

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052220\
 Data File : VL035083.D
 Acq On : 22 May 2020 14:04
 Operator : SY/AP
 Sample : L2739-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

Quant Time: May 24 00:26:40 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_LWed May 06 14:49:39 2020
 QLast Update : Wed May 06 14:49:39 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.65	49	1054485	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.17	114	2480081	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.10	117	2348682	10.00	ppbv	-0.02

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.44	95	2020659	10.63	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.30%

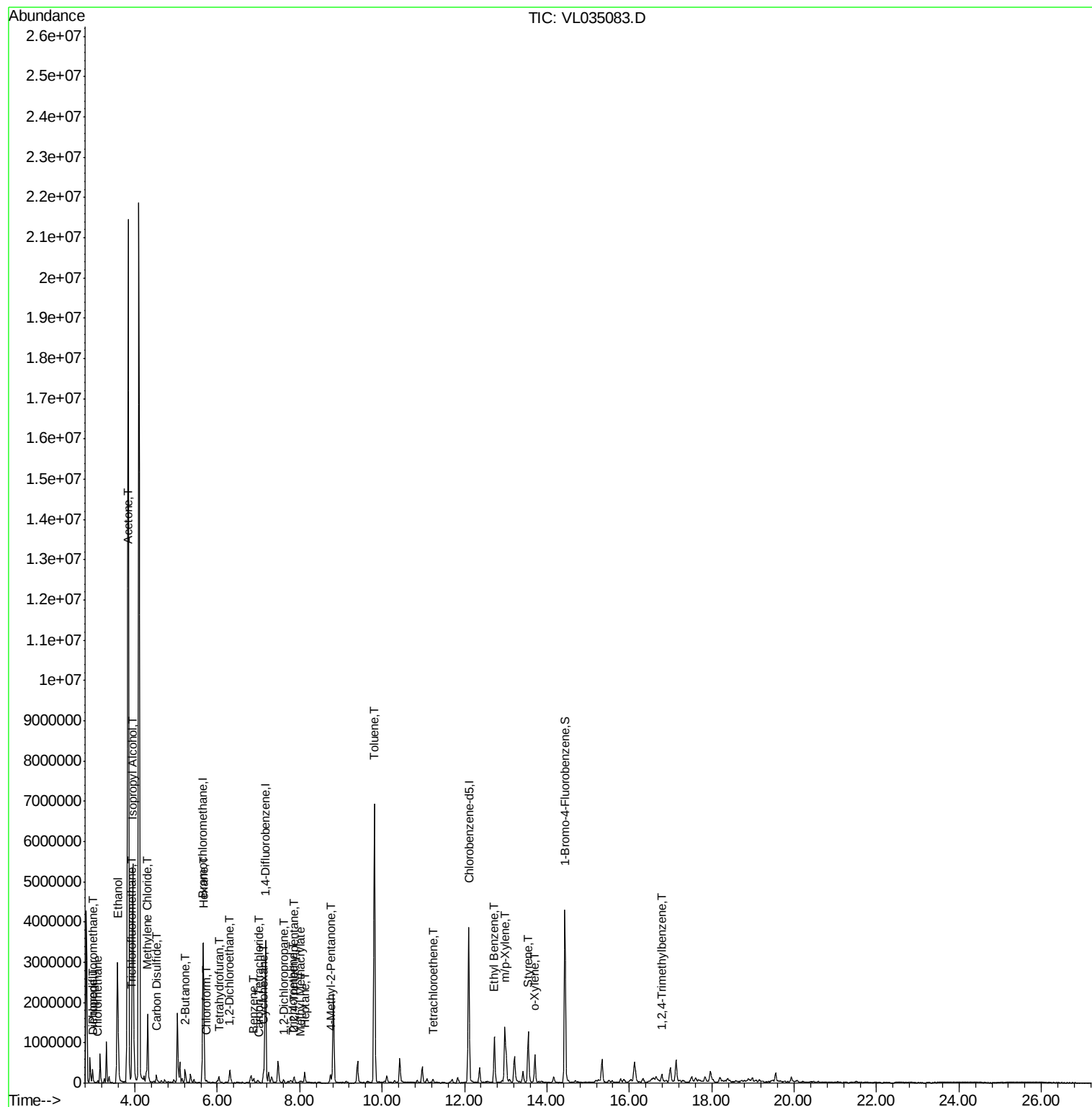
Target Compounds					Ovalue
2) Dichlorodifluoromethane	3.00	85	30493	0.204	ppbv 95
4) Chloromethane	3.09	50	38549	0.559	ppbv 98
9) Propene	2.97	41	61182	1.171	ppbv # 73
10) Heptane	8.12	43	93061	0.711	ppbv 97
11) Trichlorofluoromethane	3.91	101	39057	0.253	ppbv 99
13) Ethanol	3.57	45	3924536	227.655	ppbv 98
15) Acetone	3.81	43	1234429m	8.855	ppbv
19) Isopropyl Alcohol	3.94	45	7082671	76.183	ppbv 99
20) Methylene Chloride	4.31	84	539223	11.685	ppbv 94
26) Hexane	5.67	57	658146	6.483	ppbv 87
27) Carbon Disulfide	4.52	76	192632	1.610	ppbv 98
29) Chloroform	5.73	83	32111	0.193	ppbv 88
30) Cyclohexane	7.13	84	89318m	1.140	ppbv
34) 2-Butanone	5.22	43	351556	2.281	ppbv 98
35) Carbon Tetrachloride	7.02	117	11357m	0.073	ppbv
36) Benzene	6.88	78	77156	0.377	ppbv 94
37) 1,2-Dichloroethane	6.30	62	83926m	0.665	ppbv
38) Trichloroethene	7.83	130	3085m	0.039	ppbv
39) 1,2-Dichloropropane	7.61	63	25056m	0.306	ppbv
41) Tetrahydrofuran	6.04	42	61972	0.764	ppbv 99
43) Methyl Methacrylate	8.02	69	15219m	0.176	ppbv
44) 2,2,4-Trimethylpentane	7.86	57	68488	0.188	ppbv # 47
50) 4-Methyl-2-Pentanone	8.75	43	141064	0.642	ppbv 97
52) Tetrachloroethene	11.24	164	19852m	0.273	ppbv
53) Toluene	9.81	91	5358674	24.722	ppbv 97
58) Ethyl Benzene	12.72	91	990241	3.410	ppbv 99
59) m/p-Xylene	12.98	91	1395747	5.462	ppbv # 58
60) o-Xylene	13.71	91	506411	2.008	ppbv 99
61) Styrene	13.55	104	675221	4.231	ppbv 99
74) 1,2,4-Trimethylbenzene	16.79	105	90741m	0.304	ppbv

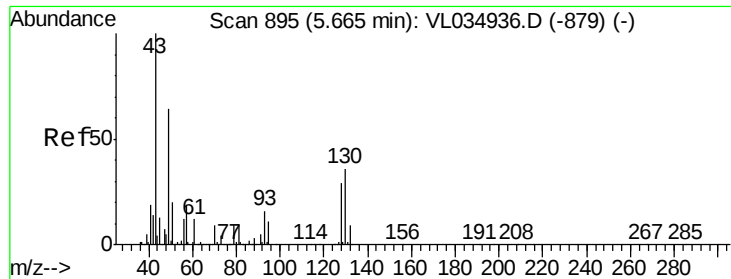
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Wed May 06 14:49:39 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampled :

IA-1

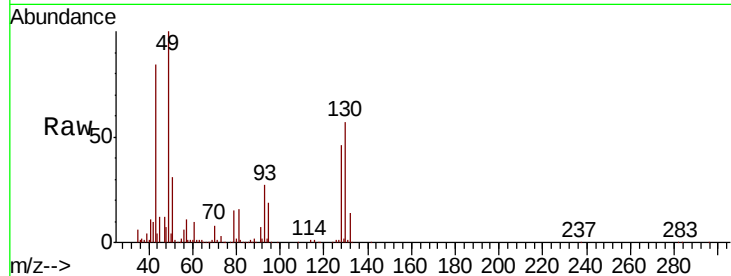
Tot Ion: 49 Resp: 1054485

Ion Ratio Lower Upper

49 100

128 45.6 22.1 66.5

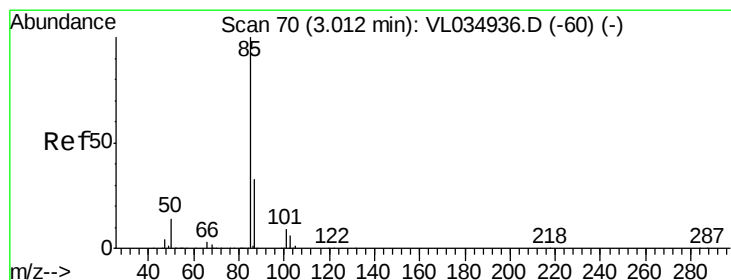
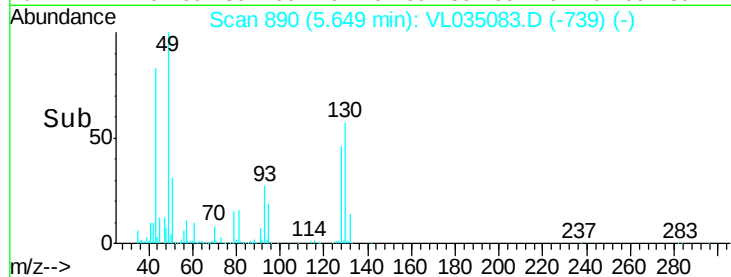
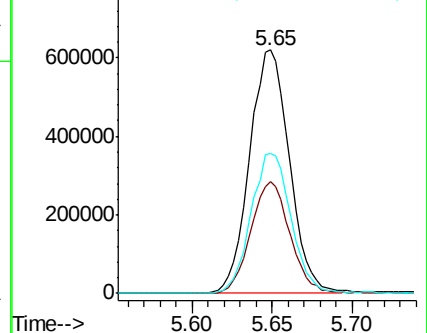
130 58.3 29.1 87.3



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.204 ppbv

RT: 3.00 min Scan# 66

Delta R.T. -0.01 min

Lab File: VL035083.D

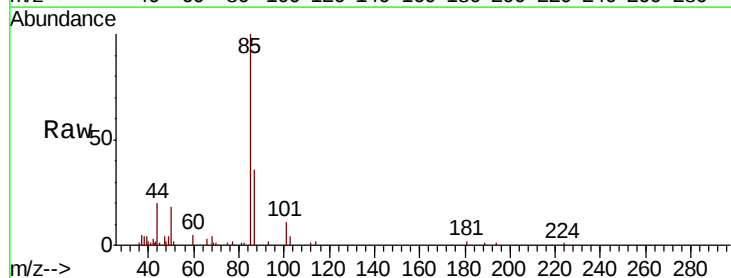
Acq: 22 May 2020 14:04

Tgt Ion: 85 Resp: 30493

Ion Ratio Lower Upper

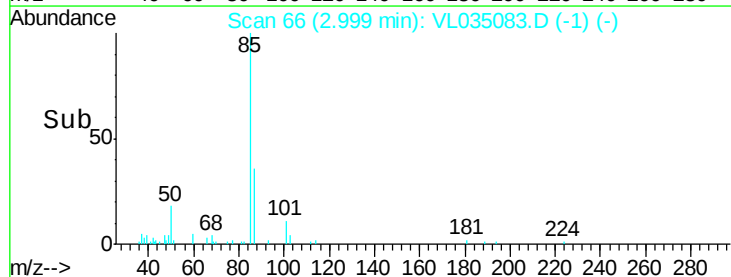
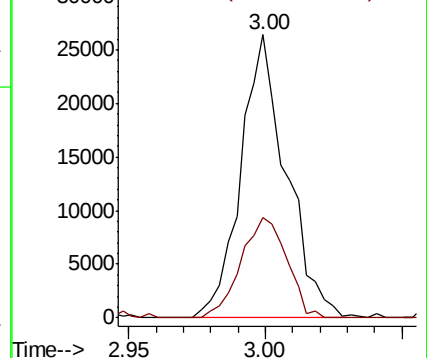
85 100

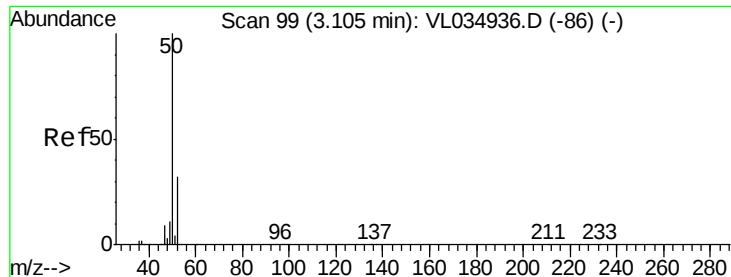
87 35.6 26.2 39.2



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#4

Chloromethane

Concen: 0.559 ppbv

RT: 3.09 min Scan# 95

Delta R.T. -0.01 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

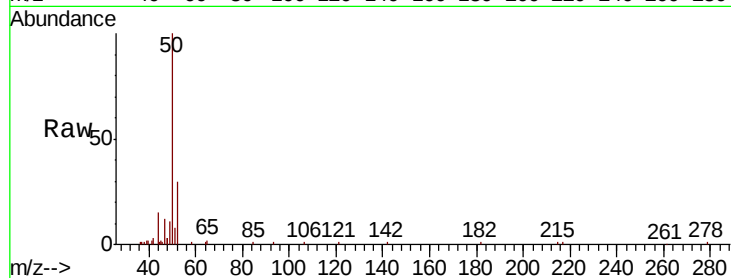
IA-1

Tot Ion: 50 Resp: 38549

Ion Ratio Lower Upper

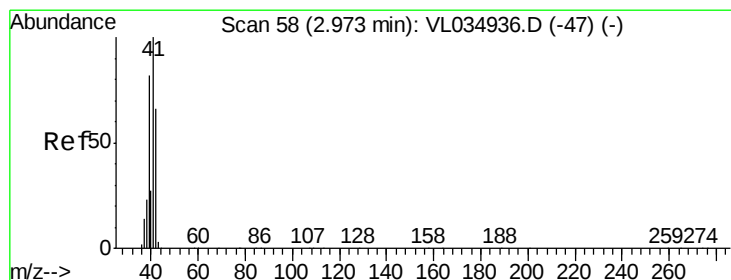
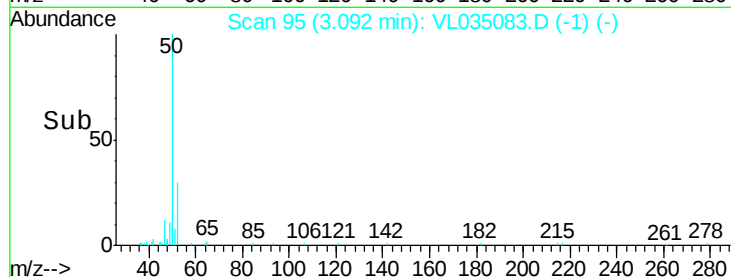
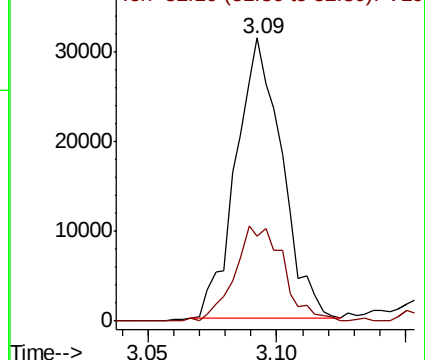
50 100

52 30.5 25.4 38.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 1.171 ppbv

RT: 2.97 min Scan# 58

Delta R.T. 0.00 min

Lab File: VL035083.D

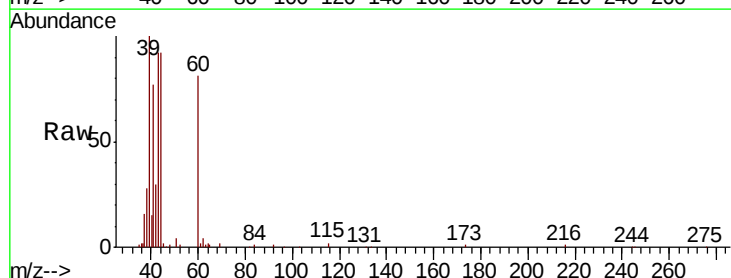
Acq: 22 May 2020 14:04

Tgt Ion: 41 Resp: 61182

Ion Ratio Lower Upper

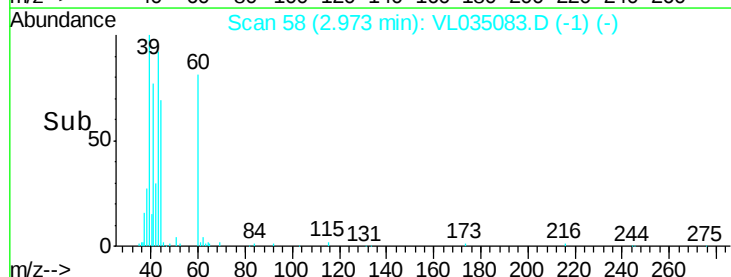
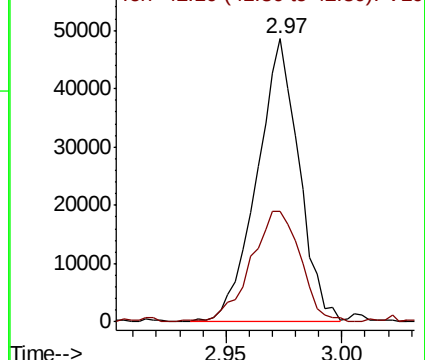
41 100

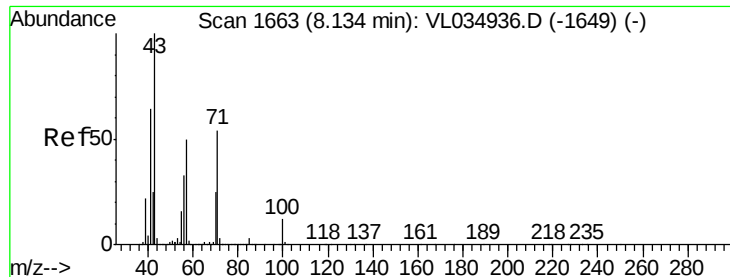
42 46.2 54.5 81.7#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.711 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.01 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

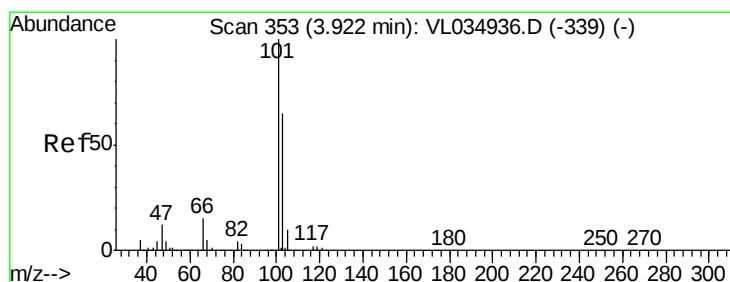
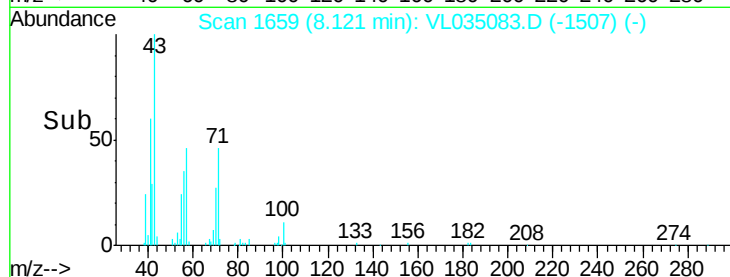
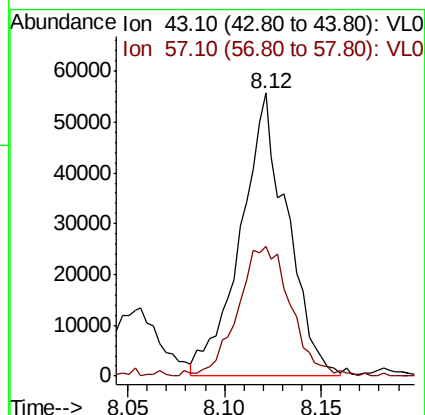
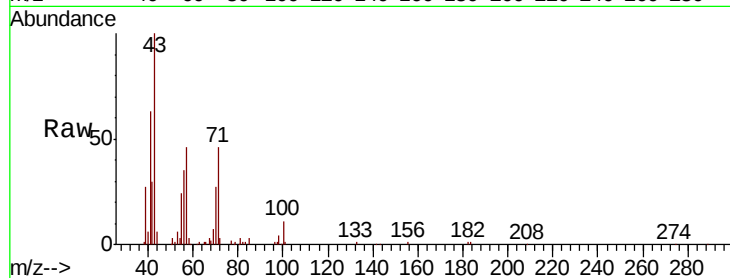
IA-1

Tot Ion: 43 Resp: 93061

Ion Ratio Lower Upper

43 100

57 53.8 41.1 61.7



#11

Trichlorofluoromethane

Concen: 0.253 ppbv

RT: 3.91 min Scan# 350

Delta R.T. -0.01 min

Lab File: VL035083.D

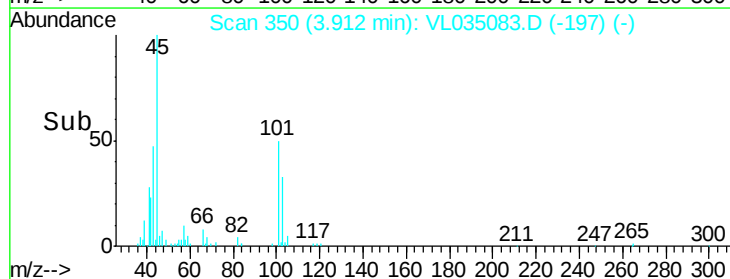
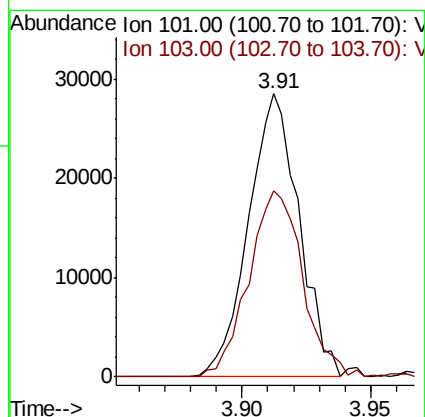
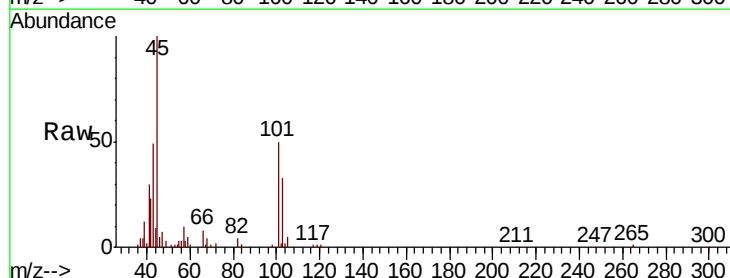
Acq: 22 May 2020 14:04

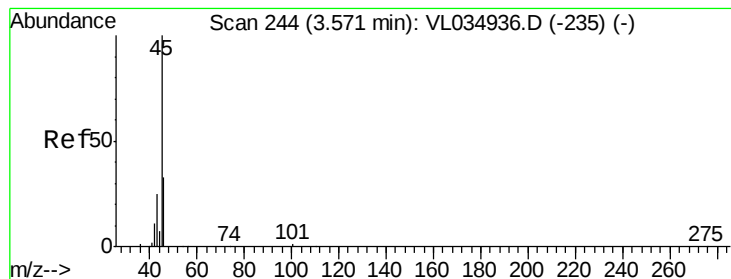
Tgt Ion: 101 Resp: 39057

Ion Ratio Lower Upper

101 100

103 65.9 51.9 77.9





#13

Ethanol

Concen: 227.655 ppbv

RT: 3.57 min Scan# 245

Delta R.T. 0.00 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

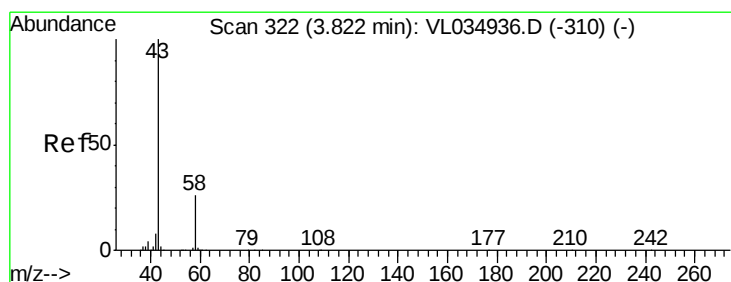
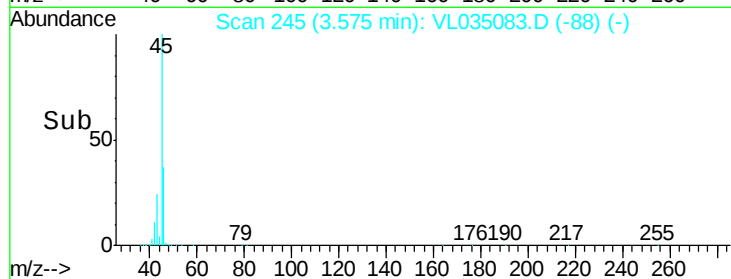
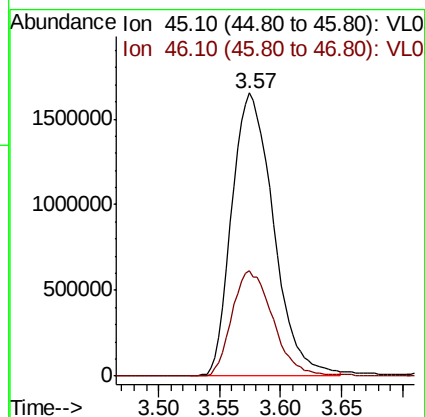
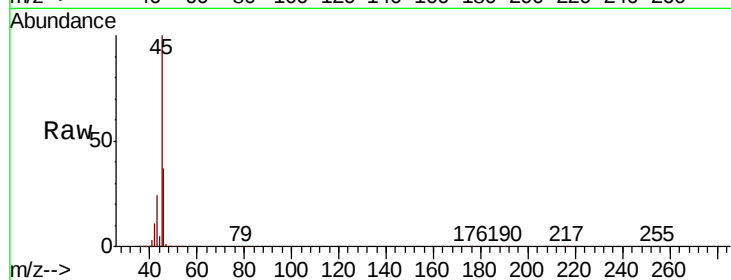
IA-1

Tot Ion: 45 Resp: 3924536

Ion Ratio Lower Upper

45 100

46 37.2 14.3 57.3



#15

Acetone

Concen: 8.855 ppbv m

RT: 3.81 min Scan# 319

Delta R.T. -0.01 min

Lab File: VL035083.D

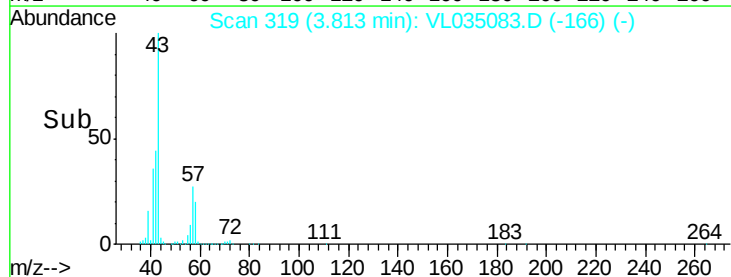
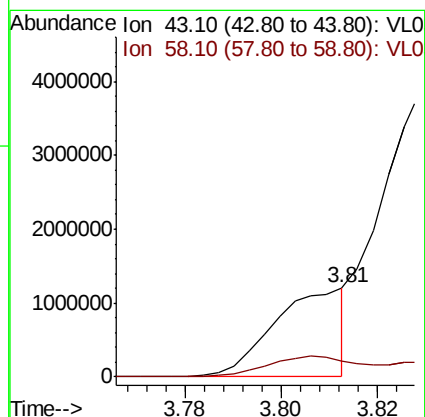
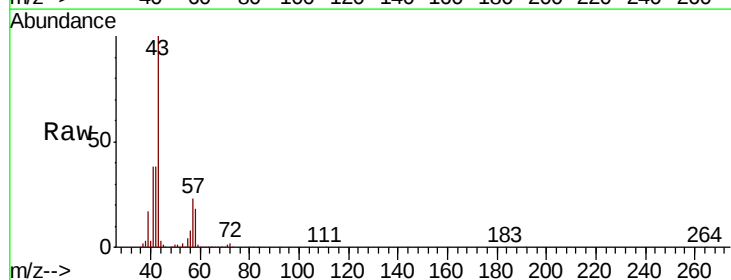
Acq: 22 May 2020 14:04

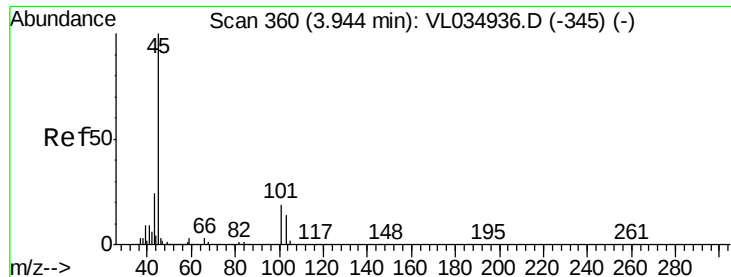
Tgt Ion: 43 Resp: 1234429

Ion Ratio Lower Upper

43 100

58 57.0 21.7 32.5#





#19

Isopropyl Alcohol

Concen: 76.183 ppbv

RT: 3.94 min Scan# 360

Delta R.T. 0.00 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

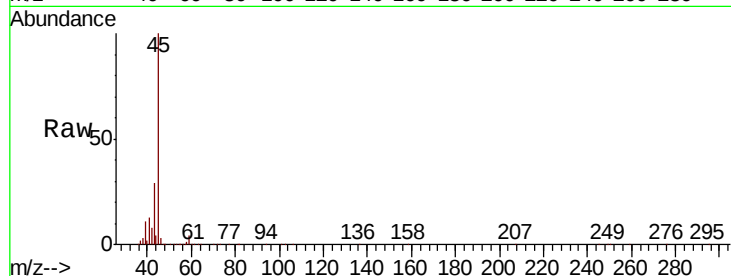
IA-1

Tot Ion: 45 Resp: 7082671

Ion Ratio Lower Upper

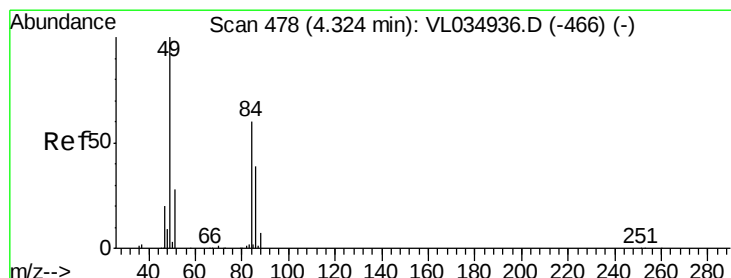
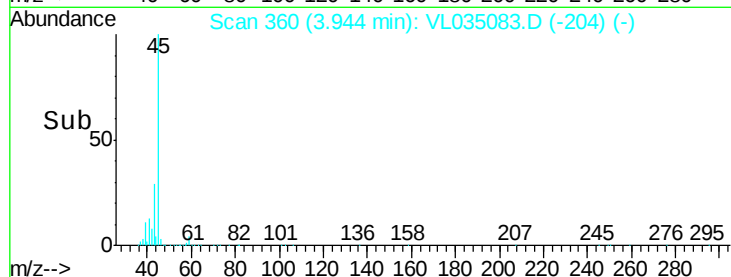
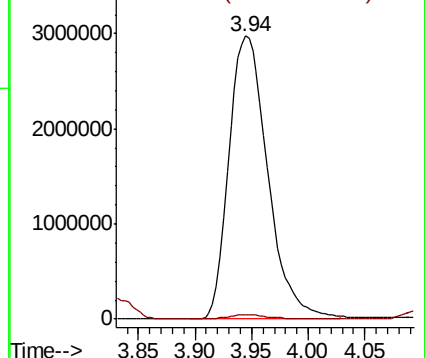
45 100

58 1.7 1.7 2.5



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 11.685 ppbv

RT: 4.31 min Scan# 474

Delta R.T. -0.01 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Tgt Ion: 84 Resp: 539223

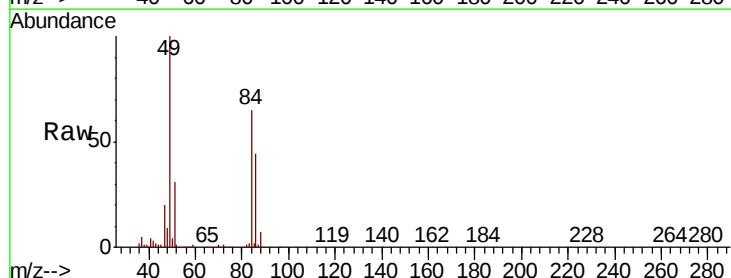
Ion Ratio Lower Upper

84 100

49 154.3 132.5 198.7

51 47.5 38.4 57.6

86 67.8 51.2 76.8

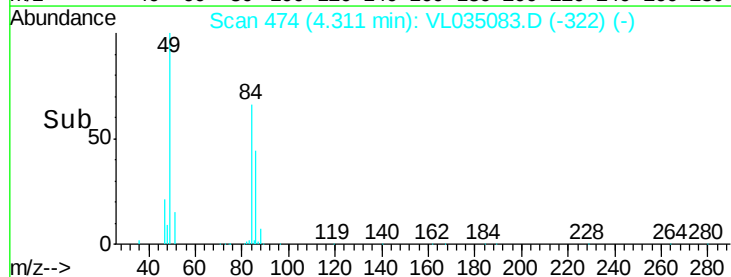
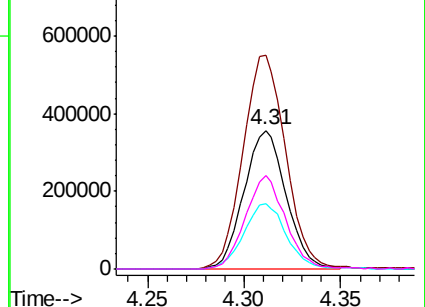


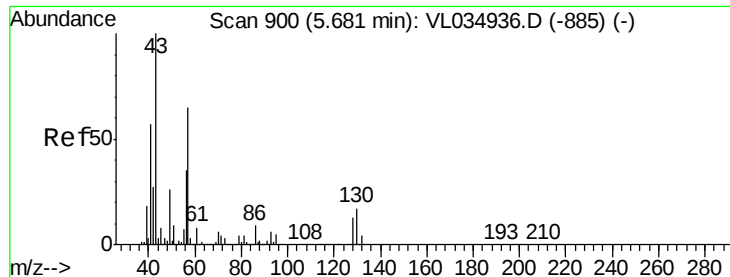
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

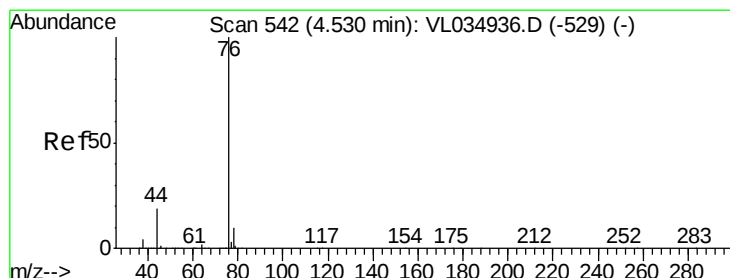
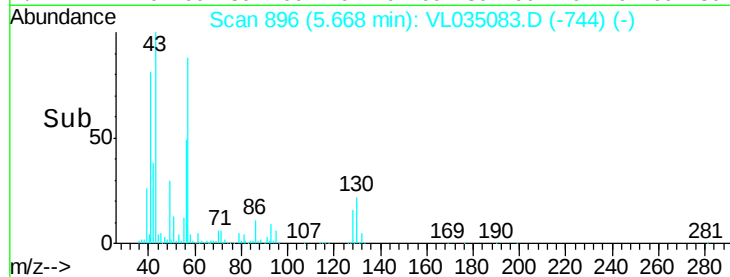
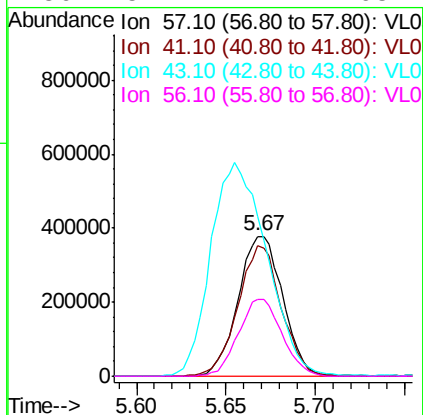
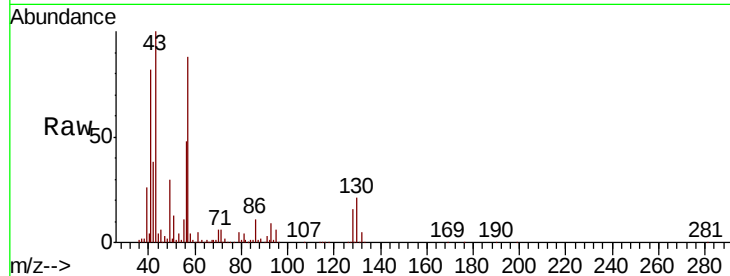




#26
Hexane
Concen: 6.483 ppbv
RT: 5.67 min Scan# 896
Delta R.T. -0.01 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

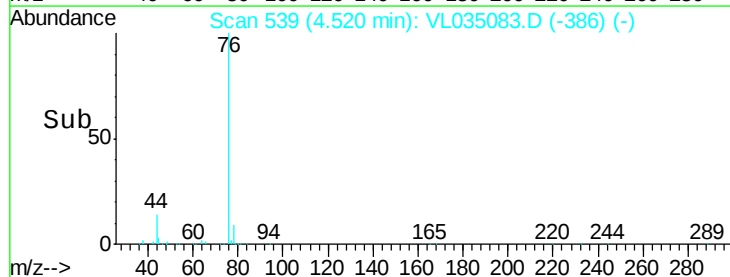
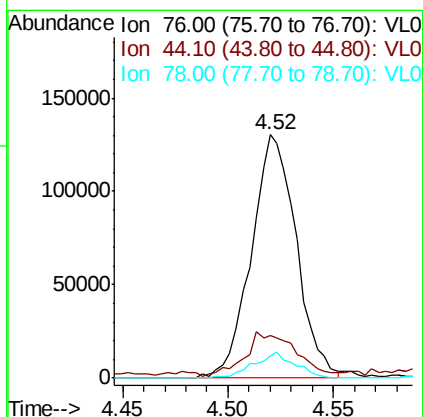
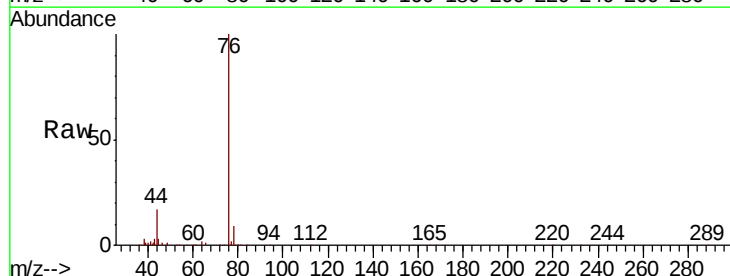
Instrument :
MSVOA_L
ClientSampleId :
IA-1

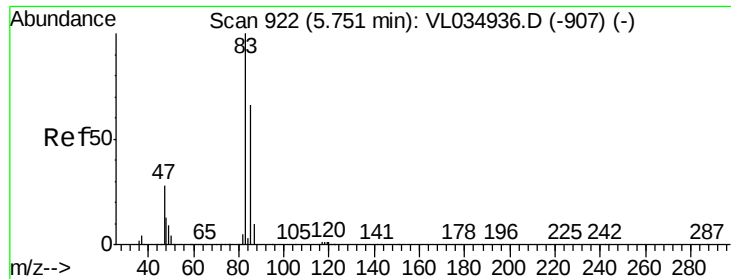
Tot Ion:	57	Resp:	658146
Ion	Ratio	Lower	Upper
57	100		
41	90.7	72.7	109.1
43	193.5	182.1	273.1
56	54.2	42.2	63.2



#27
Carbon Disulfide
Concen: 1.610 ppbv
RT: 4.52 min Scan# 539
Delta R.T. -0.01 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

Tgt Ion:	76	Resp:	192632
Ion	Ratio	Lower	Upper
76	100		
44	17.7	15.2	22.8
78	9.9	7.7	11.5





#29

Chloroform

Concen: 0.193 ppbv

RT: 5.73 min Scan# 916

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

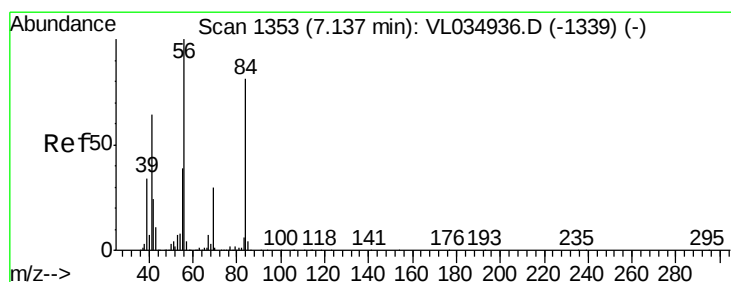
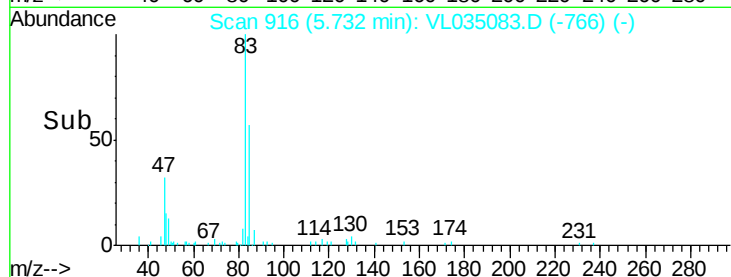
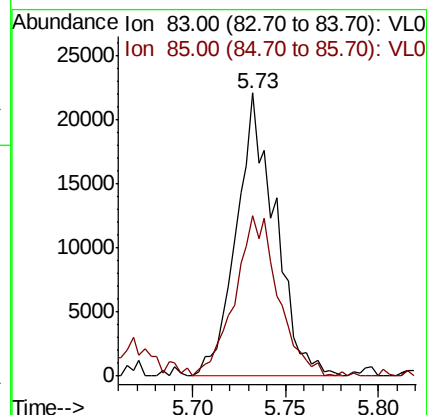
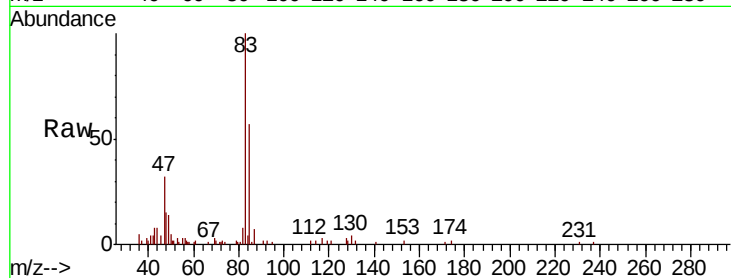
IA-1

Tot Ion: 83 Resp: 32111

Ion Ratio Lower Upper

83 100

85 56.6 53.0 79.6



#30

Cyclohexane

Concen: 1.140 ppbv m

RT: 7.13 min Scan# 1350

Delta R.T. -0.01 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

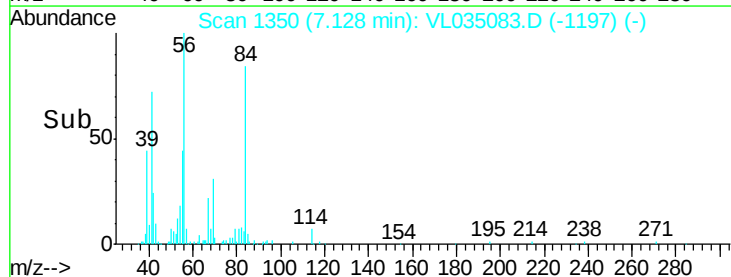
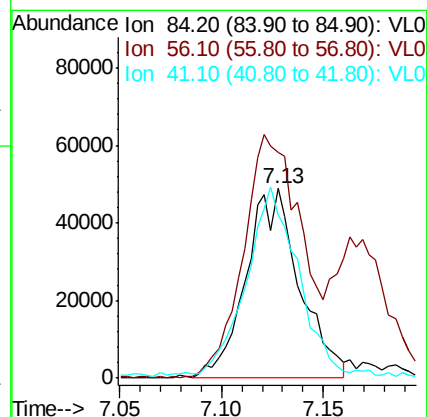
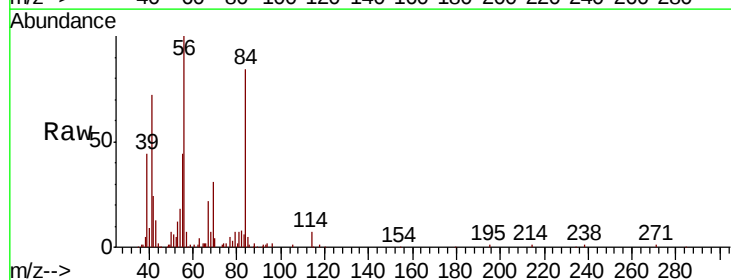
Tgt Ion: 84 Resp: 89318

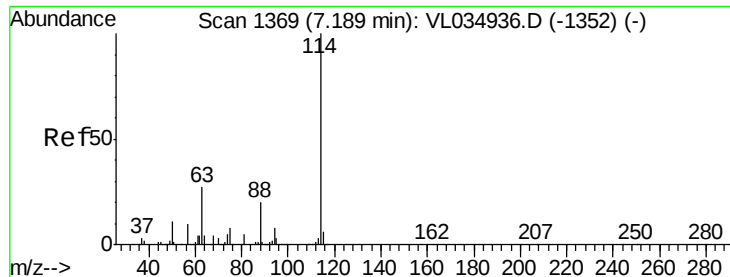
Ion Ratio Lower Upper

84 100

56 138.6 111.4 167.2

41 0.0 66.7 100.1#

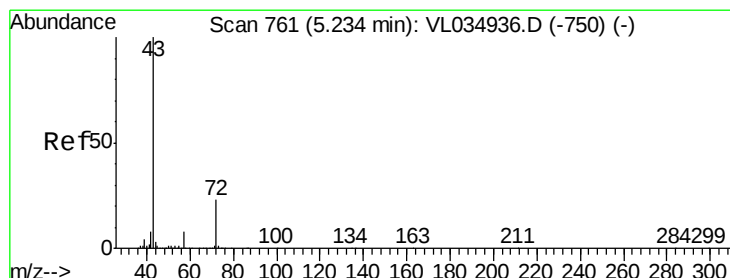
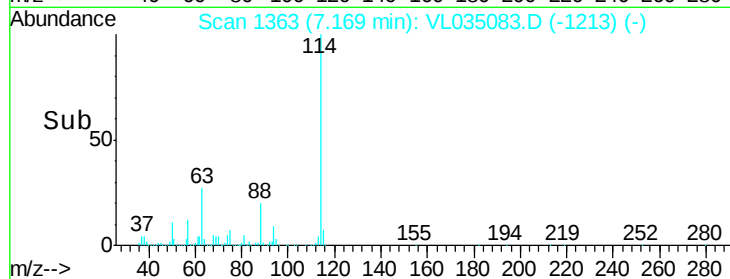
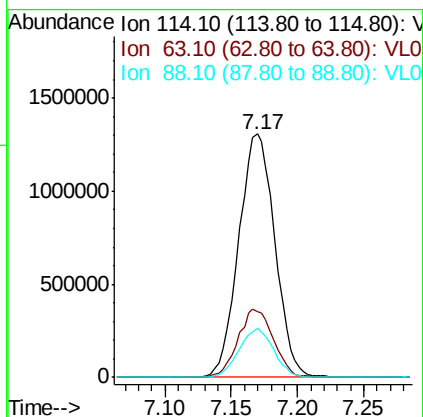
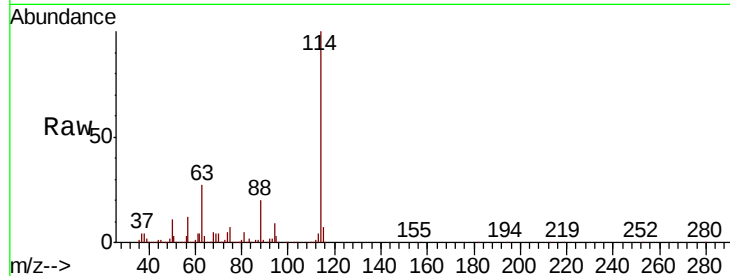




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.02 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

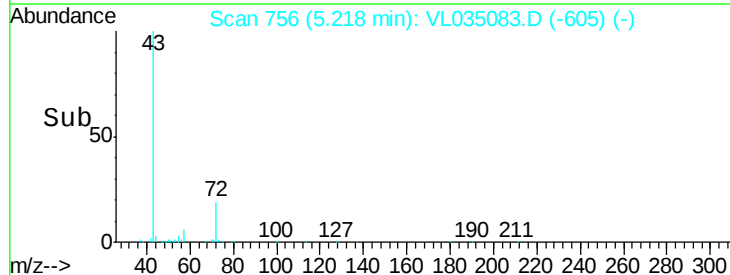
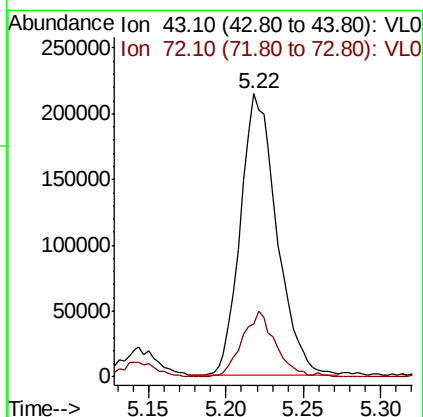
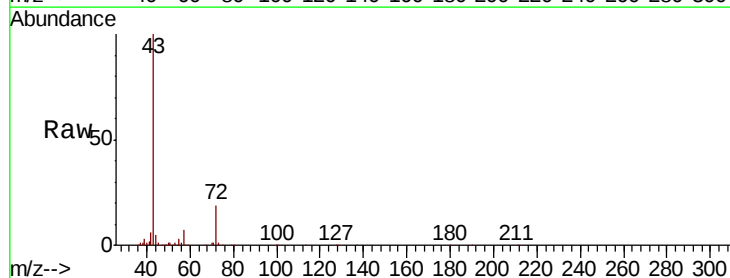
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

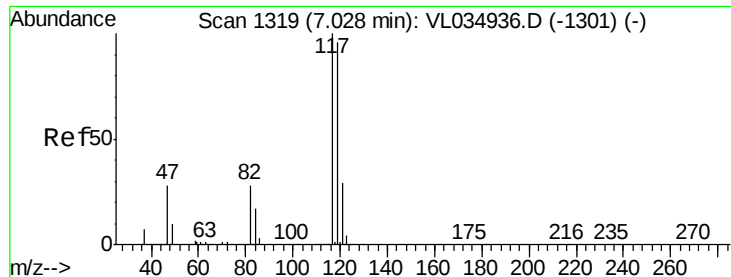
Tot Ion:114 Resp: 2480081
 Ion Ratio Lower Upper
 114 100
 63 27.7 22.2 33.4
 88 19.2 15.5 23.3



#34
 2-Butanone
 Concen: 2.281 ppbv
 RT: 5.22 min Scan# 756
 Delta R.T. -0.02 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

Tgt Ion: 43 Resp: 351556
 Ion Ratio Lower Upper
 43 100
 72 21.6 18.0 27.0





#35

Carbon Tetrachloride

Concen: 0.073 ppbv

RT: 7.02 min Scan# 1315

Delta R.T. -0.01 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

IA-1

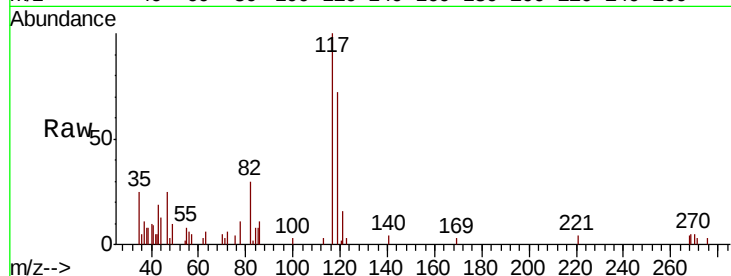
Tot Ion:117 Resp: 11357

Ion Ratio Lower Upper

117 100

119 71.8 77.0 115.6#

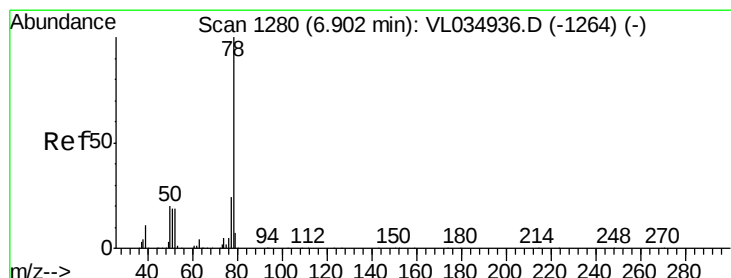
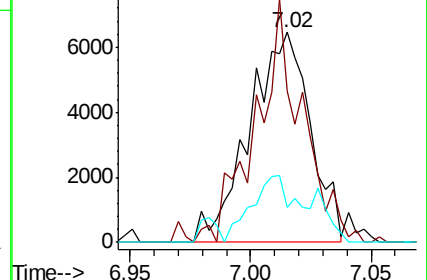
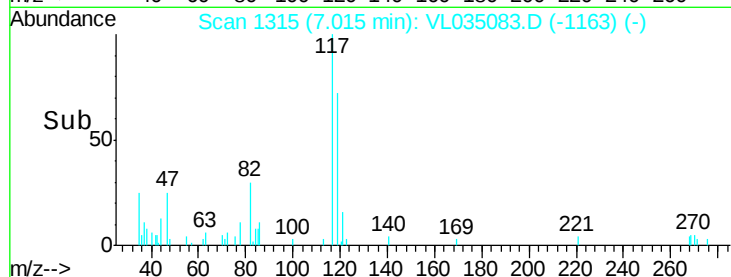
121 16.5 23.0 34.6#



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.377 ppbv

RT: 6.88 min Scan# 1274

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

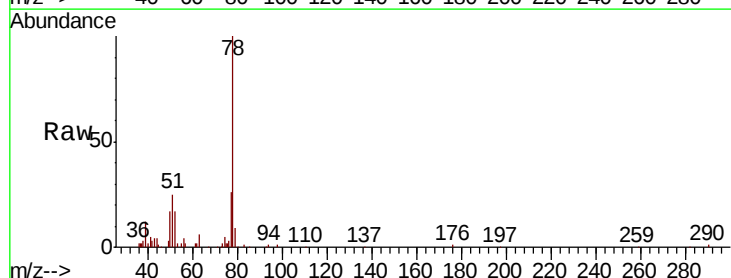
Tgt Ion: 78 Resp: 77156

Ion Ratio Lower Upper

78 100

77 26.1 19.0 28.6

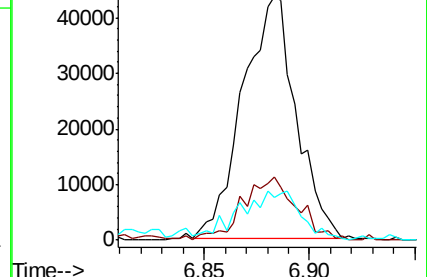
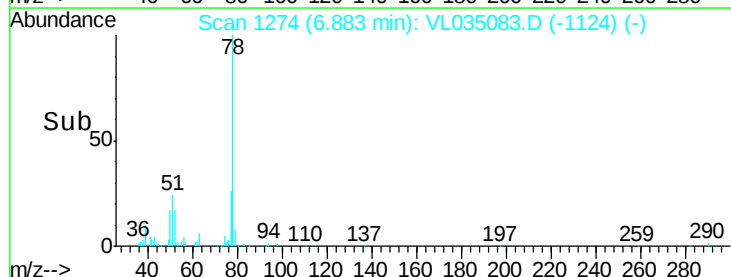
50 16.5 15.8 23.8

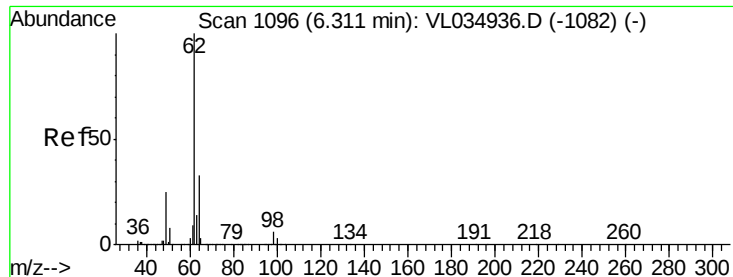


Abundance Ion 78.10 (77.80 to 78.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

Ion 50.10 (49.80 to 50.80): VL0

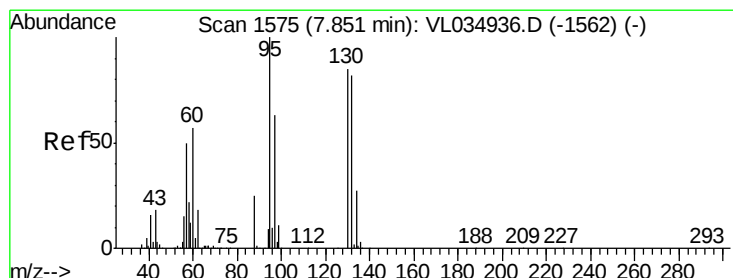
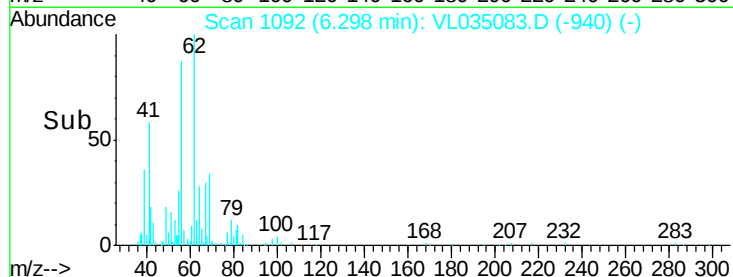
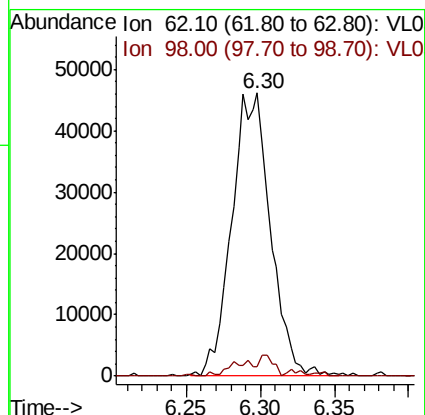
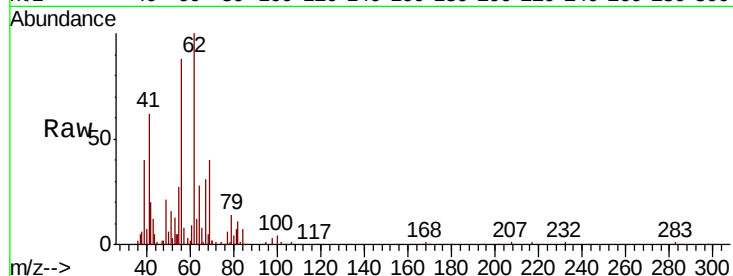




#37
 1,2-Dichloroethane
 Concen: 0.665 ppbv m
 RT: 6.30 min Scan# 1092
 Delta R.T. -0.01 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

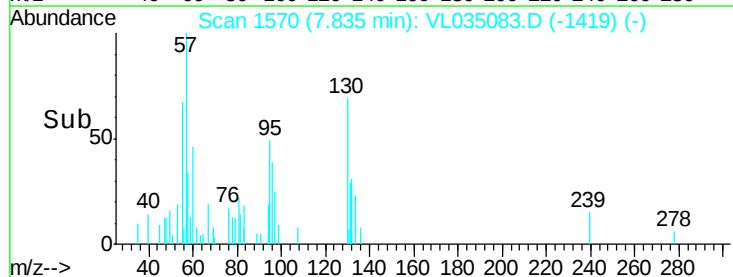
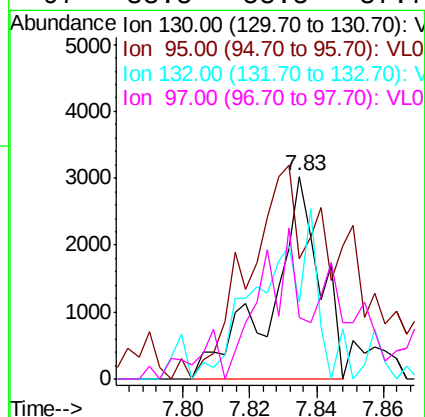
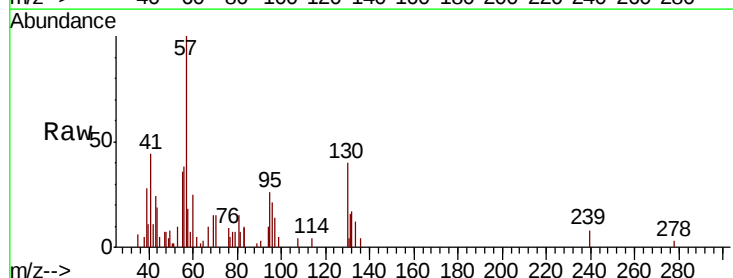
Instrument :
 MSVOA_L
 ClientSampled :
 IA-1

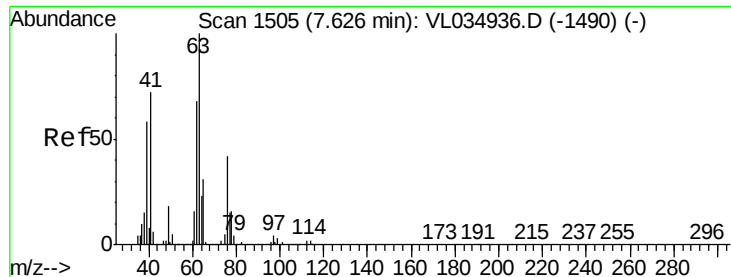
Tot Ion: 62 Resp: 83926
 Ion Ratio Lower Upper
 62 100
 98 0.0 4.8 7.2#



#38
 Trichloroethene
 Concen: 0.039 ppbv m
 RT: 7.83 min Scan# 1570
 Delta R.T. -0.02 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

Tgt Ion: 130 Resp: 3085
 Ion Ratio Lower Upper
 130 100
 95 65.4 93.4 140.0#
 132 41.6 76.4 114.6#
 97 33.5 58.5 87.7#

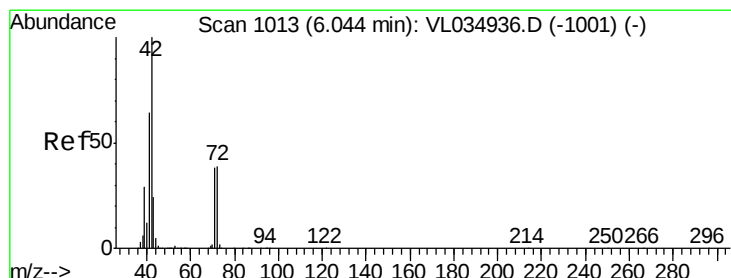
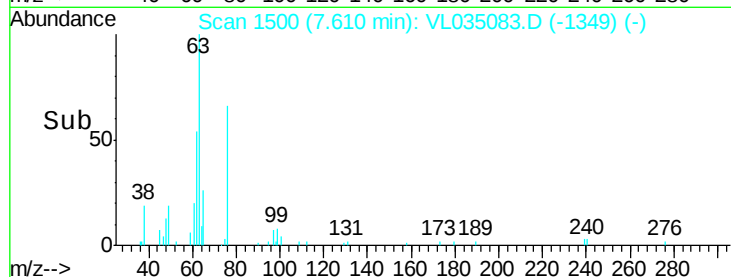
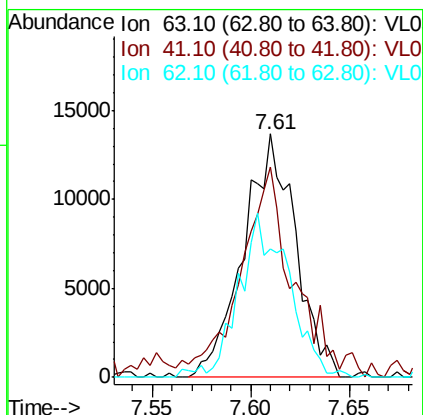
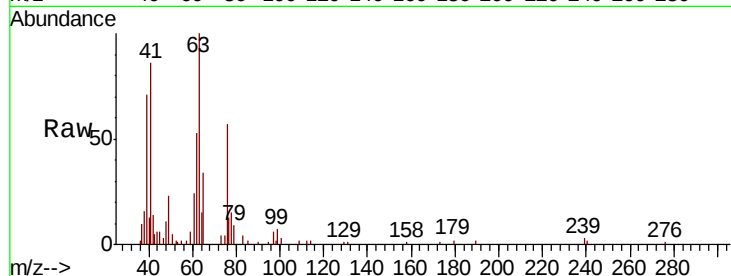




#39
 1,2-Dichloropropane
 Concen: 0.306 ppbv m
 RT: 7.61 min Scan# 1500
 Delta R.T. -0.02 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

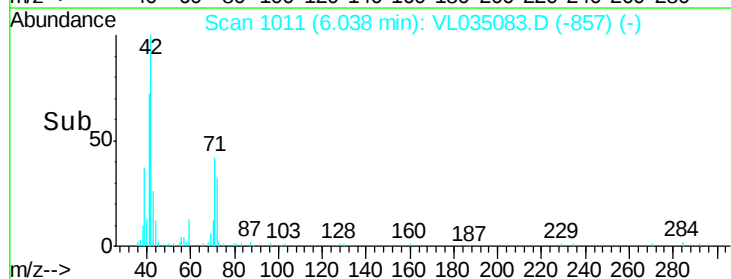
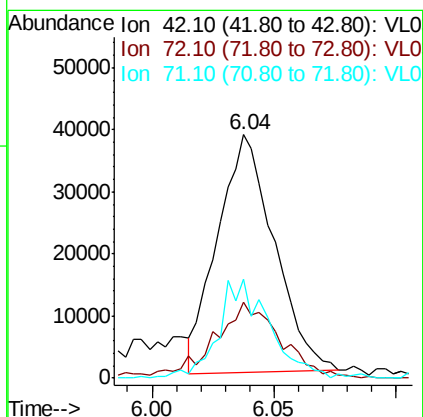
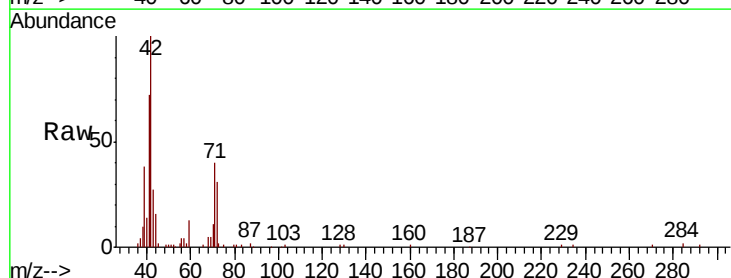
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-1

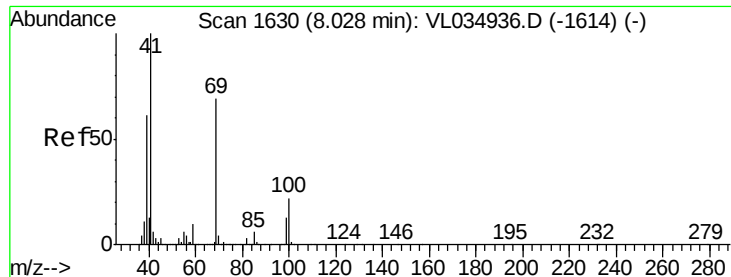
Tot Ion: 63 Resp: 25056
 Ion Ratio Lower Upper
 63 100
 41 86.2 57.8 86.8
 62 52.8 54.2 81.2#



#41
 Tetrahydrofuran
 Concen: 0.764 ppbv
 RT: 6.04 min Scan# 1011
 Delta R.T. -0.01 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

Tgt Ion: 42 Resp: 61972
 Ion Ratio Lower Upper
 42 100
 72 38.2 31.4 47.0
 71 37.8 29.8 44.8

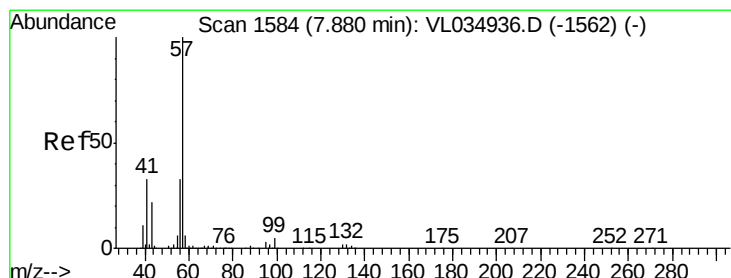
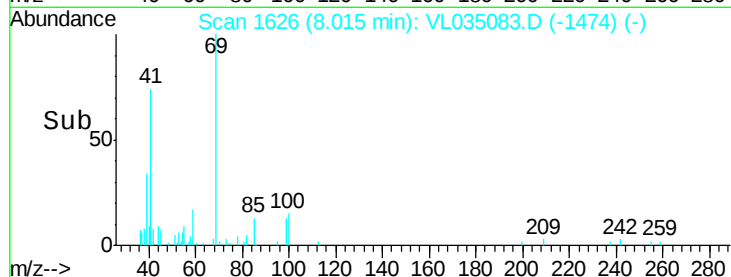
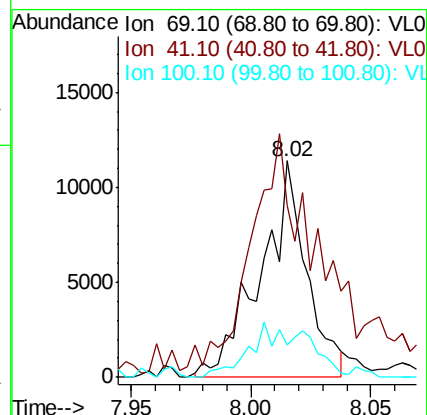
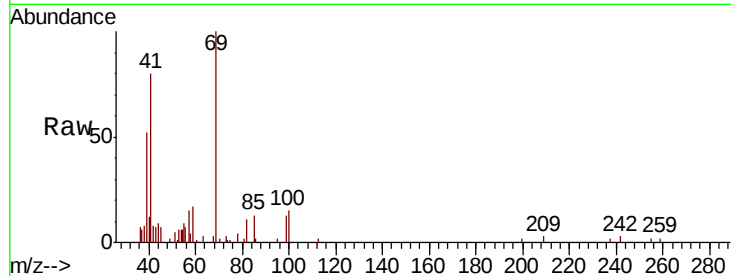




#43
Methvl Methacrylate
Concen: 0.176 ppbv m
RT: 8.02 min Scan# 1626
Delta R.T. -0.01 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

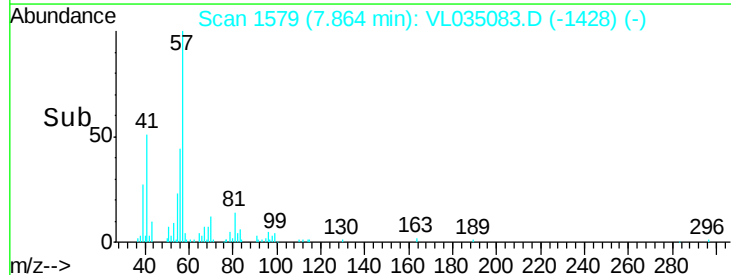
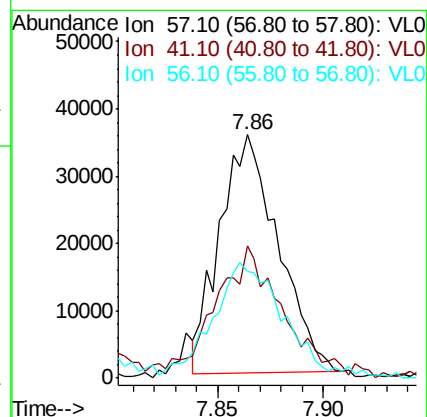
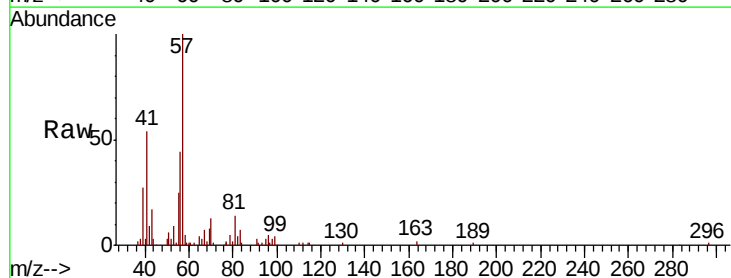
Instrument :
MSVOA_L
ClientSampleId :
IA-1

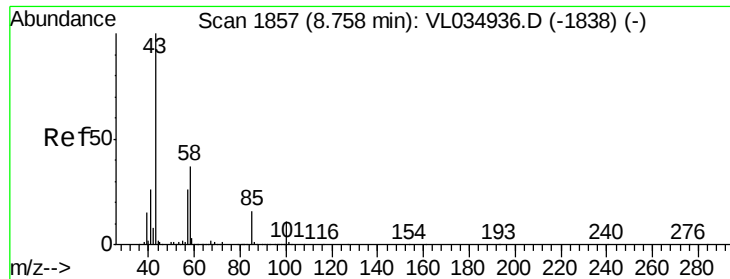
Tot Ion: 69 Resp: 15219
Ion Ratio Lower Upper
69 100
41 0.0 119.8 179.6#
100 0.0 25.0 37.6#



#44
2,2,4-Trimethylpentane
Concen: 0.188 ppbv
RT: 7.86 min Scan# 1579
Delta R.T. -0.02 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

Tgt Ion: 57 Resp: 68488
Ion Ratio Lower Upper
57 100
41 65.1 26.4 39.6#
56 59.2 25.5 38.3#

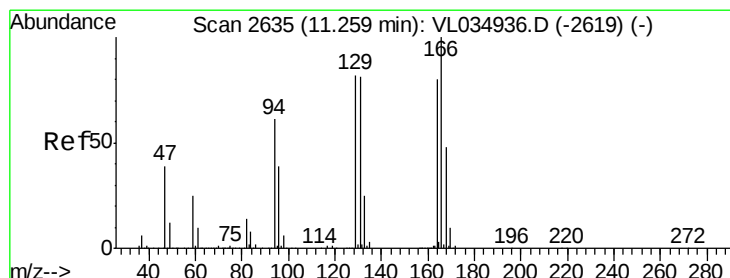
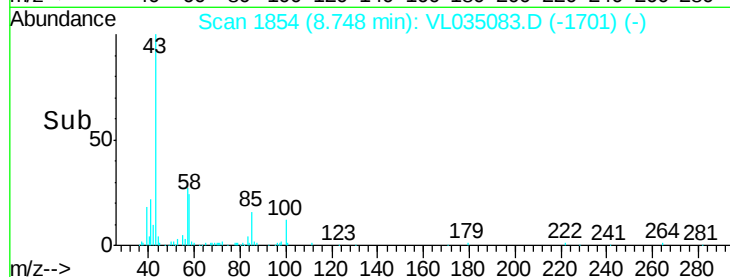
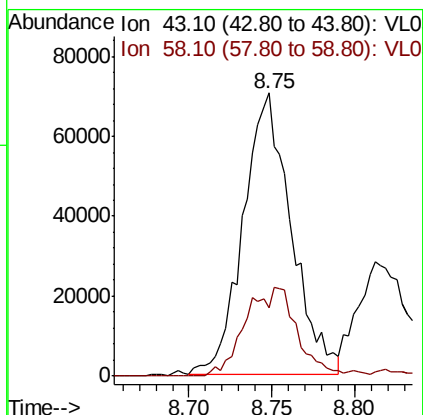
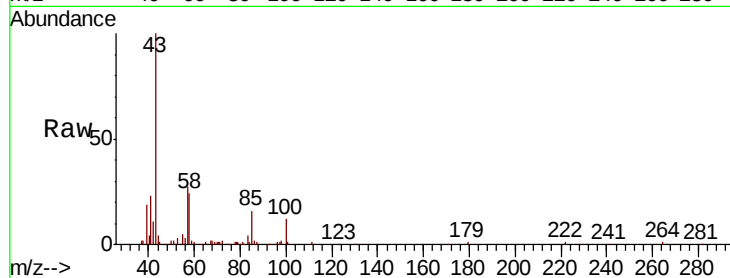




#50
 4-Methyl-2-Pentanone
 Concen: 0.642 ppbv
 RT: 8.75 min Scan# 1854
 Delta R.T. -0.01 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

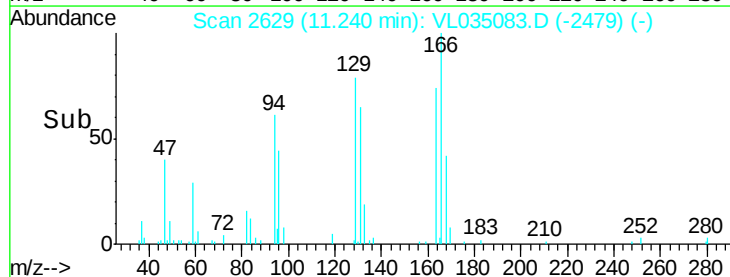
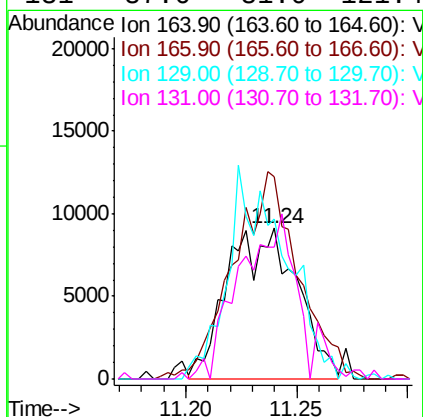
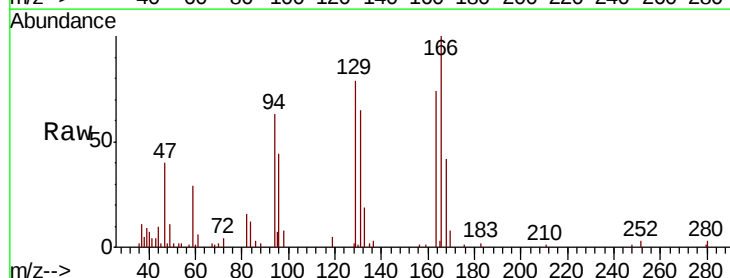
Instrument :
 MSVOA_L
 ClientSampled :
 IA-1

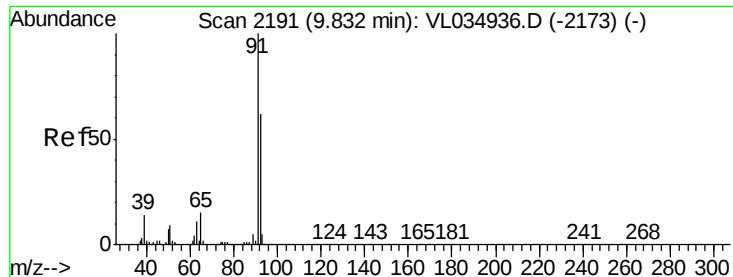
Tot Ion: 43 Resp: 141064
 Ion Ratio Lower Upper
 43 100
 58 34.7 29.1 43.7



#52
 Tetrachloroethene
 Concen: 0.273 ppbv m
 RT: 11.24 min Scan# 2629
 Delta R.T. -0.02 min
 Lab File: VL035083.D
 Acq: 22 May 2020 14:04

Tgt Ion: 164 Resp: 19852
 Ion Ratio Lower Upper
 164 100
 166 134.3 100.7 151.1
 129 105.8 83.0 124.4
 131 87.6 81.0 121.4





#53

Toluene

Concen: 24.722 ppbv

RT: 9.81 min Scan# 2184

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampled :

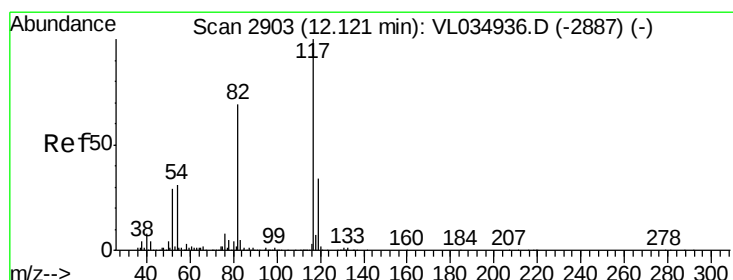
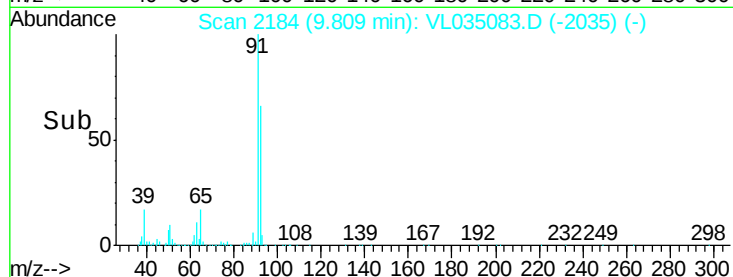
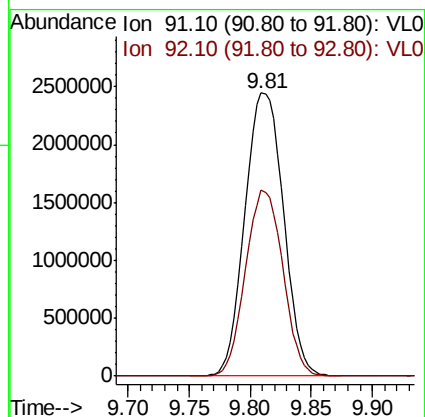
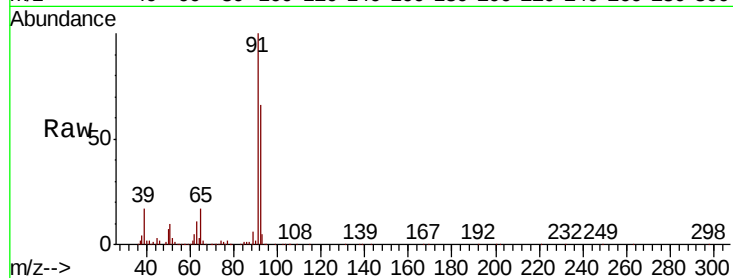
IA-1

Tot Ion: 91 Resp: 5358674

Ion Ratio Lower Upper

91 100

92 63.5 48.6 73.0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2897

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

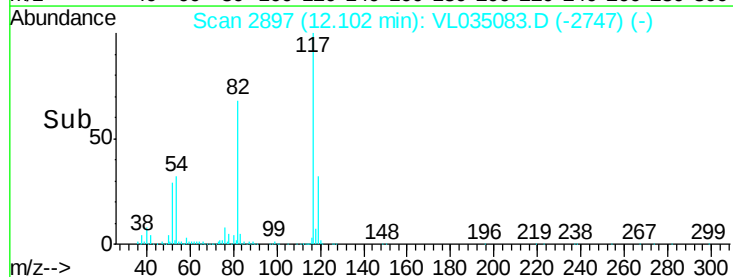
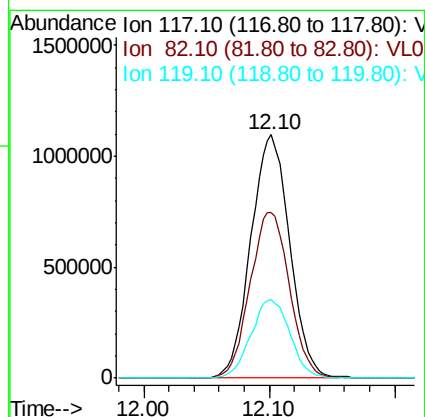
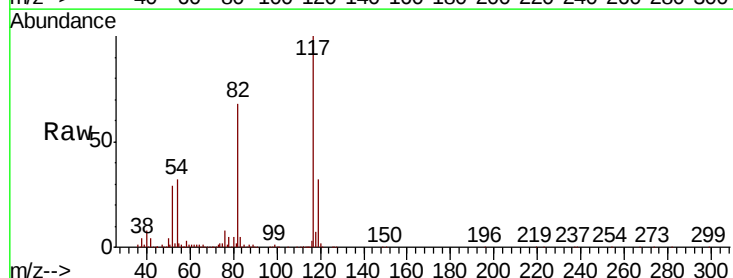
Tgt Ion: 117 Resp: 2348682

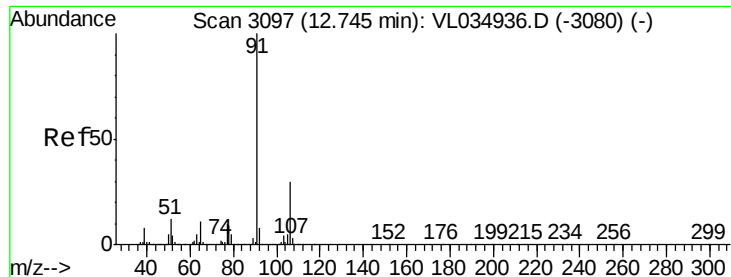
Ion Ratio Lower Upper

117 100

82 69.3 53.1 79.7

119 32.7 26.7 40.1





#58

Ethyl Benzene

Concen: 3.410 ppbv

RT: 12.72 min Scan# 3090

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampled :

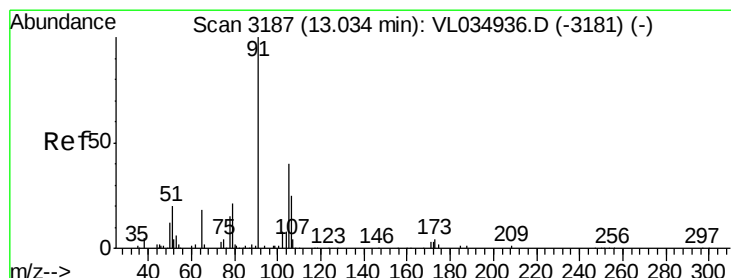
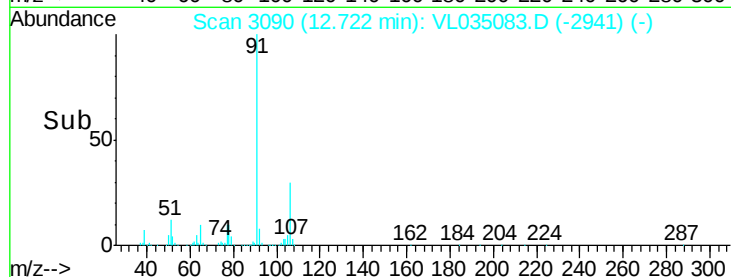
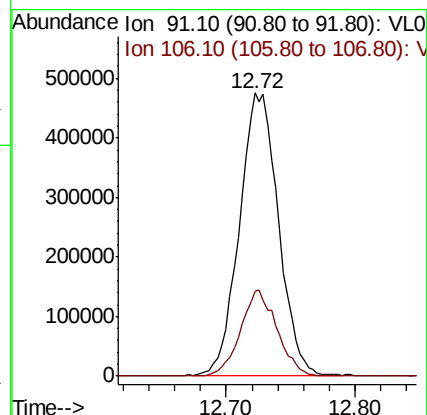
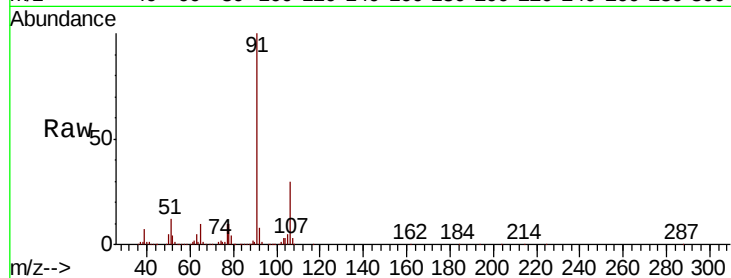
IA-1

Tot Ion: 91 Resp: 990241

Ion Ratio Lower Upper

91 100

106 29.9 24.2 36.4



#59

m/p-Xylene

Concen: 5.462 ppbv

RT: 12.98 min Scan# 3171

Delta R.T. -0.05 min

Lab File: VL035083.D

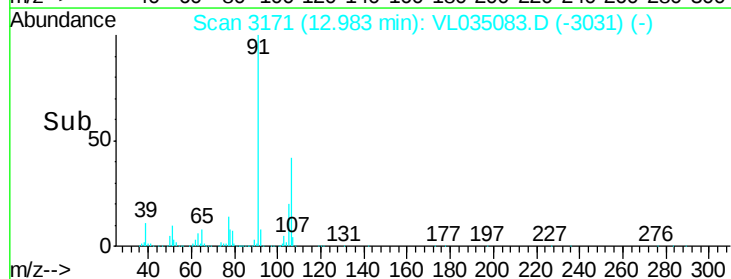
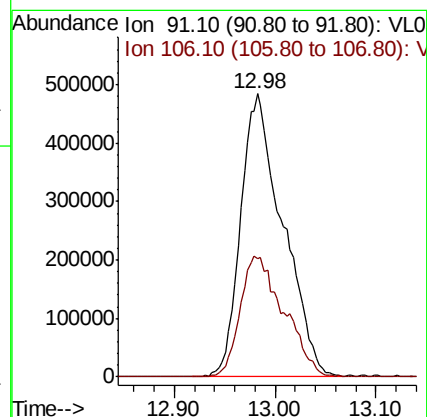
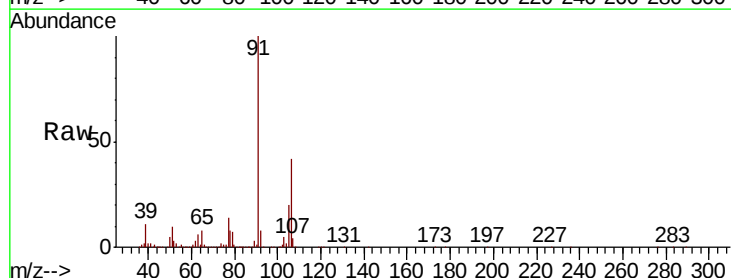
Acq: 22 May 2020 14:04

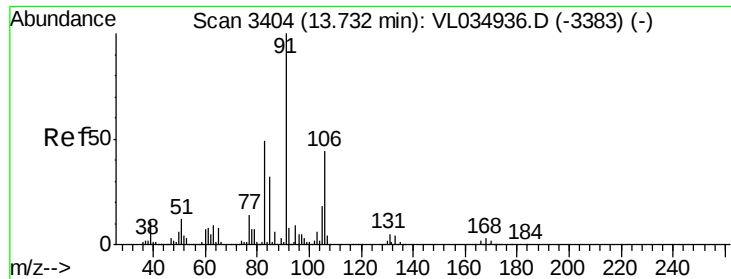
Tgt Ion: 91 Resp: 1395747

Ion Ratio Lower Upper

91 100

106 44.6 66.0 99.0#

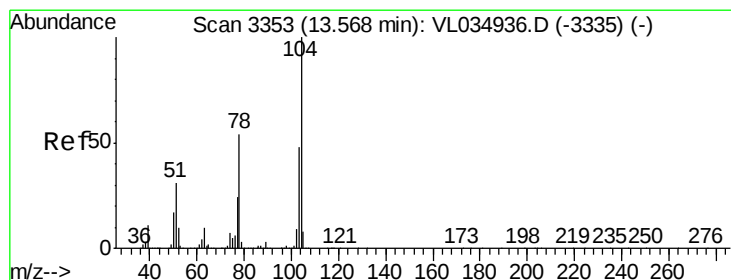
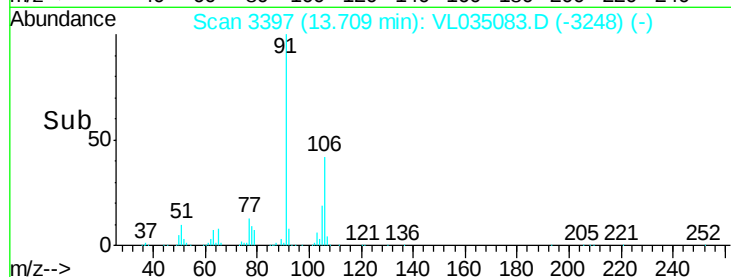
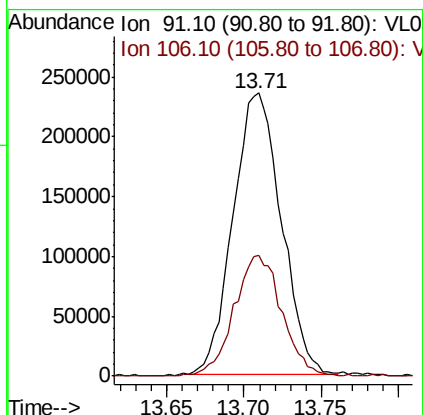
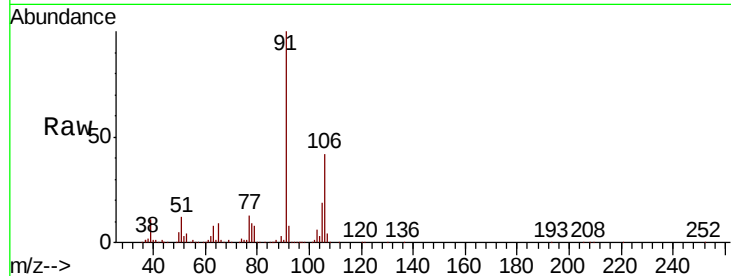




#60
o-Xylene
Concen: 2.008 ppbv
RT: 13.71 min Scan# 3397
Delta R.T. -0.02 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

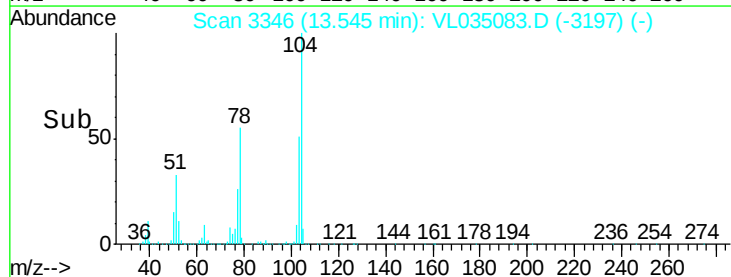
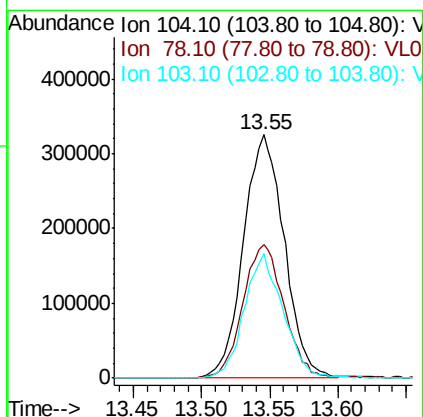
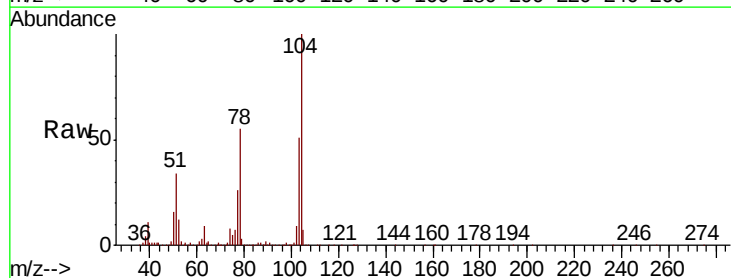
Instrument :
MSVOA_L
ClientSampleId :
IA-1

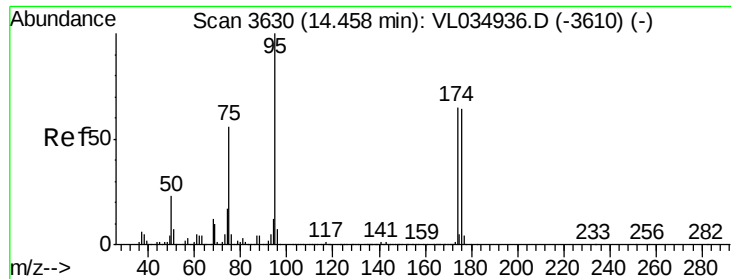
Tot Ion: 91 Resp: 506411
Ion Ratio Lower Upper
91 100
106 42.7 21.9 65.5



#61
Styrene
Concen: 4.231 ppbv
RT: 13.55 min Scan# 3346
Delta R.T. -0.02 min
Lab File: VL035083.D
Acq: 22 May 2020 14:04

Tgt Ion: 104 Resp: 675221
Ion Ratio Lower Upper
104 100
78 55.9 43.7 65.5
103 48.9 38.8 58.2





#68

1-Bromo-4-Fluorobenzene

Concen: 10.629 ppbv

RT: 14.44 min Scan# 3623

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Instrument :

MSVOA_L

ClientSampleId :

IA-1

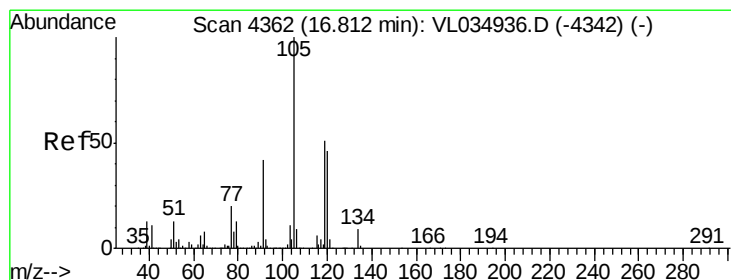
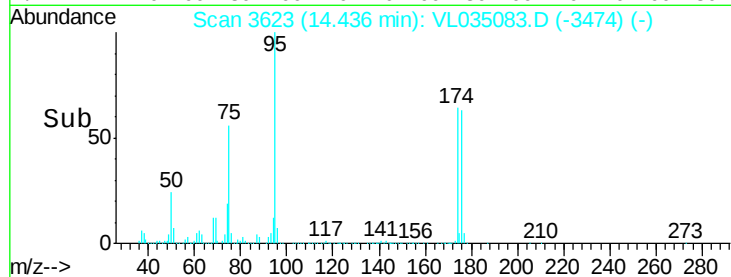
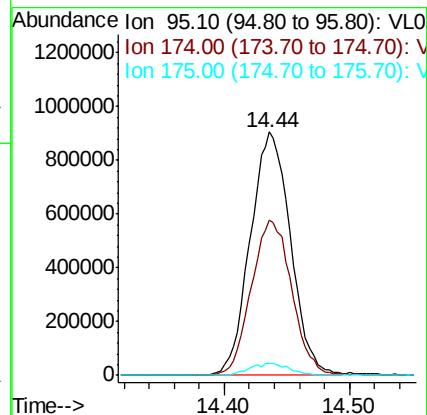
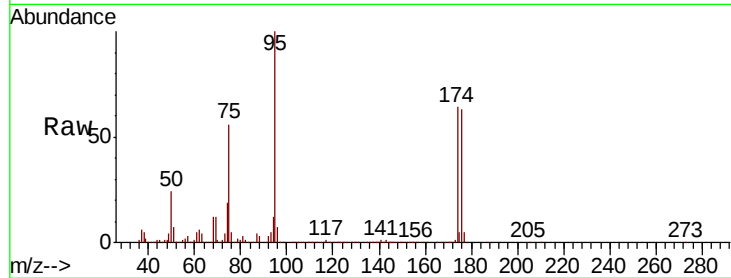
Tot Ion: 95 Resp: 2020659

Ion Ratio Lower Upper

95 100

174 64.7 51.5 77.3

175 4.9 3.8 5.8



#74

1,2,4-Trimethylbenzene

Concen: 0.304 ppbv m

RT: 16.79 min Scan# 4356

Delta R.T. -0.02 min

Lab File: VL035083.D

Acq: 22 May 2020 14:04

Tgt Ion:105 Resp: 90741

Ion Ratio Lower Upper

105 100

120 30.8 36.8 55.2#

91 9.3 35.4 53.0#

77 14.9 16.2 24.2#

