

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\VW081219\  
 Data File : VW011860.D  
 Acq On : 12 Aug 2019 18:41  
 Operator : SY/VA  
 Sample : K4223-08RE  
 Misc : 4.59G/5ML/MSVOA W/SOIL  
 ALS Vial : 23 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :

Quant Time: Aug 13 07:47:55 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W072719S.M  
 Quant Title : SW846 8260  
 QLast Update : Sat Jul 27 00:23:30 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 13705    | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.85  | 114  | 31004    | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 19038    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.56 | 152  | 9366     | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc   | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|--------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 8.31  | 65   | 21808    | 138.58 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =      | 277.16% |          |
| 35) Dibromofluoromethane    | 7.88  | 113  | 1504     | 8.65   | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =      | 17.30%  |          |
| 50) Toluene-d8              | 10.32 | 98   | 16730    | 23.49  | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =      | 46.98%  |          |
| 62) 4-Bromofluorobenzene    | 12.62 | 95   | 10408    | 40.99  | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =      | 81.98%  |          |

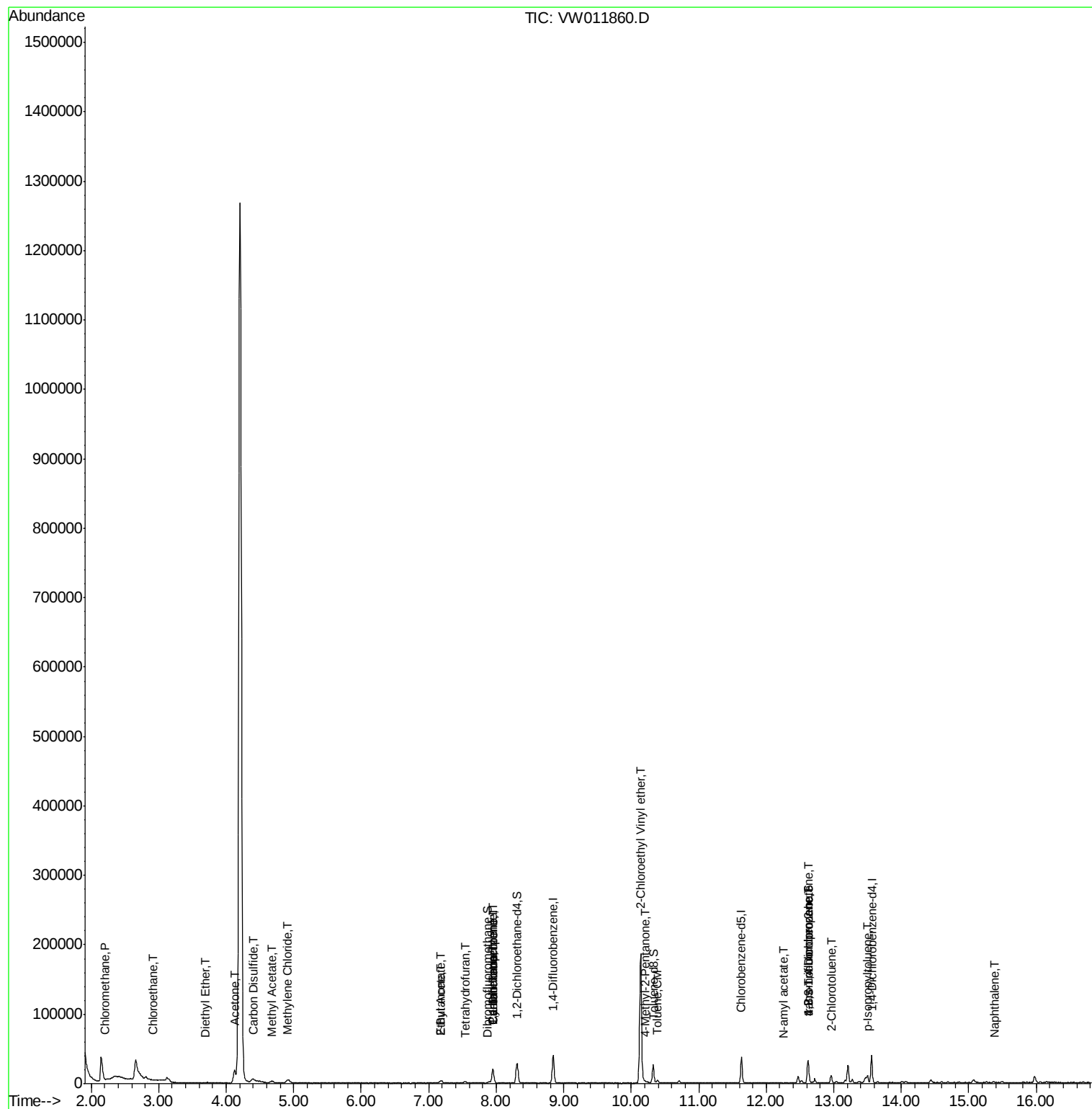
| Target Compounds               | R.T.  | QIon | Response | Conc      | Units  | Qvalue |
|--------------------------------|-------|------|----------|-----------|--------|--------|
| 3) Chloromethane               | 2.21  | 50   | 228      | 1.721     | ug/l # | 76     |
| 6) Chloroethane                | 2.92  | 64   | 94       | 1.032     | ug/l # | 50     |
| 8) Diethyl Ether               | 3.69  | 74   | 181      | 2.240     | ug/l   | 82     |
| 11) Tert butyl alcohol         | 5.18  | 59   | 103      | Below Cal | #      | 72     |
| 16) Acetone                    | 4.12  | 43   | 32496    | 649.147   | ug/l   | 97     |
| 17) Carbon Disulfide           | 4.40  | 76   | 6451     | 14.441    | ug/l # | 86     |
| 18) Methyl Acetate             | 4.68  | 43   | 4895     | 43.527    | ug/l   | 98     |
| 20) Methylene Chloride         | 4.91  | 84   | 3068     | 17.771    | ug/l   | 93     |
| 25) 2-Butanone                 | 7.18  | 43   | 6577     | 100.406   | ug/l   | 95     |
| 29) Tetrahydrofuran            | 7.55  | 42   | 1822     | 48.661    | ug/l   | 98     |
| 31) Cyclohexane                | 7.96  | 56   | 494      | 1.679     | ug/l # | 5      |
| 36) 1,1-Dichloropropene        | 7.95  | 75   | 1264     | 3.921     | ug/l # | 47     |
| 37) Ethyl Acetate              | 7.18  | 43   | 6577     | 35.460    | ug/l # | 74     |
| 38) Carbon Tetrachloride       | 7.96  | 117  | 1460     | 5.290     | ug/l # | 13     |
| 51) 4-Methyl-2-Pentanone       | 10.22 | 43   | 378      | 2.130     | ug/l   | 100    |
| 52) Toluene                    | 10.39 | 92   | 1641     | 3.009     | ug/l   | 99     |
| 58) 2-Chloroethyl Vinyl ether  | 10.14 | 63   | 958      | 9.215     | ug/l # | 51     |
| 74) N-amyl acetate             | 12.25 | 43   | 255      | 1.166     | ug/l # | 53     |
| 76) 1,2,3-Trichloropropane     | 12.62 | 75   | 5517     | 55.669    | ug/l # | 100    |
| 79) 2-Chlorotoluene            | 12.97 | 91   | 510      | 1.041     | ug/l # | 43     |
| 81) trans-1,4-Dichloro-2-buten | 12.62 | 75   | 5517     | 128.299   | ug/l # | 6      |
| 86) p-Isopropyltoluene         | 13.50 | 119  | 5388     | 8.497     | ug/l # | 84     |
| 95) Naphthalene                | 15.38 | 128  | 500      | 3.362     | ug/l # | 85     |

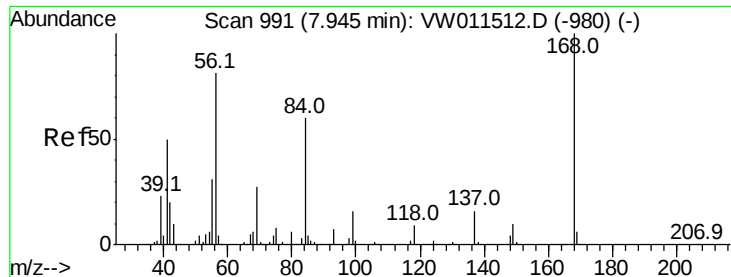
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : SW846 8260  
QLast Update : Sat Jul 27 00:23:30 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.95 min Scan# 992

Delta R.T. 0.01 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

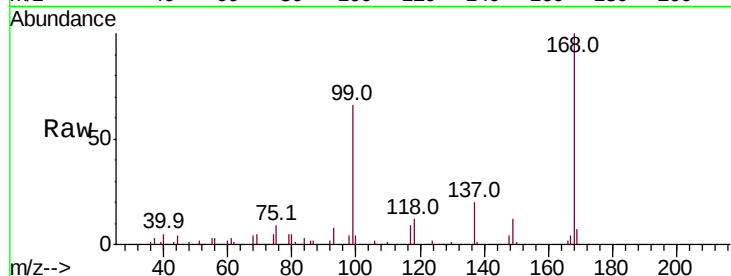
ClientSampled :

Tot Ion:168 Resp: 13705

Ion Ratio Lower Upper

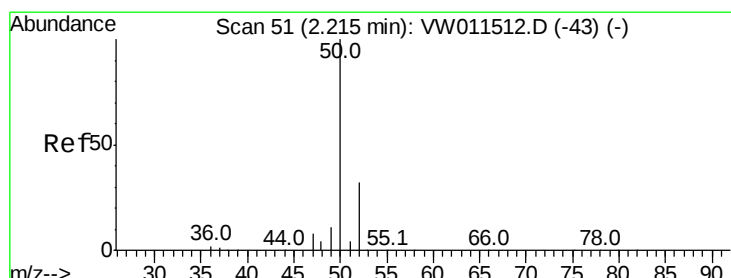
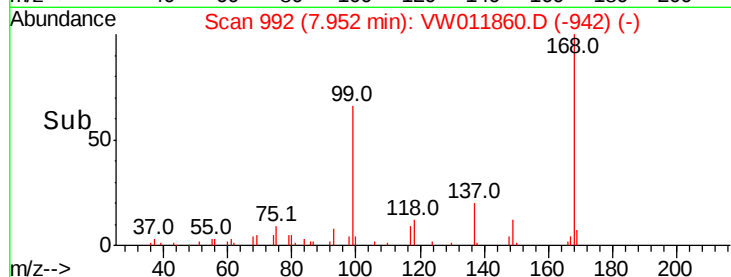
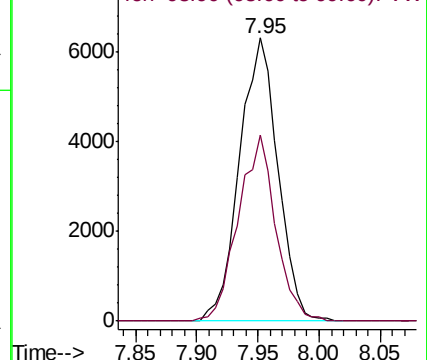
168 100

99 65.8 48.2 72.4



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VW



#3

Chloromethane

Concen: 1.721 ug/l

RT: 2.21 min Scan# 50

Delta R.T. -0.01 min

Lab File: VW011860.D

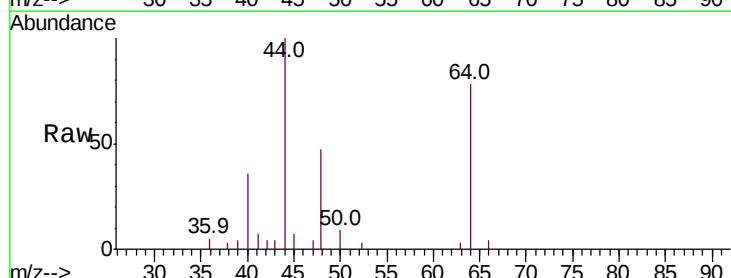
Acq: 12 Aug 2019 18:41

Tgt Ion: 50 Resp: 228

Ion Ratio Lower Upper

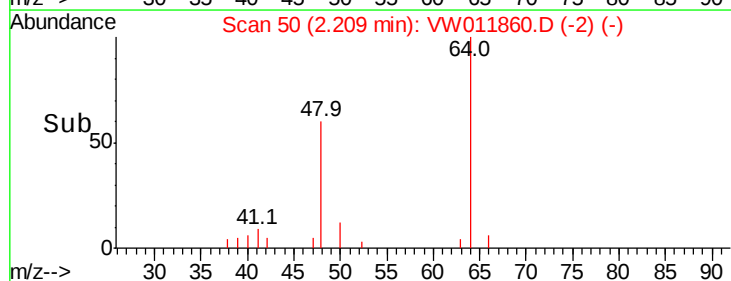
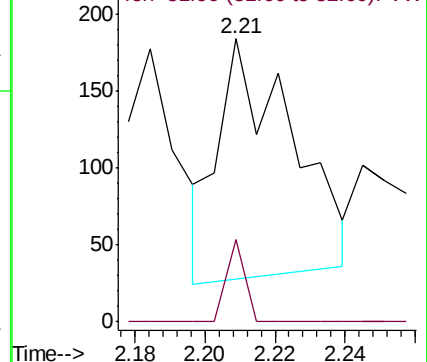
50 100

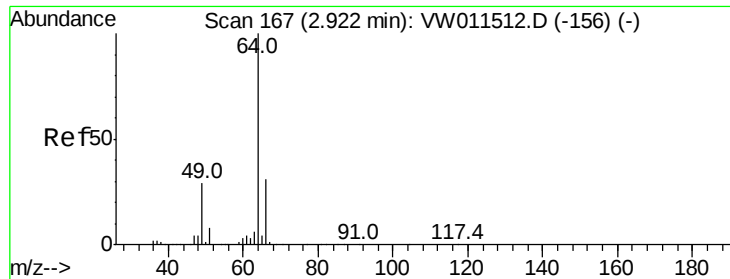
52 44.9 25.4 38.2#



Abundance Ion 49.90 (49.60 to 50.60): VW

Ion 51.90 (51.60 to 52.60): VW





#6

Chloroethane

Concen: 1.032 ug/l

RT: 2.92 min Scan# 166

Delta R.T. -0.01 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

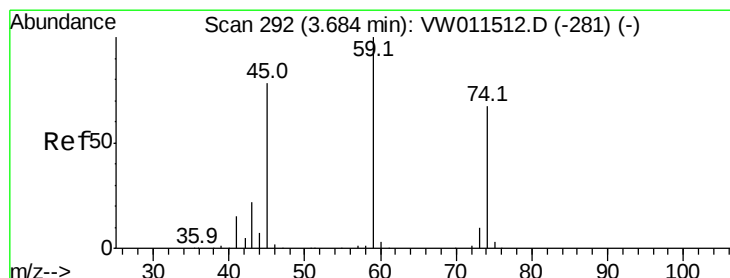
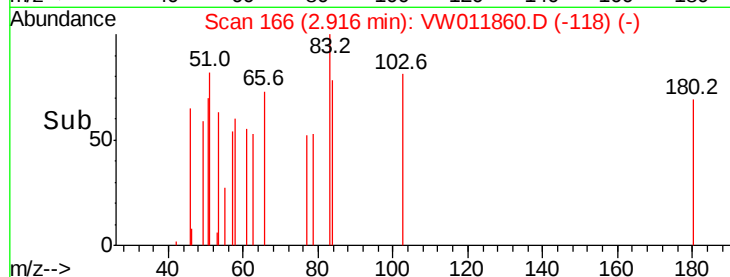
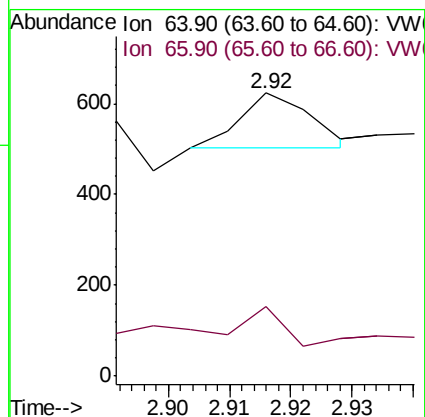
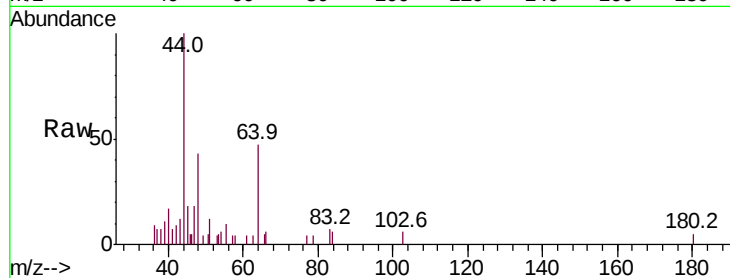
ClientSampled :

Tot Ion: 64 Resp: 94

Ion Ratio Lower Upper

64 100

66 58.0 24.6 36.8#



#8

Diethyl Ether

Concen: 2.240 ug/l

RT: 3.69 min Scan# 293

Delta R.T. 0.01 min

Lab File: VW011860.D

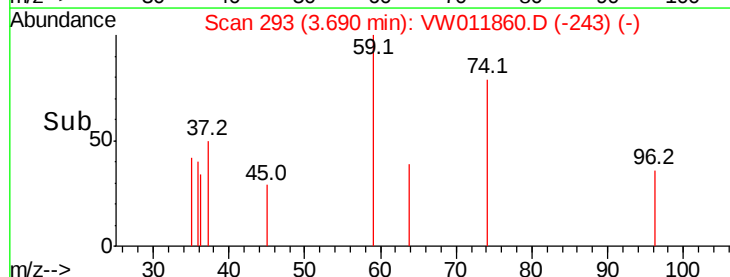
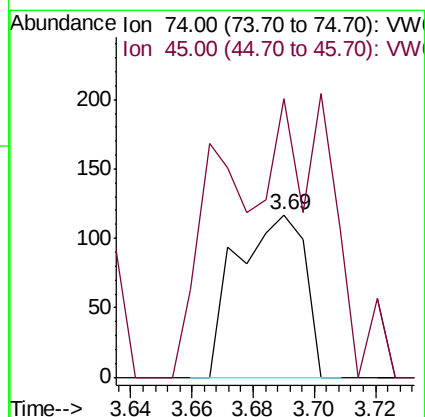
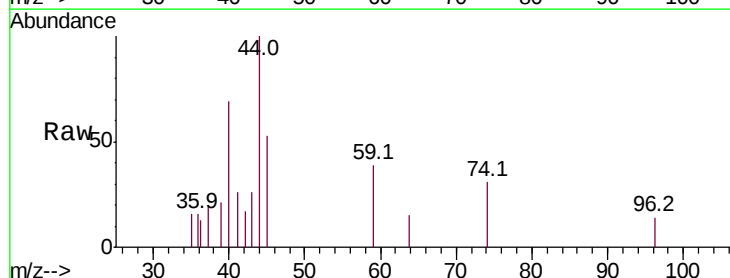
Acq: 12 Aug 2019 18:41

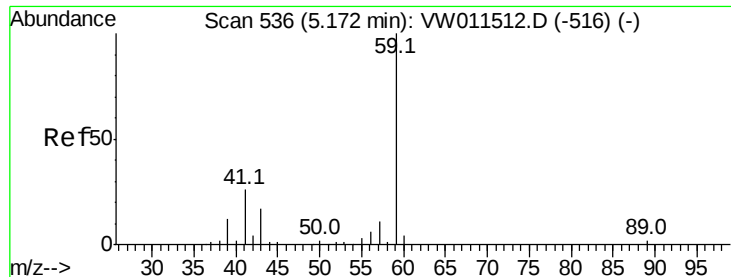
Tgt Ion: 74 Resp: 181

Ion Ratio Lower Upper

74 100

45 139.2 59.6 178.8



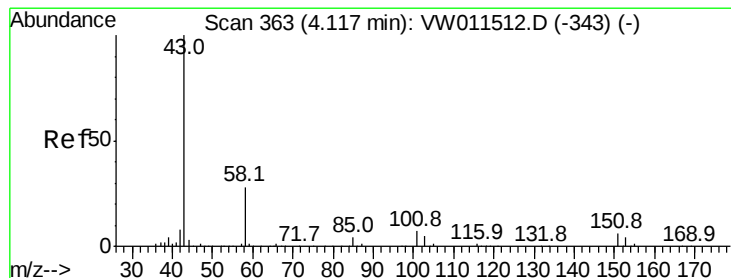
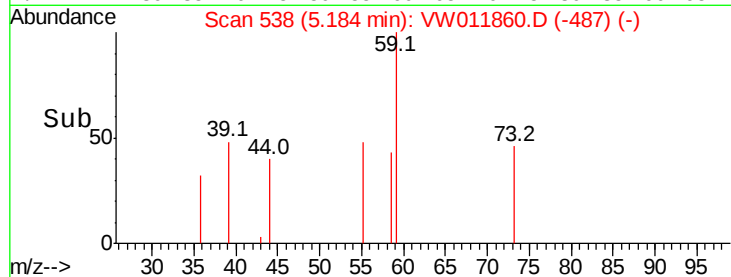
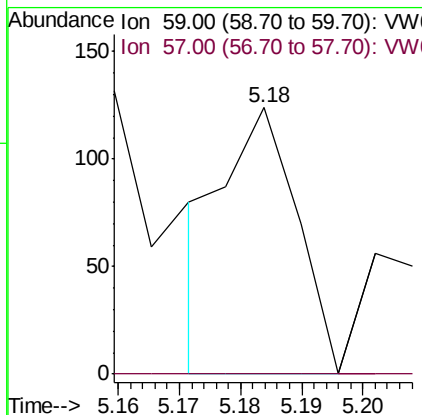
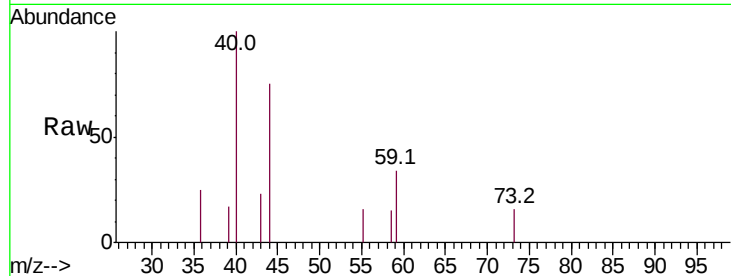


#11

Tert butyl alcohol  
 Concen: Below Cal  
 RT: 5.18 min Scan# 538  
 Delta R.T. 0.01 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

Instrument :  
 MSVOA\_W  
 ClientSampled :

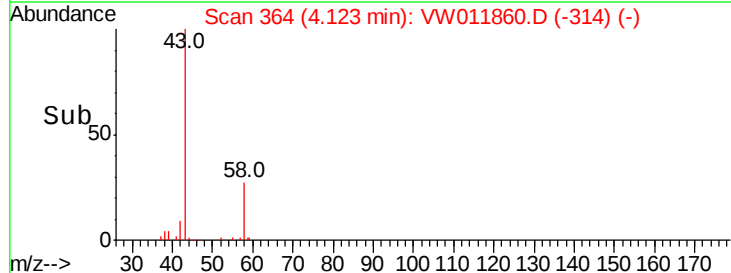
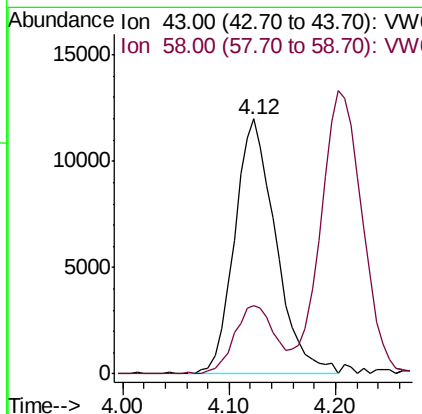
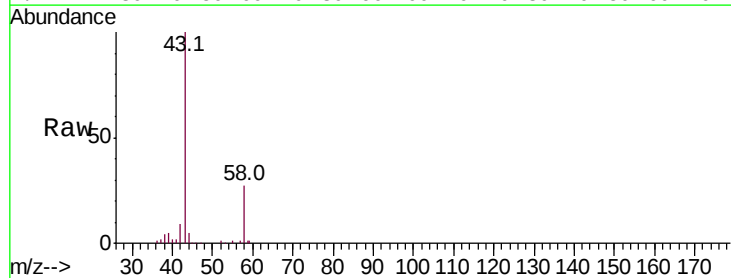
Tot Ion: 59 Resp: 103  
 Ion Ratio Lower Upper  
 59 100  
 57 0.0 8.5 12.7#

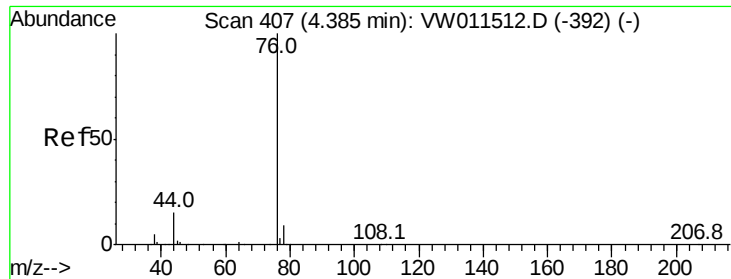


#16

Acetone  
 Concen: 649.147 ug/l  
 RT: 4.12 min Scan# 364  
 Delta R.T. 0.01 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

Tgt Ion: 43 Resp: 32496  
 Ion Ratio Lower Upper  
 43 100  
 58 26.3 22.3 33.5

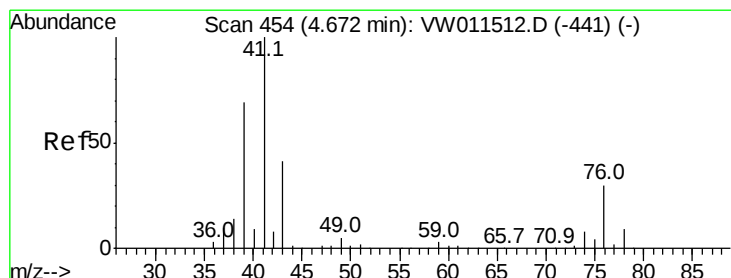
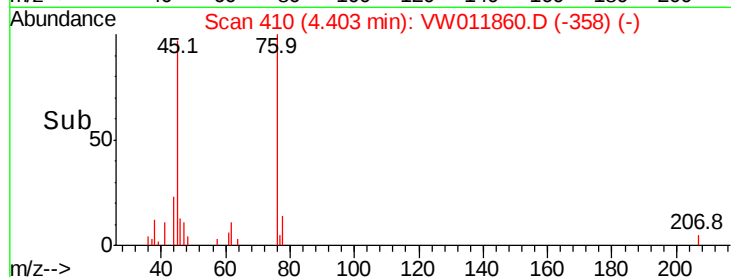
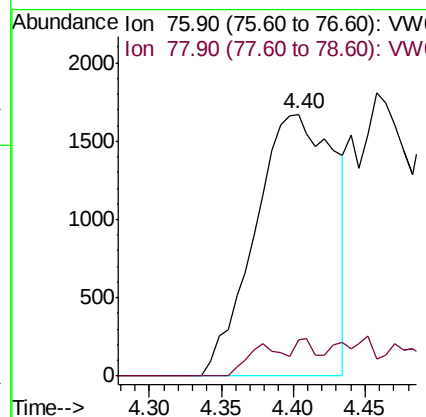
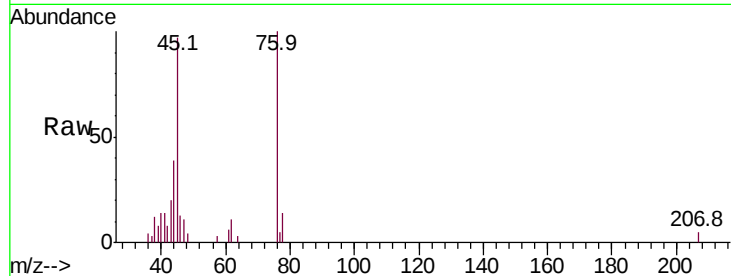




#17  
Carbon Disulfide  
Concen: 14.441 ug/l  
RT: 4.40 min Scan# 410  
Delta R.T. 0.02 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

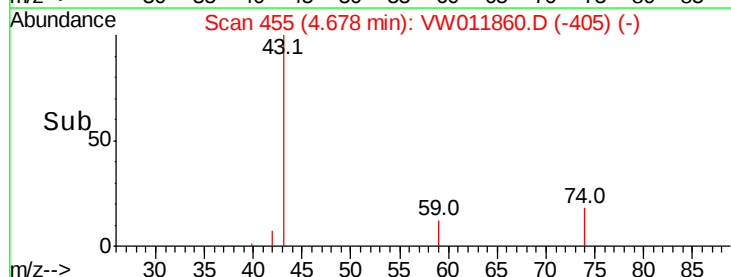
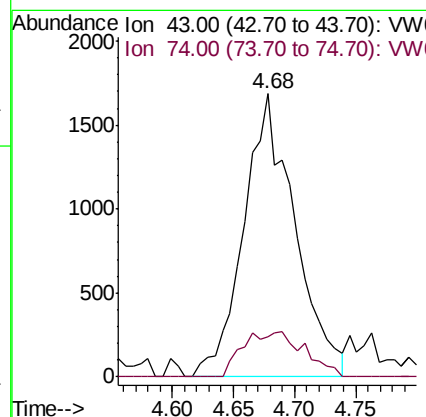
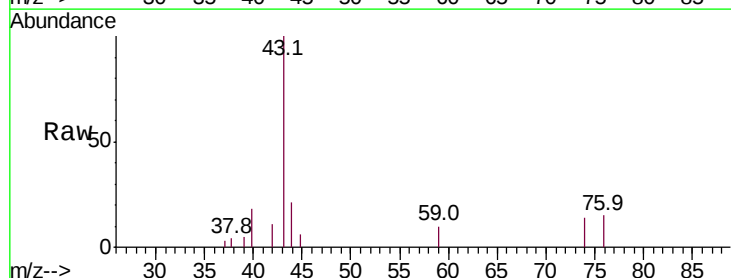
Instrument :  
MSVOA\_W  
ClientSampled :

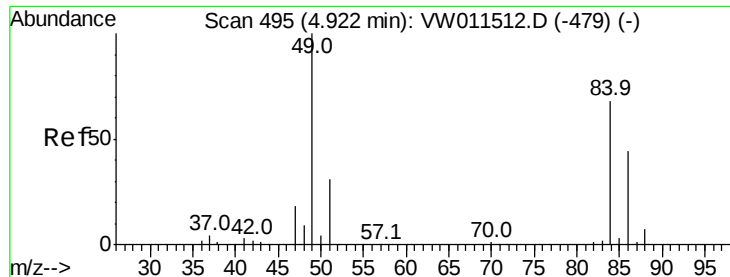
Tot Ion: 76 Resp: 6451  
Ion Ratio Lower Upper  
76 100  
78 13.8 7.1 10.7#



#18  
Methyl Acetate  
Concen: 43.527 ug/l  
RT: 4.68 min Scan# 455  
Delta R.T. 0.01 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

Tgt Ion: 43 Resp: 4895  
Ion Ratio Lower Upper  
43 100  
74 19.1 15.9 23.9

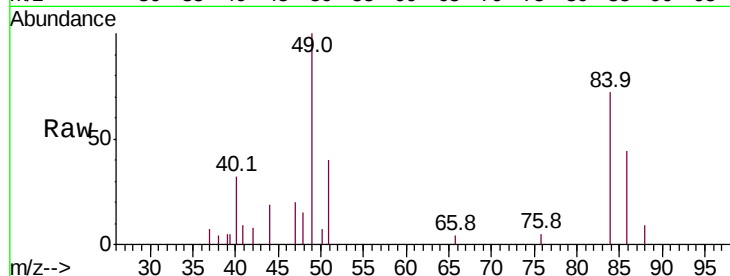




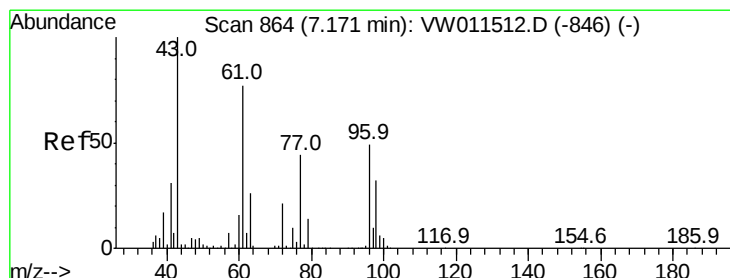
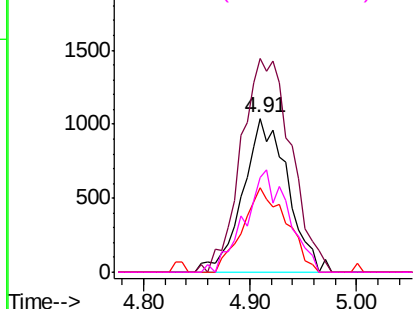
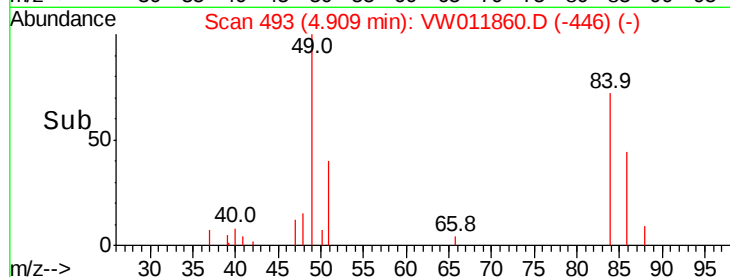
#20  
Methvlene Chloride  
Concen: 17.771 ug/l  
RT: 4.91 min Scan# 493  
Delta R.T. -0.01 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

Instrument :  
MSVOA\_W  
ClientSampleId :

Tot Ion: 84 Resp: 3068  
Ion Ratio Lower Upper  
84 100  
49 138.6 117.8 176.6  
51 54.8 37.0 55.4  
86 61.3 51.8 77.8

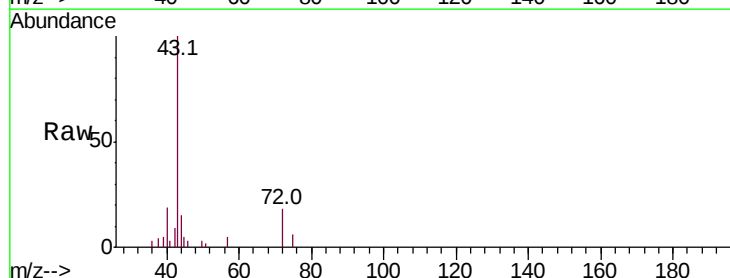


Abundance Ion 83.90 (83.60 to 84.60): VW  
Ion 48.90 (48.60 to 49.60): VW  
Ion 50.90 (50.60 to 51.60): VW  
Ion 85.90 (85.60 to 86.60): VW

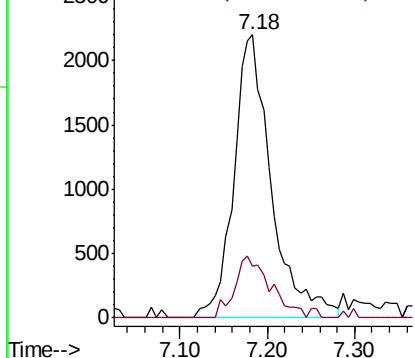
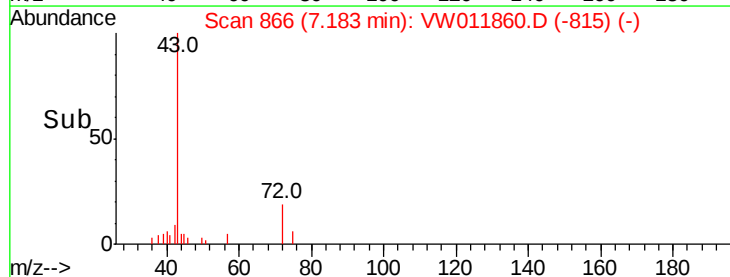


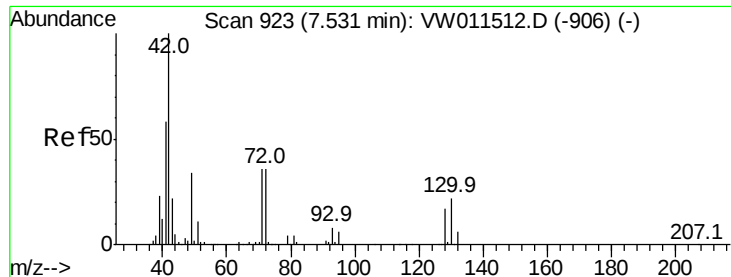
#25  
2-Butanone  
Concen: 100.406 ug/l  
RT: 7.18 min Scan# 866  
Delta R.T. 0.01 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

Tgt Ion: 43 Resp: 6577  
Ion Ratio Lower Upper  
43 100  
72 18.3 16.6 24.8



Abundance Ion 43.00 (42.70 to 43.70): VW  
Ion 72.00 (71.70 to 72.70): VW

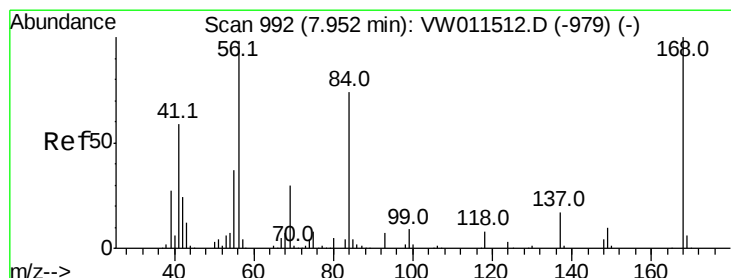
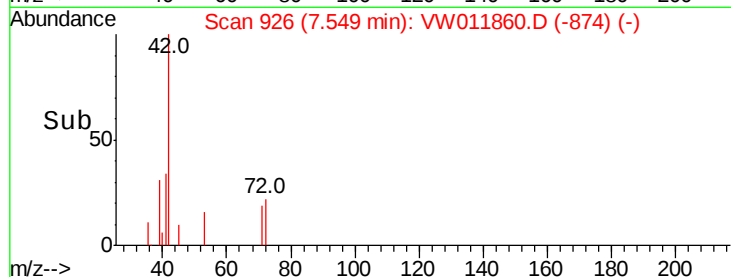
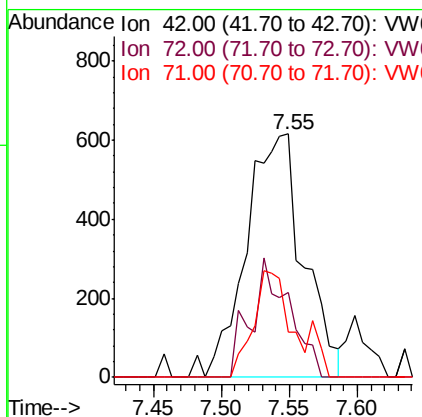
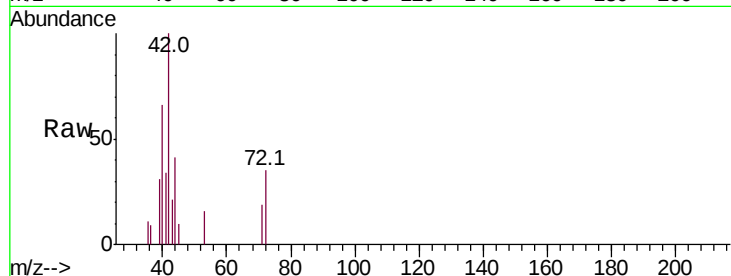




#29  
Tetrahydrofuran  
Concen: 48.661 ug/l  
RT: 7.55 min Scan# 926  
Delta R.T. 0.02 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

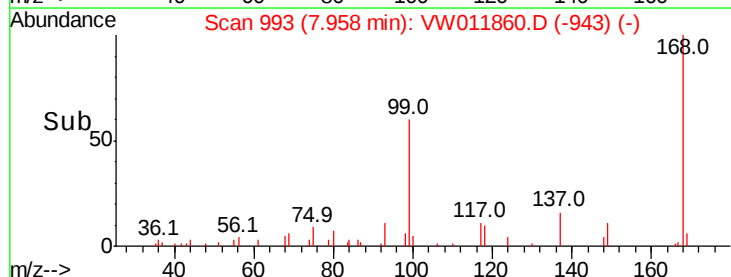
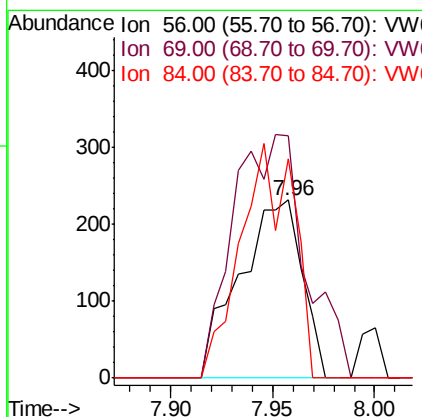
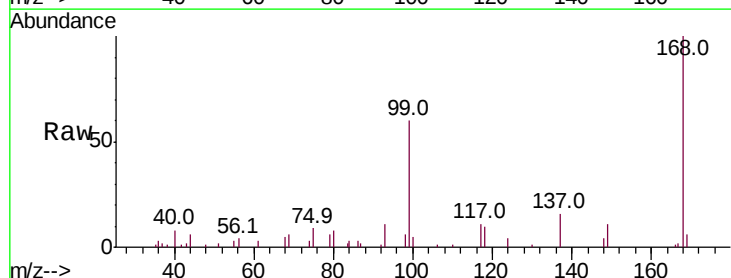
Instrument :  
MSVOA\_W  
ClientSampleId :

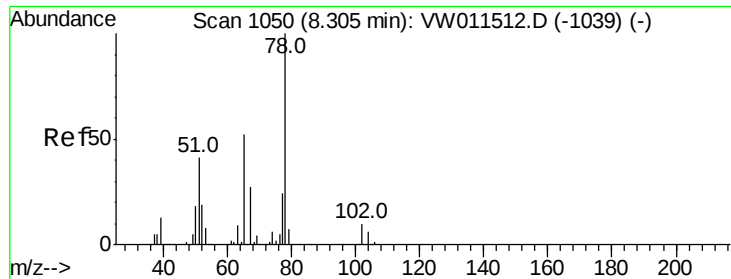
Tot Ion: 42 Resp: 1822  
Ion Ratio Lower Upper  
42 100  
72 32.9 27.1 40.7  
71 31.7 26.2 39.4



#31  
Cyclohexane  
Concen: 1.679 ug/l  
RT: 7.96 min Scan# 993  
Delta R.T. 0.01 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

Tgt Ion: 56 Resp: 494  
Ion Ratio Lower Upper  
56 100  
69 136.2 24.3 36.5#  
84 122.8 60.4 90.6#

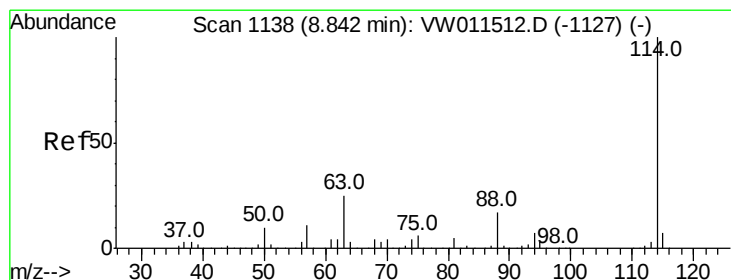
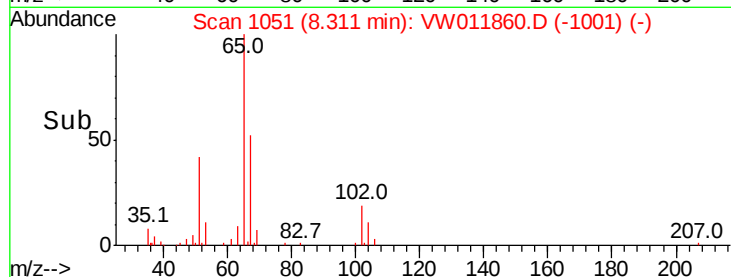
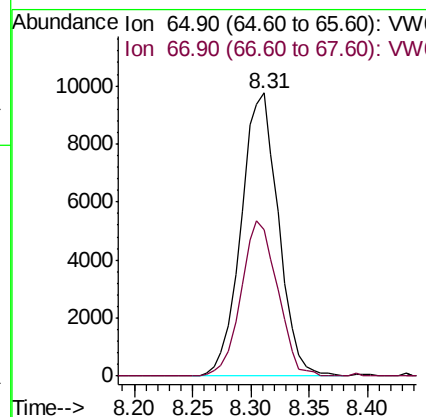
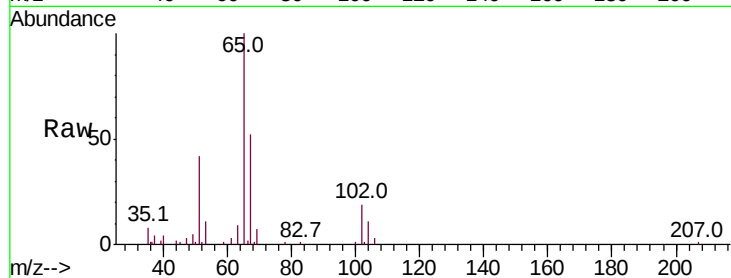




#33  
 1,2-Dichloroethane-d4  
 Concen: 138.576 ug/l  
 RT: 8.31 min Scan# 1051  
 Delta R.T. 0.01 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

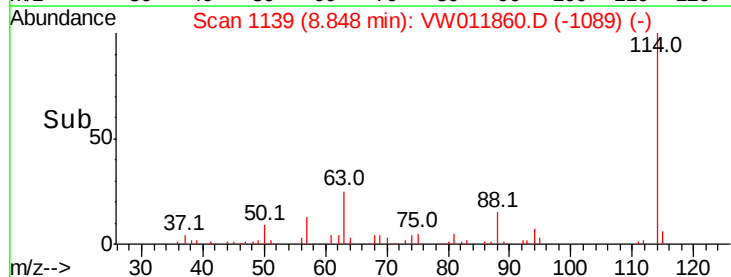
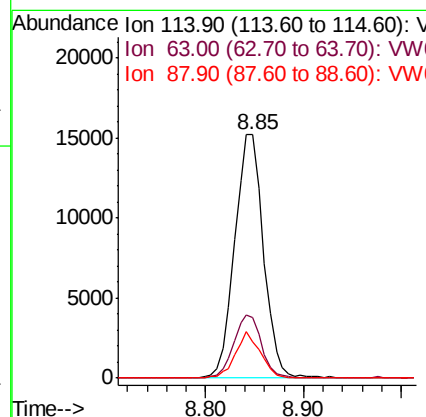
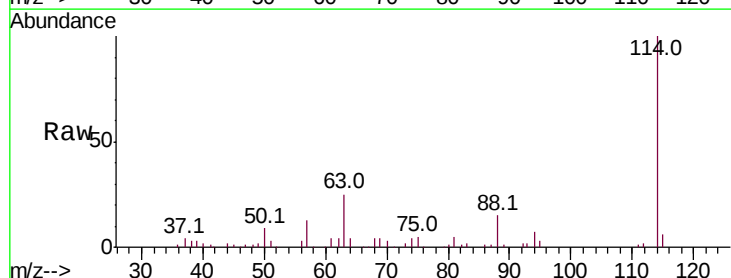
Instrument :  
 MSVOA\_W  
 ClientSampled :

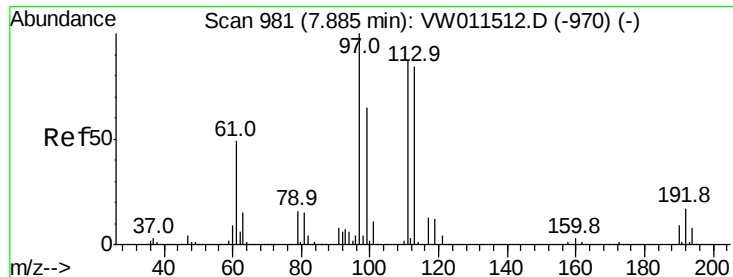
Tot Ion: 65 Resp: 21808  
 Ion Ratio Lower Upper  
 65 100  
 67 53.6 0.0 105.2



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.85 min Scan# 1139  
 Delta R.T. 0.01 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

Tgt Ion: 114 Resp: 31004  
 Ion Ratio Lower Upper  
 114 100  
 63 25.0 0.0 49.2  
 88 14.8 0.0 33.8

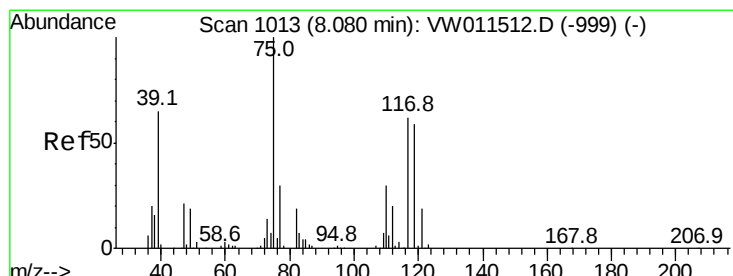
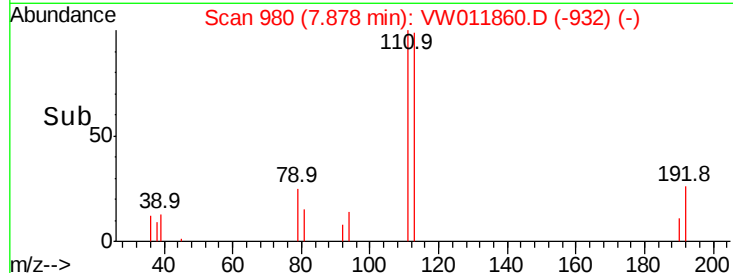
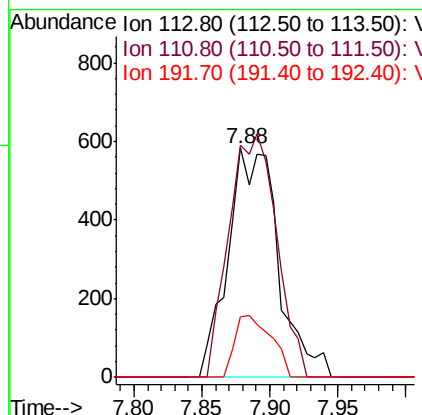
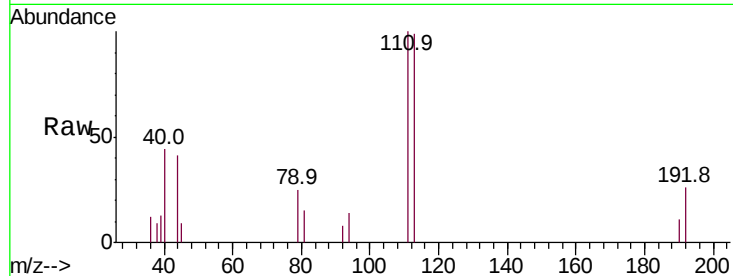




#35  
 Dibromofluoromethane  
 Concen: 8.647 ug/l  
 RT: 7.88 min Scan# 980  
 Delta R.T. -0.01 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

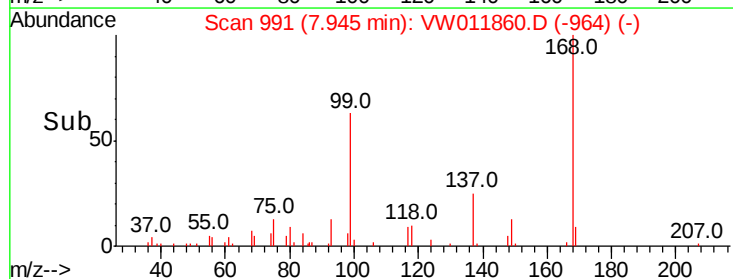
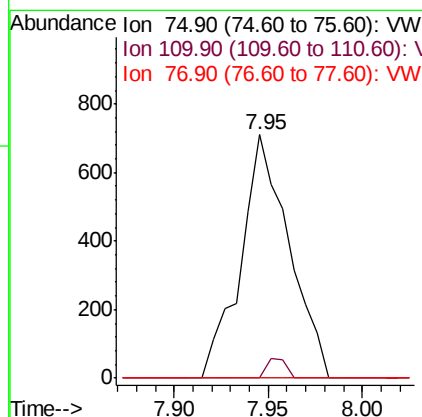
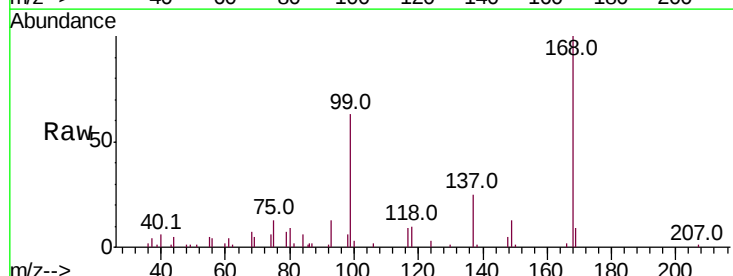
Instrument :  
 MSVOA\_W  
 ClientSampleId :

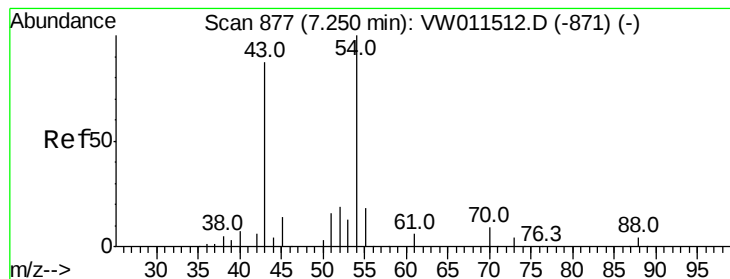
Tot Ion:113 Resp: 1504  
 Ion Ratio Lower Upper  
 113 100  
 111 100.7 82.7 124.1  
 192 19.5 16.1 24.1



#36  
 1,1-Dichloropropene  
 Concen: 3.921 ug/l  
 RT: 7.95 min Scan# 991  
 Delta R.T. -0.13 min  
 Lab File: VW011860.D  
 Acq: 12 Aug 2019 18:41

Tgt Ion: 75 Resp: 1264  
 Ion Ratio Lower Upper  
 75 100  
 110 3.2 15.6 46.8#  
 77 0.0 24.3 36.5#





#37

Ethyl Acetate

Concen: 35.460 ug/l

RT: 7.18 min Scan# 866

Delta R.T. -0.07 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

ClientSampleId :

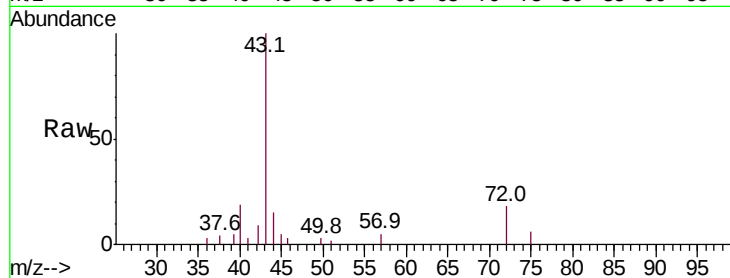
Tot Ion: 43 Resp: 6577

Ion Ratio Lower Upper

43 100

61 1.0 8.8 13.2#

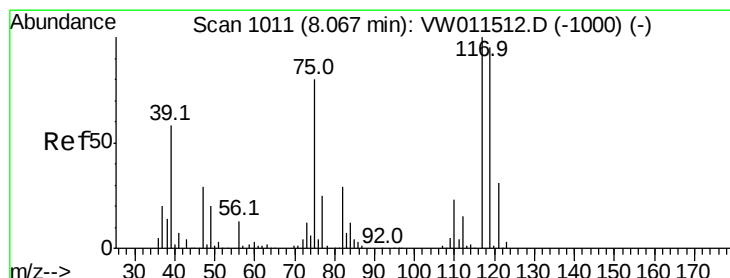
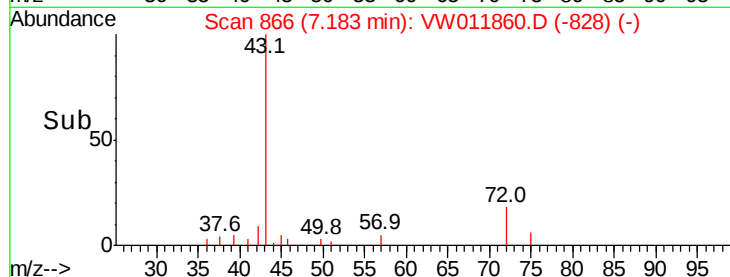
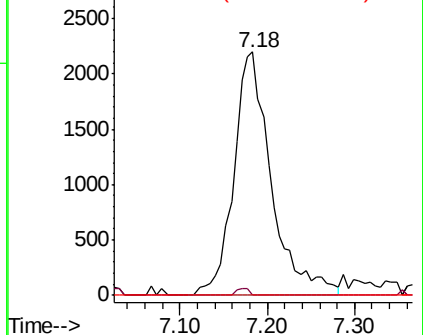
70 0.0 7.1 10.7#



Abundance Ion 43.00 (42.70 to 43.70): VW

Ion 60.90 (60.60 to 61.60): VW

Ion 70.00 (69.70 to 70.70): VW



#38

Carbon Tetrachloride

Concen: 5.290 ug/l

RT: 7.96 min Scan# 993

Delta R.T. -0.11 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

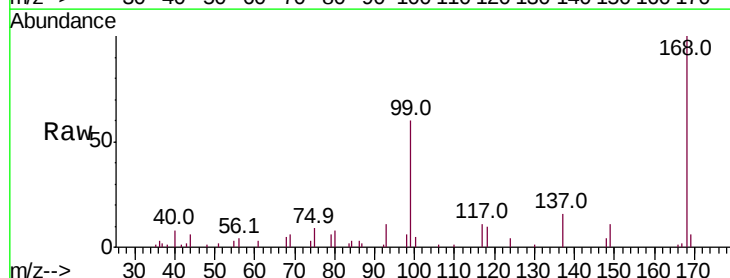
Tgt Ion: 117 Resp: 1460

Ion Ratio Lower Upper

117 100

119 0.0 75.8 113.6#

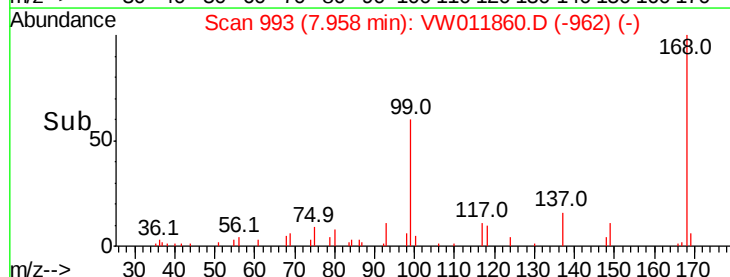
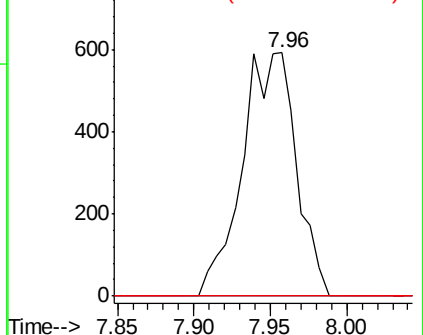
121 0.0 24.7 37.1#

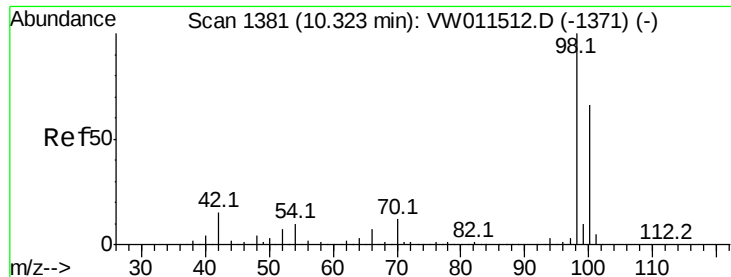


Abundance Ion 116.80 (116.50 to 117.50): V

Ion 118.80 (118.50 to 119.50): V

Ion 120.80 (120.50 to 121.50): V





#50

Toluene-d8

Concen: 23.492 ug/l

RT: 10.32 min Scan# 1381

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

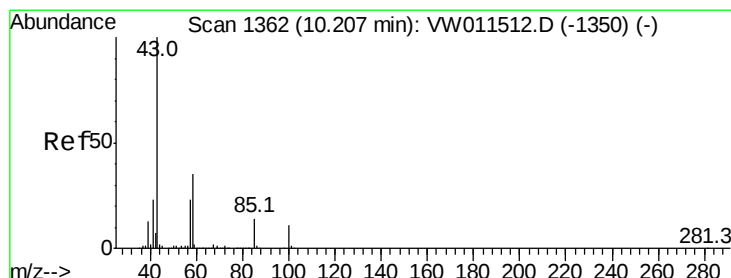
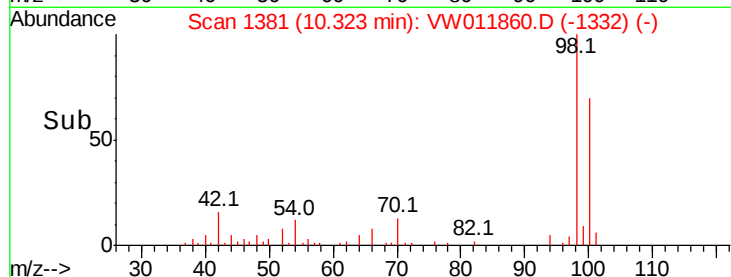
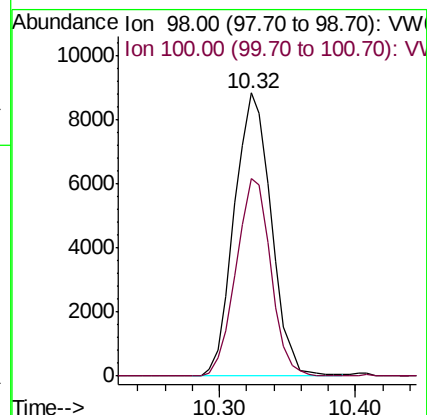
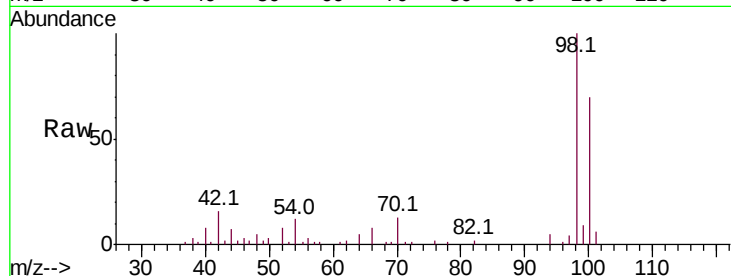
ClientSampled :

Tot Ion: 98 Resp: 16730

Ion Ratio Lower Upper

98 100

100 65.4 52.7 79.1



#51

4-Methyl-2-Pentanone

Concen: 2.130 ug/l

RT: 10.22 min Scan# 1364

Delta R.T. 0.01 min

Lab File: VW011860.D

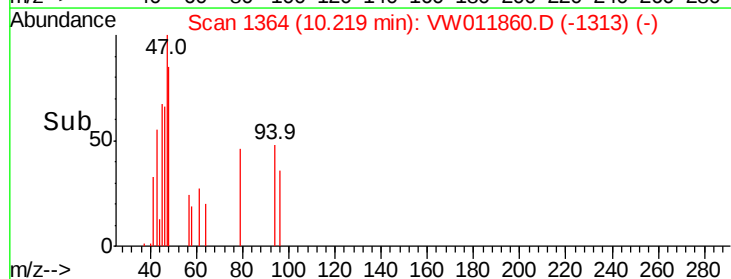
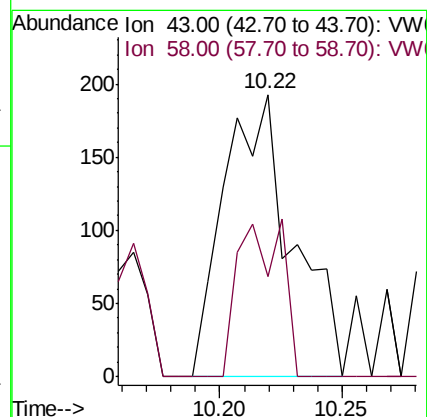
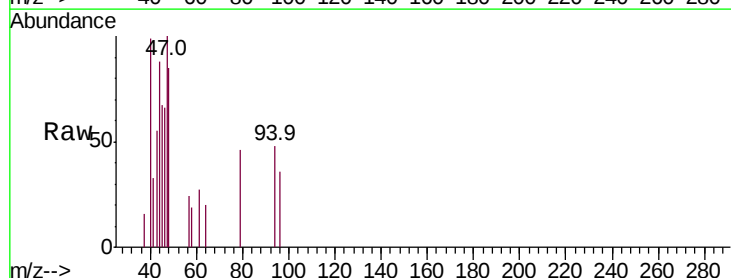
Acq: 12 Aug 2019 18:41

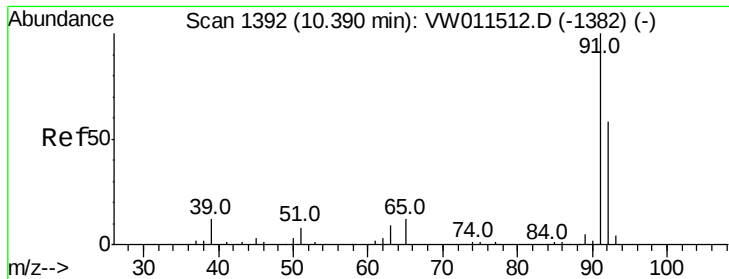
Tgt Ion: 43 Resp: 378

Ion Ratio Lower Upper

43 100

58 35.4 28.2 42.2





#52

Toluene

Concen: 3.009 ug/l

RT: 10.39 min Scan# 1392

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

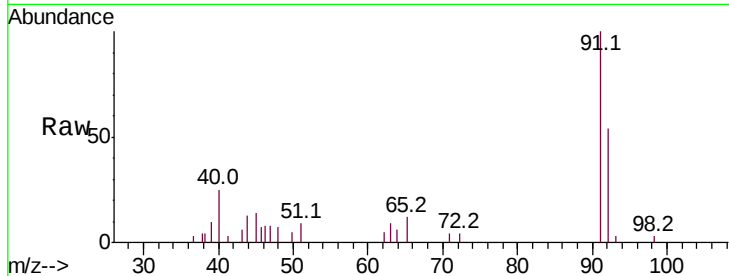
ClientSampleId :

Tot Ion: 92 Resp: 1641

Ion Ratio Lower Upper

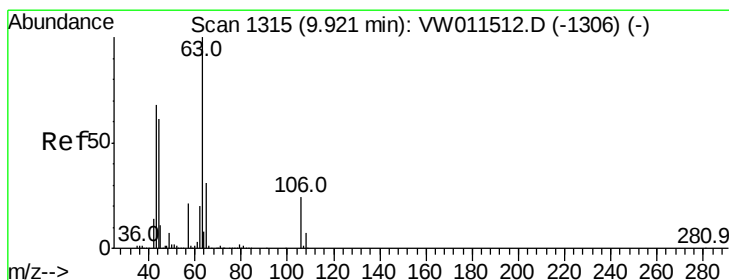
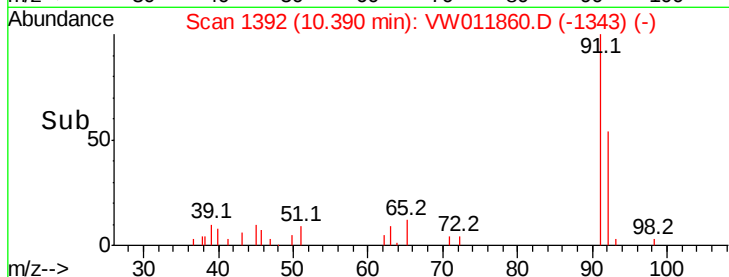
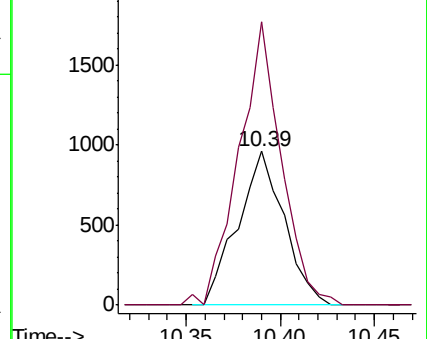
92 100

91 169.1 136.7 205.1



Abundance Ion 92.00 (91.70 to 92.70): VW

Ion 91.00 (90.70 to 91.70): VW



#58

2-Chloroethyl Vinyl ether

Concen: 9.215 ug/l

RT: 10.14 min Scan# 1351

Delta R.T. 0.22 min

Lab File: VW011860.D

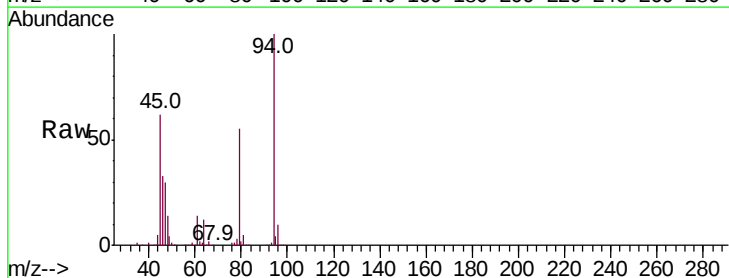
Acq: 12 Aug 2019 18:41

Tgt Ion: 63 Resp: 958

Ion Ratio Lower Upper

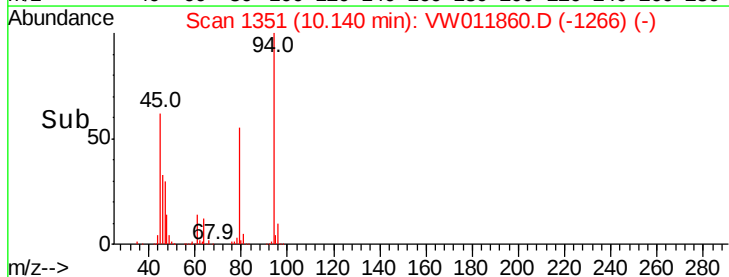
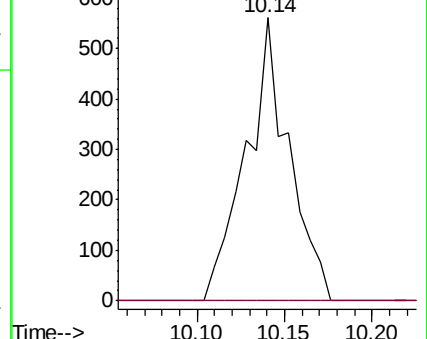
63 100

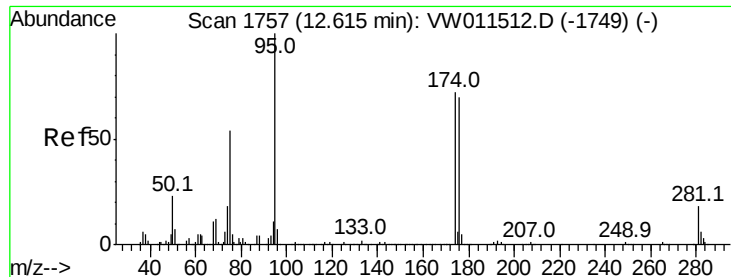
106 0.0 19.7 29.5#



Abundance Ion 62.90 (62.60 to 63.60): VW

Ion 105.90 (105.60 to 106.60): V





#62

4-Bromofluorobenzene

Concen: 40.993 ug/l

RT: 12.62 min Scan# 1757

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

ClientSampleId :

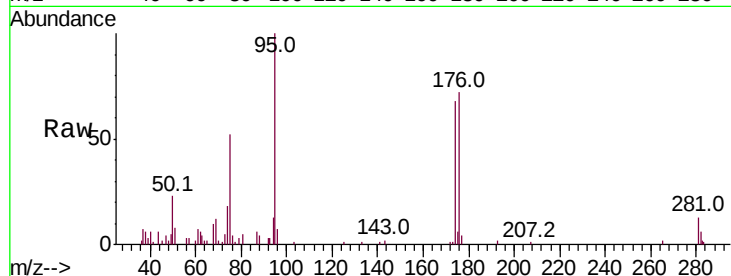
Tot Ion: 95 Resp: 10408

Ion Ratio Lower Upper

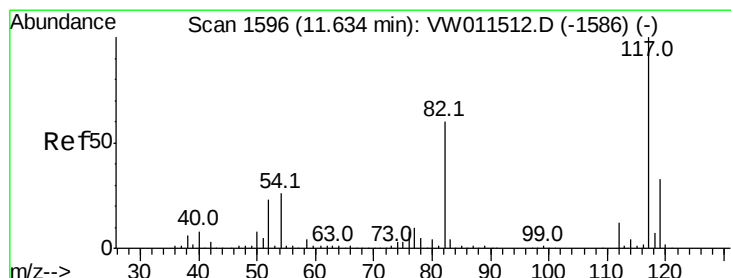
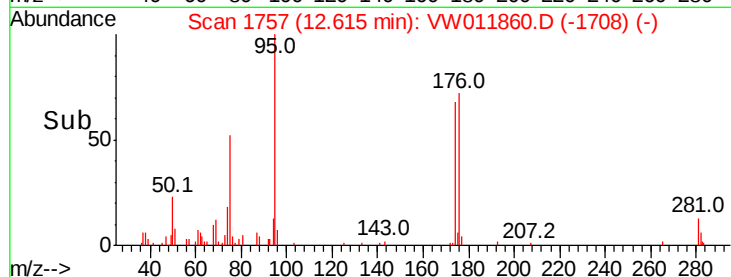
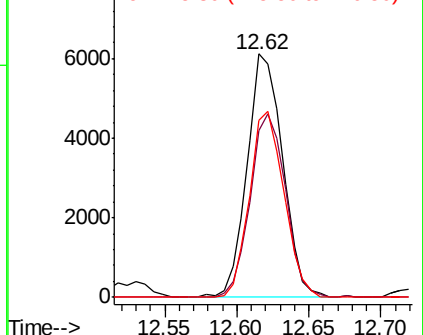
95 100

174 74.9 0.0 150.2

176 74.1 0.0 144.4



Abundance Ion 94.90 (94.60 to 95.60): VW  
Ion 173.80 (173.50 to 174.50): VW  
Ion 175.80 (175.50 to 176.50): VW



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 11.63 min Scan# 1596

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

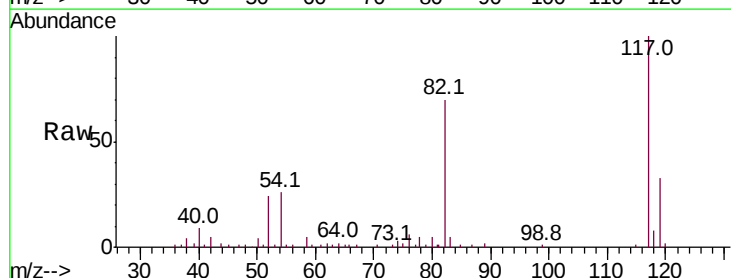
Tgt Ion: 117 Resp: 19038

Ion Ratio Lower Upper

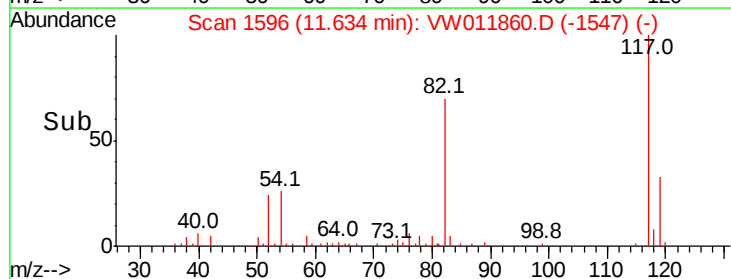
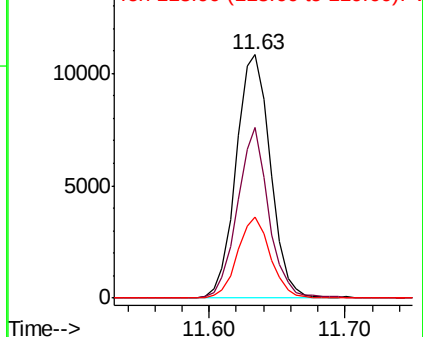
117 100

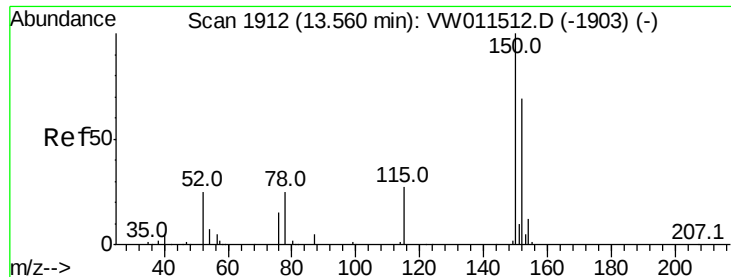
82 70.2 47.9 71.9

119 33.5 26.2 39.2



Abundance Ion 116.90 (116.60 to 117.60): VW  
Ion 82.00 (81.70 to 82.70): VW  
Ion 118.90 (118.60 to 119.60): VW





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 13.56 min Scan# 1912

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

ClientSampleId :

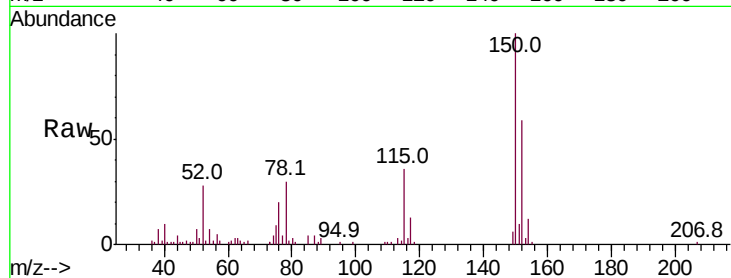
Tot Ion:152 Resp: 9366

Ion Ratio Lower Upper

152 100

115 61.9 30.5 91.5

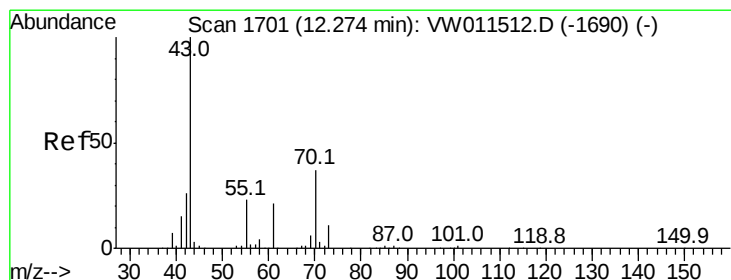
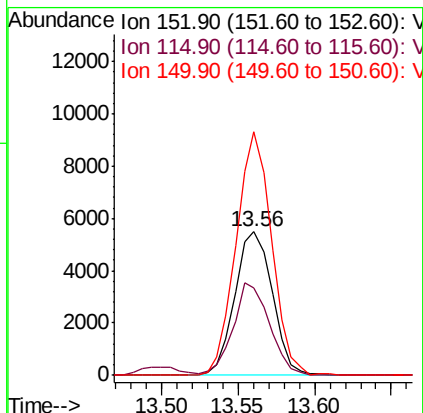
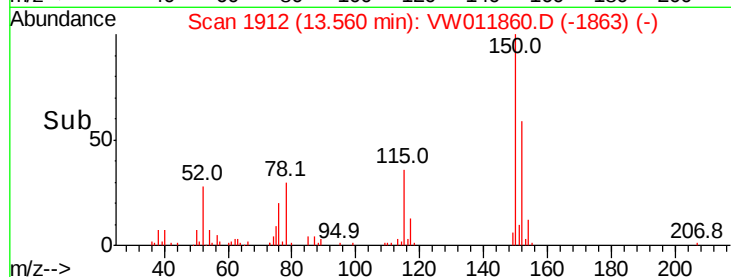
150 159.9 0.0 352.6



Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V



#74

N-ethyl acetate

Concen: 1.166 ug/l

RT: 12.25 min Scan# 1697

Delta R.T. -0.02 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Tgt Ion: 43 Resp: 255

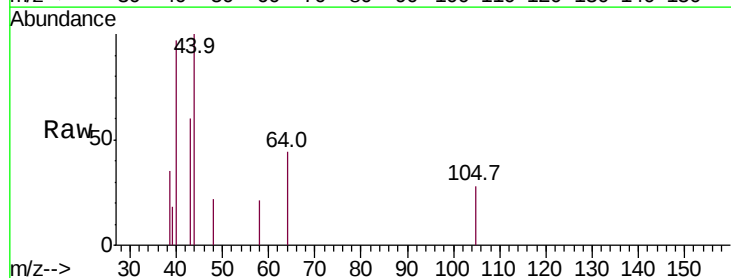
Ion Ratio Lower Upper

43 100

70 7.8 28.6 43.0#

55 0.0 17.8 26.8#

61 0.0 17.0 25.6#

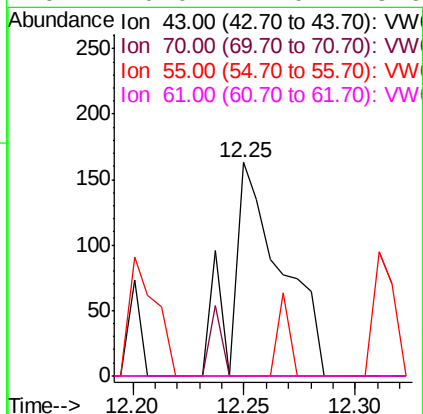
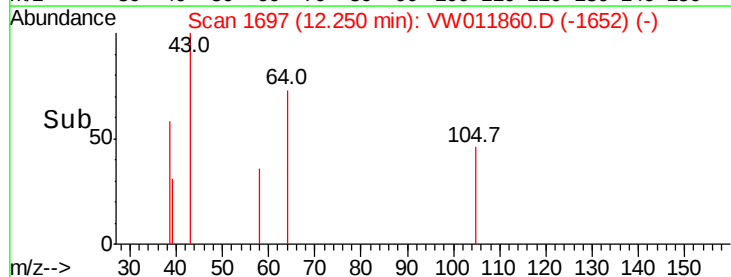


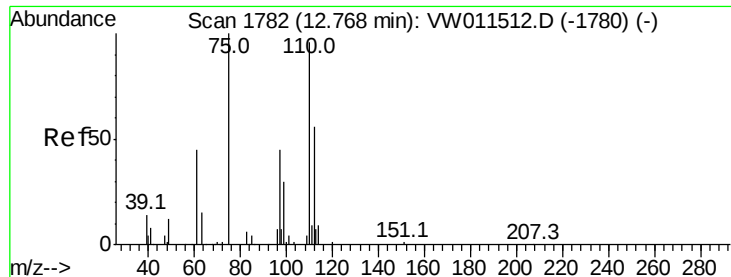
Abundance Ion 43.00 (42.70 to 43.70): VV

Ion 70.00 (69.70 to 70.70): VV

Ion 55.00 (54.70 to 55.70): VV

Ion 61.00 (60.70 to 61.70): VV





#76

1,2,3-Trichloropropane

Concen: 55.669 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. -0.15 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

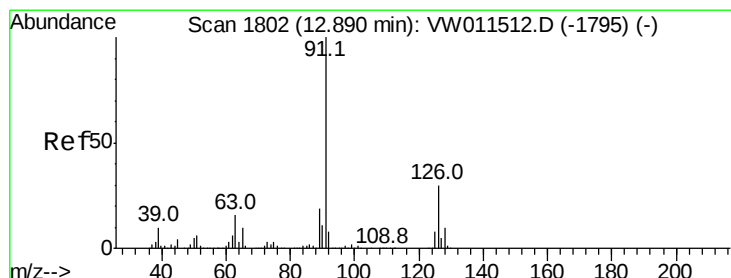
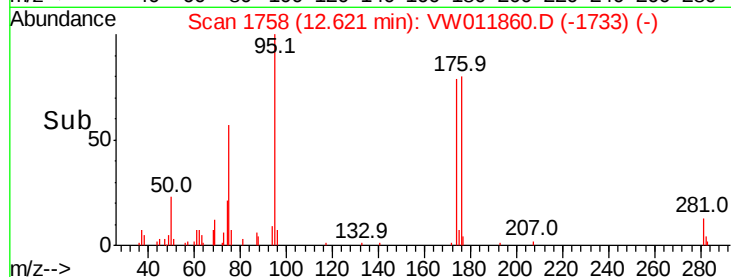
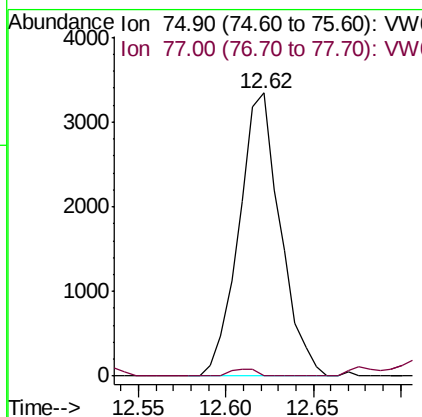
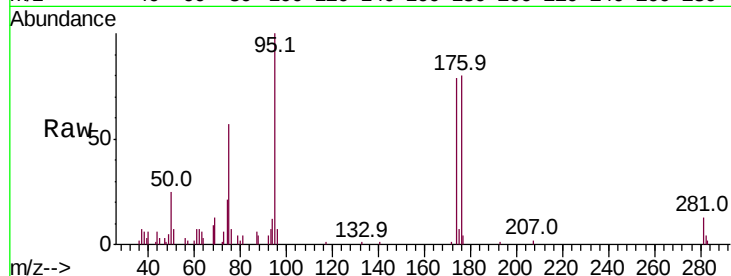
ClientSampleId :

Tot Ion: 75 Resp: 5517

Ion Ratio Lower Upper

75 100

77 1.5 0.0 0.0#



#79

2-Chlorotoluene

Concen: 1.041 ug/l

RT: 12.97 min Scan# 1815

Delta R.T. 0.08 min

Lab File: VW011860.D

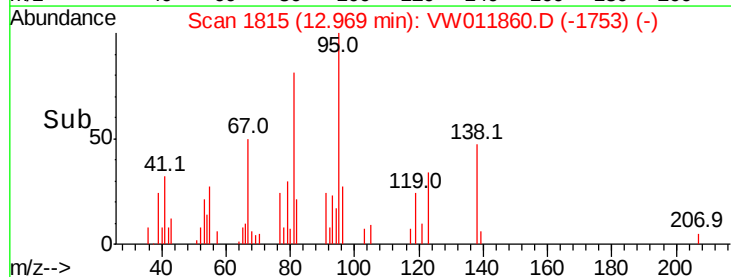
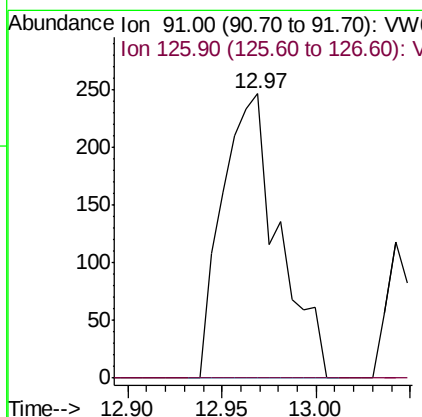
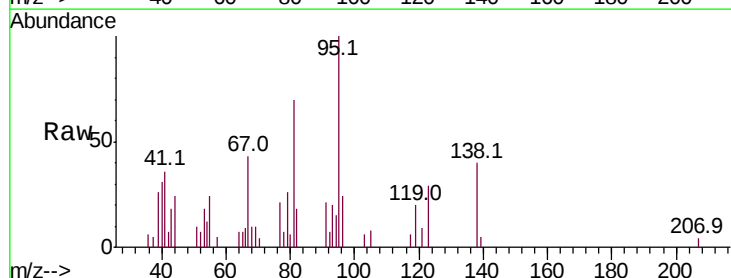
Acq: 12 Aug 2019 18:41

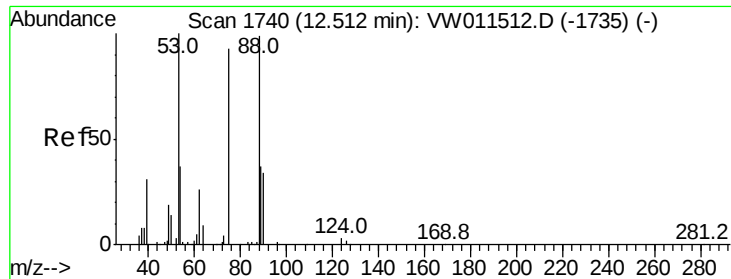
Tgt Ion: 91 Resp: 510

Ion Ratio Lower Upper

91 100

126 0.0 15.7 47.1#





#81

trans-1,4-Dichloro-2-butene

Concen: 128.299 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. 0.11 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

Instrument :

MSVOA\_W

ClientSampleId :

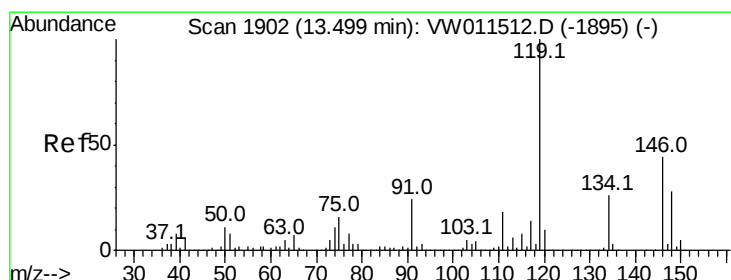
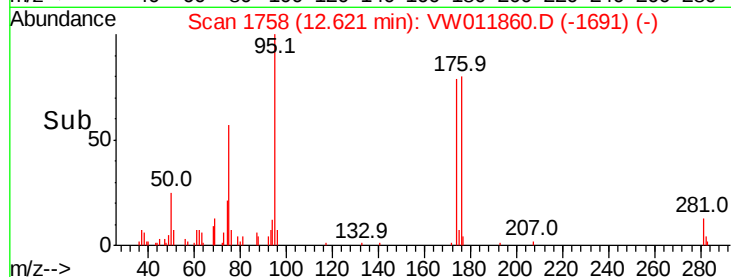
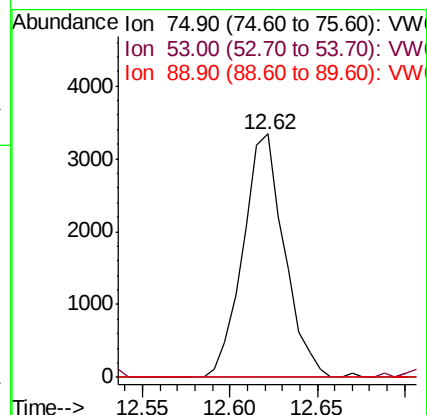
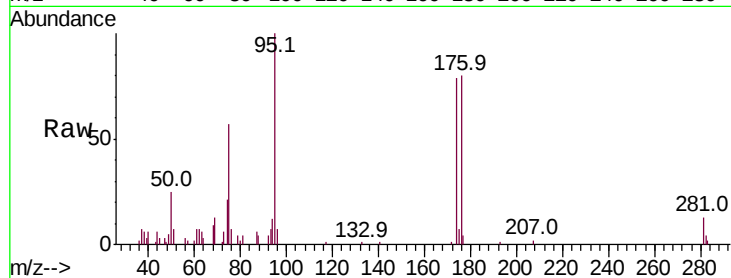
Tot Ion: 75 Resp: 5517

Ion Ratio Lower Upper

75 100

53 0.0 88.0 132.0#

89 0.0 35.3 52.9#



#86

p-Isopropyltoluene

Concen: 8.497 ug/l

RT: 13.50 min Scan# 1902

Delta R.T. -0.00 min

Lab File: VW011860.D

Acq: 12 Aug 2019 18:41

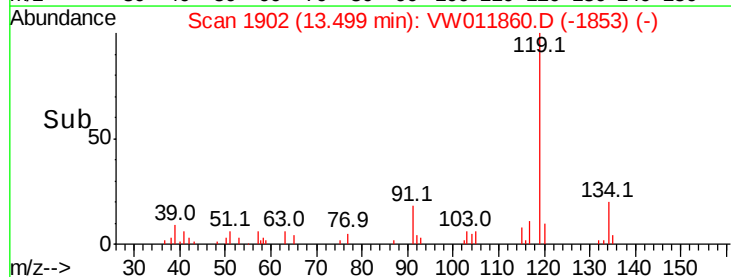
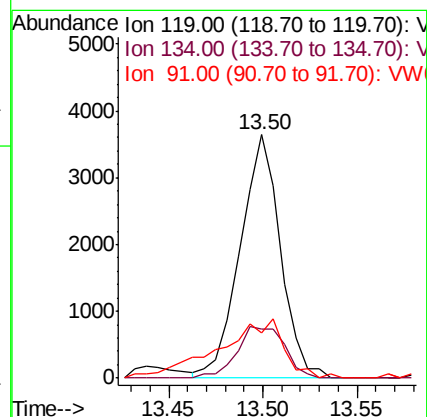
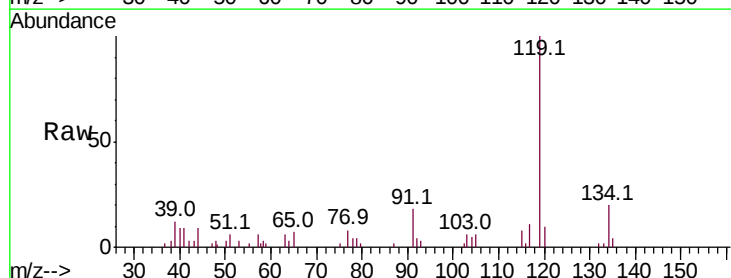
Tgt Ion: 119 Resp: 5388

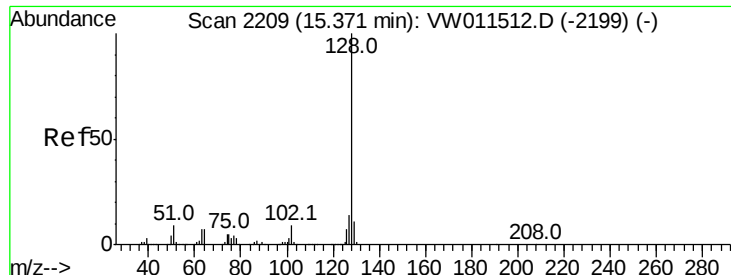
Ion Ratio Lower Upper

119 100

134 25.2 12.8 38.4

91 39.6 12.1 36.3#





#95  
Naphthalene  
Concen: 3.362 ug/l  
RT: 15.38 min Scan# 2210  
Delta R.T. 0.01 min  
Lab File: VW011860.D  
Acq: 12 Aug 2019 18:41

Instrument :  
MSVOA\_W  
ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 8.2   | 10.6  | 16.0# |
| 129     | 4.0   | 8.6   | 13.0# |

