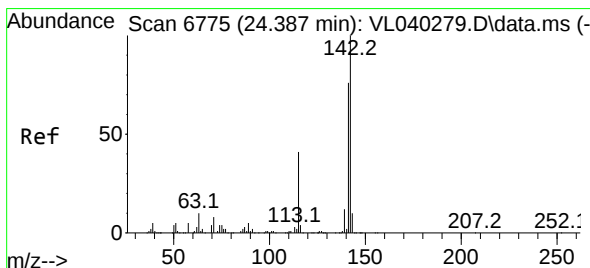
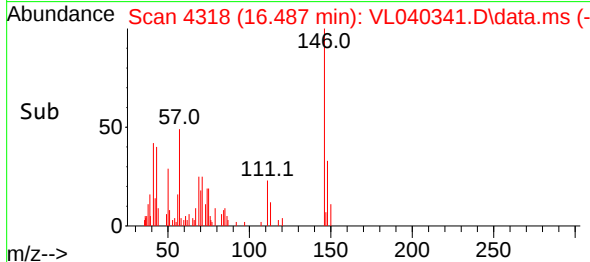
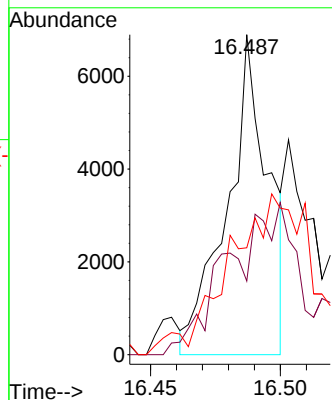
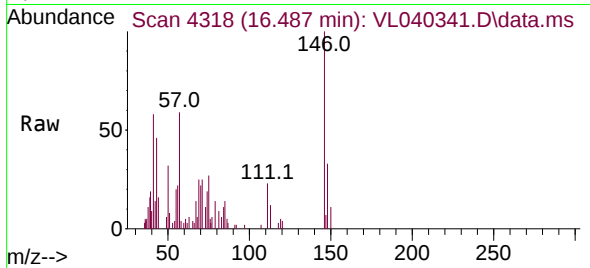




#76
1,4-Dichlorobenzene
Concen: 0.059 ppbv
RT: 16.487 min Scan# 4317
Delta R.T. 0.003 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Instrument :
MSVOA_L
ClientSampleId :
IA1

Tgt Ion:146 Resp: 7482
Ion Ratio Lower Upper
146 100
111 0.0 23.8 71.2#
148 0.0 32.5 97.5#



#80
Naphthalene,2-methyl-
Concen: 0.161 ppbv
RT: 24.384 min Scan# 6774
Delta R.T. -0.003 min
Lab File: VL040341.D
Acq: 12 Apr 2023 16:28

Tgt Ion:142 Resp: 5928
Ion Ratio Lower Upper
142 100
141 66.5 65.5 98.3
115 61.4 33.5 50.3#

