

Data Path : Z:\VOASRV\HPCHEM1\MSVOA W\DATA\WV122218\  
 Data File : VW007785.D  
 Acq On : 21 Dec 2018 10:24  
 Operator : SY/AP  
 Sample : J6389-10  
 Misc : 6.05G/5ML/MSVOA W/SOIL  
 ALS Vial : 47 Sample Multiplier: 1

Instrument :  
 MSVOA\_W  
 ClientSampleId :

Quant Time: Dec 21 10:58:09 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_W\METHOD\82W122118S.M  
 Quant Title : SW846 8260  
 QLast Update : Thu Dec 20 06:30:23 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 7.95  | 168  | 79808    | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 8.84  | 114  | 132063   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 11.63 | 117  | 94058    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 13.56 | 152  | 31568    | 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   | 39265    | 44.89 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 89.78% |          |
| 35) Dibromofluoromethane    | 7.88  | 113  | 34995    | 43.44 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 86.88% |          |
| 50) Toluene-d8              | 10.32 | 98   | 107707   | 35.46 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 70.92% |          |
| 62) 4-Bromofluorobenzene    | 12.62 | 95   | 31826    | 27.12 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 54.24% |          |

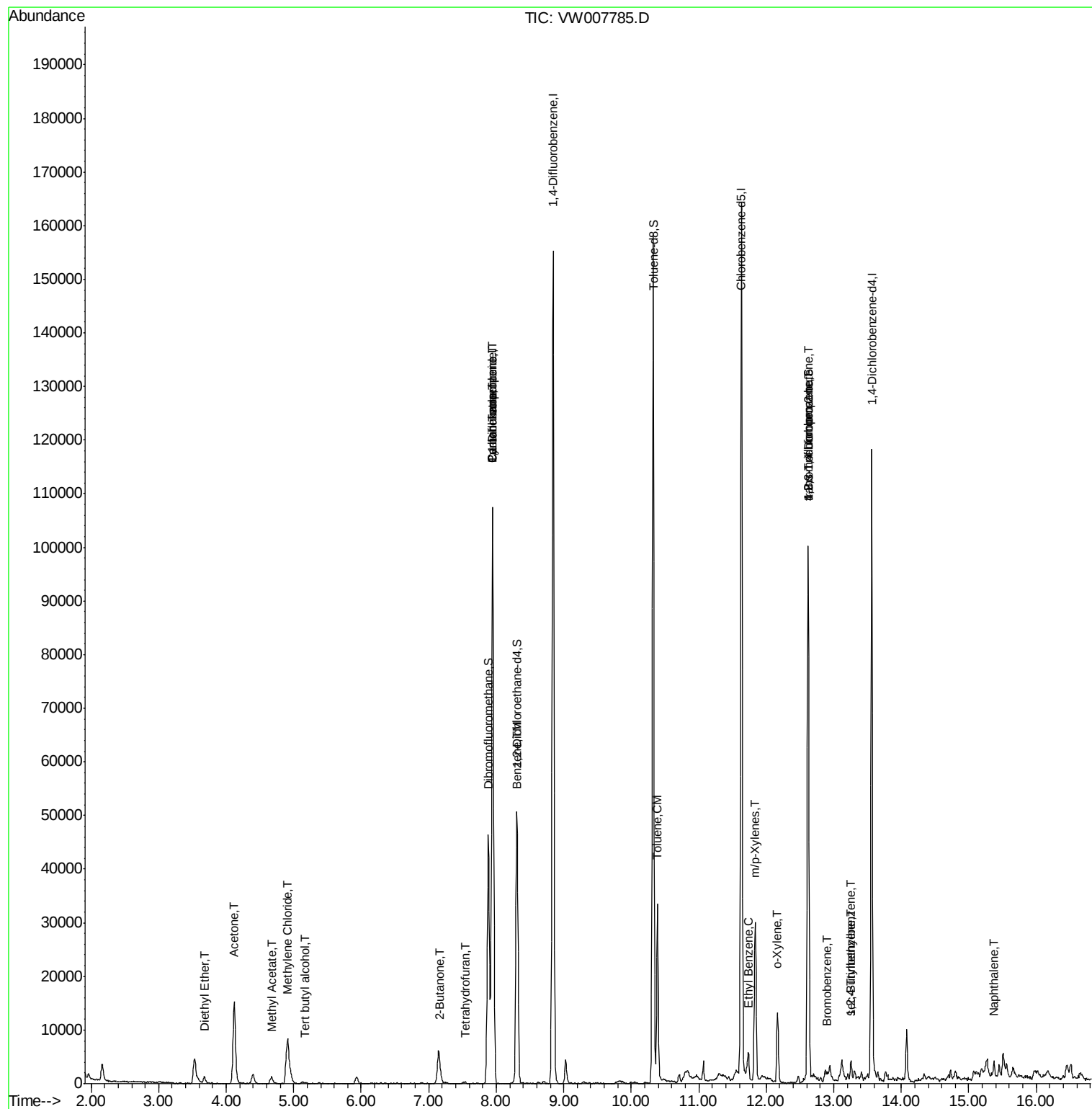
| Target Compounds               | R.T.  | QIon | Response | Conc    | Units  | Qvalue |
|--------------------------------|-------|------|----------|---------|--------|--------|
| 8) Diethyl Ether               | 3.68  | 74   | 605      | 1.711   | ug/l # | 46     |
| 11) Tert butyl alcohol         | 5.16  | 59   | 136      | 2.305   | ug/l # | 73     |
| 16) Acetone                    | 4.12  | 43   | 26093    | 159.296 | ug/l   | 94     |
| 18) Methyl Acetate             | 4.67  | 43   | 2397     | 6.153   | ug/l   | 89     |
| 20) Methylene Chloride         | 4.91  | 84   | 7967     | 3.913   | ug/l   | 95     |
| 25) 2-Butanone                 | 7.17  | 43   | 1750     | 9.121   | ug/l   | 96     |
| 29) Tetrahydrofuran            | 7.53  | 42   | 311      | 2.718   | ug/l # | 45     |
| 31) Cyclohexane                | 7.95  | 56   | 1627     | 1.249   | ug/l # | 19     |
| 36) 1,1-Dichloropropene        | 7.95  | 75   | 5832     | 4.575   | ug/l # | 50     |
| 38) Carbon Tetrachloride       | 7.95  | 117  | 8323     | 5.544   | ug/l # | 15     |
| 40) Benzene                    | 8.32  | 78   | 3734     | 1.098   | ug/l   | 94     |
| 52) Toluene                    | 10.39 | 92   | 14483    | 6.346   | ug/l   | 100    |
| 67) Ethyl Benzene              | 11.74 | 91   | 3714     | 1.063   | ug/l   | 99     |
| 68) m/p-Xylenes                | 11.84 | 106  | 9471     | 6.989   | ug/l   | 98     |
| 69) o-Xylene                   | 12.16 | 106  | 3573     | 2.813   | ug/l   | 95     |
| 76) 1,2,3-Trichloropropane     | 12.62 | 75   | 16089    | 65.941  | ug/l # | 100    |
| 77) Bromobenzene               | 12.89 | 156  | 684      | 1.251   | ug/l # | 1      |
| 81) trans-1,4-Dichloro-2-buten | 12.62 | 75   | 16089    | 138.415 | ug/l # | 9      |
| 84) 1,2,4-Trimethylbenzene     | 13.26 | 105  | 2646     | 1.274   | ug/l   | 94     |
| 85) sec-Butylbenzene           | 13.26 | 105  | 2646     | 1.063   | ug/l # | 56     |
| 95) Naphthalene                | 15.37 | 128  | 2911     | 2.333   | ug/l   | 98     |

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

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Quant Time: Dec 21 10:58:09 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_W\METHOD\82W122118S.M  
Quant Title : SW846 8260  
QLast Update : Thu Dec 20 06:30:23 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 7.95 min Scan# 991

Delta R.T. -0.00 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

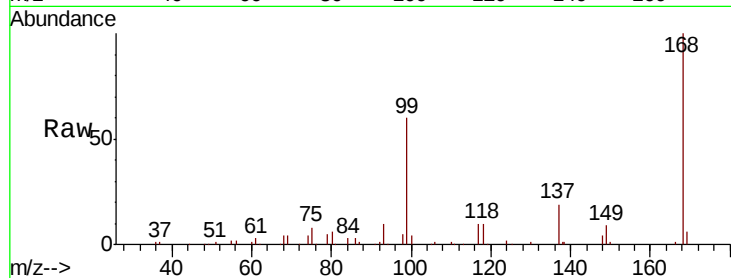
Instrument :  
MSVOA\_W  
ClientSampled :

Tot Ion:168 Resp: 79808

Ion Ratio Lower Upper

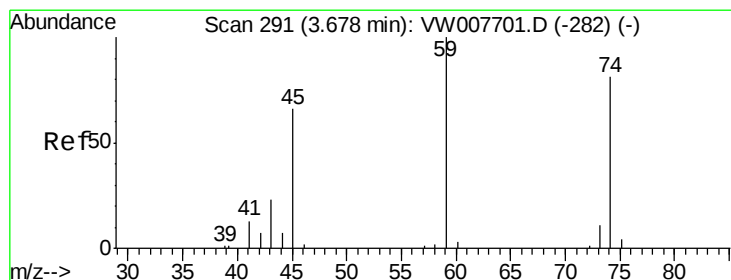
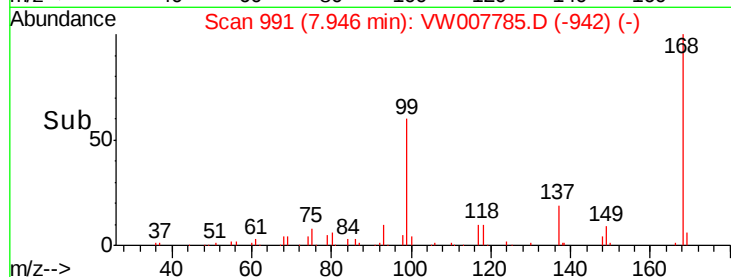
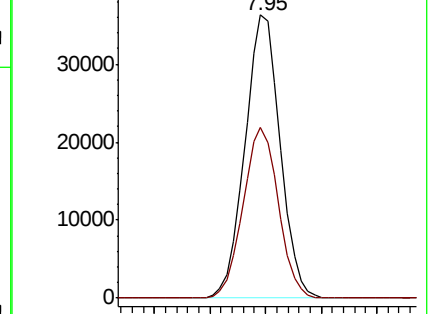
168 100

99 60.4 54.0 81.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VW



#8

Diethyl Ether

Concen: 1.711 ug/l

RT: 3.68 min Scan# 291

Delta R.T. -0.00 min

Lab File: VW007785.D

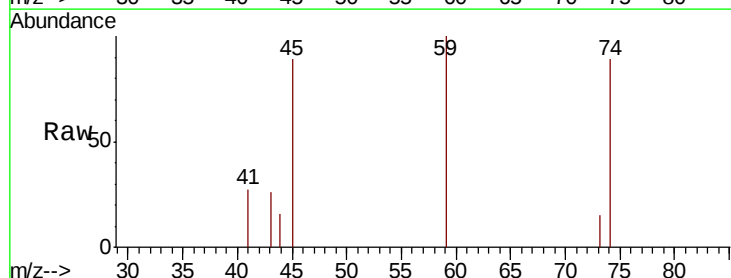
Acq: 21 Dec 2018 10:24

Tgt Ion: 74 Resp: 605

Ion Ratio Lower Upper

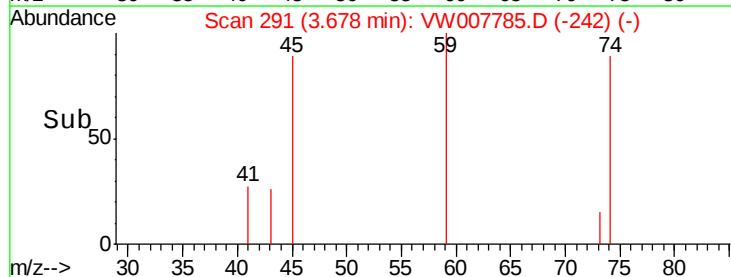
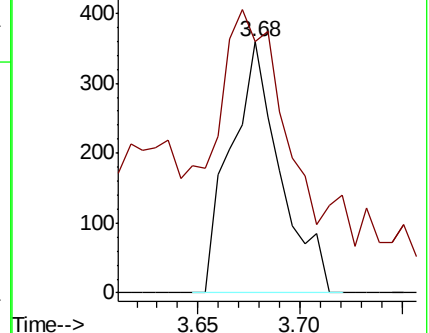
74 100

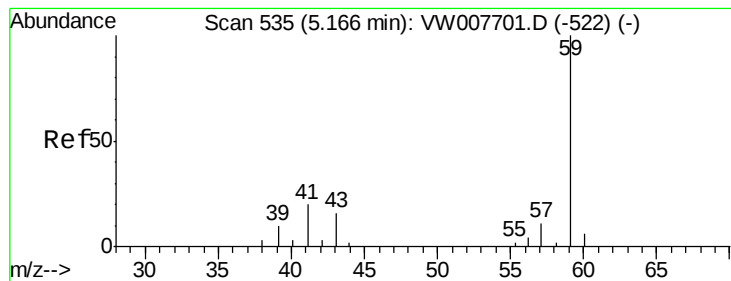
45 126.1 39.4 118.1#



Abundance Ion 74.00 (73.70 to 74.70): VW

Ion 45.00 (44.70 to 45.70): VW



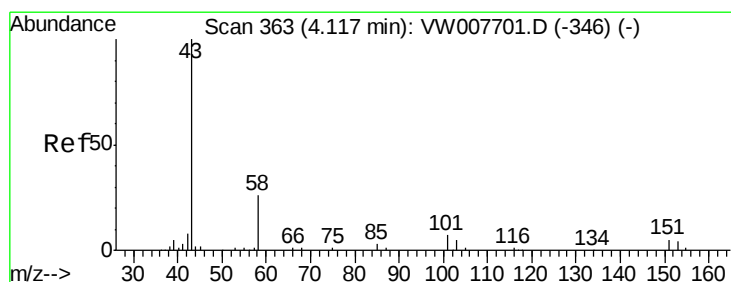
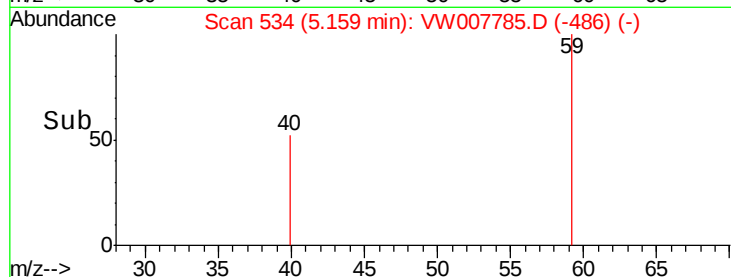
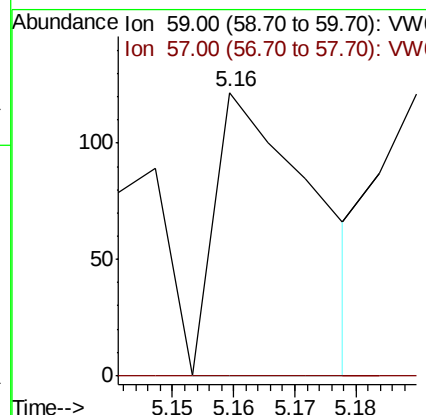
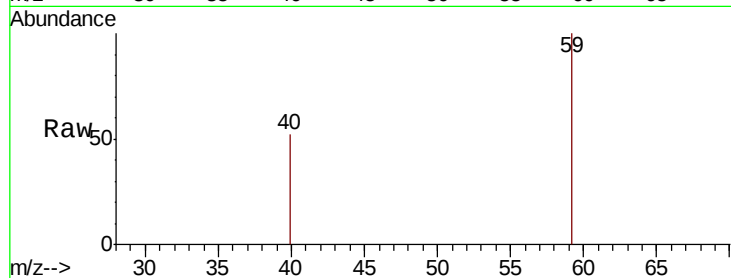


#11

Tert butyl alcohol  
 Concen: 2.305 ug/l  
 RT: 5.16 min Scan# 534  
 Delta R.T. -0.01 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Instrument :  
 MSVOA\_W  
 ClientSampled :

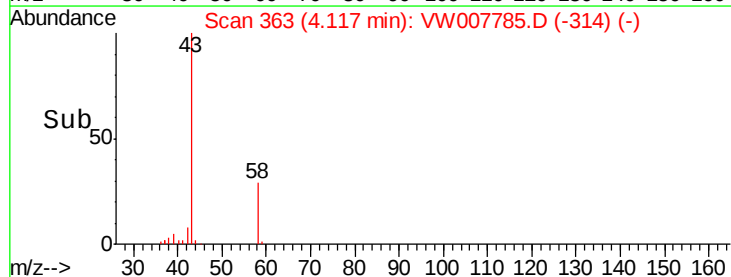
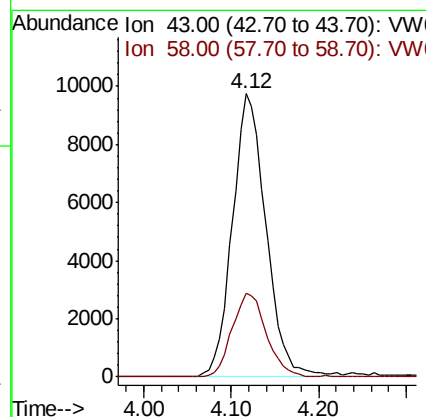
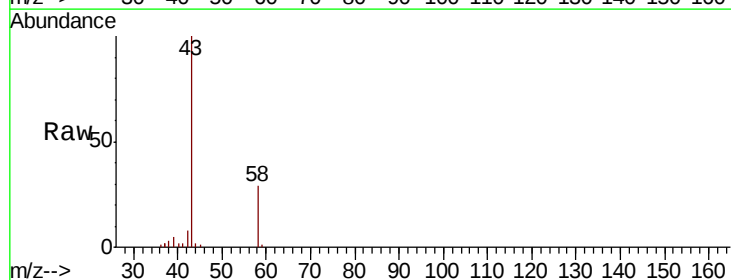
Tot Ion: 59 Resp: 136  
 Ion Ratio Lower Upper  
 59 100  
 57 0.0 7.8 11.8#

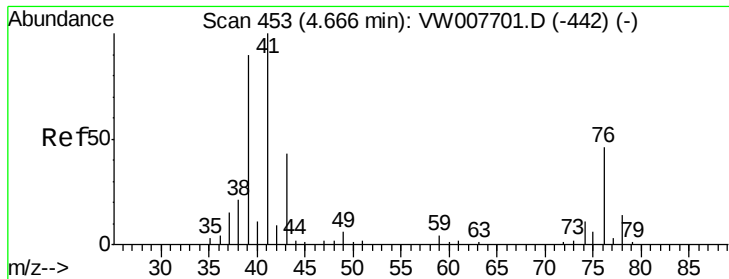


#16

Acetone  
 Concen: 159.296 ug/l  
 RT: 4.12 min Scan# 363  
 Delta R.T. -0.00 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Tgt Ion: 43 Resp: 26093  
 Ion Ratio Lower Upper  
 43 100  
 58 29.4 21.2 31.8

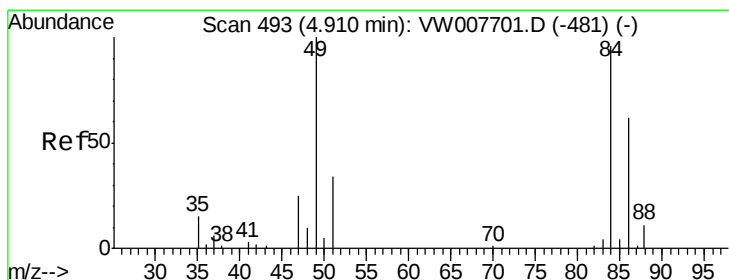
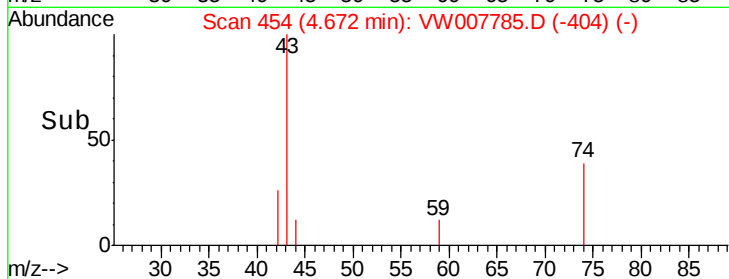
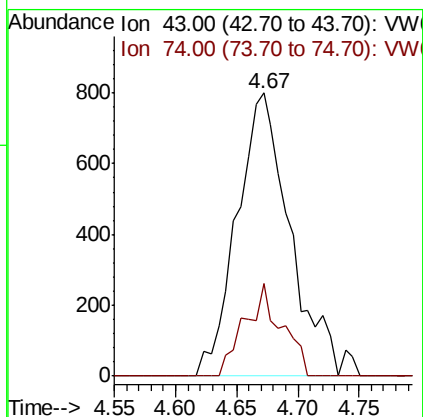
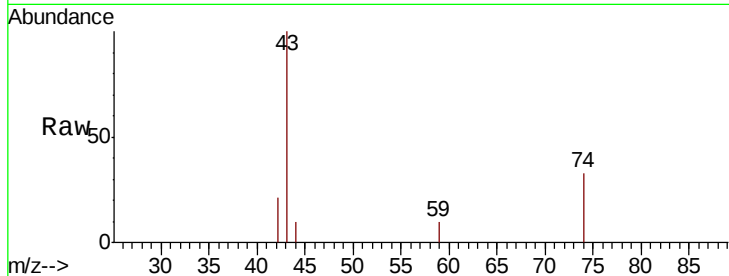




#18  
Methyl Acetate  
Concen: 6.153 ug/l  
RT: 4.67 min Scan# 454  
Delta R.T. 0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

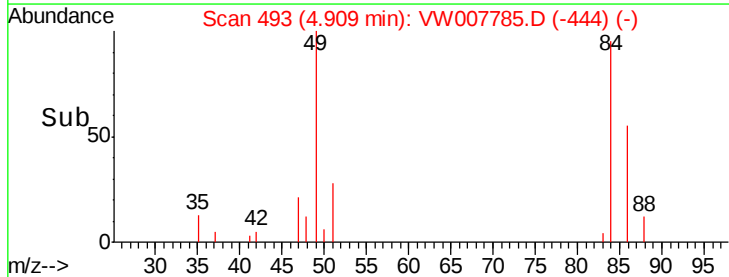
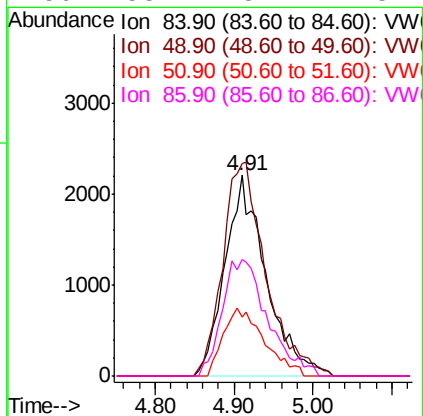
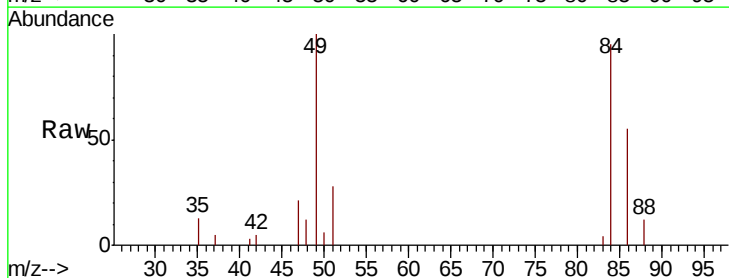
Instrument :  
MSVOA\_W  
ClientSampled :

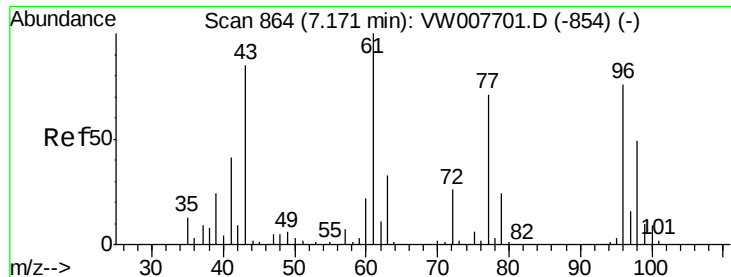
Tot Ion: 43 Resp: 2397  
Ion Ratio Lower Upper  
43 100  
74 22.8 22.7 34.1



#20  
Methylene Chloride  
Concen: 3.913 ug/l  
RT: 4.91 min Scan# 493  
Delta R.T. 0.00 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Tgt Ion: 84 Resp: 7967  
Ion Ratio Lower Upper  
84 100  
49 105.7 83.7 125.5  
51 29.4 28.2 42.2  
86 58.2 52.2 78.2





#25

2-Butanone

Concen: 9.121 ug/l

RT: 7.17 min Scan# 864

Delta R.T. -0.00 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

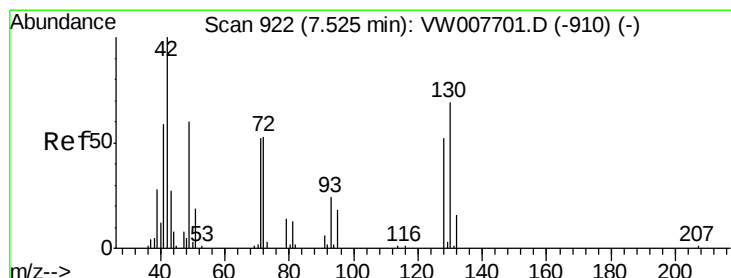
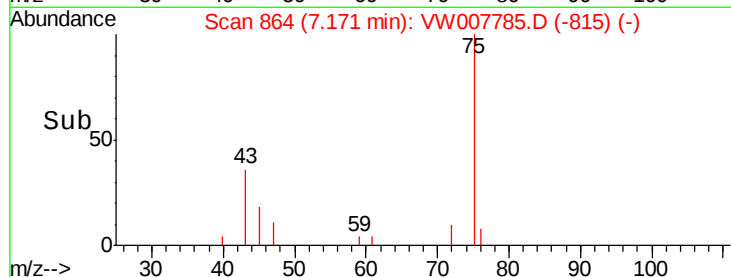
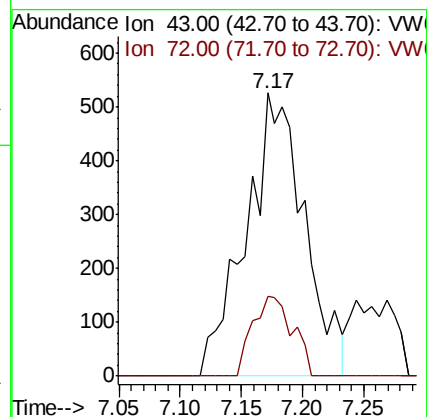
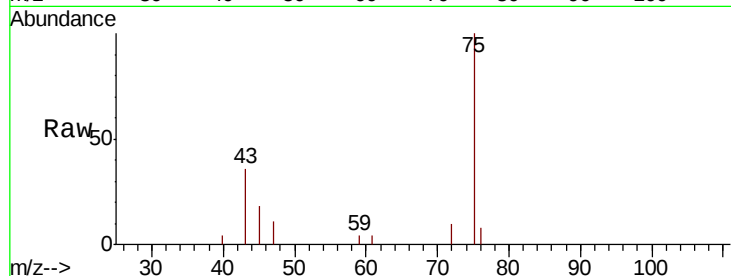
Instrument :  
MSVOA\_W  
ClientSampled :

Tot Ion: 43 Resp: 1750

Ion Ratio Lower Upper

43 100

72 28.3 24.5 36.7



#29

Tetrahydrofuran

Concen: 2.718 ug/l

RT: 7.53 min Scan# 923

Delta R.T. 0.01 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

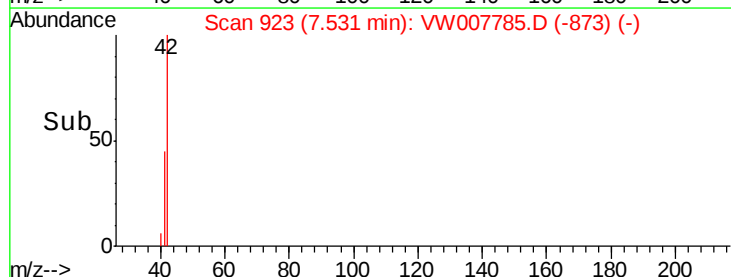
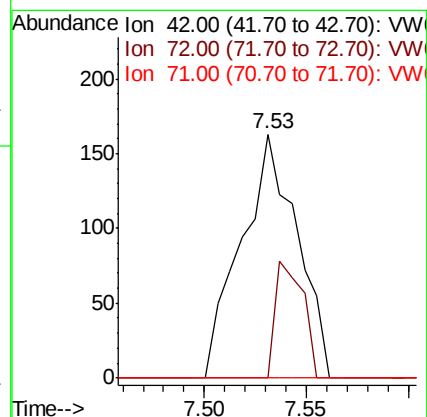
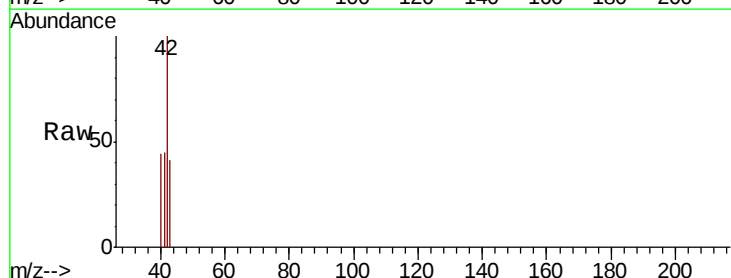
Tgt Ion: 42 Resp: 311

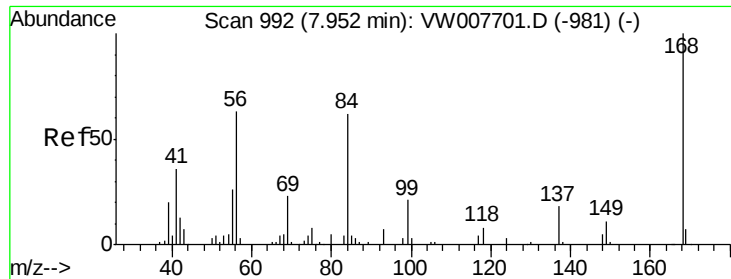
Ion Ratio Lower Upper

42 100

72 23.8 41.7 62.5#

71 0.0 39.0 58.6#

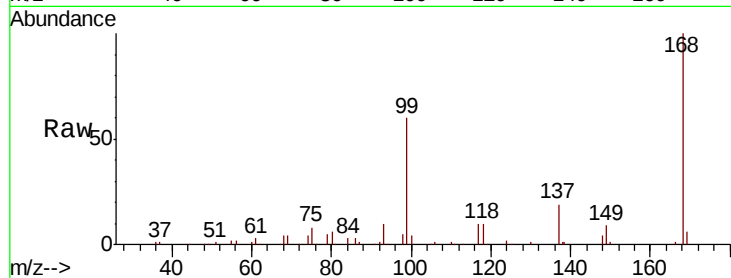




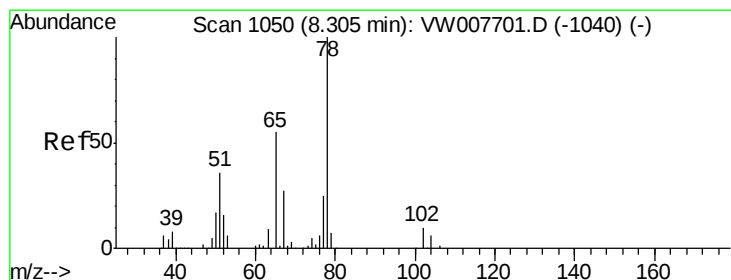
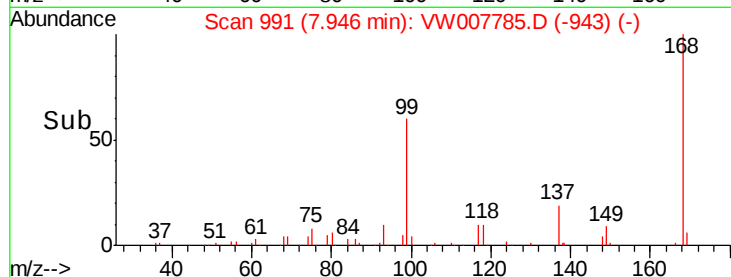
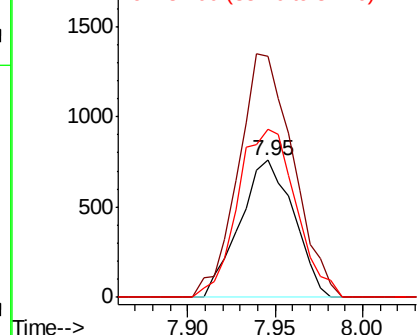
#31  
Cyclohexane  
Concen: 1.249 ug/l  
RT: 7.95 min Scan# 991  
Delta R.T. -0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Instrument :  
MSVOA\_W  
ClientSampleId :

Tot Ion: 56 Resp: 1627  
Ion Ratio Lower Upper  
56 100  
69 175.9 29.7 44.5#  
84 122.8 78.9 118.3#

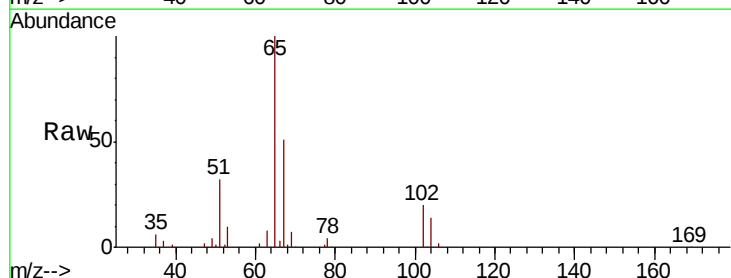


Abundance Ion 56.00 (55.70 to 56.70): VW  
Ion 69.00 (68.70 to 69.70): VW  
Ion 84.00 (83.70 to 84.70): VW

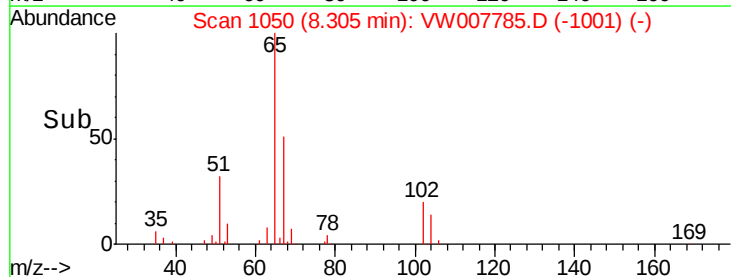
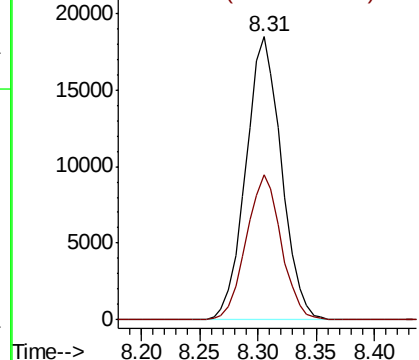


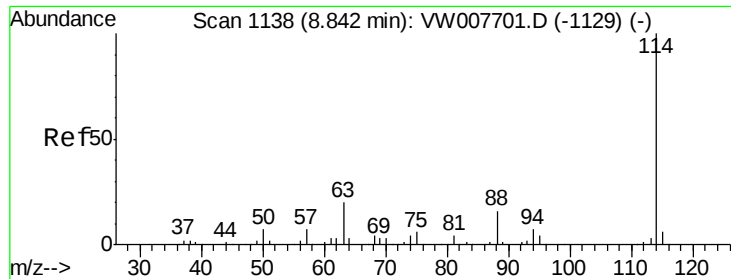
#33  
1,2-Dichloroethane-d4  
Concen: 44.888 ug/l  
RT: 8.31 min Scan# 1050  
Delta R.T. -0.00 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Tgt Ion: 65 Resp: 39265  
Ion Ratio Lower Upper  
65 100  
67 50.3 0.0 100.6



Abundance Ion 64.90 (64.60 to 65.60): VW  
Ion 66.90 (66.60 to 67.60): VW

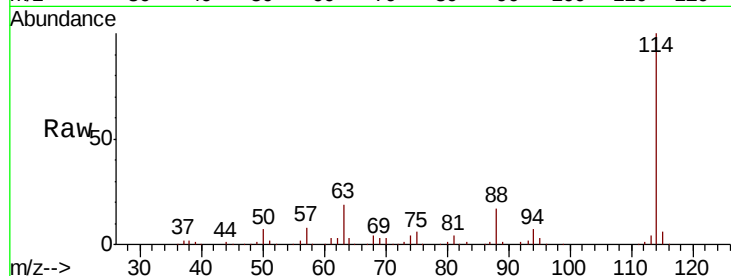




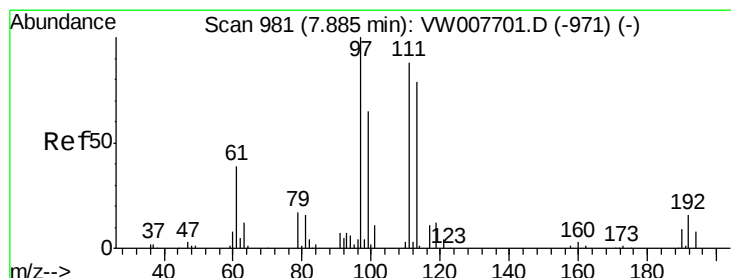
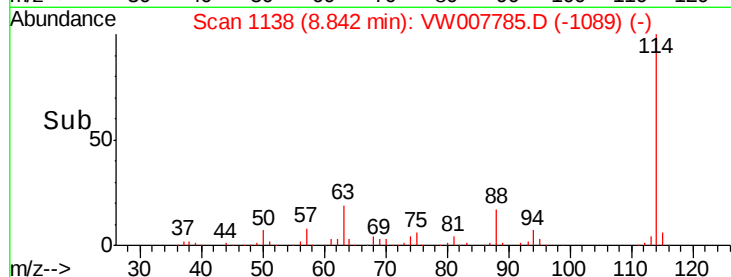
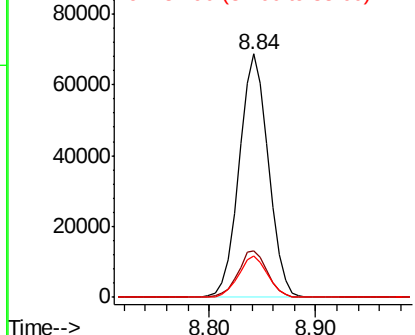
#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 8.84 min Scan# 1138  
 Delta R.T. -0.00 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Instrument :  
 MSVOA\_W  
 ClientSampleId :

Tot Ion:114 Resp: 132063  
 Ion Ratio Lower Upper  
 114 100  
 63 18.9 0.0 40.0  
 88 17.1 0.0 32.6

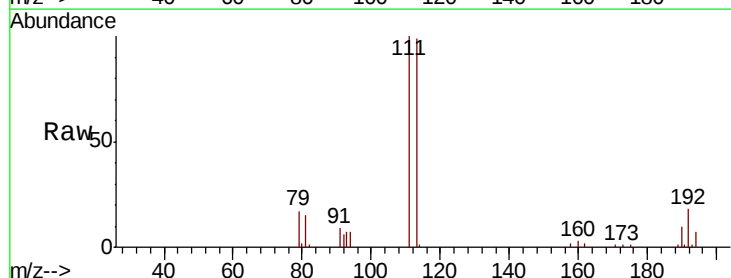


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VW  
 Ion 87.90 (87.60 to 88.60): VW

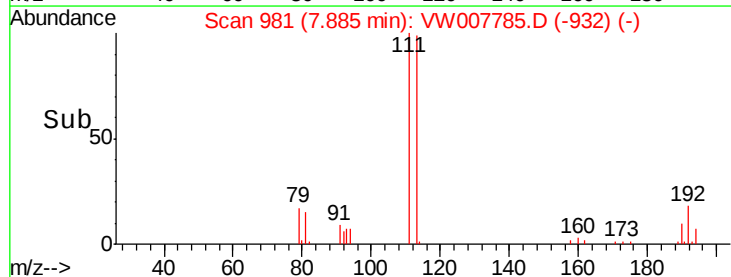
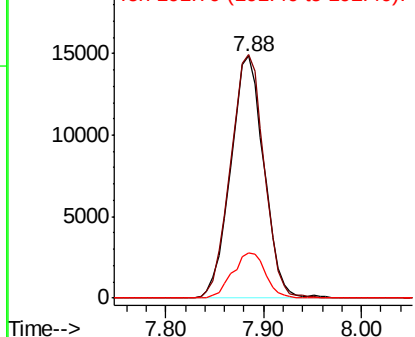


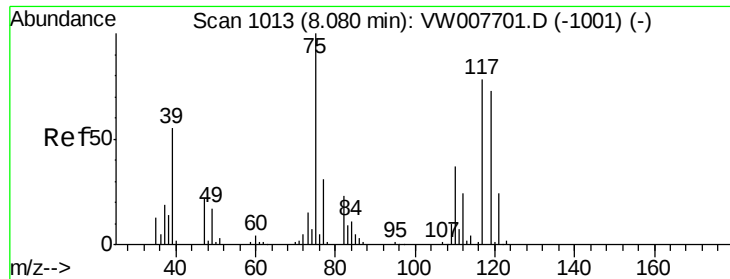
#35  
 Dibromofluoromethane  
 Concen: 43.437 ug/l  
 RT: 7.88 min Scan# 981  
 Delta R.T. -0.00 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Tgt Ion:113 Resp: 34995  
 Ion Ratio Lower Upper  
 113 100  
 111 101.5 82.6 124.0  
 192 18.2 15.5 23.3



Abundance Ion 112.80 (112.50 to 113.50): V  
 Ion 110.80 (110.50 to 111.50): V  
 Ion 191.70 (191.40 to 192.40): V

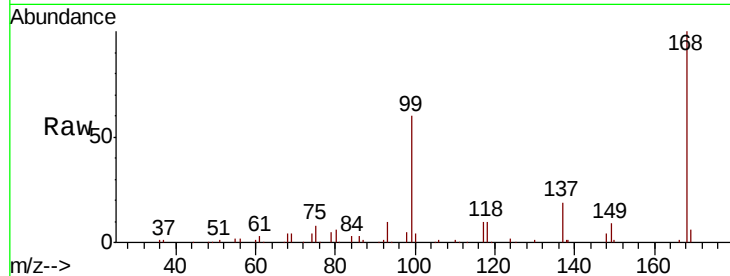




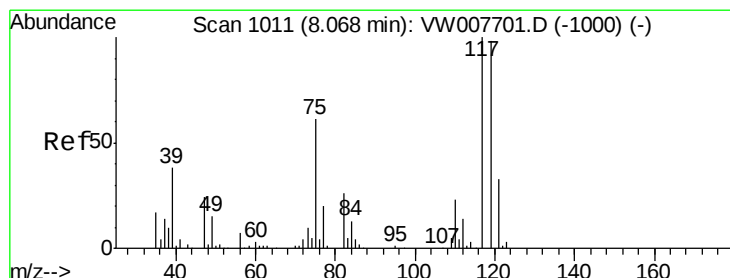
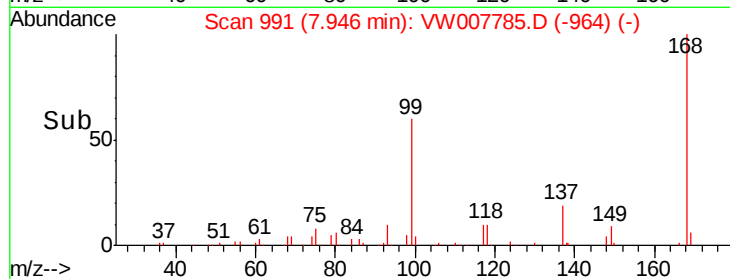
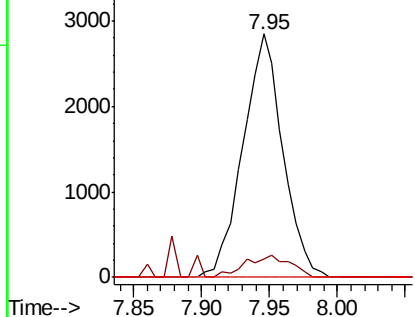
#36  
 1,1-Dichloropropene  
 Concen: 4.575 ug/l  
 RT: 7.95 min Scan# 991  
 Delta R.T. -0.13 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Instrument :  
 MSVOA\_W  
 ClientSampleId :

Tot Ion: 75 Resp: 5832  
 Ion Ratio Lower Upper  
 75 100  
 110 10.4 18.6 55.8#  
 77 0.0 25.0 37.4#

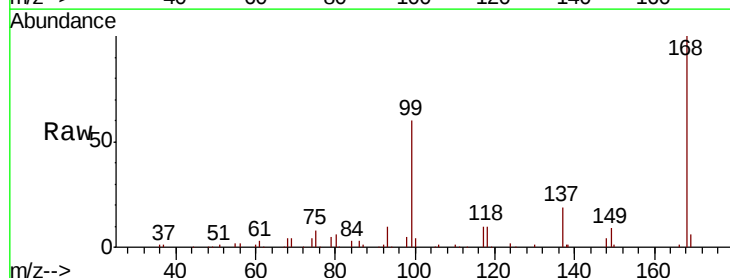


Abundance Ion 74.90 (74.60 to 75.60): VW  
 Ion 109.90 (109.60 to 110.60): V  
 Ion 76.90 (76.60 to 77.60): VW

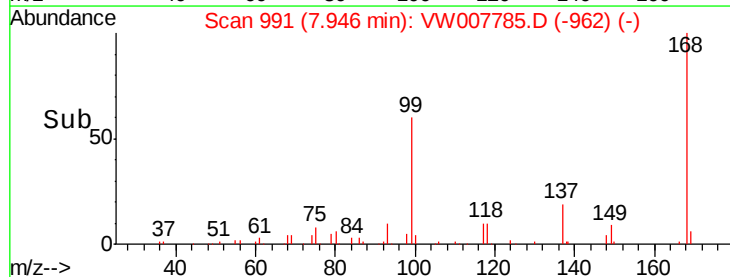
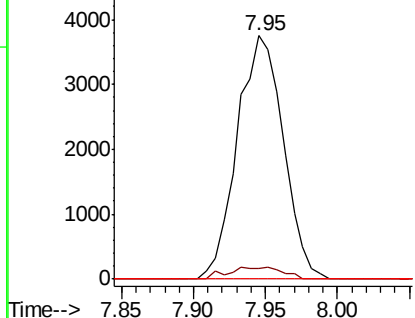


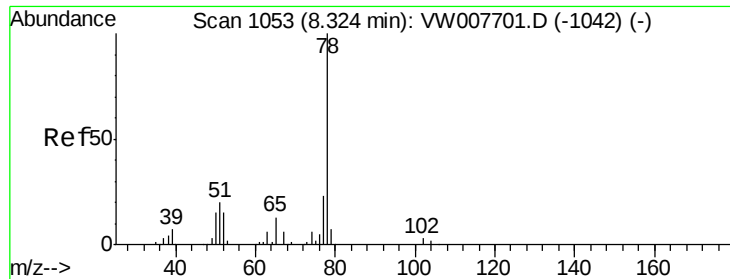
#38  
 Carbon Tetrachloride  
 Concen: 5.544 ug/l  
 RT: 7.95 min Scan# 991  
 Delta R.T. -0.12 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Tgt Ion: 117 Resp: 8323  
 Ion Ratio Lower Upper  
 117 100  
 119 4.4 78.2 117.2#  
 121 0.0 26.1 39.1#



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

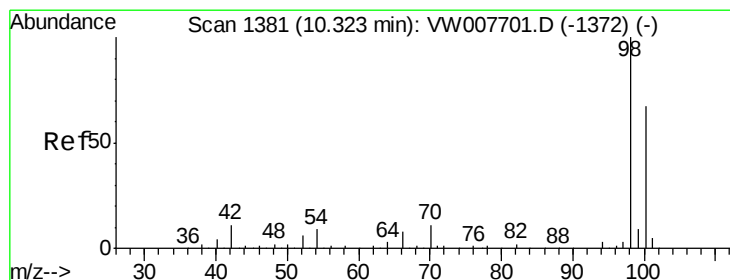
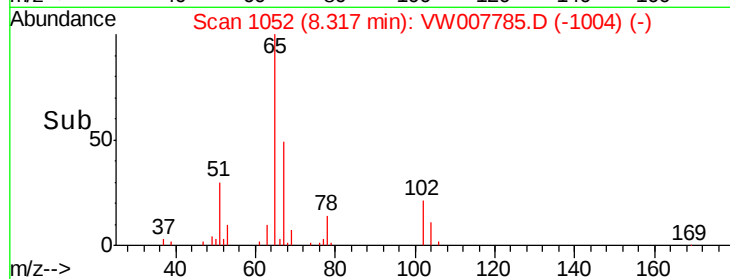
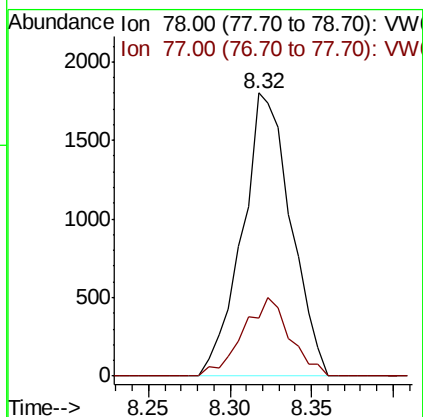
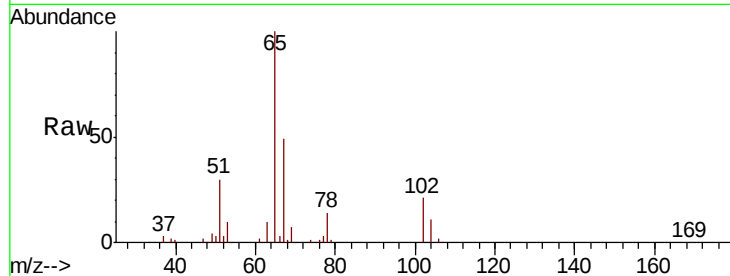




#40  
Benzene  
Concen: 1.098 ug/l  
RT: 8.32 min Scan# 1052  
Delta R.T. -0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

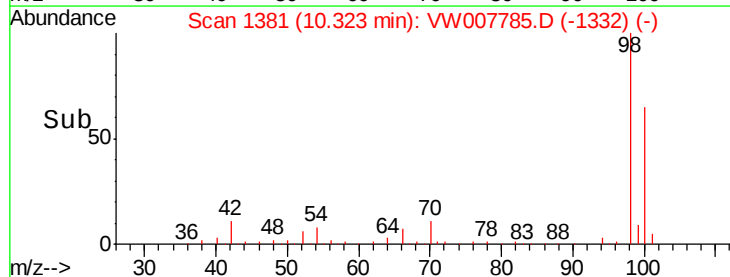
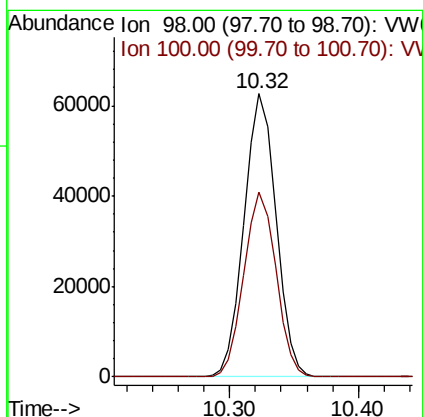
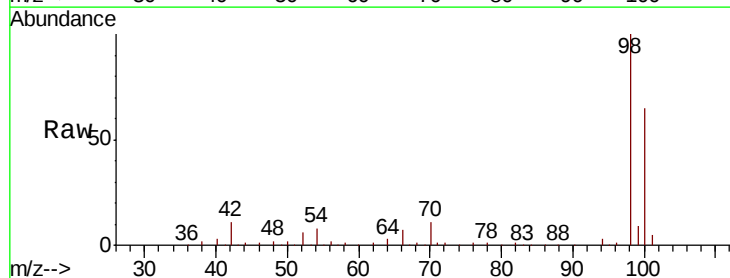
Instrument :  
MSVOA\_W  
ClientSampleId :

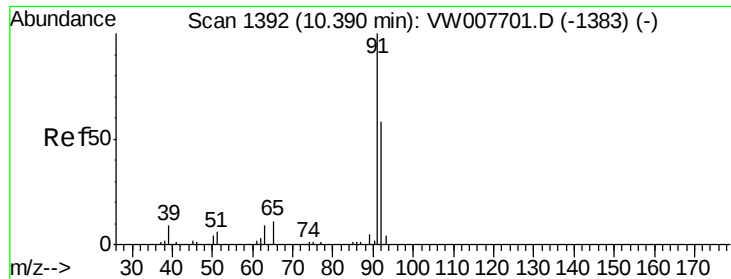
Tot Ion: 78 Resp: 3734  
Ion Ratio Lower Upper  
78 100  
77 20.6 18.7 28.1



#50  
Toluene-d8  
Concen: 35.463 ug/l  
RT: 10.32 min Scan# 1381  
Delta R.T. -0.00 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Tgt Ion: 98 Resp: 107707  
Ion Ratio Lower Upper  
98 100  
100 65.6 52.2 78.2





#52

Toluene

Concen: 6.346 ug/l

RT: 10.39 min Scan# 1392

Delta R.T. -0.00 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

Instrument :

MSVOA\_W

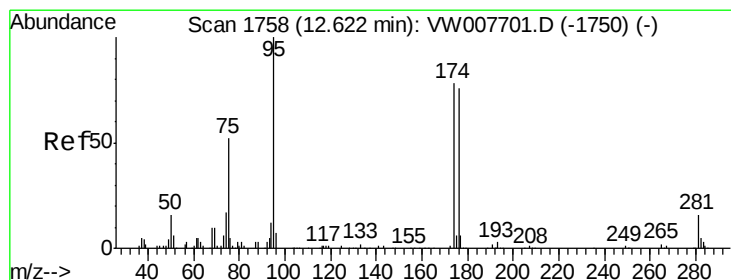
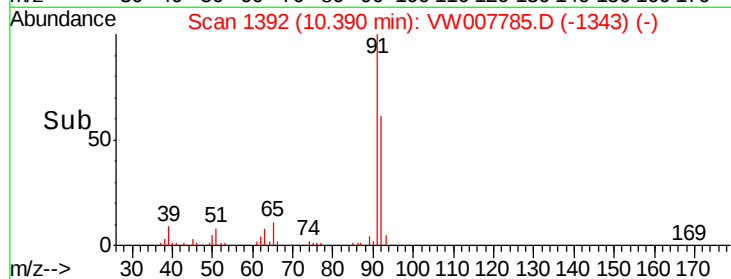
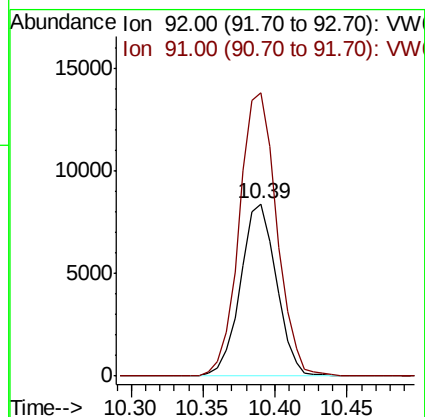
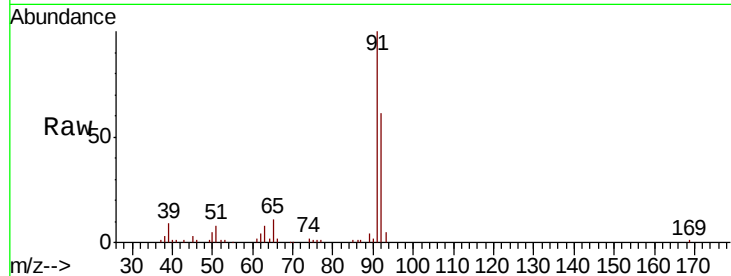
ClientSampleId :

Tot Ion: 92 Resp: 14483

Ion Ratio Lower Upper

92 100

91 171.4 137.0 205.4



#62

4-Bromofluorobenzene

Concen: 27.124 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. -0.00 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

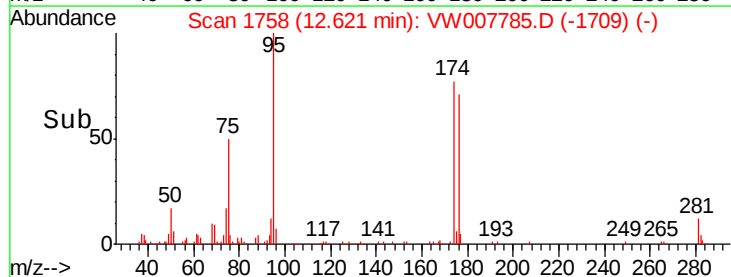
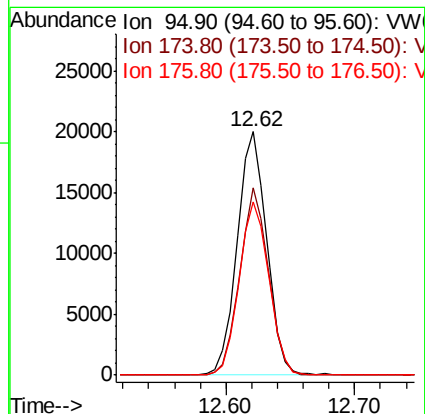
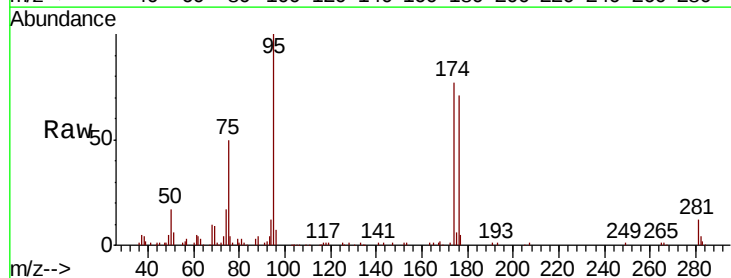
Tgt Ion: 95 Resp: 31826

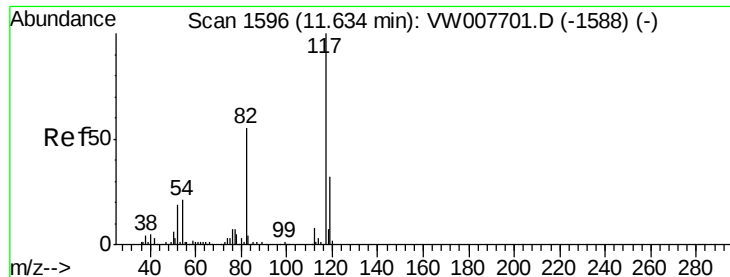
Ion Ratio Lower Upper

95 100

174 74.4 0.0 152.2

176 71.5 0.0 146.8

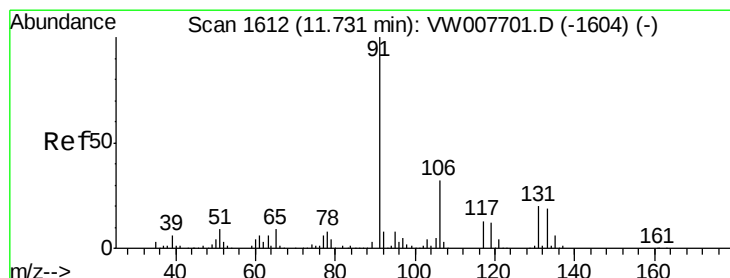
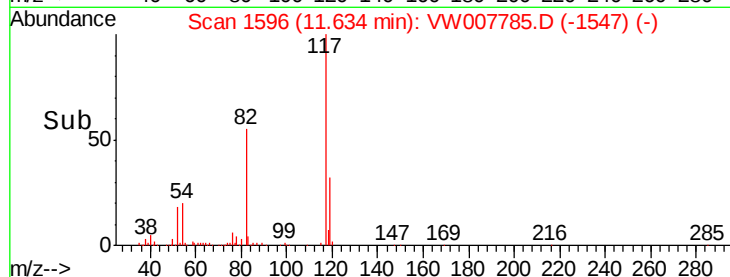
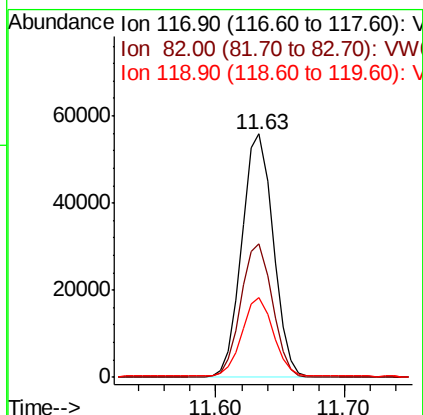
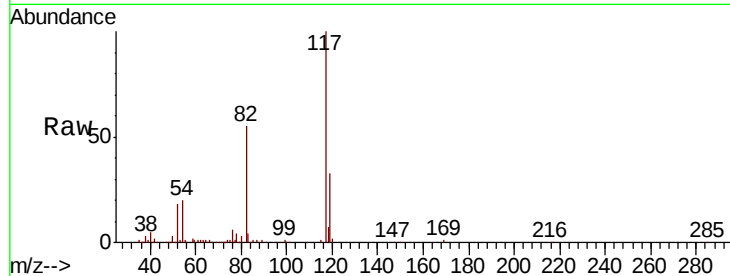




#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 11.63 min Scan# 1596  
Delta R.T. -0.00 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

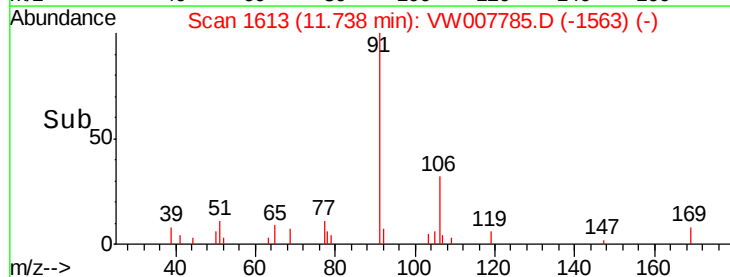
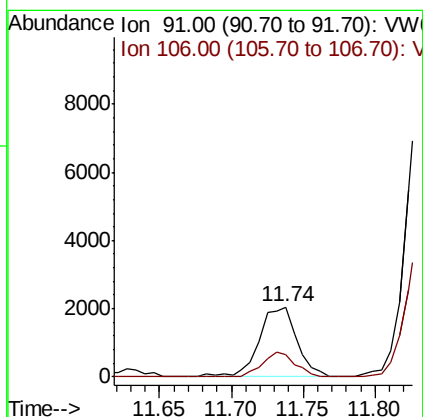
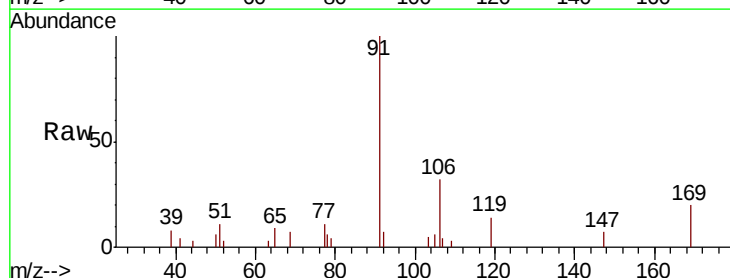
Instrument :  
MSVOA\_W  
ClientSampleId :

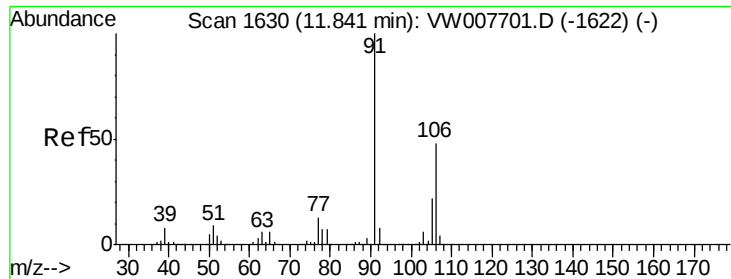
Tot Ion:117 Resp: 94058  
Ion Ratio Lower Upper  
117 100  
82 54.9 44.3 66.5  
119 32.4 25.7 38.5



#67  
Ethyl Benzene  
Concen: 1.063 ug/l  
RT: 11.74 min Scan# 1613  
Delta R.T. 0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Tgt Ion: 91 Resp: 3714  
Ion Ratio Lower Upper  
91 100  
106 31.6 25.8 38.8

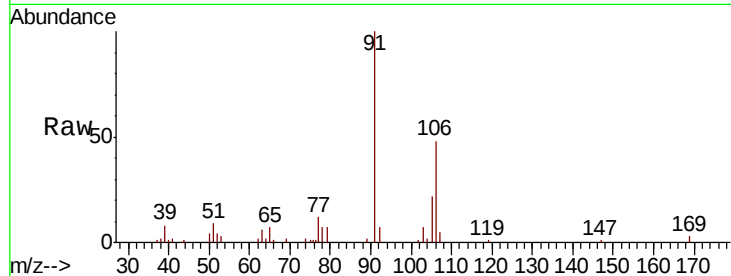




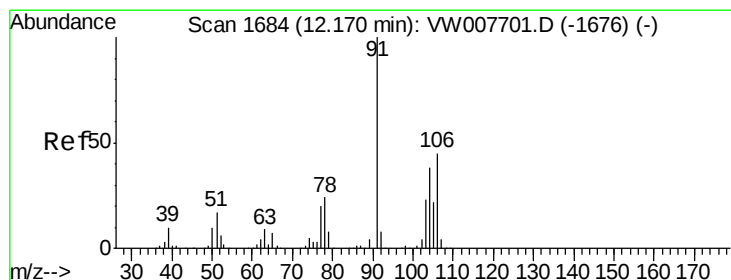
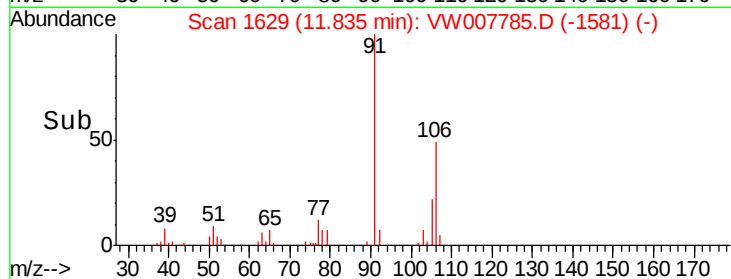
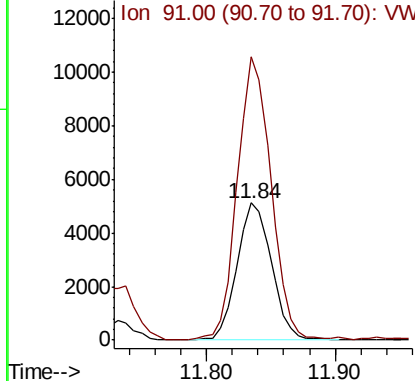
#68  
m/p-Xylenes  
Concen: 6.989 ug/l  
RT: 11.84 min Scan# 1629  
Delta R.T. -0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Instrument :  
MSVOA\_W  
ClientSampleId :

Tot Ion:106 Resp: 9471  
Ion Ratio Lower Upper  
106 100  
91 202.7 165.2 247.8

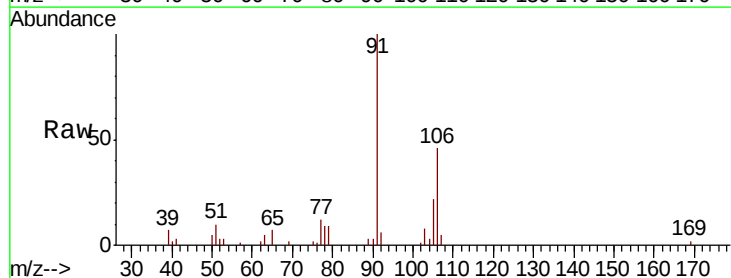


Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VW

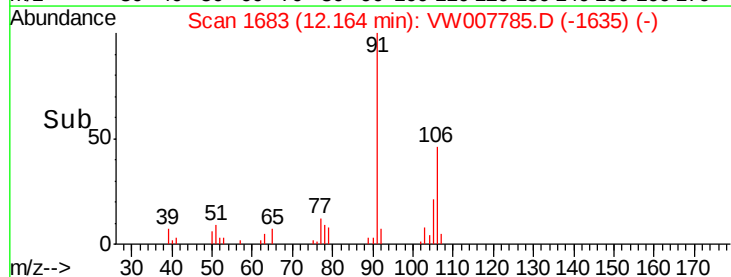
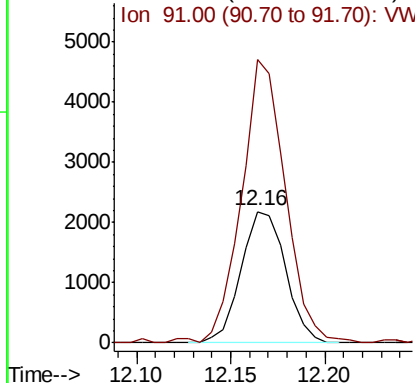


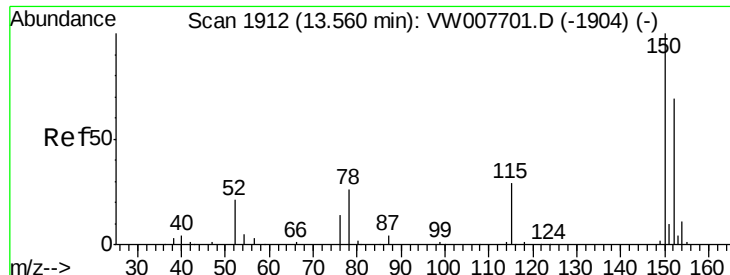
#69  
o-Xylene  
Concen: 2.813 ug/l  
RT: 12.16 min Scan# 1683  
Delta R.T. -0.01 min  
Lab File: VW007785.D  
Acq: 21 Dec 2018 10:24

Tgt Ion:106 Resp: 3573  
Ion Ratio Lower Upper  
106 100  
91 213.4 110.5 331.4



Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): 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: VW007785.D

Acq: 21 Dec 2018 10:24

Instrument :

MSVOA\_W

ClientSampleId :

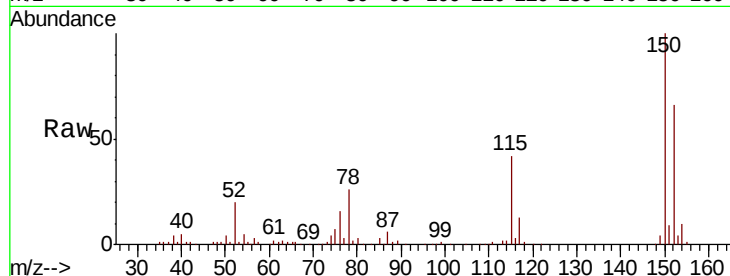
Tot Ion:152 Resp: 31568

Ion Ratio Lower Upper

152 100

115 62.4 31.8 95.4

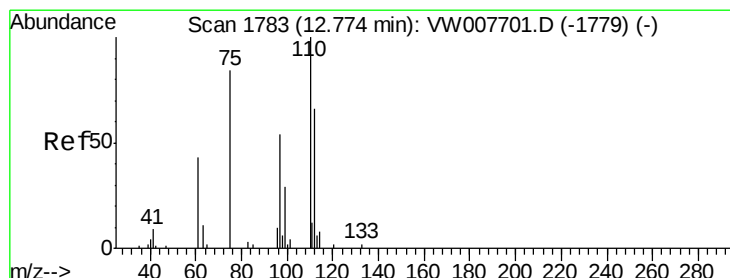
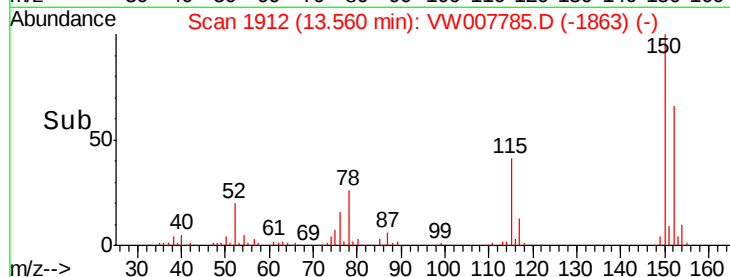
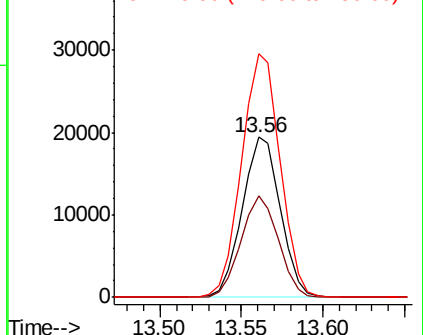
150 154.0 0.0 350.8



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



#76

1,2,3-Trichloropropane

Concen: 65.941 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. -0.15 min

Lab File: VW007785.D

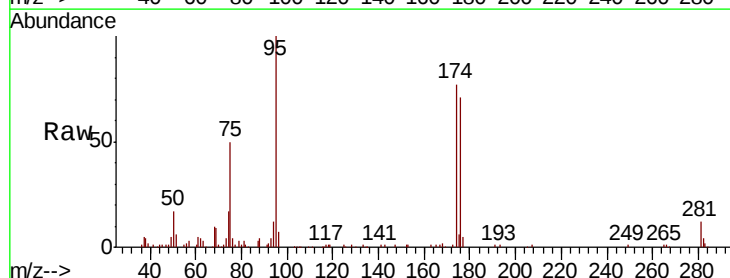
Acq: 21 Dec 2018 10:24

Tgt Ion: 75 Resp: 16089

Ion Ratio Lower Upper

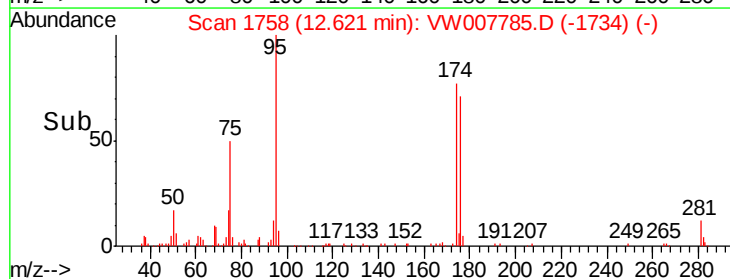
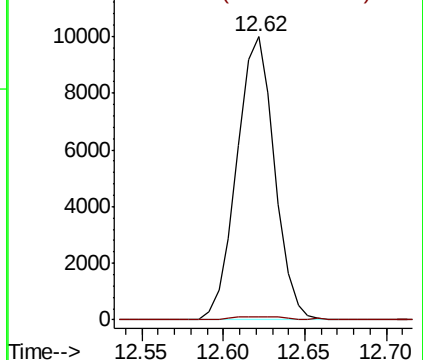
75 100

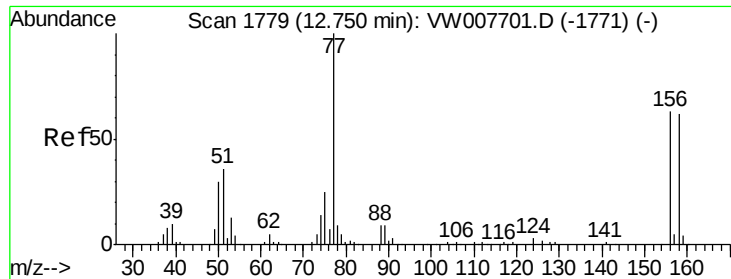
77 1.5 0.0 0.0#



Abundance Ion 74.90 (74.60 to 75.60): VW

Ion 77.00 (76.70 to 77.70): VW





#77

Bromobenzene

Concen: 1.251 ug/l

RT: 12.89 min Scan# 1802

Delta R.T. 0.14 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

Instrument :

MSVOA\_W

ClientSampled :

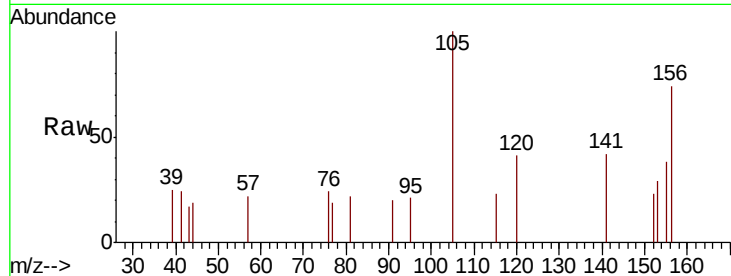
Tot Ion:156 Resp: 684

Ion Ratio Lower Upper

156 100

77 27.8 87.4 262.1#

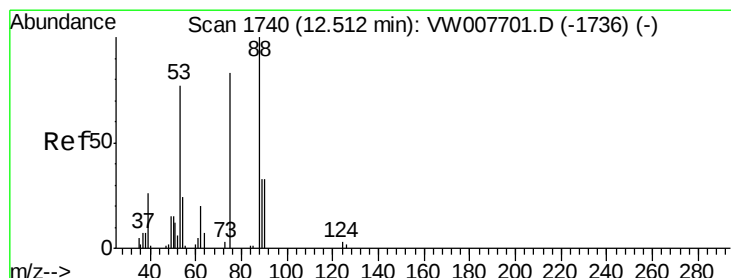
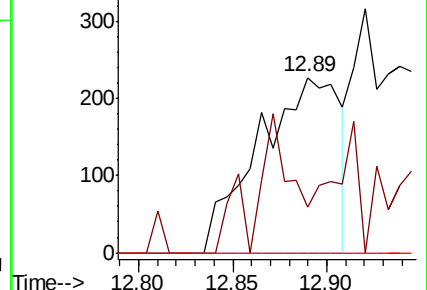
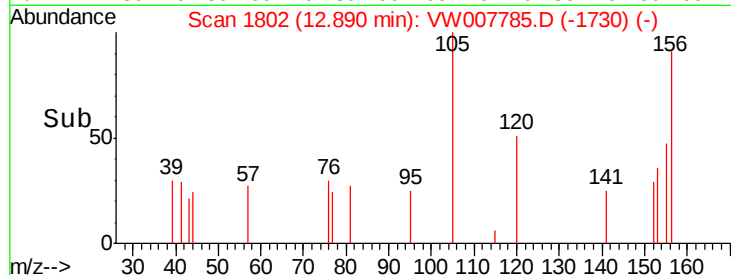
158 0.0 48.4 145.0#



Abundance Ion 155.80 (155.50 to 156.50): V

Ion 77.00 (76.70 to 77.70): VW

Ion 157.80 (157.50 to 158.50): V



#81

trans-1,4-Dichloro-2-butene

Concen: 138.415 ug/l

RT: 12.62 min Scan# 1758

Delta R.T. 0.11 min

Lab File: VW007785.D

Acq: 21 Dec 2018 10:24

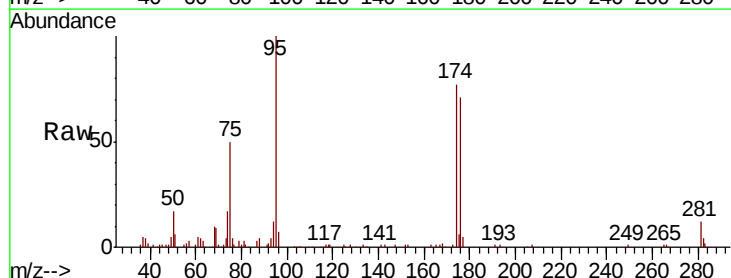
Tgt Ion: 75 Resp: 16089

Ion Ratio Lower Upper

75 100

53 0.0 80.2 120.2#

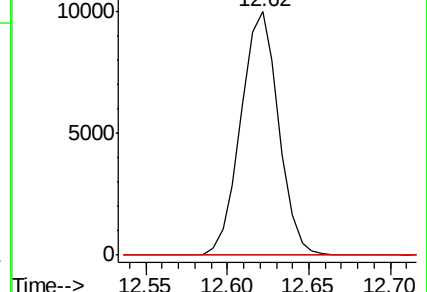
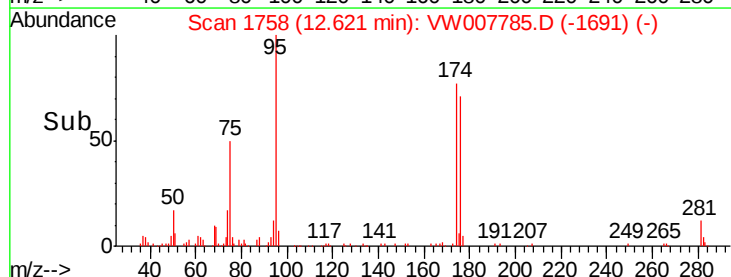
89 0.0 39.2 58.8#

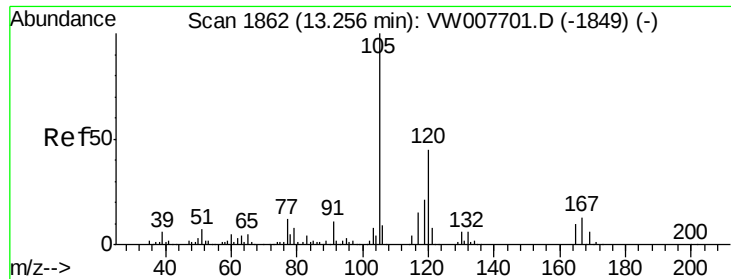


Abundance Ion 74.90 (74.60 to 75.60): VW

Ion 53.00 (52.70 to 53.70): VW

Ion 88.90 (88.60 to 89.60): VW

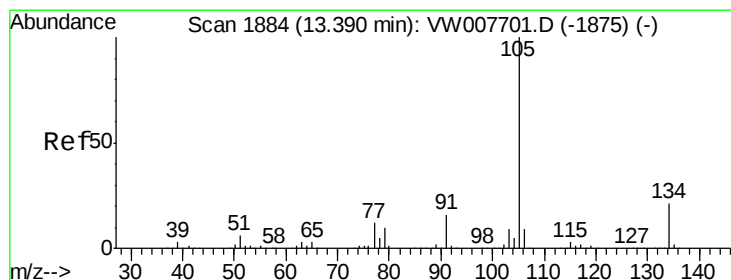
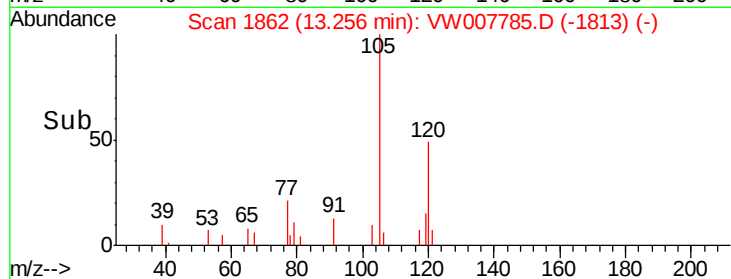
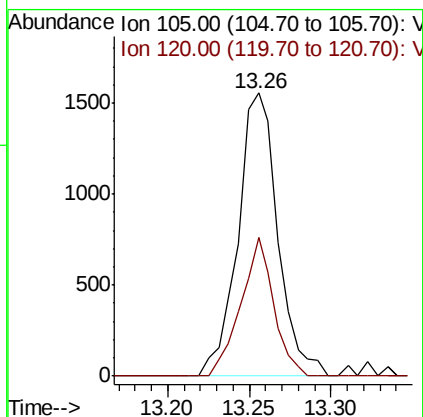
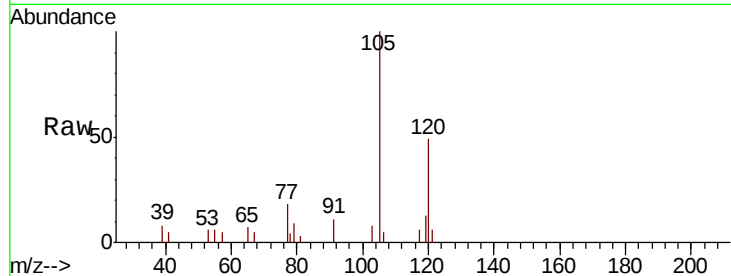




#84  
 1,2,4-Trimethylbenzene  
 Concen: 1.274 ug/l  
 RT: 13.26 min Scan# 1862  
 Delta R.T. -0.00 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

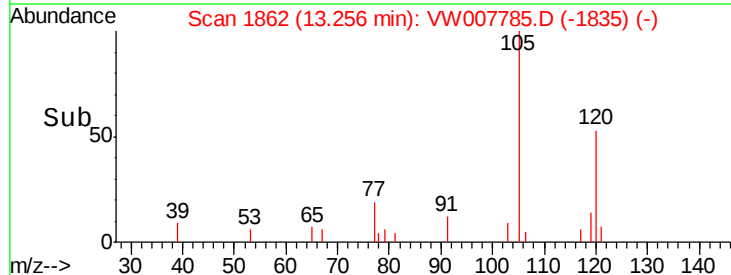
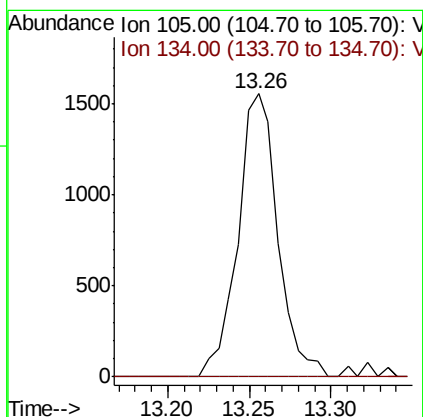
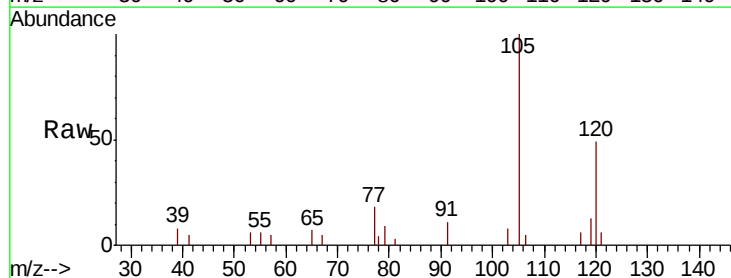
Instrument :  
 MSVOA\_W  
 ClientSampleId :

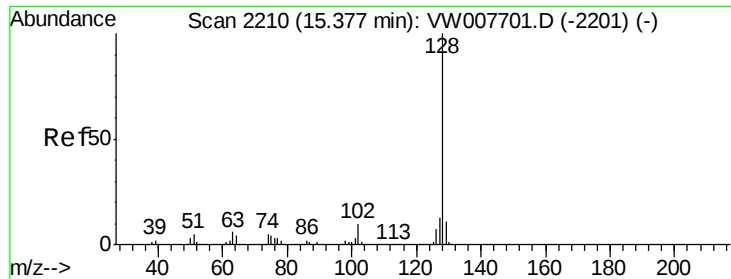
Tot Ion:105 Resp: 2646  
 Ion Ratio Lower Upper  
 105 100  
 120 40.4 22.0 66.0



#85  
 sec-Butylbenzene  
 Concen: 1.063 ug/l  
 RT: 13.26 min Scan# 1862  
 Delta R.T. -0.13 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Tgt Ion:105 Resp: 2646  
 Ion Ratio Lower Upper  
 105 100  
 134 0.0 10.2 30.4#





#95  
 Naphthalene  
 Concen: 2.333 ug/l  
 RT: 15.37 min Scan# 2209  
 Delta R.T. -0.01 min  
 Lab File: VW007785.D  
 Acq: 21 Dec 2018 10:24

Instrument :  
 MSVOA\_W  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 128     | 100   |       |       |
| 127     | 13.4  | 10.7  | 16.1  |
| 129     | 12.9  | 8.8   | 13.2  |

