

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL051220\
 Data File : VL035010.D
 Acq On : 13 May 2020 5:55
 Operator : SY/AP
 Sample : L2566-05DL 40X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-1DL

Quant Time: May 13 06:59:22 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	848766	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.18	114	2013322	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	1819261	10.00	ppbv	0.00

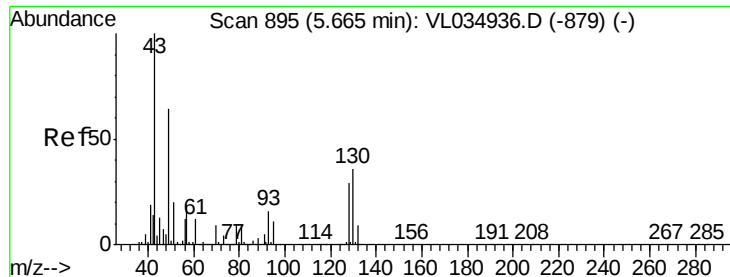
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.45	95	1474919	10.02	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.20%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.94	51	2644	0.027	ppbv	93
5) Vinyl Chloride	3.21	62	7466	0.138	ppbv	91
9) Propene	3.16	41	44361	1.055	ppbv	100
13) Ethanol	3.56	45	2297	0.166	ppbv #	39
15) Acetone	3.82	43	1050179	9.359	ppbv	96
16) 1,3-Butadiene	3.26	39	25321	0.524	ppbv #	16
18) 1,1-Dichloroethene	4.25	96	38641	1.007	ppbv	97
20) Methylene Chloride	4.31	84	10710	0.288	ppbv	92
22) trans-1,2-Dichloroethene	4.85	96	377239	9.925	ppbv	94
24) 1,1-Dichloroethane	4.85	63	217410	1.984	ppbv #	1
26) Hexane	5.66	57	5633	0.069	ppbv #	1
29) Chloroform	5.73	83	3221371	24.094	ppbv	99
30) Cyclohexane	7.12	84	3395	0.054	ppbv #	36
31) cis-1,2-Dichloroethene	5.53	61	6621617	83.052	ppbv #	88
32) 1,1,1-Trichloroethane	6.50	97	10833	0.090	ppbv #	26
34) 2-Butanone	5.26	43	14178	0.113	ppbv #	79
36) Benzene	6.89	78	89584	0.540	ppbv	95
38) Trichloroethene	7.87	130	20008314	311.143	ppbv #	86
39) 1,2-Dichloropropane	7.86	63	86894	1.306	ppbv #	1
41) Tetrahydrofuran	6.03	42	1629	0.025	ppbv #	37
42) Bromodichloromethane	7.87	83	561527	4.066	ppbv #	90
47) 1,1,2-Trichloroethane	9.49	97	2179	0.031	ppbv #	41
50) 4-Methyl-2-Pentanone	8.76	43	164708	0.923	ppbv	99
52) Tetrachloroethene	11.31	164	24270050	411.196	ppbv	91
53) Toluene	9.83	91	426471	2.424	ppbv	97
56) 1,1,1,2-Tetrachloroethane	12.15	131	1851	0.023	ppbv #	1
58) Ethyl Benzene	12.74	91	246410	1.095	ppbv	98
59) m/p-Xylene	12.99	91	639276	3.230	ppbv #	58
60) o-Xylene	13.72	91	69969	0.358	ppbv #	19
62) Isopropylbenzene	14.70	105	112748	0.387	ppbv	96

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

```
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL051220\  
Data File : VL035010.D  
Acq On    : 13 May 2020    5:55  
Operator  : SY/AP  
Sample    : L2566-05DL 40X  
Misc      : 400ml/MSVOA L  
ALS Vial  : 1    Sample Multiplier: 1
```



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 890

Delta R.T. -0.02 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

SG-1DL

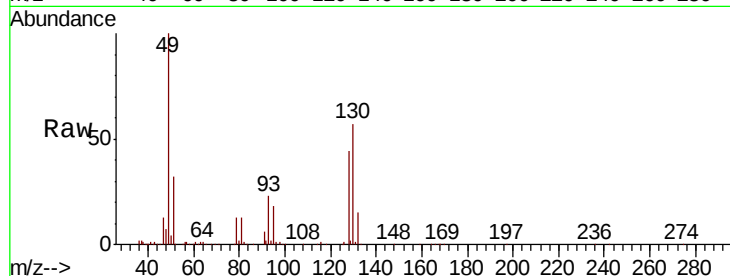
Tot Ion: 49 Resp: 848766

Ion Ratio Lower Upper

49 100

128 45.5 22.1 66.5

130 58.1 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

5.65

400000

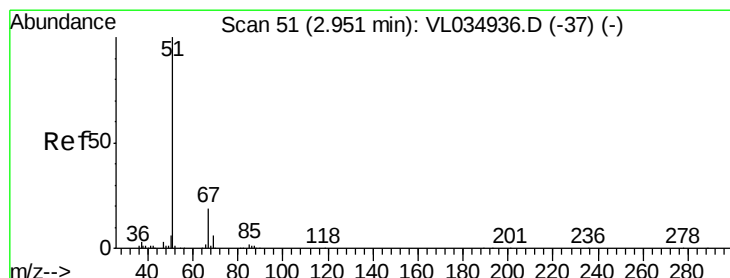
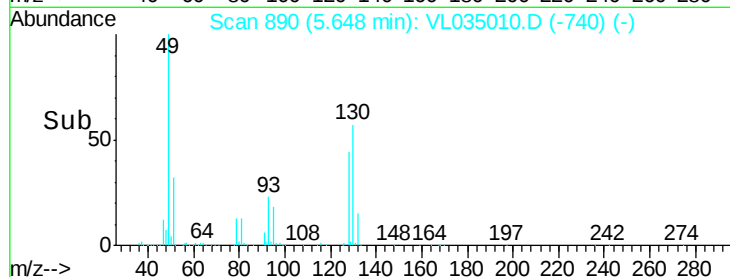
300000

200000

100000

0

Time-->



#3

Chlorodifluoromethane

Concen: 0.027 ppbv

RT: 2.94 min Scan# 49

Delta R.T. -0.01 min

Lab File: VL035010.D

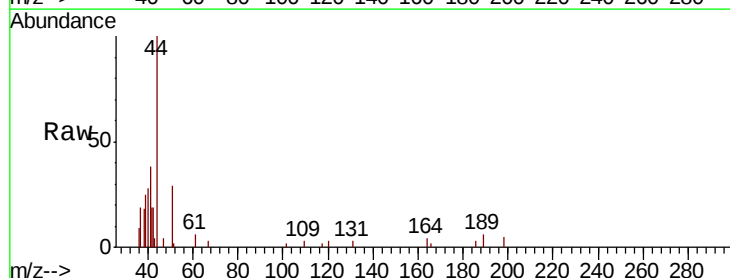
Acq: 13 May 2020 5:55

Tgt Ion: 51 Resp: 2644

Ion Ratio Lower Upper

51 100

67 15.8 15.0 22.6



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

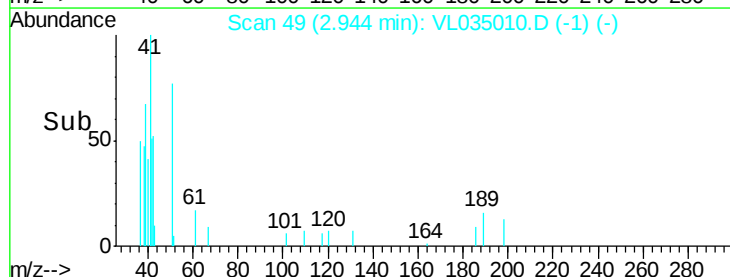
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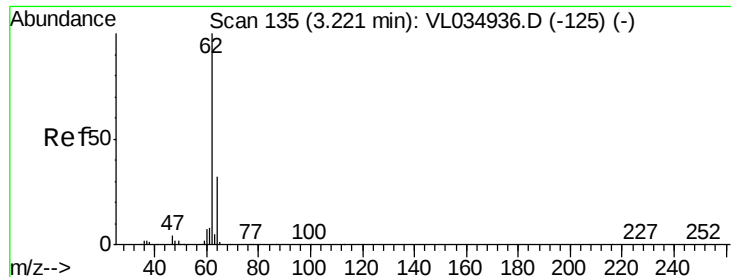
4000

2000

0

Time-->





#5

Vinyl Chloride

Concen: 0.138 ppbv

RT: 3.21 min Scan# 132

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampled :

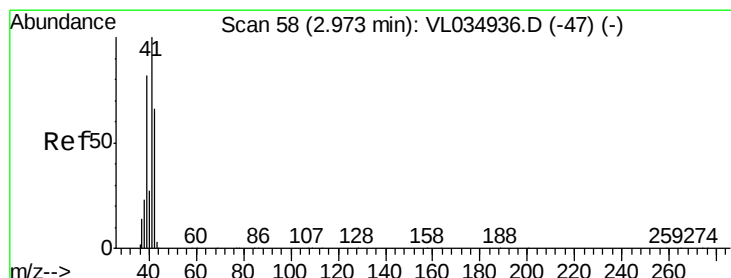
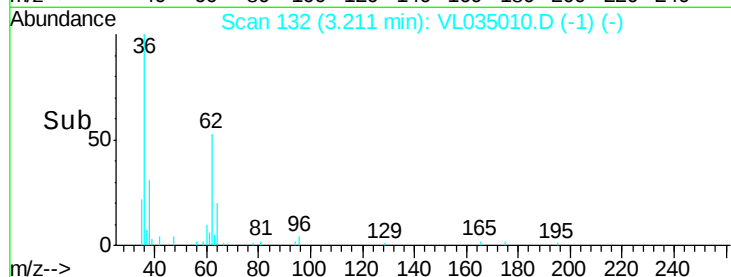
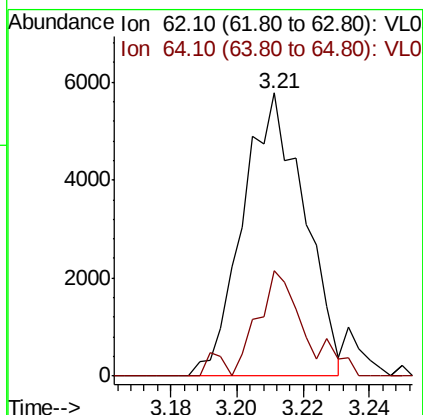
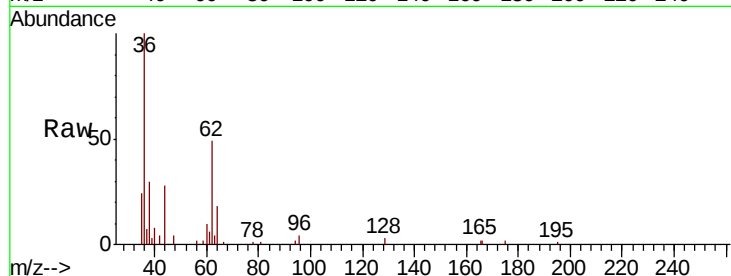
SG-1DL

Tot Ion: 62 Resp: 7466

Ion Ratio Lower Upper

62 100

64 37.3 25.7 38.5



#9

Propene

Concen: 1.055 ppbv

RT: 3.16 min Scan# 115

Delta R.T. 0.18 min

Lab File: VL035010.D

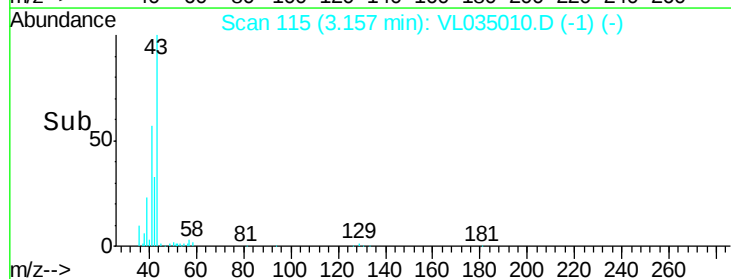
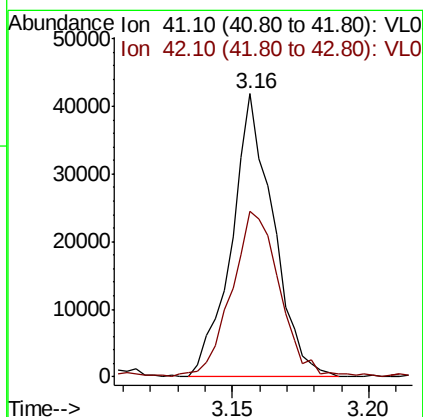
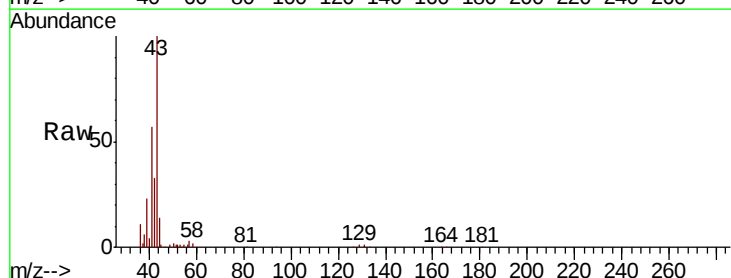
Acq: 13 May 2020 5:55

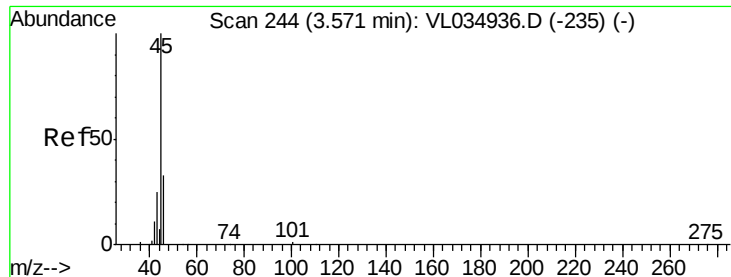
Tgt Ion: 41 Resp: 44361

Ion Ratio Lower Upper

41 100

42 68.2 54.5 81.7





#13

Ethanol

Concen: 0.166 ppbv

RT: 3.56 min Scan# 240

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

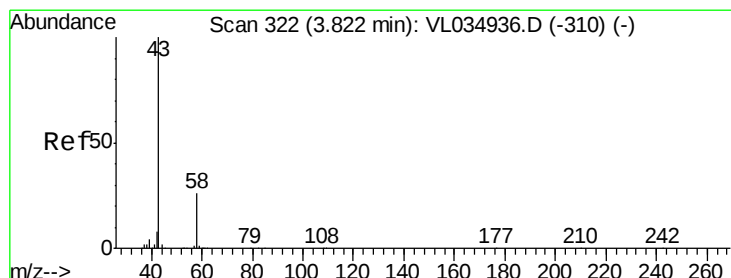
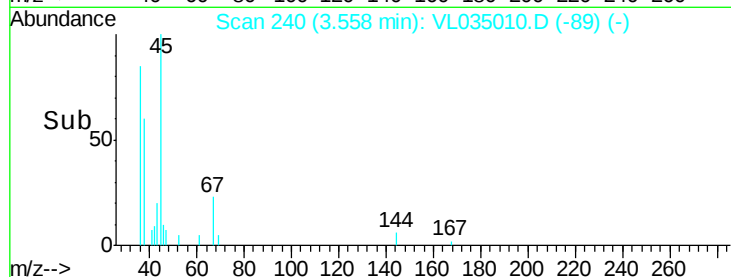
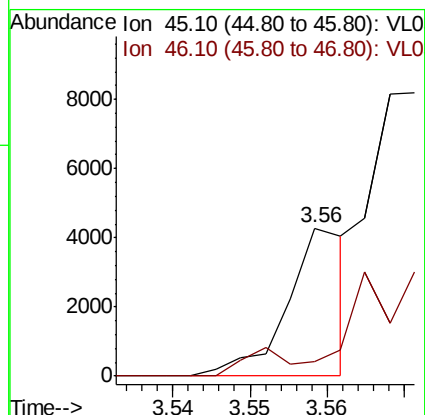
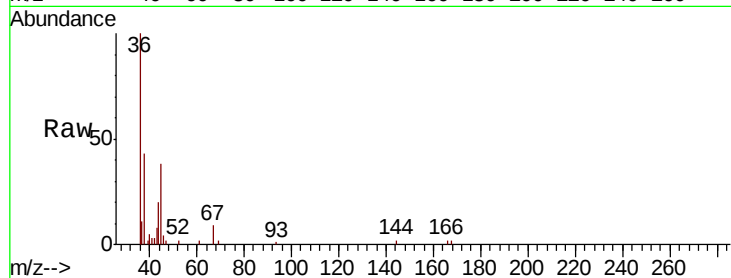
SG-1DL

Tot Ion: 45 Resp: 2297

Ion Ratio Lower Upper

45 100

46 0.0 14.3 57.3#



#15

Acetone

Concen: 9.359 ppbv

RT: 3.82 min Scan# 320

Delta R.T. -0.01 min

Lab File: VL035010.D

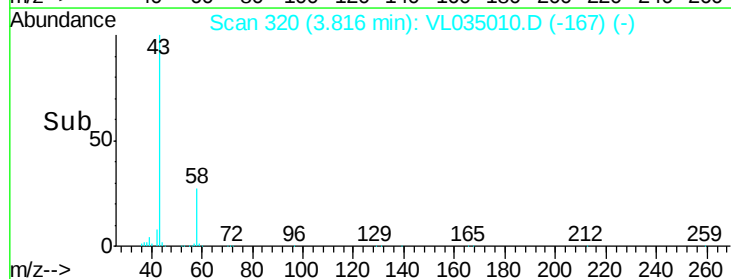
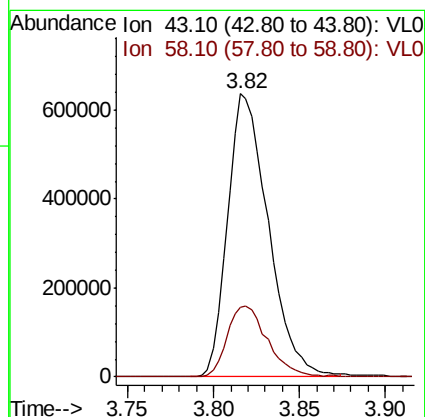
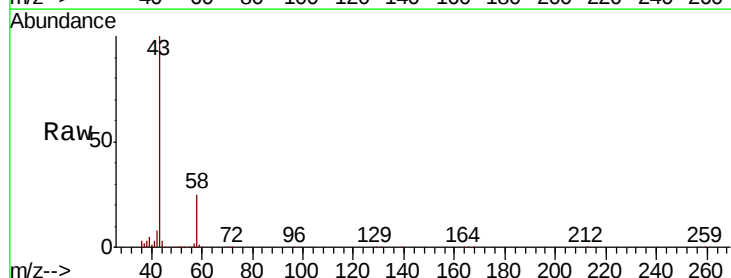
Acq: 13 May 2020 5:55

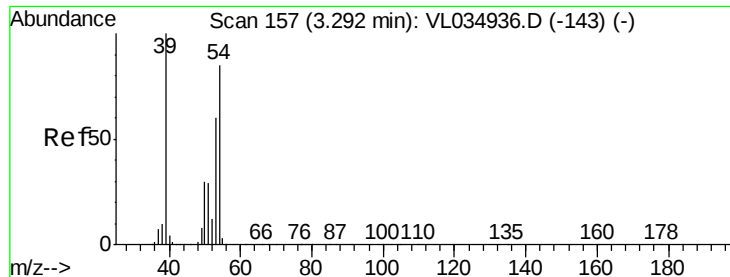
Tgt Ion: 43 Resp: 1050179

Ion Ratio Lower Upper

43 100

58 25.1 21.7 32.5

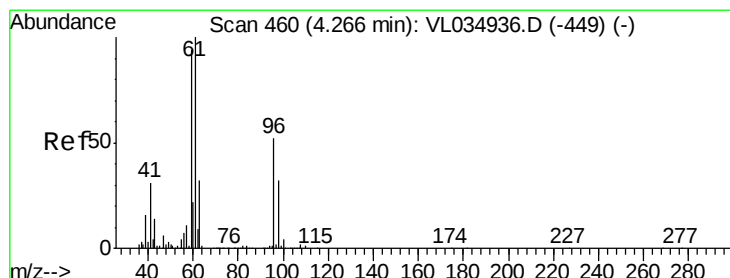
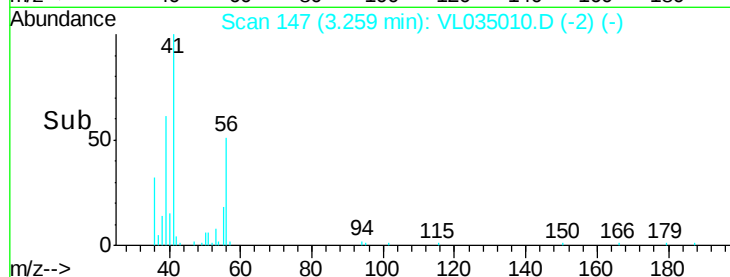
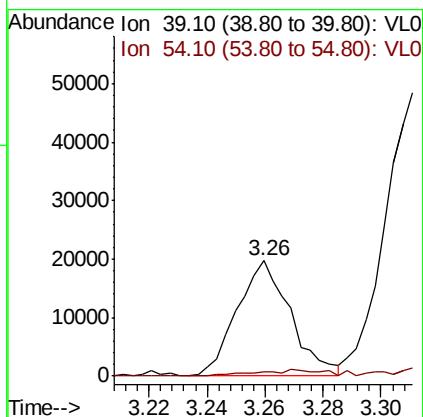
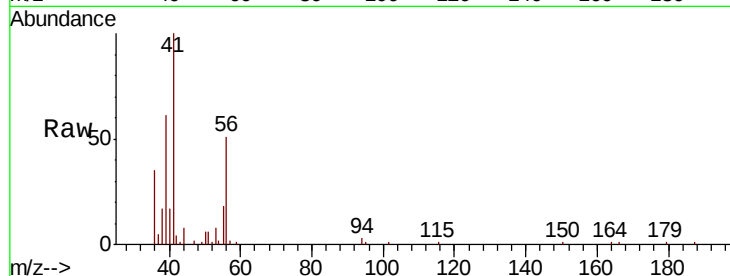




#16
1,3-Butadiene
Concen: 0.524 ppbv
RT: 3.26 min Scan# 147
Delta R.T. -0.03 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

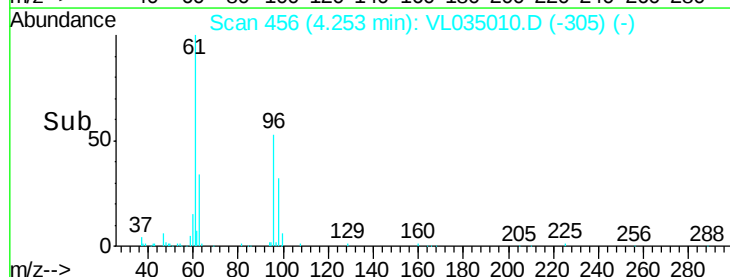
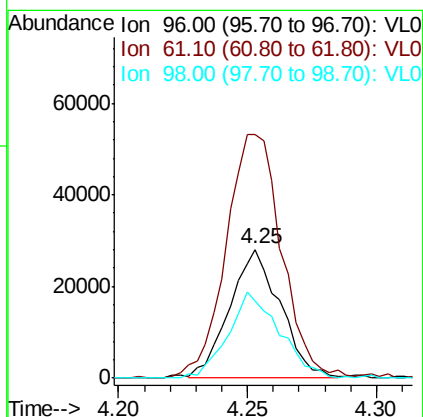
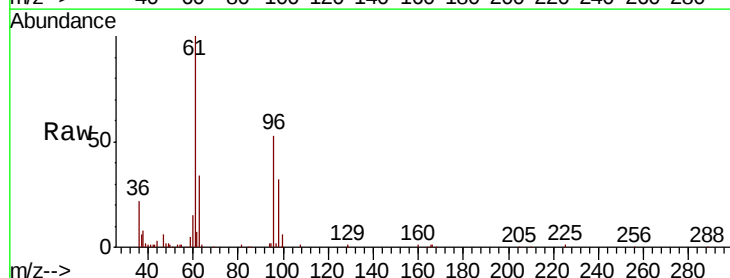
Instrument :
MSVOA_L
ClientSampled :
SG-1DL

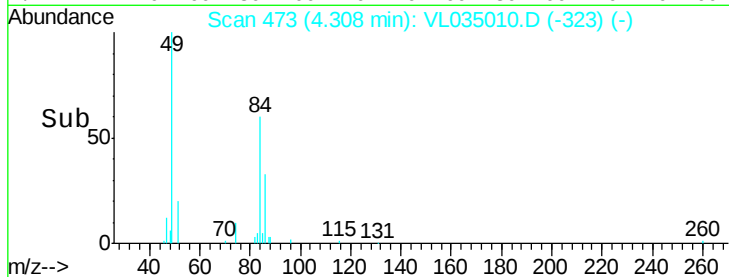
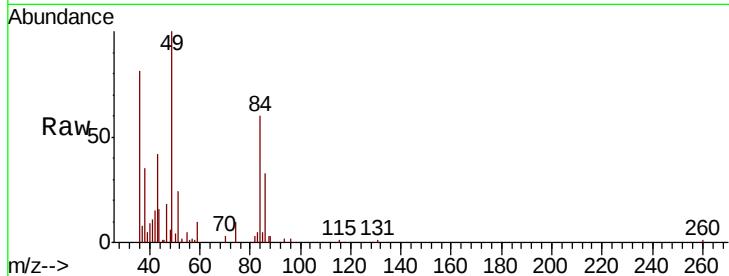
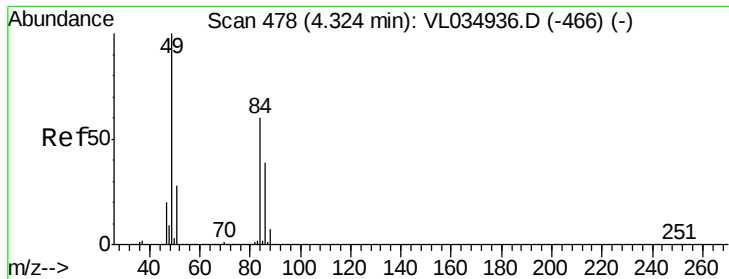
Tot Ion: 39 Resp: 25321
Ion Ratio Lower Upper
39 100
54 7.7 66.6 100.0#



#18
1,1-Dichloroethene
Concen: 1.007 ppbv
RT: 4.25 min Scan# 456
Delta R.T. -0.01 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

Tgt Ion: 96 Resp: 38641
Ion Ratio Lower Upper
96 100
61 185.1 152.4 228.6
98 60.3 48.8 73.2

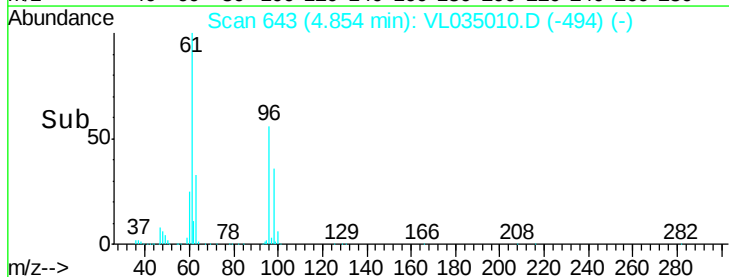
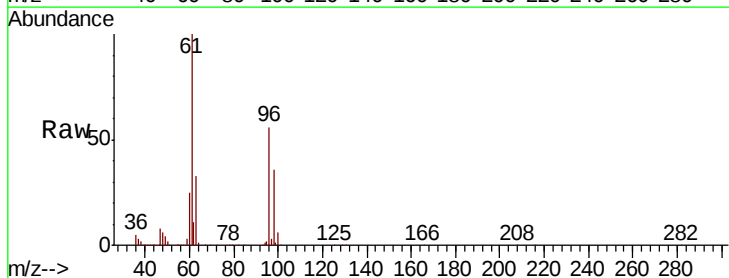
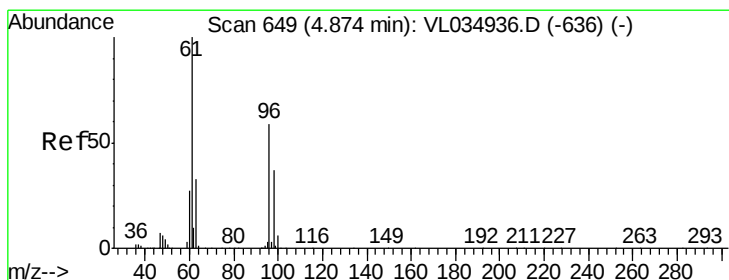
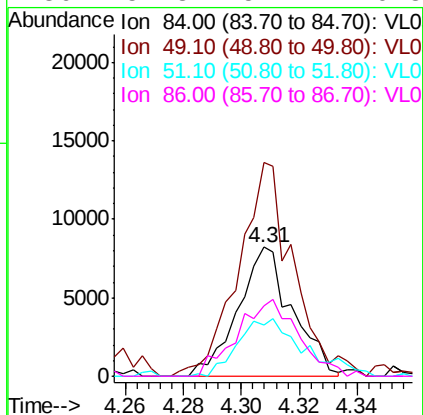




#20
Methvlene Chloride
Concen: 0.288 ppbv
RT: 4.31 min Scan# 473
Delta R.T. -0.02 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

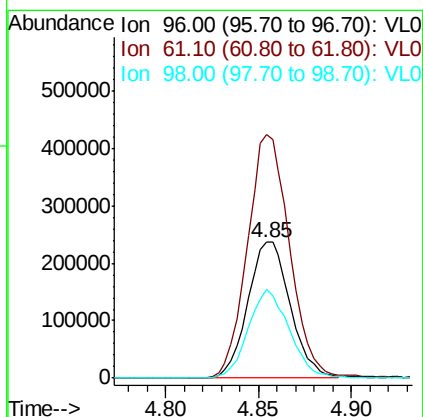
Instrument :
MSVOA_L
ClientSampleId :
SG-1DL

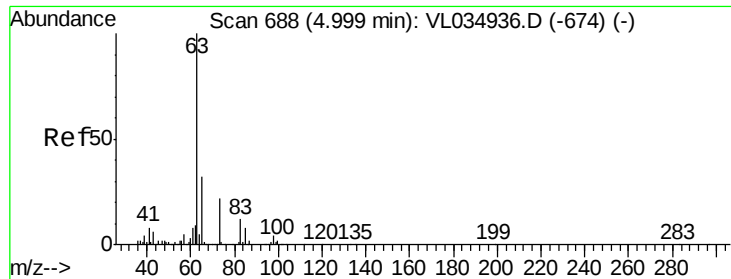
Tot Ion	Ratio	Lower	Upper
84	100		
49	158.2	132.5	198.7
51	39.3	38.4	57.6
86	54.3	51.2	76.8



#22
trans-1,2-Dichloroethene
Concen: 9.925 ppbv
RT: 4.85 min Scan# 643
Delta R.T. -0.02 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

Tgt Ion	Ratio	Lower	Upper
96	100		
61	179.0	135.3	202.9
98	65.0	50.4	75.6





#24

1,1-Dichloroethane

Concen: 1.984 ppbv

RT: 4.85 min Scan# 643

Delta R.T. -0.14 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

SG-1DL

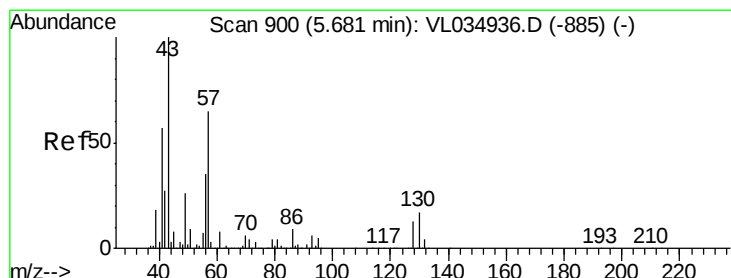
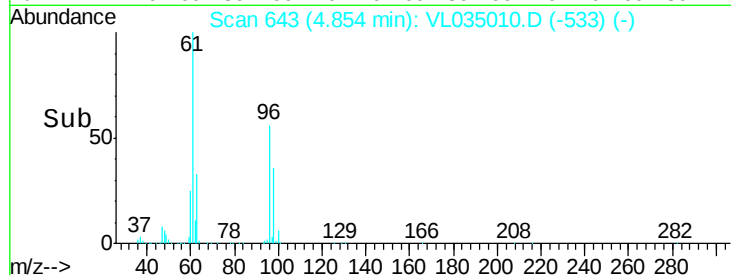
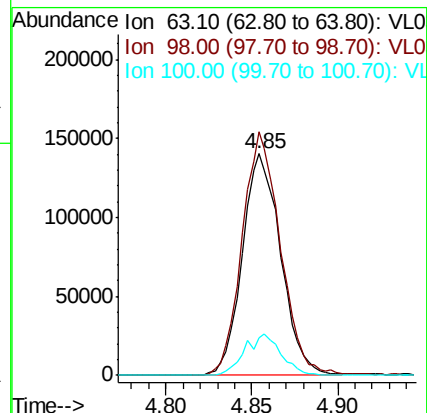
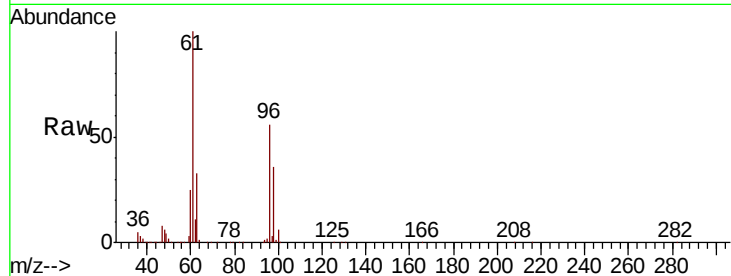
Tot Ion: 63 Resp: 217410

Ion Ratio Lower Upper

63 100

98 109.8 2.0 6.0#

100 16.9 1.1 3.5#



#26

Hexane

Concen: 0.069 ppbv

RT: 5.66 min Scan# 894

Delta R.T. -0.02 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Tgt Ion: 57 Resp: 5633

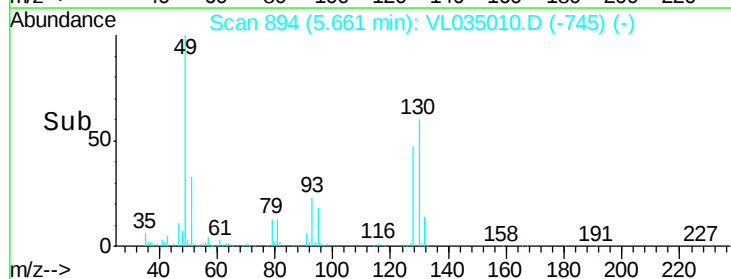
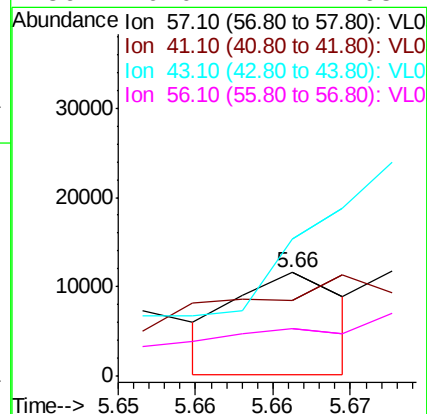
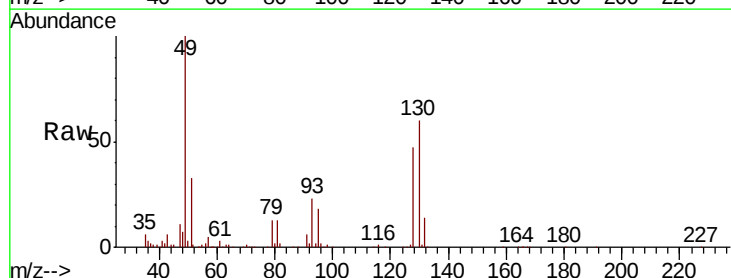
Ion Ratio Lower Upper

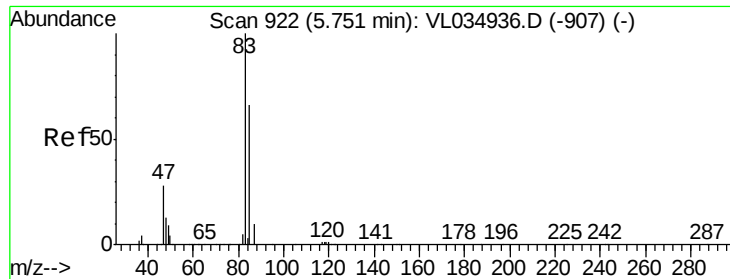
57 100

41 0.0 72.7 109.1#

43 0.0 182.1 273.1#

56 0.0 42.2 63.2#





#29

Chloroform

Concen: 24.094 ppbv

RT: 5.73 min Scan# 916

Delta R.T. -0.02 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

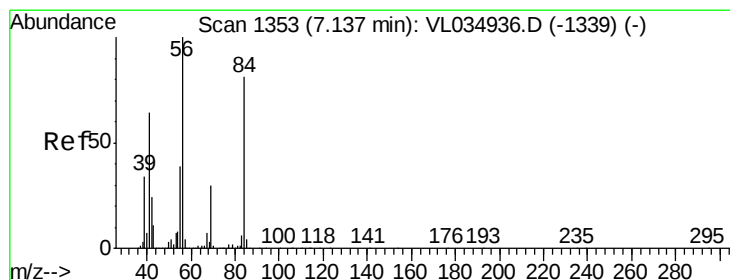
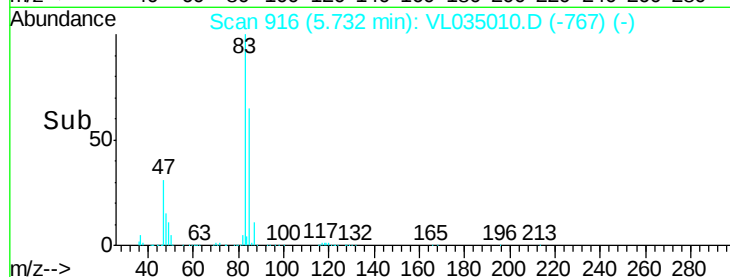
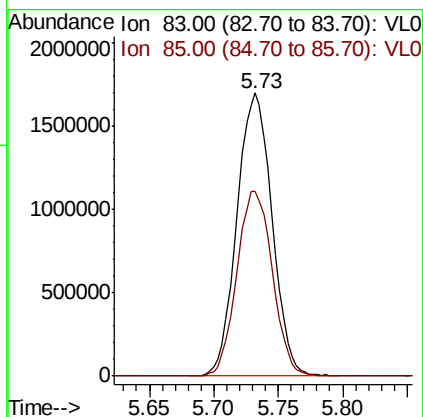
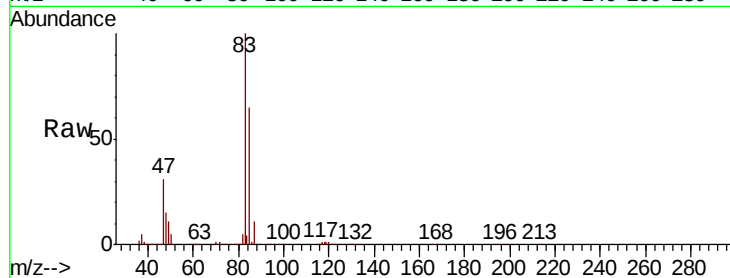
SG-1DL

Tot Ion: 83 Resp: 3221371

Ion Ratio Lower Upper

83 100

85 65.3 53.0 79.6



#30

Cyclohexane

Concen: 0.054 ppbv

RT: 7.12 min Scan# 1348

Delta R.T. -0.02 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

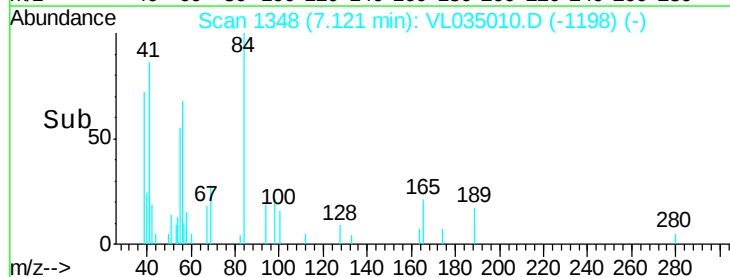
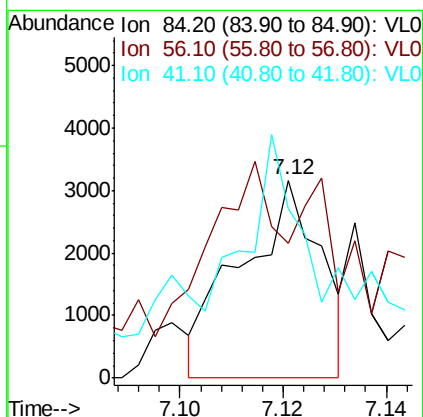
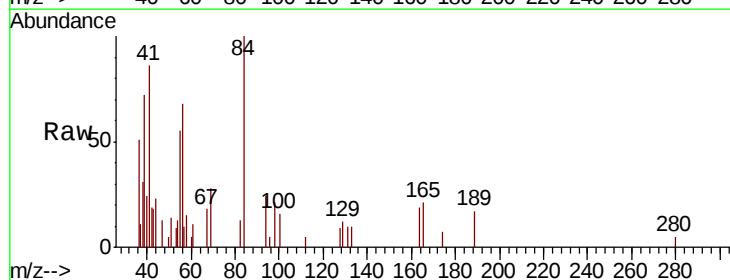
Tgt Ion: 84 Resp: 3395

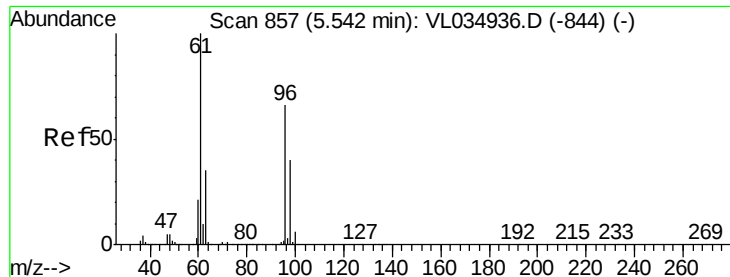
Ion Ratio Lower Upper

84 100

56 159.1 111.4 167.2

41 213.0 66.7 100.1#



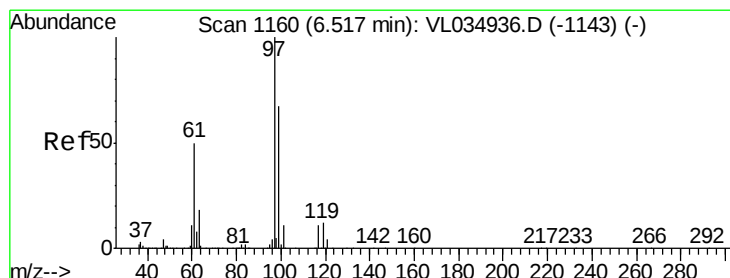
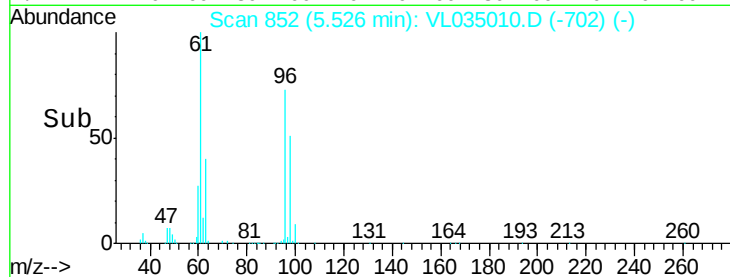
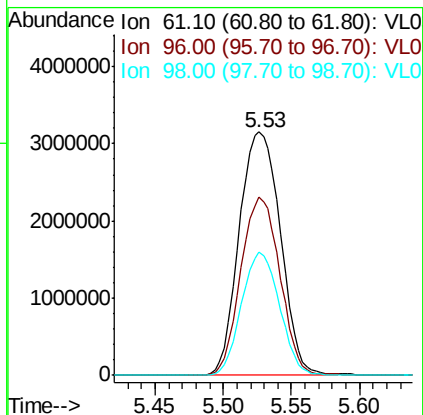
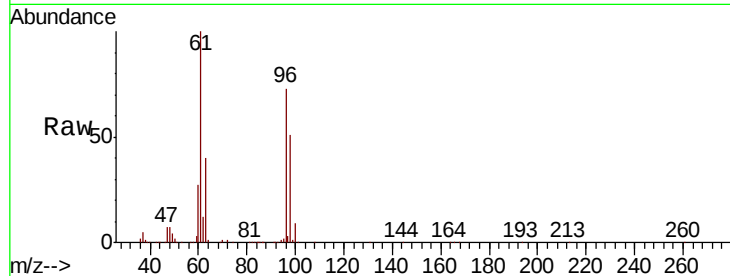


#31

cis-1,2-Dichloroethene
 Concen: 83.052 ppbv
 RT: 5.53 min Scan# 852
 Delta R.T. -0.02 min
 Lab File: VL035010.D
 Acq: 13 May 2020 5:55

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-1DL

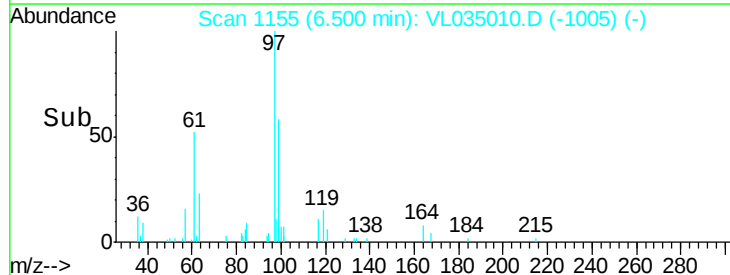
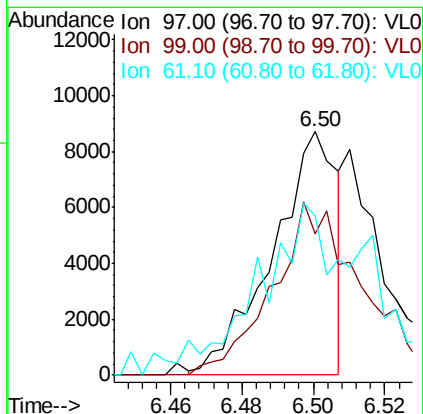
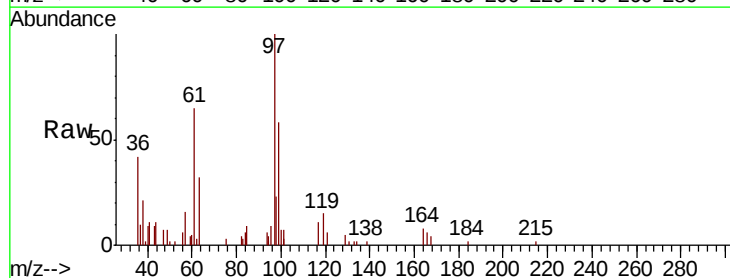
Tot Ion: 61 Resp: 6621617
 Ion Ratio Lower Upper
 61 100
 96 73.0 53.0 79.6
 98 50.5 32.2 48.2#

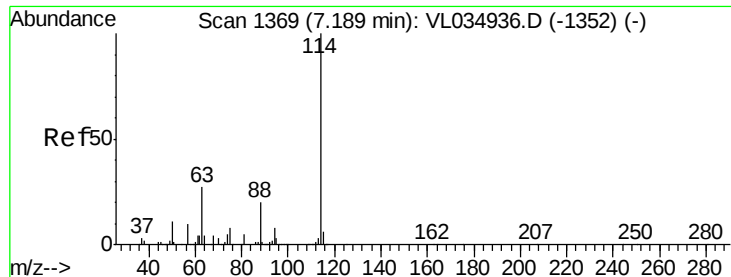


#32

1,1,1-Trichloroethane
 Concen: 0.090 ppbv
 RT: 6.50 min Scan# 1155
 Delta R.T. -0.02 min
 Lab File: VL035010.D
 Acq: 13 May 2020 5:55

Tgt Ion: 97 Resp: 10833
 Ion Ratio Lower Upper
 97 100
 99 97.1 52.1 78.1#
 61 133.6 41.8 62.8#

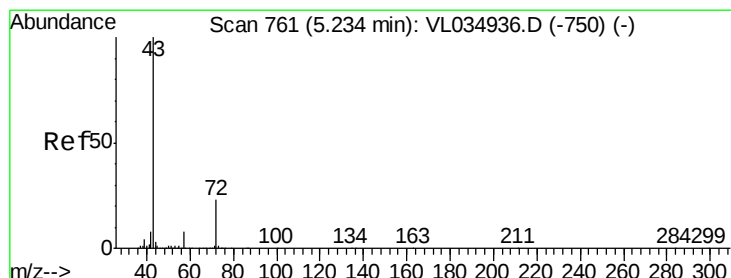
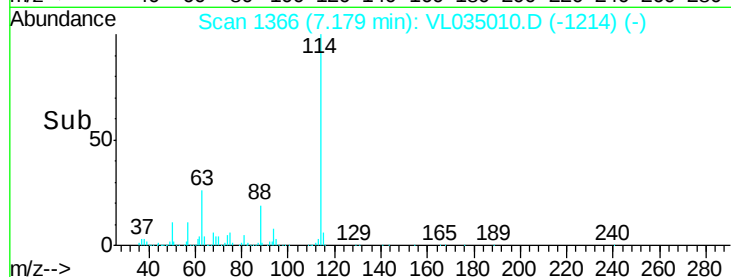
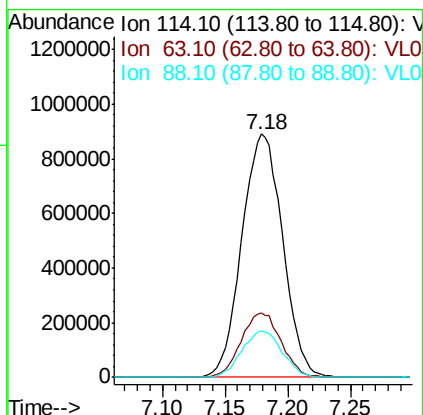
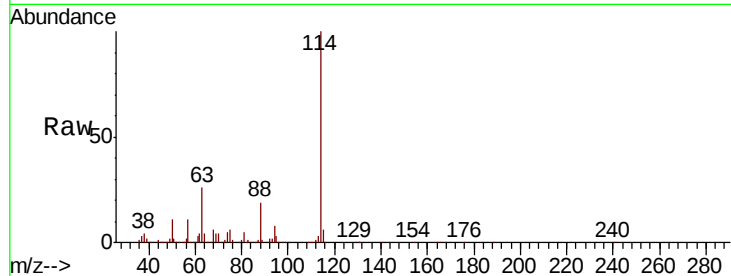




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.18 min Scan# 1366
 Delta R.T. -0.01 min
 Lab File: VL035010.D
 Acq: 13 May 2020 5:55

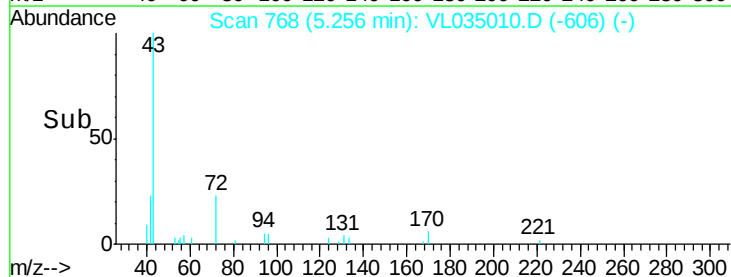
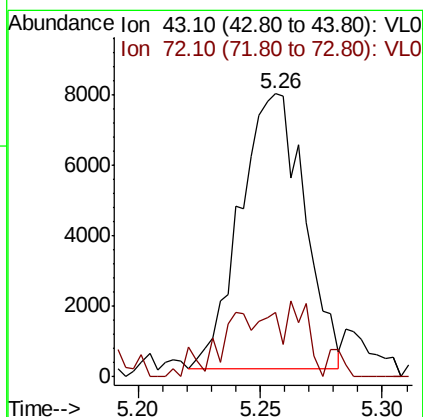
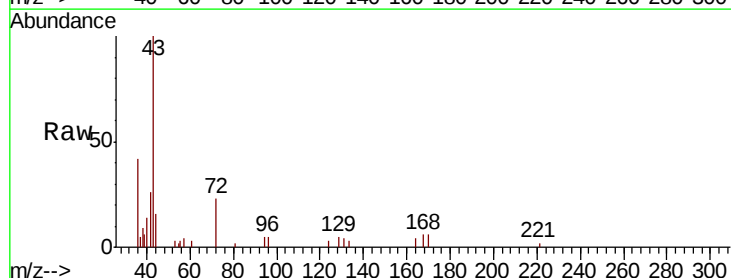
Instrument :
 MSVOA_L
 ClientSampleId :
 SG-1DL

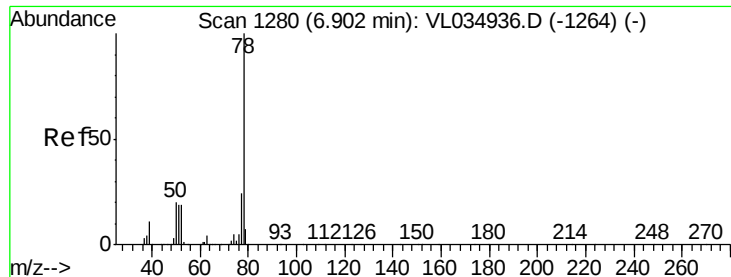
Tot Ion:114 Resp: 2013322
 Ion Ratio Lower Upper
 114 100
 63 26.1 22.2 33.4
 88 18.8 15.5 23.3



#34
 2-Butanone
 Concen: 0.113 ppbv
 RT: 5.26 min Scan# 768
 Delta R.T. 0.02 min
 Lab File: VL035010.D
 Acq: 13 May 2020 5:55

Tgt Ion: 43 Resp: 14178
 Ion Ratio Lower Upper
 43 100
 72 32.6 18.0 27.0#





#36

Benzene

Concen: 0.540 ppbv

RT: 6.89 min Scan# 1276

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampled :

SG-1DL

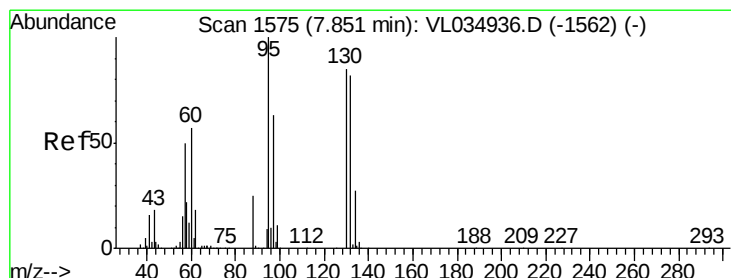
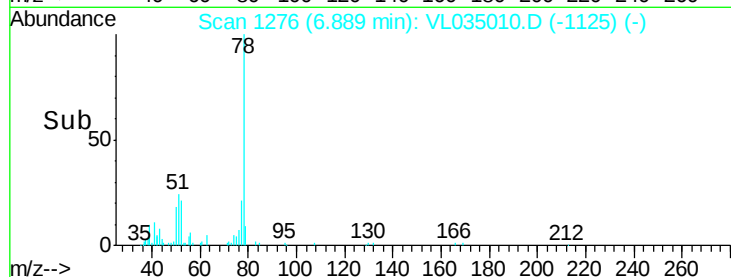
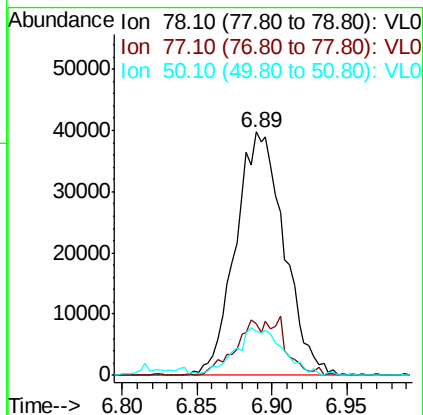
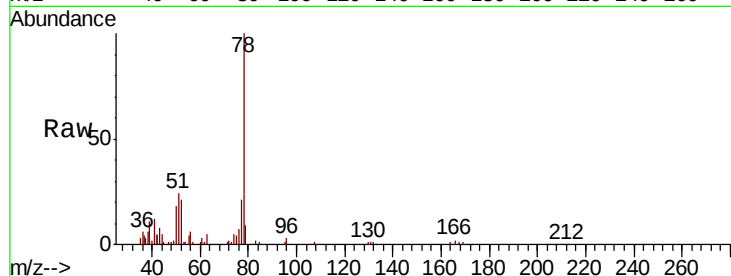
Tot Ion: 78 Resp: 89584

Ion Ratio Lower Upper

78 100

77 21.1 19.0 28.6

50 18.3 15.8 23.8



#38

Trichloroethene

Concen: 311.143 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. 0.02 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Tgt Ion: 130 Resp: 20008314

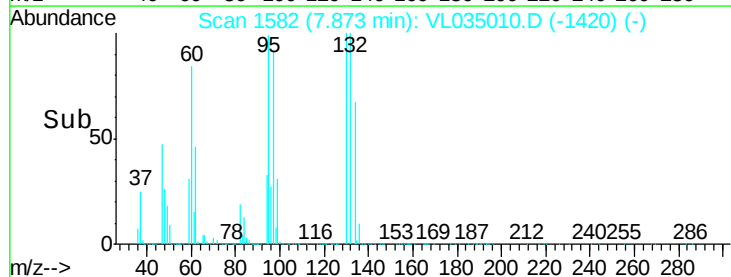
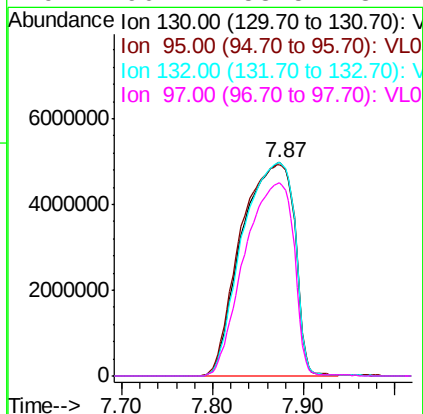
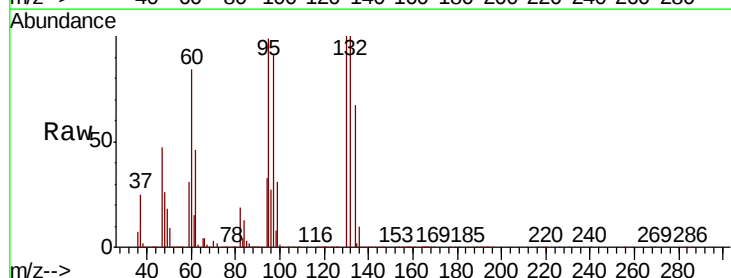
Ion Ratio Lower Upper

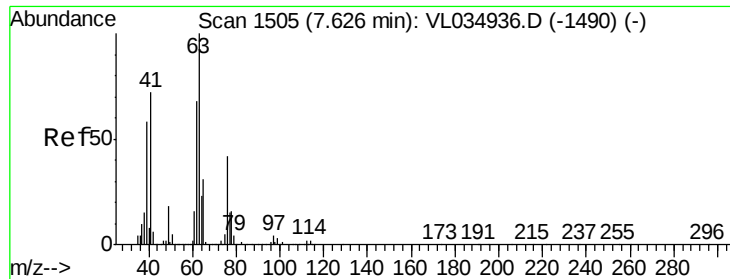
130 100

95 99.3 93.4 140.0

132 100.2 76.4 114.6

97 90.7 58.5 87.7#





#39

1,2-Dichloropropane

Concen: 1.306 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. 0.24 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

SG-1DL

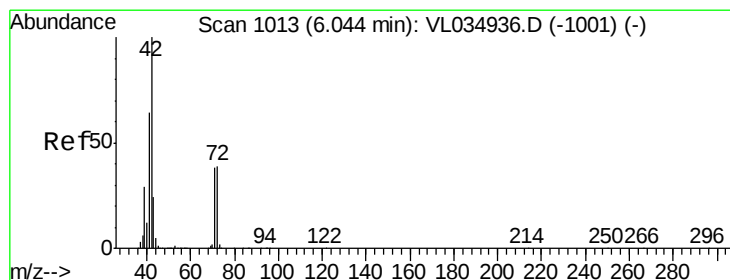
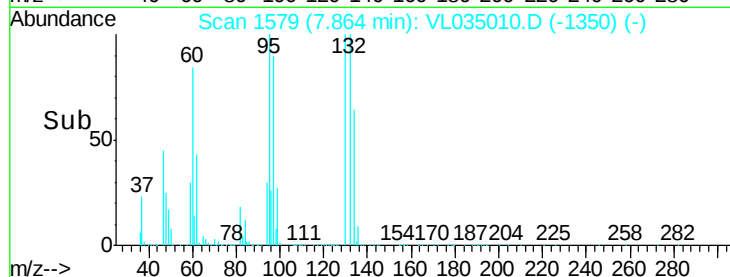
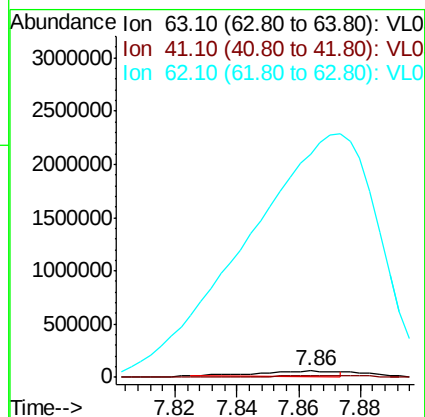
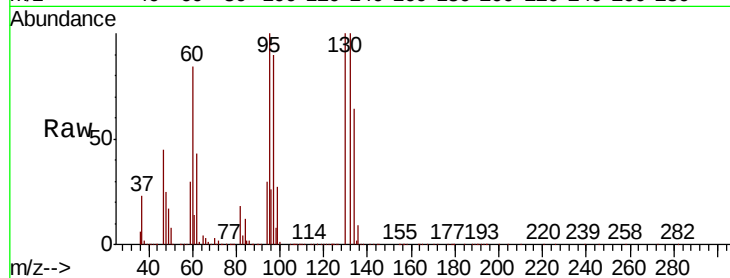
Tot Ion: 63 Resp: 86894

Ion Ratio Lower Upper

63 100

41 23.3 57.8 86.8#

62 3371.2 54.2 81.2#



#41

Tetrahydrofuran

Concen: 0.025 ppbv

RT: 6.03 min Scan# 1009

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

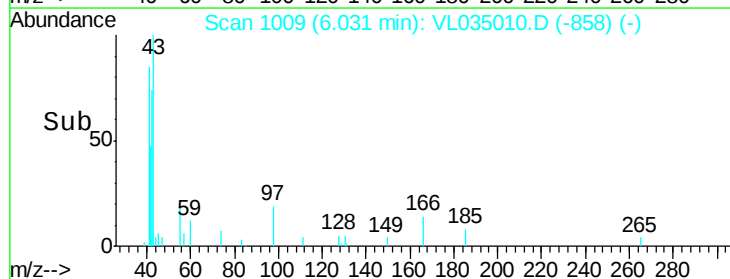
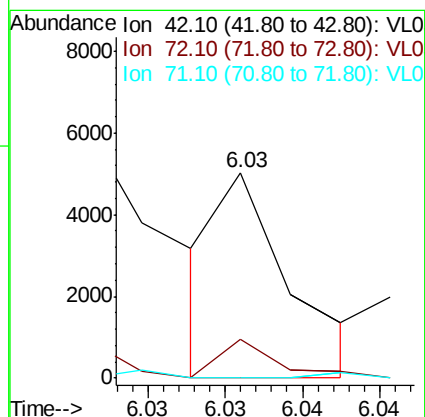
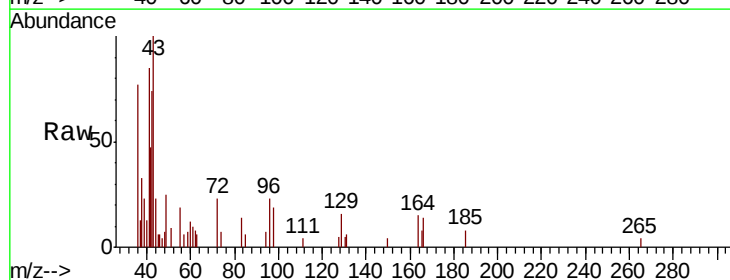
Tgt Ion: 42 Resp: 1629

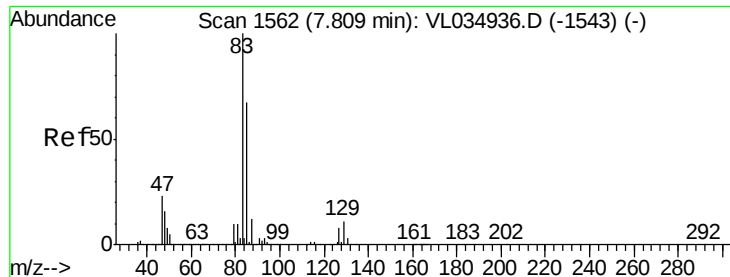
Ion Ratio Lower Upper

42 100

72 0.0 31.4 47.0#

71 0.0 29.8 44.8#





#42

Bromodichloromethane

Concen: 4.066 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. 0.06 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampled :

SG-1DL

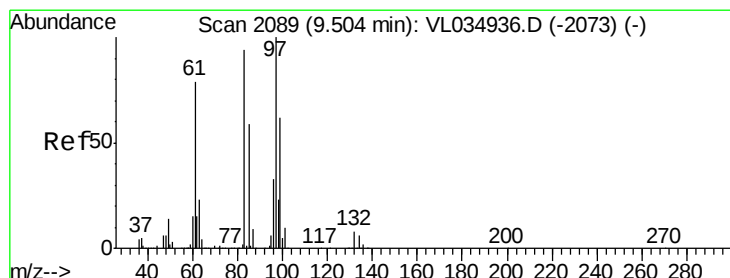
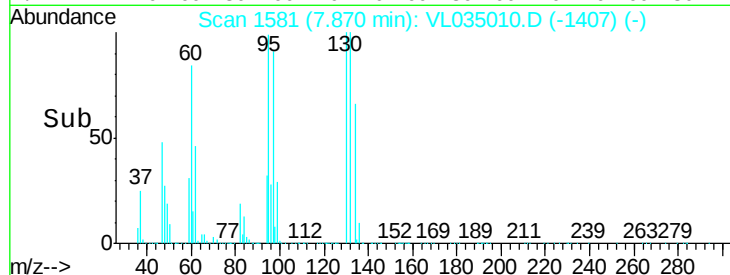
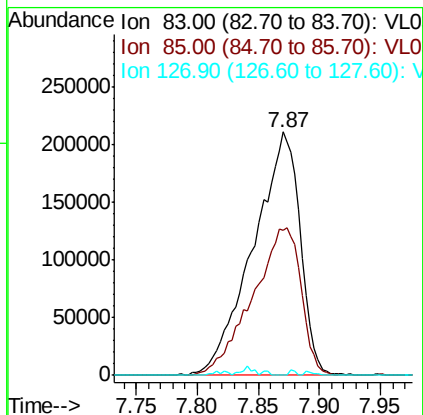
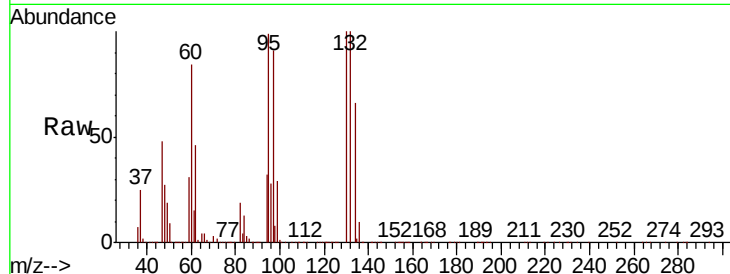
Tot Ion: 83 Resp: 561527

Ion Ratio Lower Upper

83 100

85 59.6 53.4 80.0

127 0.0 6.1 9.1#



#47

1,1,2-Trichloroethane

Concen: 0.031 ppbv

RT: 9.49 min Scan# 2085

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Tgt Ion: 97 Resp: 2179

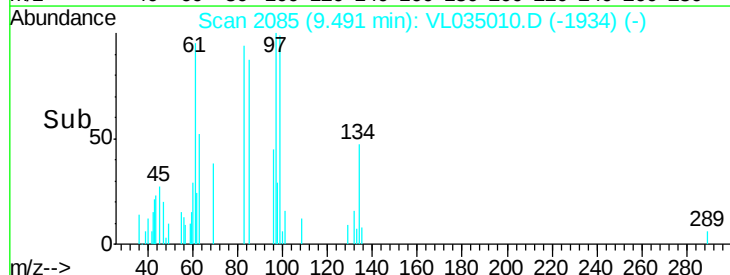
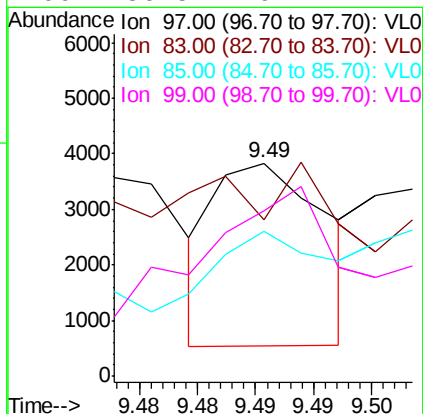
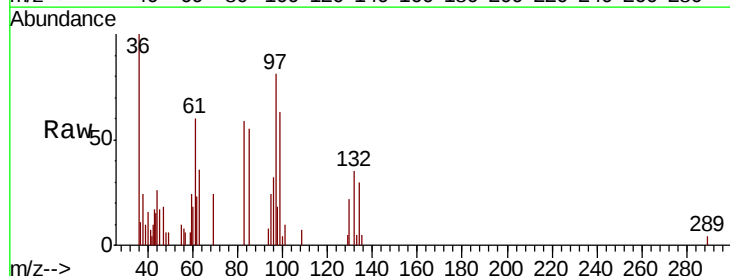
Ion Ratio Lower Upper

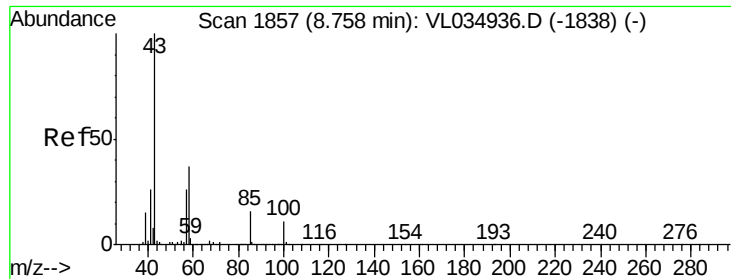
97 100

83 4.7 75.6 113.4#

85 83.3 47.0 70.6#

99 86.5 49.4 74.2#

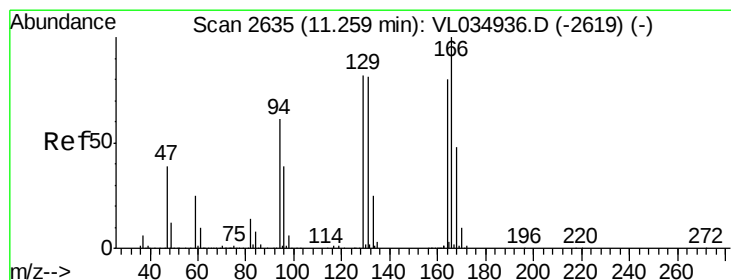
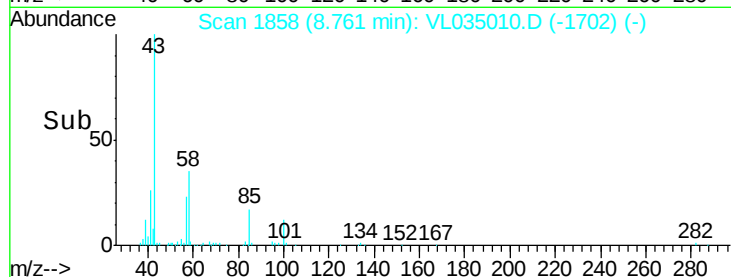
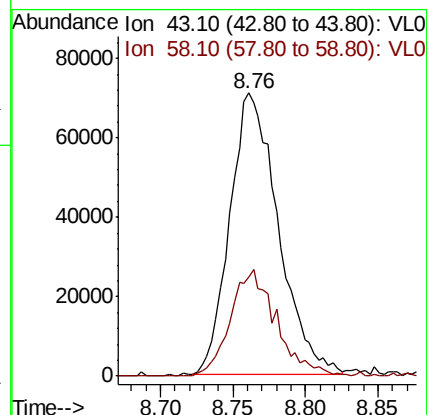
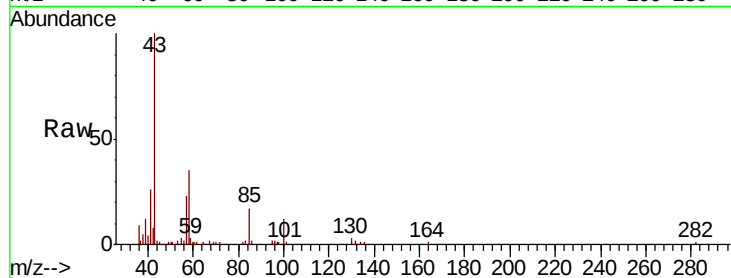




#50
4-Methyl-2-Pentanone
Concen: 0.923 ppbv
RT: 8.76 min Scan# 1858
Delta R.T. 0.00 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

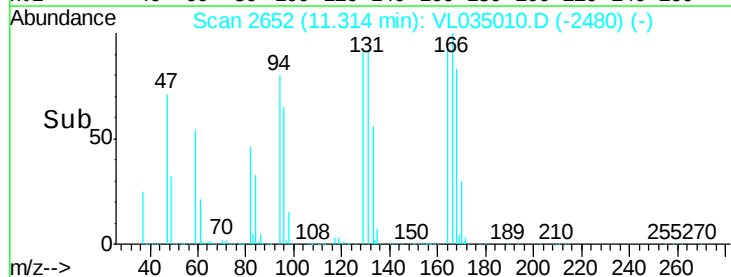
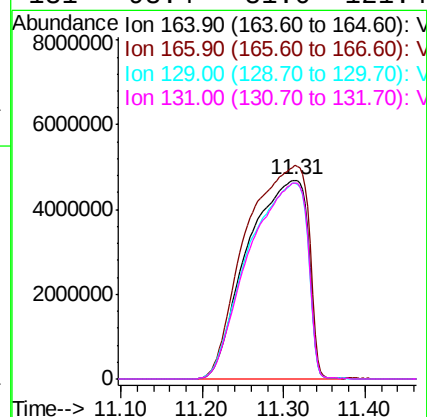
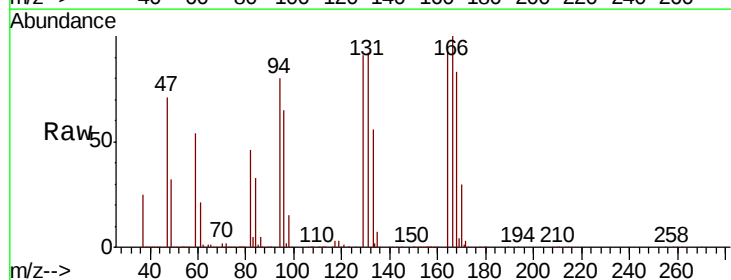
Instrument :
MSVOA_L
ClientSampleId :
SG-1DL

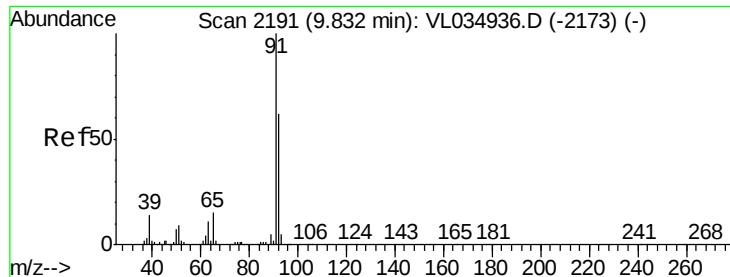
Tot Ion: 43 Resp: 164708
Ion Ratio Lower Upper
43 100
58 36.0 29.1 43.7



#52
Tetrachloroethene
Concen: 411.196 ppbv
RT: 11.31 min Scan# 2652
Delta R.T. 0.05 min
Lab File: VL035010.D
Acq: 13 May 2020 5:55

Tgt Ion: 164 Resp: 24270050
Ion Ratio Lower Upper
164 100
166 107.4 100.7 151.1
129 98.2 83.0 124.4
131 98.4 81.0 121.4





#53

Toluene

Concen: 2.424 ppbv

RT: 9.83 min Scan# 2189

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

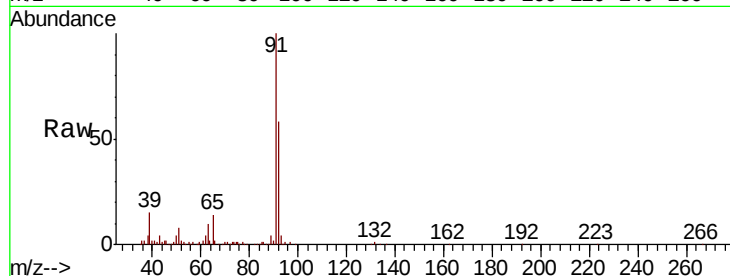
SG-1DL

Tot Ion: 91 Resp: 426471

Ion Ratio Lower Upper

91 100

92 58.1 48.6 73.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.83

200000

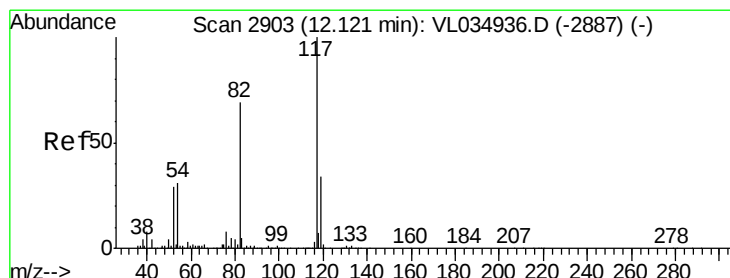
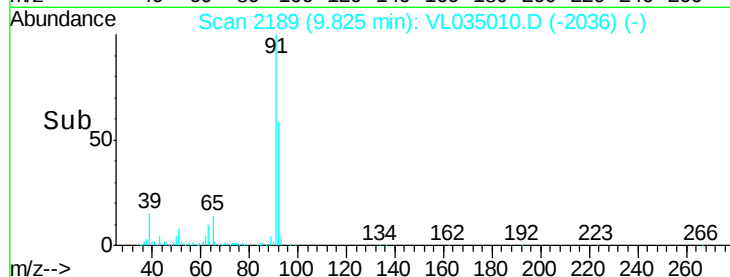
150000

100000

50000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.12 min Scan# 2902

Delta R.T. -0.00 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

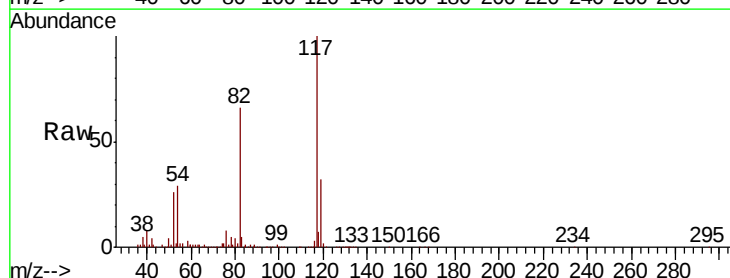
Tgt Ion: 117 Resp: 1819261

Ion Ratio Lower Upper

117 100

82 68.4 53.1 79.7

119 32.6 26.7 40.1



Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V

12.12

1000000

800000

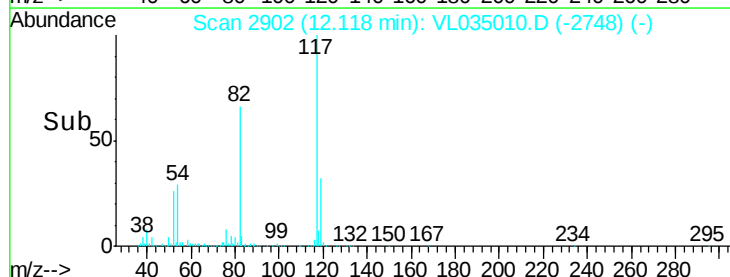
600000

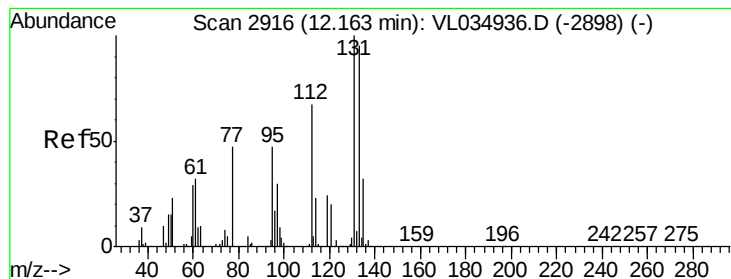
400000

200000

0

Time-->





#56

1,1,1,2-Tetrachloroethane

Concen: 0.023 ppbv

RT: 12.15 min Scan# 2913

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

SG-1DL

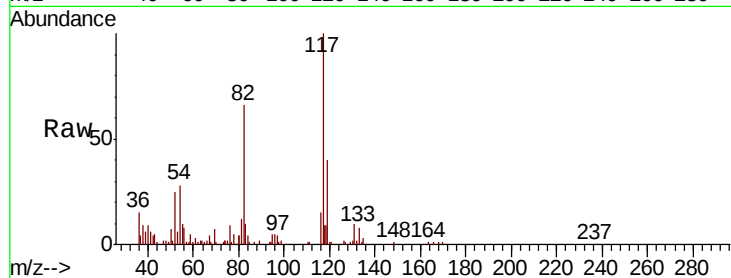
Tot Ion:131 Resp: 1851

Ion Ratio Lower Upper

131 100

133 414.3 77.7 116.5#

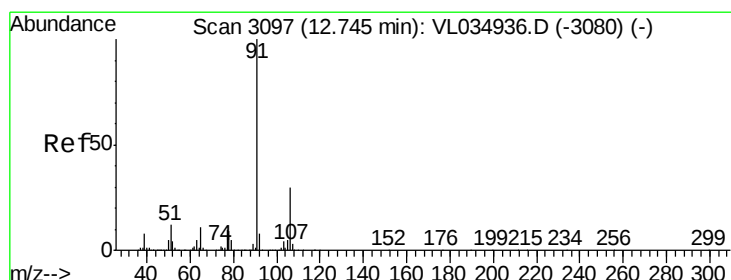
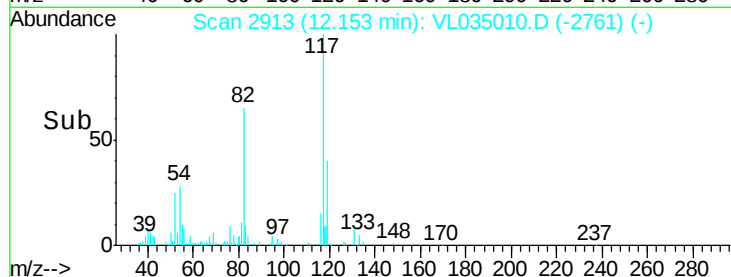
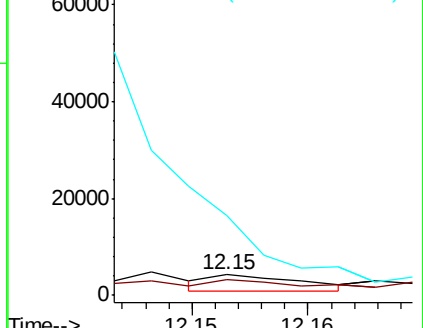
119 0.0 49.8 74.6#



Abundance Ion 131.00 (130.70 to 131.70): V

Ion 133.00 (132.70 to 133.70): V

Ion 119.00 (118.70 to 119.70): V



#58

Ethyl Benzene

Concen: 1.095 ppbv

RT: 12.74 min Scan# 3095

Delta R.T. -0.01 min

Lab File: VL035010.D

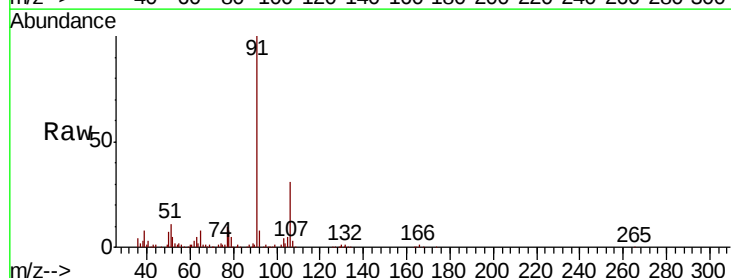
Acq: 13 May 2020 5:55

Tgt Ion: 91 Resp: 246410

Ion Ratio Lower Upper

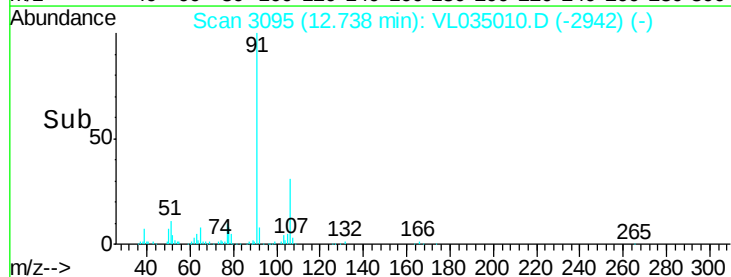
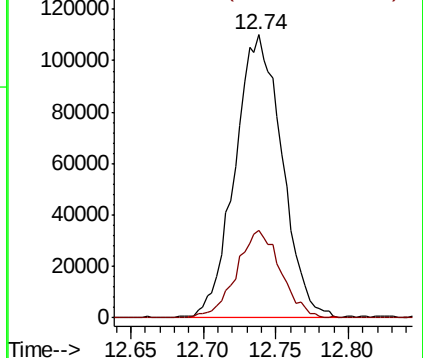
91 100

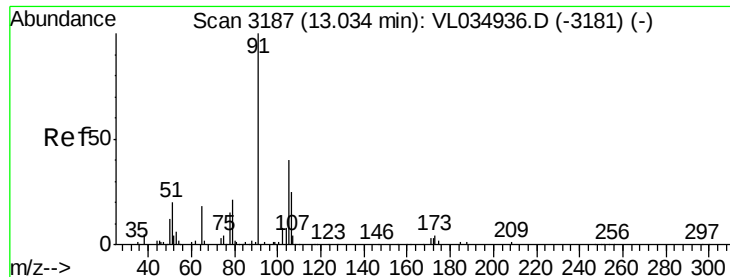
106 31.1 24.2 36.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#59

m/p-Xylene

Concen: 3.230 ppbv

RT: 12.99 min Scan# 3174

Delta R.T. -0.04 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampleId :

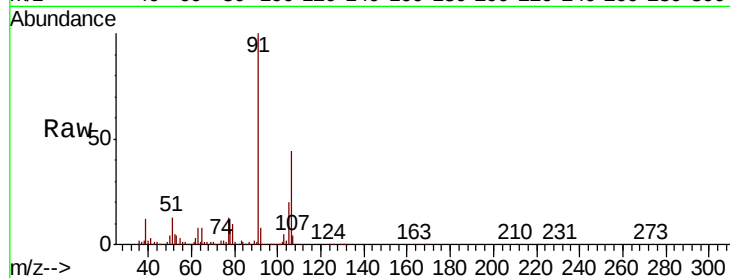
SG-1DL

Tot Ion: 91 Resp: 639276

Ion Ratio Lower Upper

91 100

106 44.7 66.0 99.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

250000

200000

150000

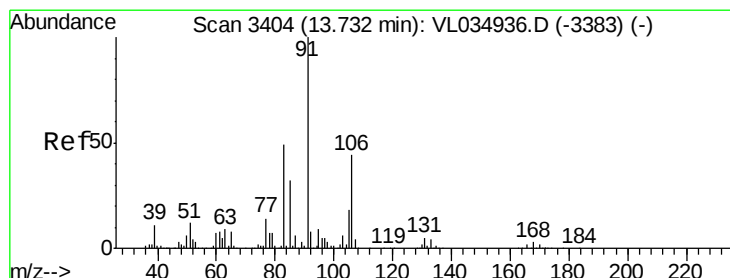
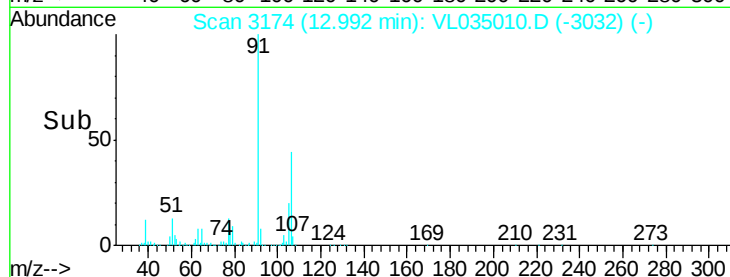
100000

50000

0

12.90 13.00 13.10

Time-->



#60

o-Xylene

Concen: 0.358 ppbv

RT: 13.72 min Scan# 3401

Delta R.T. -0.01 min

Lab File: VL035010.D

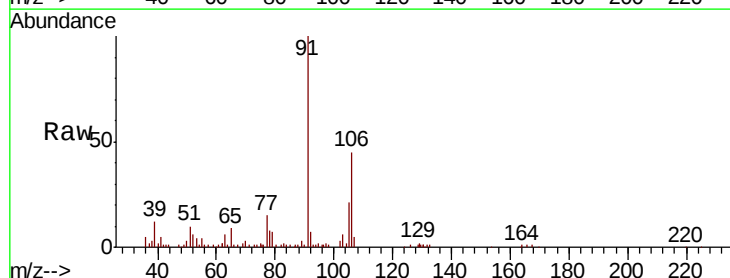
Acq: 13 May 2020 5:55

Tgt Ion: 91 Resp: 69969

Ion Ratio Lower Upper

91 100

106 95.6 21.9 65.5#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

80000

60000

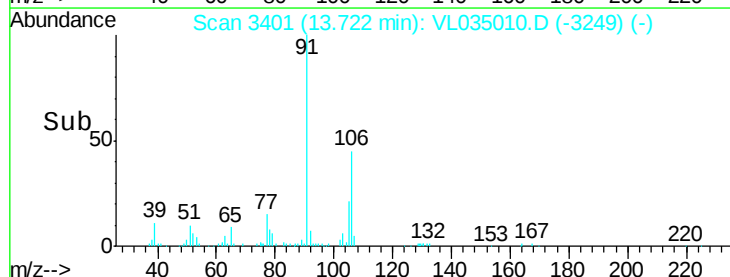
40000

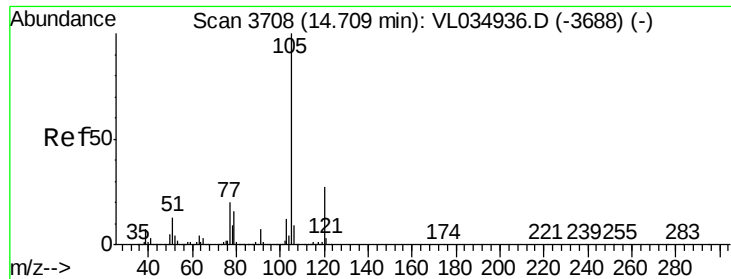
20000

0

13.70 13.75

Time-->





#62

Isopropylbenzene

Concen: 0.387 ppbv

RT: 14.70 min Scan# 3704

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

Instrument :

MSVOA_L

ClientSampled :

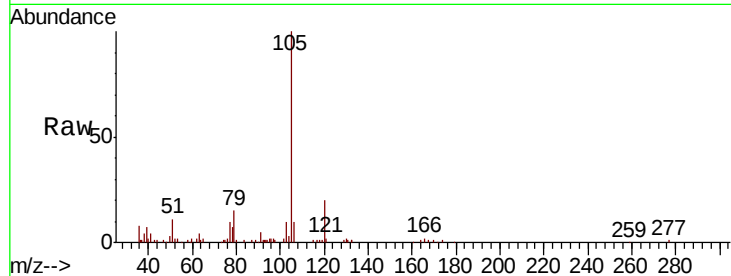
SG-1DL

Tot Ion:105 Resp: 112748

Ion Ratio Lower Upper

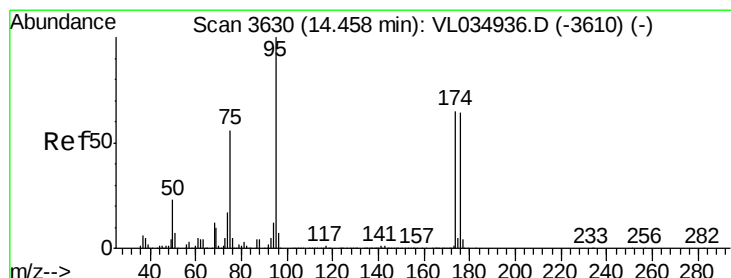
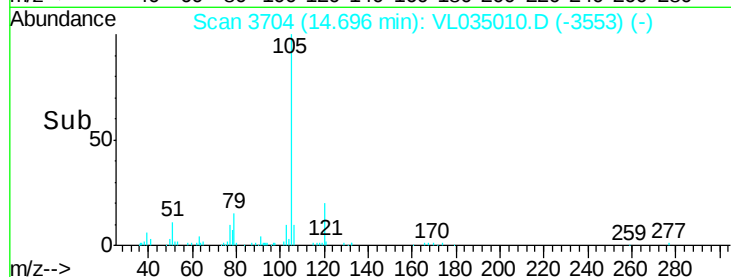
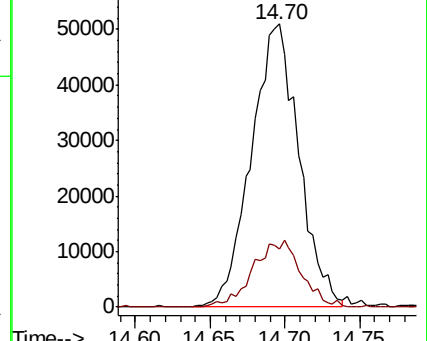
105 100

120 23.8 20.6 31.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.016 ppbv

RT: 14.45 min Scan# 3626

Delta R.T. -0.01 min

Lab File: VL035010.D

Acq: 13 May 2020 5:55

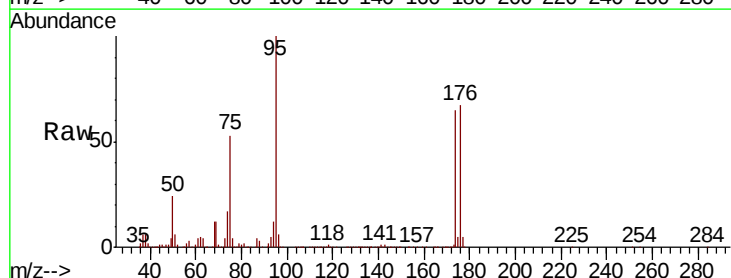
Tgt Ion: 95 Resp: 1474919

Ion Ratio Lower Upper

95 100

174 66.0 51.5 77.3

175 5.0 3.8 5.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

