

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX091718\  
 Data File : VX004641.D  
 Acq On : 18 Sep 2018 01:19  
 Operator : JC/MD  
 Sample : J4936-22  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 22 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: Sep 18 02:18:40 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X091118W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Sep 12 02:17:23 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.67  | 168  | 233308   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.87  | 114  | 334052   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.12 | 117  | 317287   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.08 | 152  | 206734   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 6.06  | 65   | 156762   | 52.11 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 104.22% |          |
| 35) Dibromofluoromethane    | 5.51  | 113  | 146071   | 47.78 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.56%  |          |
| 50) Toluene-d8              | 8.71  | 98   | 465169   | 45.38 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 90.76%  |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 160909   | 43.97 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 87.94%  |          |

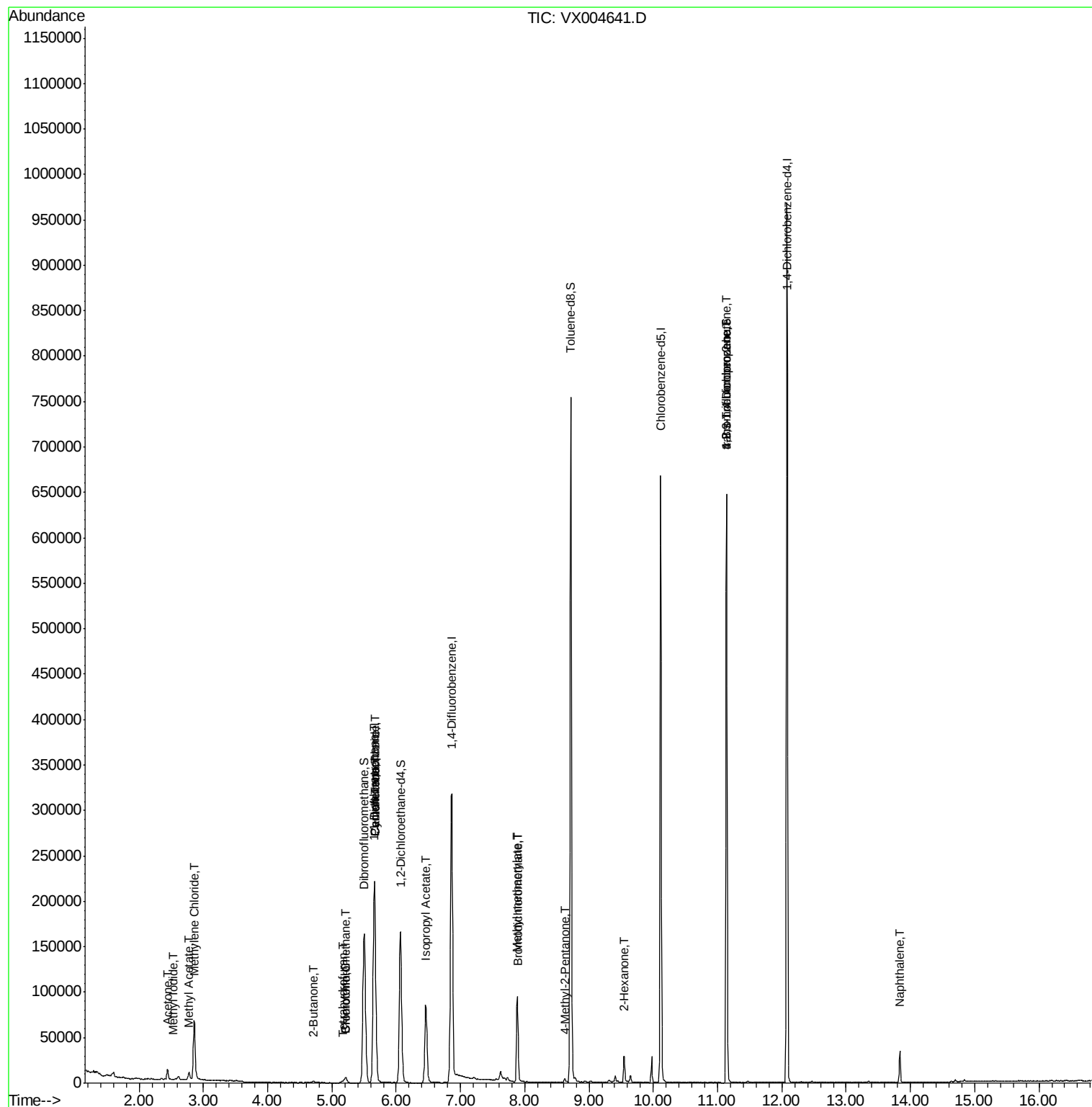
| Target Compounds               | R.T.  | QIon | Response | Conc       | Units | Qvalue |
|--------------------------------|-------|------|----------|------------|-------|--------|
| 5) Bromomethane                | 1.64  | 94   | 246      | Below Cal  |       | 85     |
| 10) Methyl Iodide              | 2.52  | 142  | 45       | 4.27 ug/l  | #     | 41     |
| 16) Acetone                    | 2.45  | 43   | 11753    | 8.00 ug/l  |       | 95     |
| 18) Methyl Acetate             | 2.78  | 43   | 9962     | 2.42 ug/l  |       | 97     |
| 20) Methylene Chloride         | 2.86  | 84   | 31997    | 10.62 ug/l |       | 93     |
| 25) 2-Butanone                 | 4.71  | 43   | 2871     | 1.23 ug/l  | #     | 84     |
| 28) Bromochloromethane         | 5.21  | 49   | 479      | 0.21 ug/l  | #     | 9      |
| 29) Tetrahydrofuran            | 5.16  | 42   | 1548     | 1.10 ug/l  | #     | 88     |
| 30) Chloroform                 | 5.21  | 83   | 6507     | 1.31 ug/l  |       | 91     |
| 31) Cyclohexane                | 5.67  | 56   | 3813     | 0.88 ug/l  | #     | 1      |
| 36) 1,1-Dichloropropene        | 5.65  | 75   | 15162    | 3.74 ug/l  | #     | 48     |
| 38) Carbon Tetrachloride       | 5.67  | 117  | 19898    | 5.02 ug/l  | #     | 16     |
| 43) Isopropyl Acetate          | 6.46  | 43   | 106697   | 17.42 ug/l |       | 99     |
| 47) Bromodichloromethane       | 7.90  | 83   | 1424     | 0.41 ug/l  |       | 98     |
| 48) Methyl methacrylate        | 7.88  | 41   | 8627     | 2.85 ug/l  | #     | 40     |
| 51) 4-Methyl-2-Pentanone       | 8.62  | 43   | 1924     | 0.45 ug/l  | #     | 34     |
| 59) 2-Hexanone                 | 9.55  | 43   | 3614     | 1.09 ug/l  | #     | 53     |
| 76) 1,2,3-Trichloropropane     | 11.14 | 75   | 75610    | 18.18 ug/l | #     | 37     |
| 81) trans-1,4-Dichloro-2-buten | 11.14 | 75   | 75610    | 57.94 ug/l | #     | 10     |
| 95) Naphthalene                | 13.83 | 128  | 22898    | 1.62 ug/l  |       | 99     |

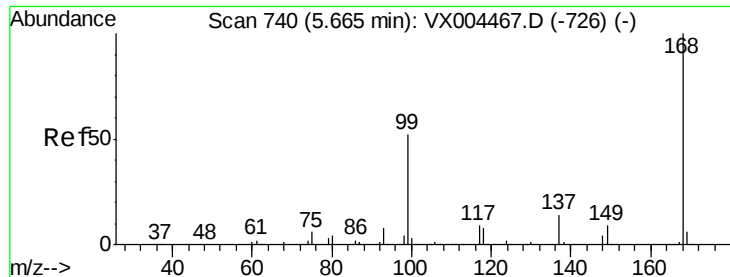
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA X\DATA\VX091718\  
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Quant Time: Sep 18 02:18:40 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_X\METHOD\82X091118W.M  
Quant Title : SW846 8260  
QLast Update : Wed Sep 12 02:17:23 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.00 ug/l

RT: 5.67 min Scan# 740

Delta R.T. -0.00 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

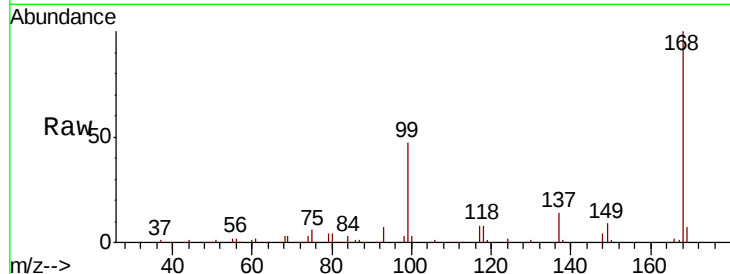
ClientSampleId :

Tot Ion:168 Resp: 233308

Ion Ratio Lower Upper

168 100

99 47.4 39.9 59.9



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0

5.67

80000

60000

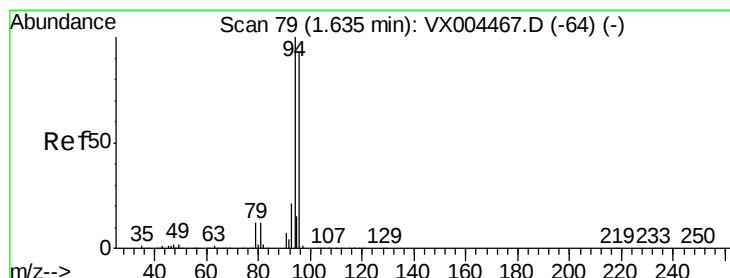
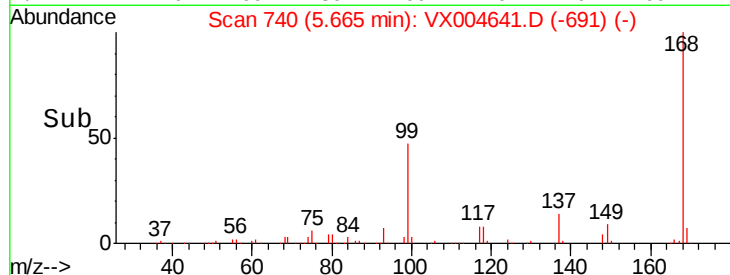
40000

20000

0

Time-->

5.50 5.60 5.70 5.80



#5

Bromomethane

Concen: Below Cal

RT: 1.64 min Scan# 80

Delta R.T. 0.01 min

Lab File: VX004641.D

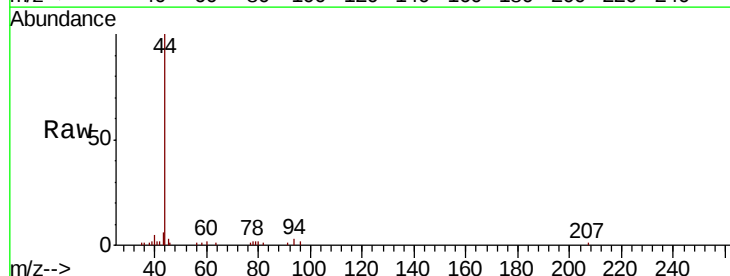
Acq: 18 Sep 2018 01:19

Tgt Ion: 94 Resp: 246

Ion Ratio Lower Upper

94 100

96 79.0 74.5 111.7



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0

1.64

150

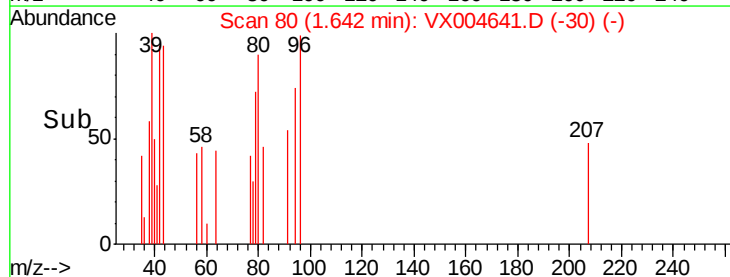
100

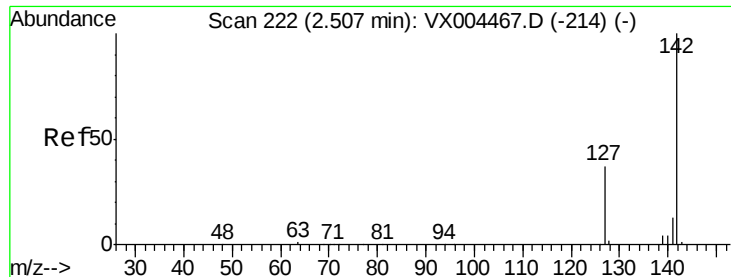
50

0

Time-->

1.62 1.64 1.66

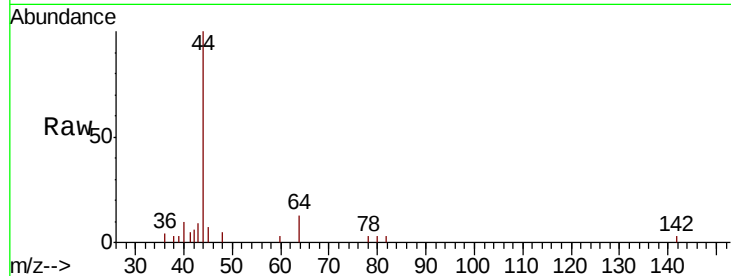




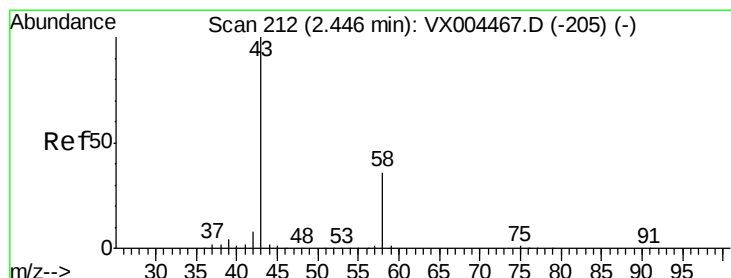
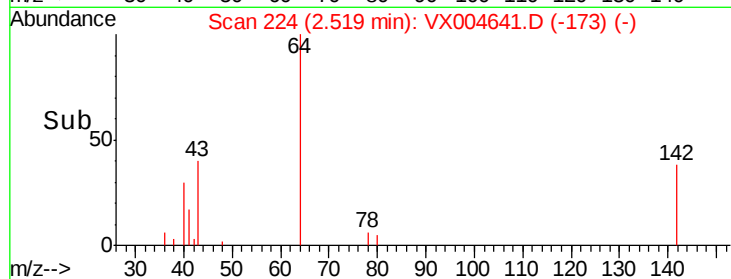
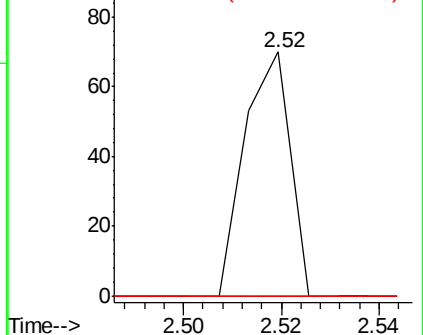
#10  
Methvl Iodide  
Concen: 4.27 ug/l  
RT: 2.52 min Scan# 224  
Delta R.T. 0.01 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion:142 Resp: 45  
Ion Ratio Lower Upper  
142 100  
127 0.0 33.8 50.6#  
141 0.0 11.4 17.0#

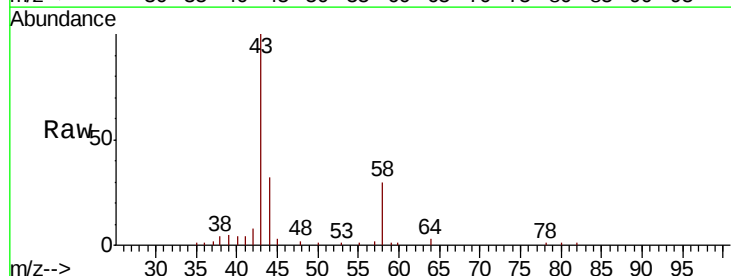


Abundance Ion 141.80 (141.50 to 142.50): V  
Ion 126.80 (126.50 to 127.50): V  
Ion 140.80 (140.50 to 141.50): V

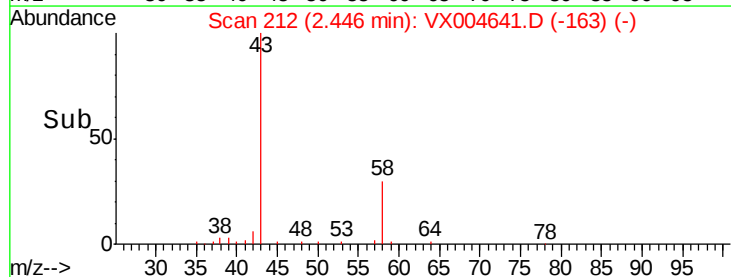
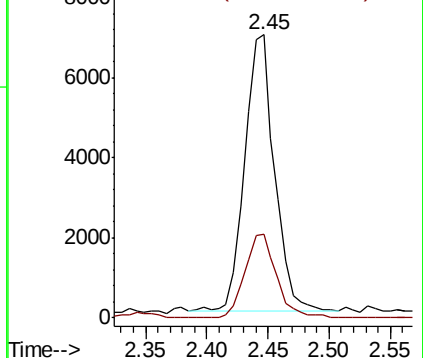


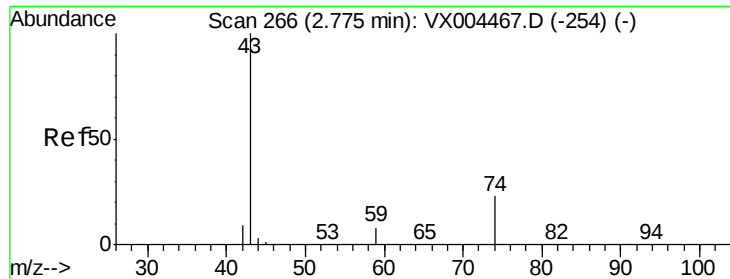
#16  
Acetone  
Concen: 8.00 ug/l  
RT: 2.45 min Scan# 212  
Delta R.T. -0.00 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Tgt Ion: 43 Resp: 11753  
Ion Ratio Lower Upper  
43 100  
58 30.2 26.2 39.4



Abundance Ion 43.00 (42.70 to 43.70): VX0  
Ion 58.00 (57.70 to 58.70): VX0

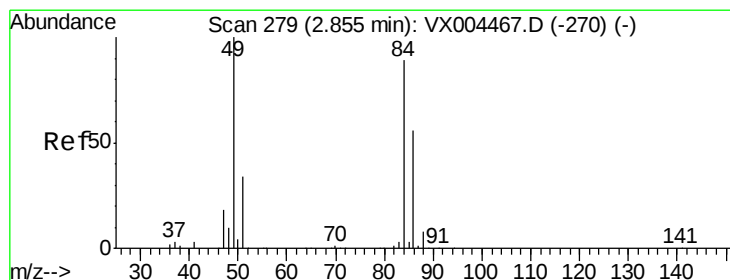
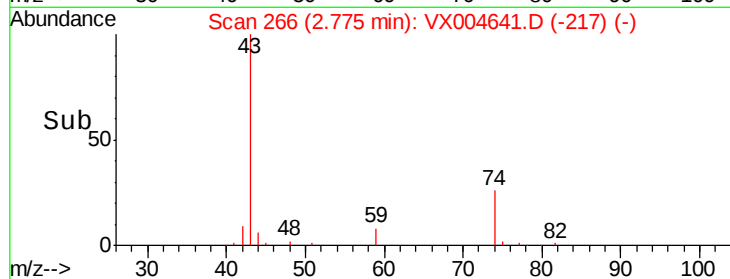
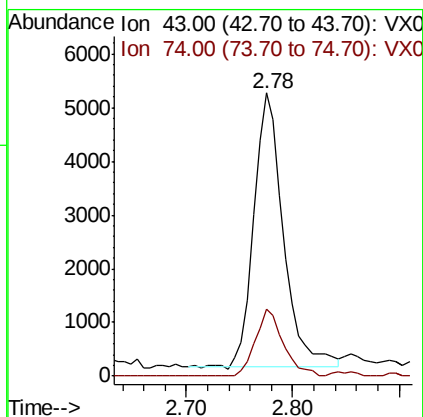
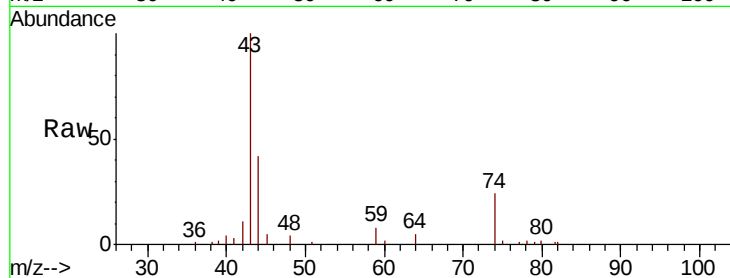




#18  
Methyl Acetate  
Concen: 2.42 ug/l  
RT: 2.78 min Scan# 266  
Delta R.T. 0.00 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

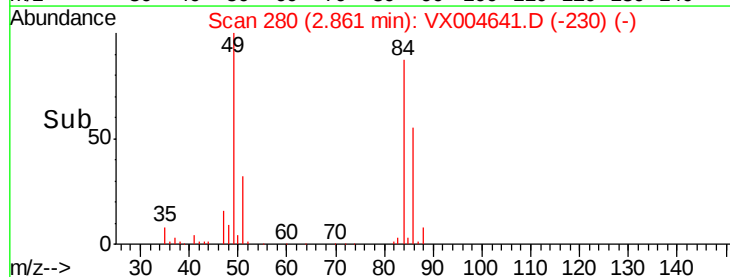
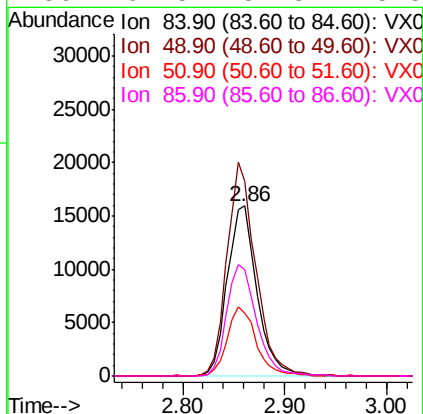
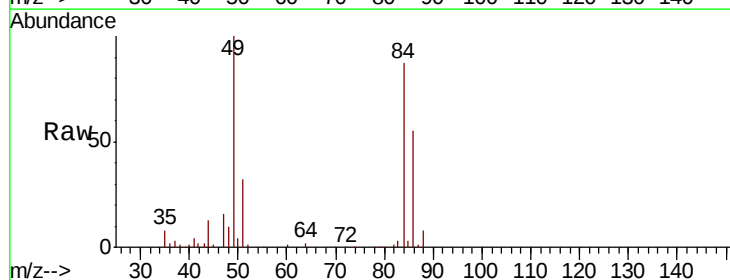
Instrument :  
MSVOA\_X  
ClientSampleId :

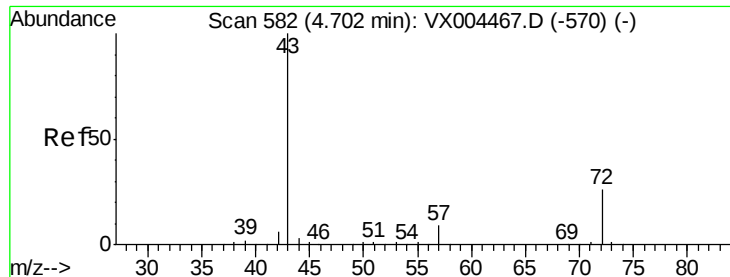
Tot Ion: 43 Resp: 9962  
Ion Ratio Lower Upper  
43 100  
74 22.8 19.4 29.2



#20  
Methylene Chloride  
Concen: 10.62 ug/l  
RT: 2.86 min Scan# 280  
Delta R.T. 0.01 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Tgt Ion: 84 Resp: 31997  
Ion Ratio Lower Upper  
84 100  
49 114.4 101.2 151.8  
51 36.9 29.5 44.3  
86 62.5 52.3 78.5





#25

2-Butanone

Concen: 1.23 ug/l

RT: 4.71 min Scan# 583

Delta R.T. 0.01 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

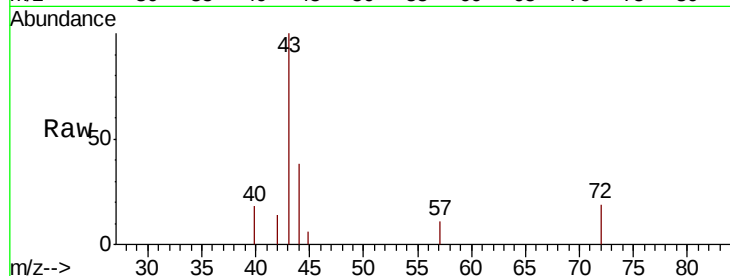
ClientSampled :

Tot Ion: 43 Resp: 2871

Ion Ratio Lower Upper

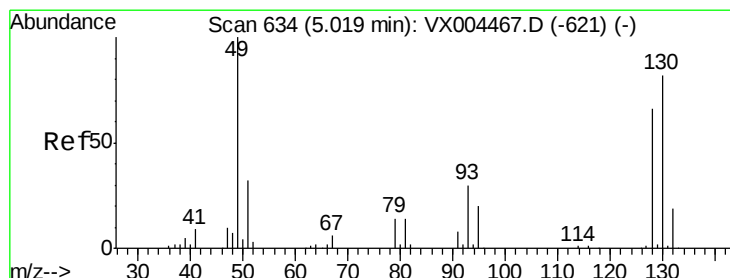
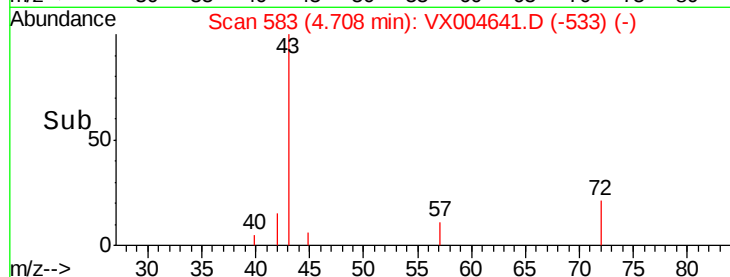
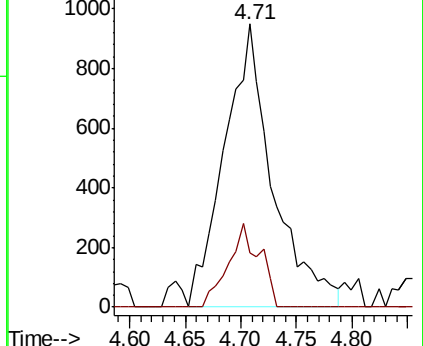
43 100

72 19.2 22.0 33.0#



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 72.00 (71.70 to 72.70): VX0



#28

Bromochloromethane

Concen: 0.21 ug/l

RT: 5.21 min Scan# 665

Delta R.T. 0.19 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

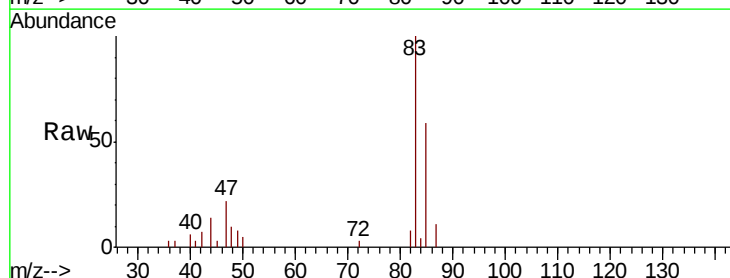
Tgt Ion: 49 Resp: 479

Ion Ratio Lower Upper

49 100

129 0.0 0.0 4.2

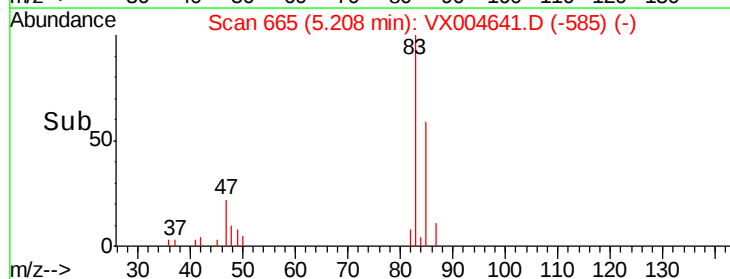
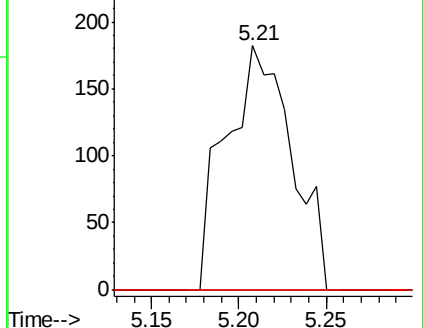
130 0.0 67.5 101.3#

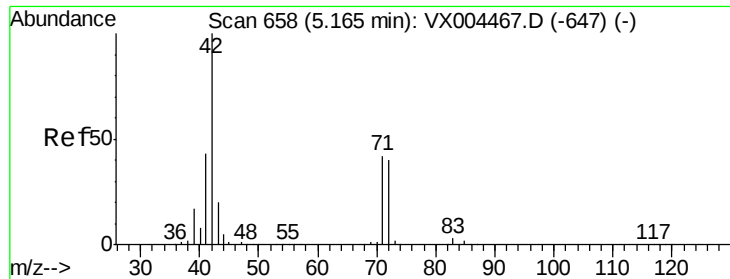


Abundance Ion 48.90 (48.60 to 49.60): VX0

Ion 128.80 (128.50 to 129.50): V

Ion 129.80 (129.50 to 130.50): V





#29

Tetrahydrofuran

Concen: 1.10 ug/l

RT: 5.16 min Scan# 657

Delta R.T. -0.01 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

ClientSampleId :

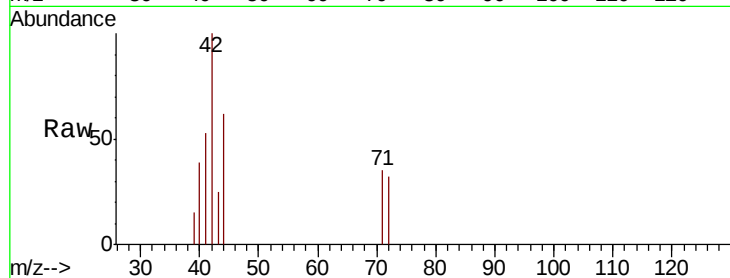
Tot Ion: 42 Resp: 1548

Ion Ratio Lower Upper

42 100

72 36.8 37.4 56.0#

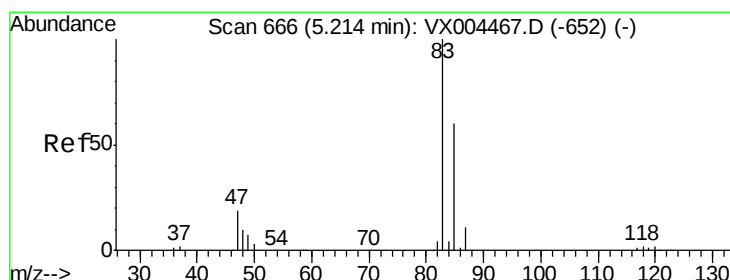
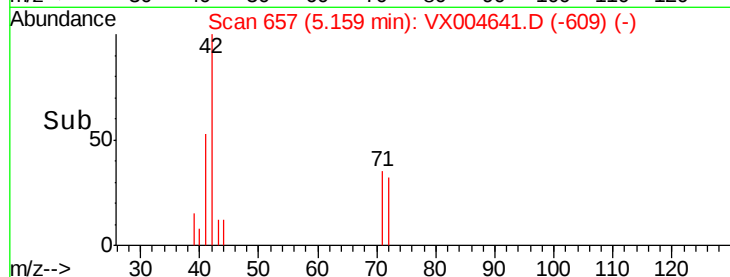
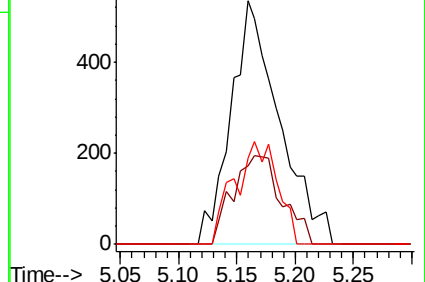
71 37.7 34.5 51.7



Abundance Ion 42.00 (41.70 to 42.70): VX0

Ion 72.00 (71.70 to 72.70): VX0

Ion 71.00 (70.70 to 71.70): VX0



#30

Chloroform

Concen: 1.31 ug/l

RT: 5.21 min Scan# 665

Delta R.T. -0.01 min

Lab File: VX004641.D

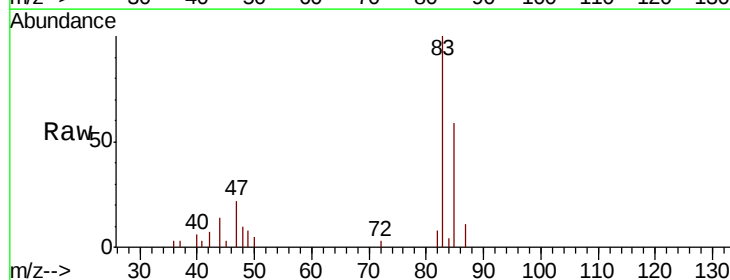
Acq: 18 Sep 2018 01:19

Tgt Ion: 83 Resp: 6507

Ion Ratio Lower Upper

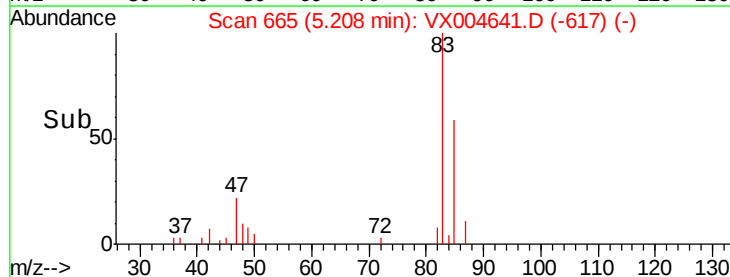
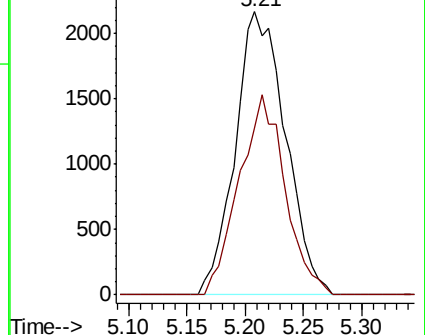
83 100

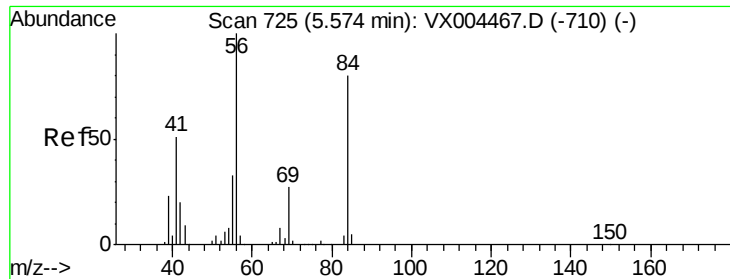
85 58.9 52.6 79.0



Abundance Ion 82.90 (82.60 to 83.60): VX0

Ion 84.90 (84.60 to 85.60): VX0

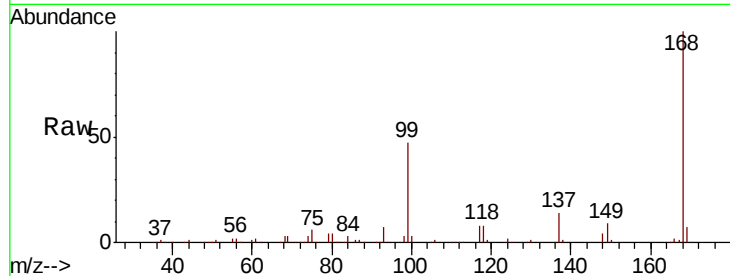




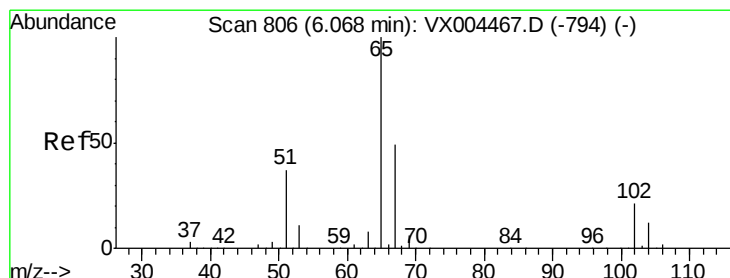
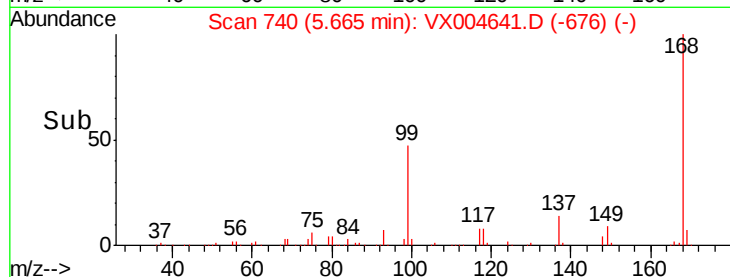
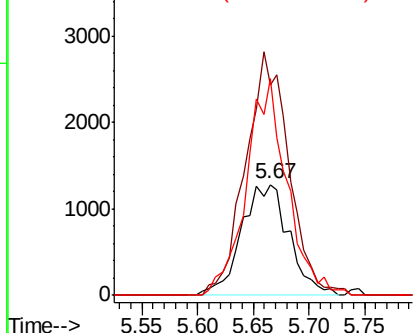
#31  
Cyclohexane  
Concen: 0.88 ug/l  
RT: 5.67 min Scan# 740  
Delta R.T. 0.09 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Instrument :  
MSVOA\_X  
ClientSampled :

Tot Ion: 56 Resp: 3813  
Ion Ratio Lower Upper  
56 100  
69 190.1 25.4 38.2#  
84 195.5 71.4 107.2#

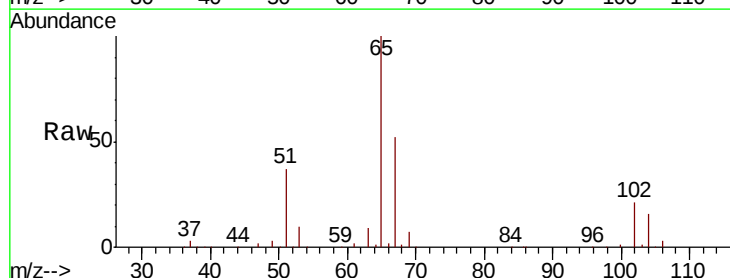


Abundance Ion 56.00 (55.70 to 56.70): VX0  
Ion 69.00 (68.70 to 69.70): VX0  
Ion 84.00 (83.70 to 84.70): VX0

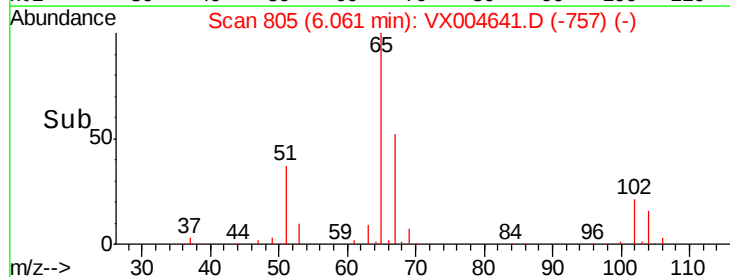
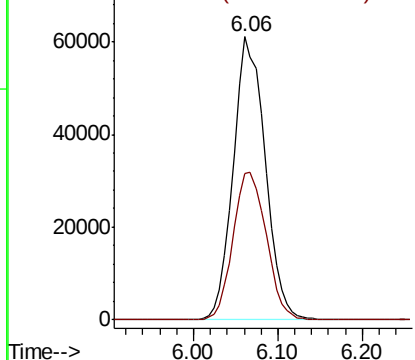


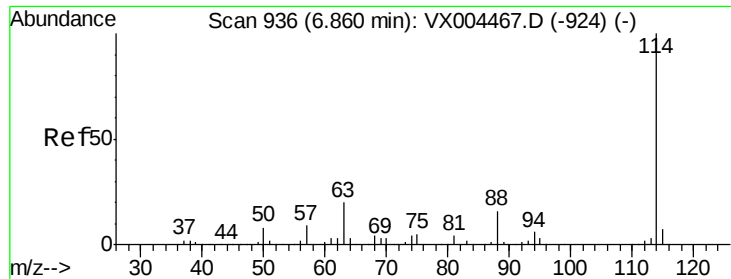
#33  
1,2-Dichloroethane-d4  
Concen: 52.11 ug/l  
RT: 6.06 min Scan# 805  
Delta R.T. -0.01 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Tgt Ion: 65 Resp: 156762  
Ion Ratio Lower Upper  
65 100  
67 54.4 0.0 106.8



Abundance Ion 64.90 (64.60 to 65.60): VX0  
Ion 66.90 (66.60 to 67.60): VX0

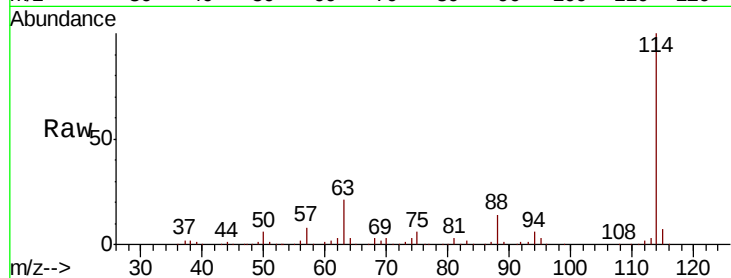




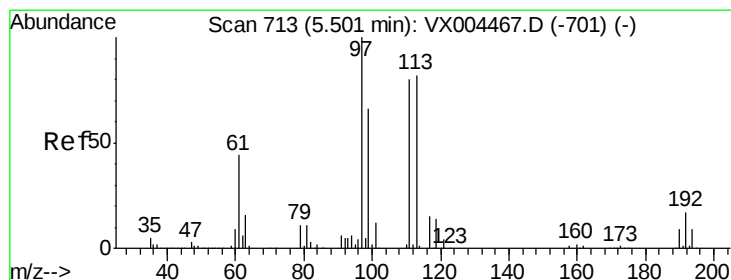
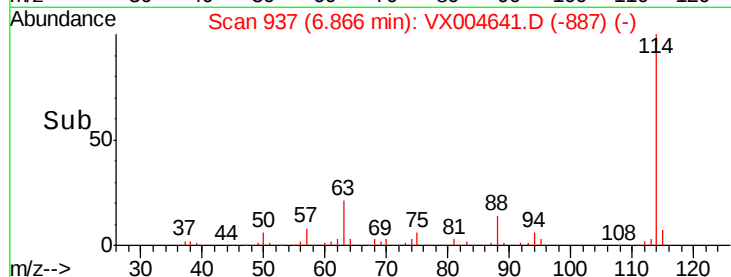
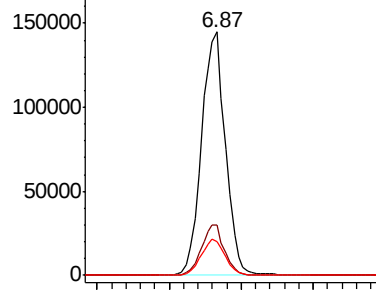
#34  
 1,4-Difluorobenzene  
 Concen: 50.00 ug/l  
 RT: 6.87 min Scan# 937  
 Delta R.T. 0.01 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Tot Ion:114 Resp: 334052  
 Ion Ratio Lower Upper  
 114 100  
 63 20.5 0.0 39.0  
 88 14.0 0.0 30.4

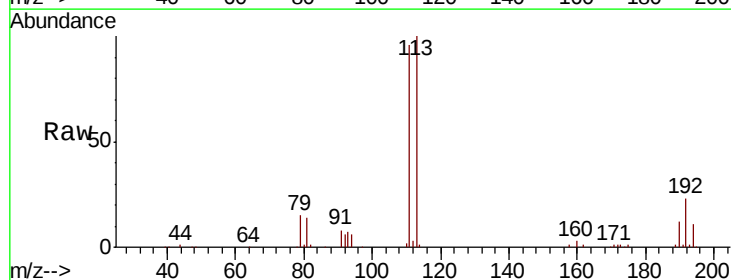


Abundance Ion 113.90 (113.60 to 114.60): V  
 Ion 63.00 (62.70 to 63.70): VX0  
 Ion 87.90 (87.60 to 88.60): VX0

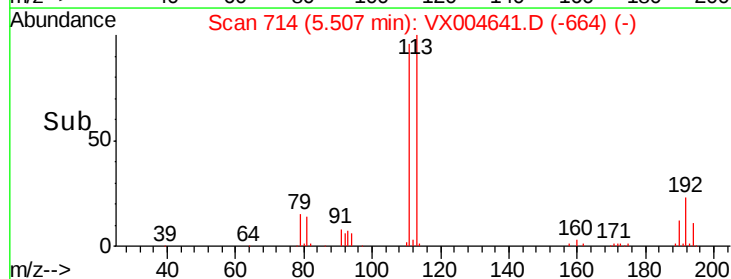
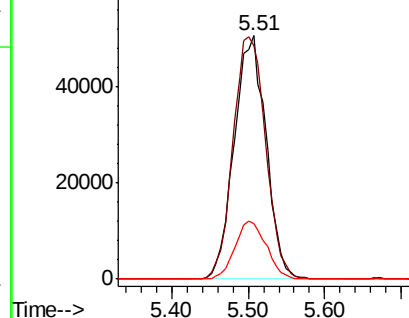


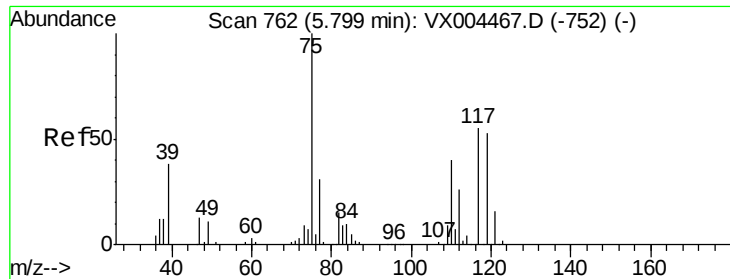
#35  
 Dibromofluoromethane  
 Concen: 47.78 ug/l  
 RT: 5.51 min Scan# 714  
 Delta R.T. 0.01 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

Tgt Ion:113 Resp: 146071  
 Ion Ratio Lower Upper  
 113 100  
 111 102.0 82.4 123.6  
 192 23.6 19.4 29.2



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

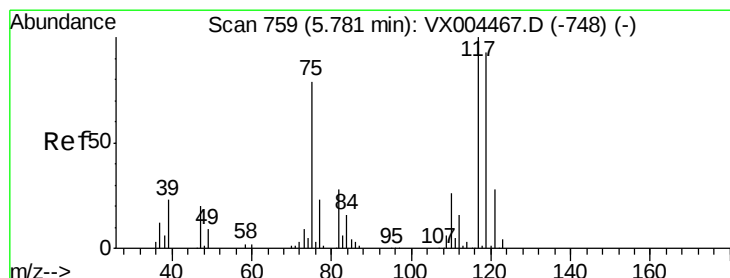
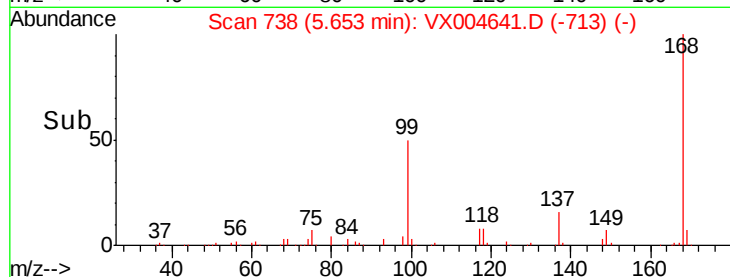
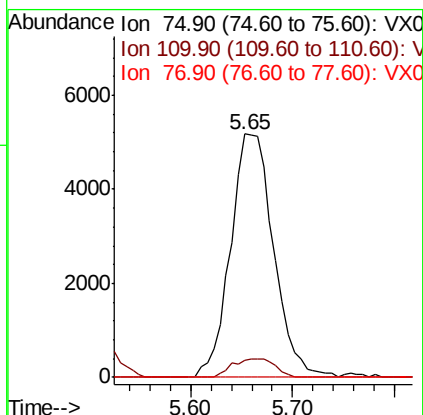
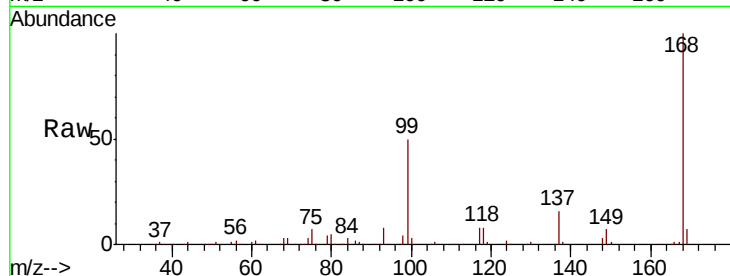




#36  
 1,1-Dichloropropene  
 Concen: 3.74 ug/l  
 RT: 5.65 min Scan# 738  
 Delta R.T. -0.15 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

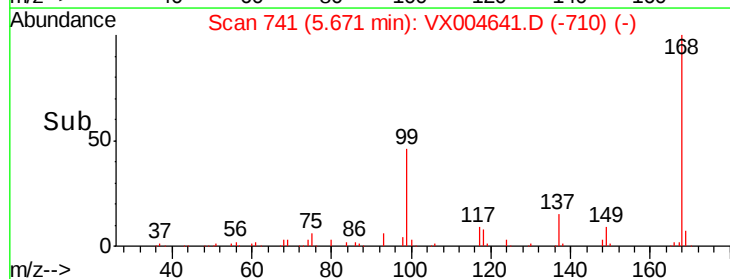
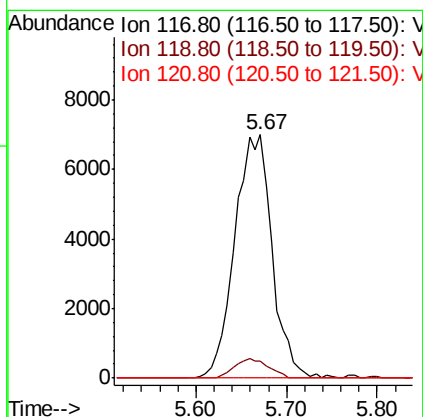
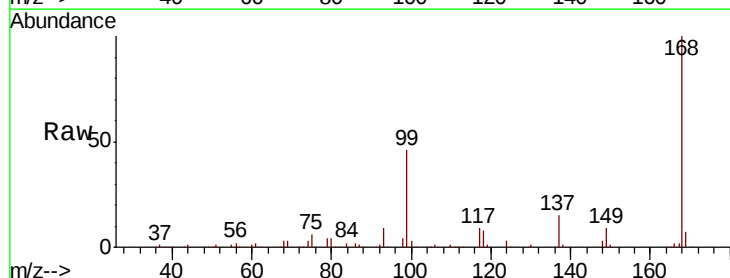
Instrument :  
 MSVOA\_X  
 ClientSampleId :

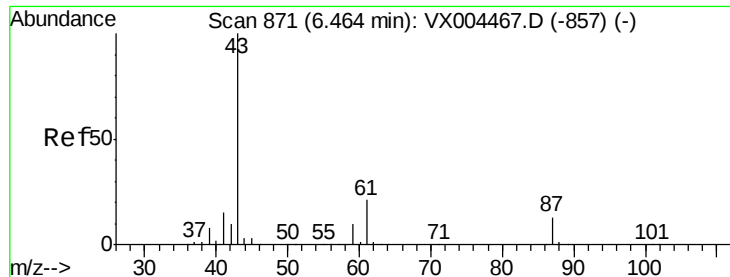
Tot Ion: 75 Resp: 15162  
 Ion Ratio Lower Upper  
 75 100  
 110 7.6 18.0 54.0#  
 77 0.0 24.6 36.8#



#38  
 Carbon Tetrachloride  
 Concen: 5.02 ug/l  
 RT: 5.67 min Scan# 741  
 Delta R.T. -0.11 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

Tgt Ion:117 Resp: 19898  
 Ion Ratio Lower Upper  
 117 100  
 119 6.9 78.8 118.2#  
 121 0.0 24.9 37.3#



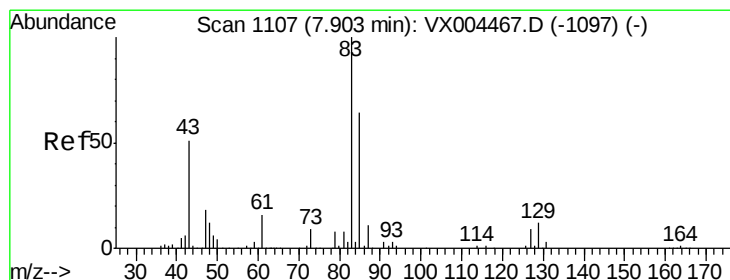
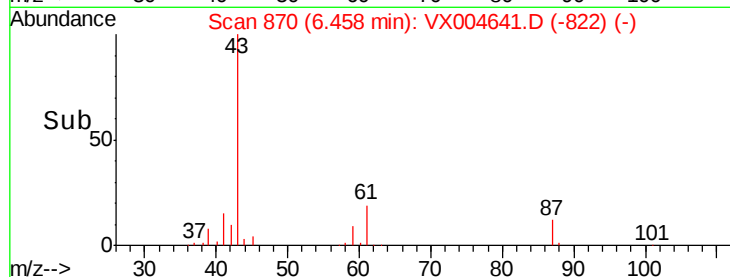
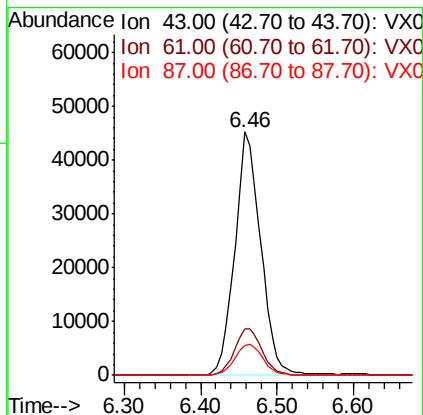
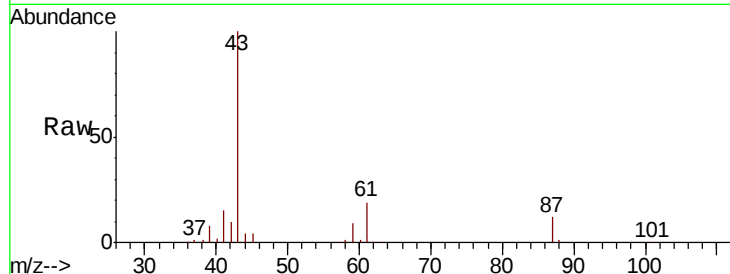


#43

Isopropyl Acetate  
 Concen: 17.42 ug/l  
 RT: 6.46 min Scan# 870  
 Delta R.T. -0.01 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

Instrument :  
 MSVOA\_X  
 ClientSampleId :

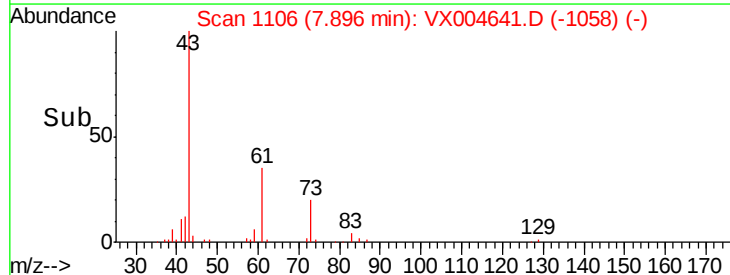
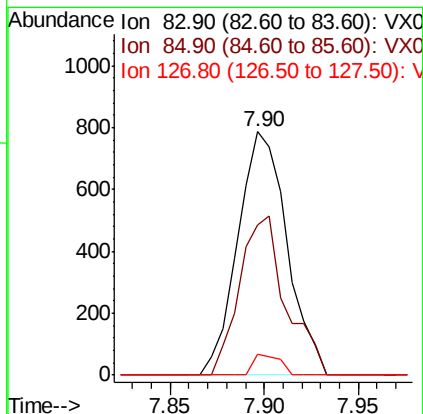
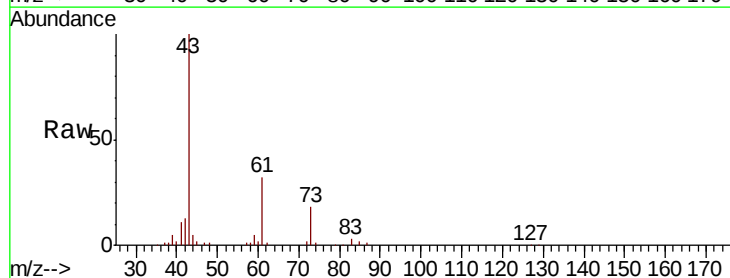
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 61      | 20.5  | 17.0  | 25.4  |
| 87      | 13.7  | 11.4  | 17.2  |

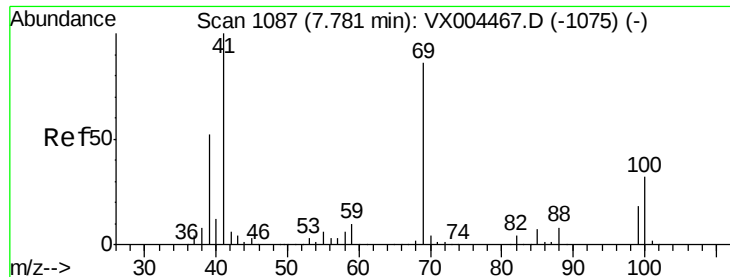


#47

Bromodichloromethane  
 Concen: 0.41 ug/l  
 RT: 7.90 min Scan# 1106  
 Delta R.T. -0.01 min  
 Lab File: VX004641.D  
 Acq: 18 Sep 2018 01:19

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 61.6  | 50.9  | 76.3  |
| 127     | 8.4   | 7.3   | 10.9  |

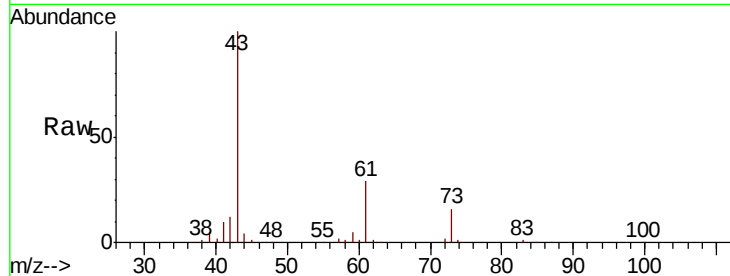




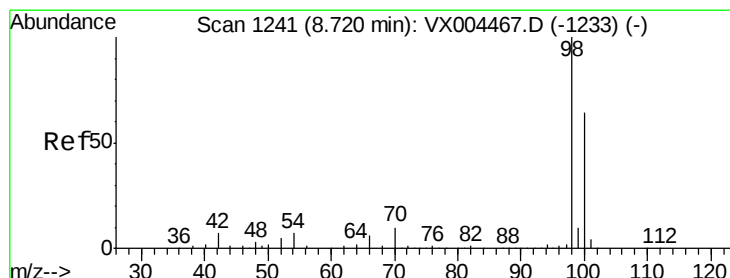
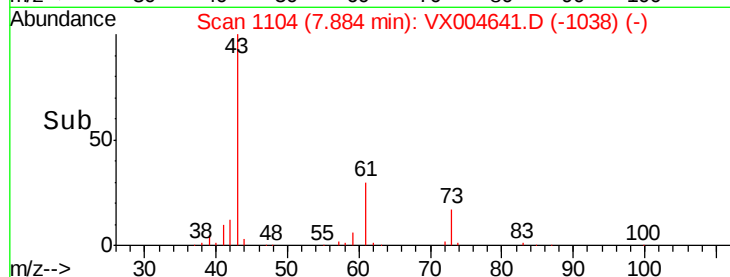
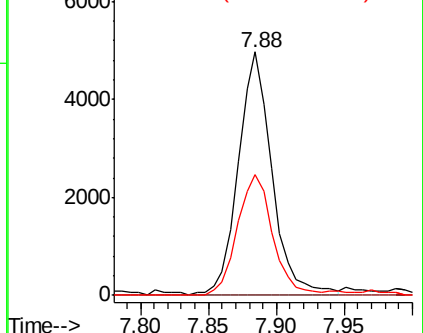
#48  
Methvl methacrylate  
Concen: 2.85 ug/l  
RT: 7.88 min Scan# 1104  
Delta R.T. 0.10 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion: 41 Resp: 8627  
Ion Ratio Lower Upper  
41 100  
69 0.0 70.2 105.4#  
39 51.8 42.7 64.1

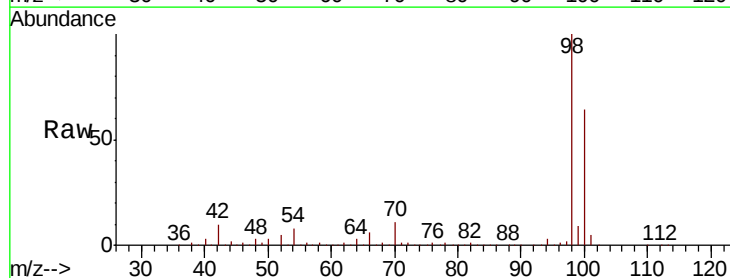


Abundance Ion 41.00 (40.70 to 41.70): VX0  
Ion 69.00 (68.70 to 69.70): VX0  
Ion 39.00 (38.70 to 39.70): VX0

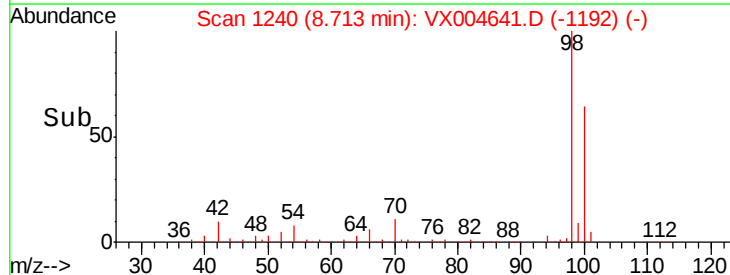
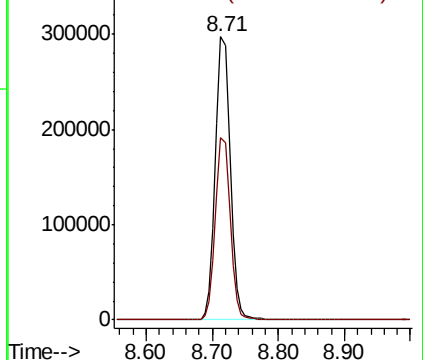


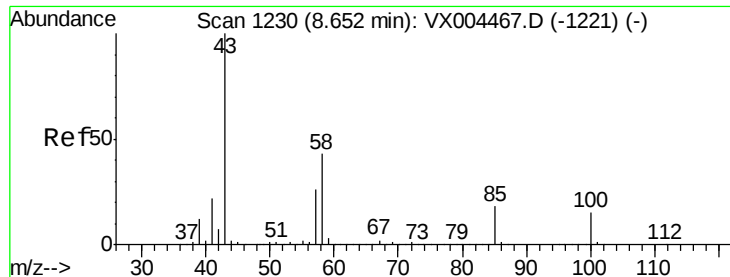
#50  
Toluene-d8  
Concen: 45.38 ug/l  
RT: 8.71 min Scan# 1240  
Delta R.T. -0.01 min  
Lab File: VX004641.D  
Acq: 18 Sep 2018 01:19

Tgt Ion: 98 Resp: 465169  
Ion Ratio Lower Upper  
98 100  
100 64.3 52.9 79.3



Abundance Ion 98.00 (97.70 to 98.70): VX0  
Ion 100.00 (99.70 to 100.70): V





#51

4-Methyl-2-Pentanone

Concen: 0.45 ug/l

RT: 8.62 min Scan# 1225

Delta R.T. -0.03 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

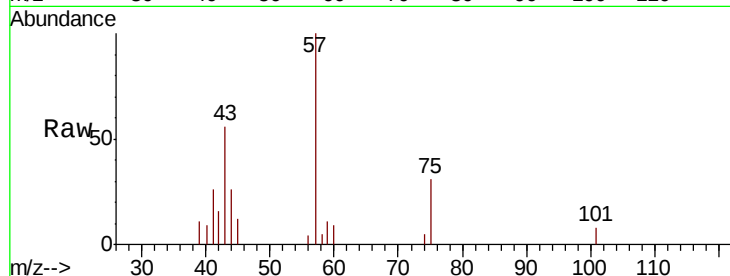
ClientSampleId :

Tot Ion: 43 Resp: 1924

Ion Ratio Lower Upper

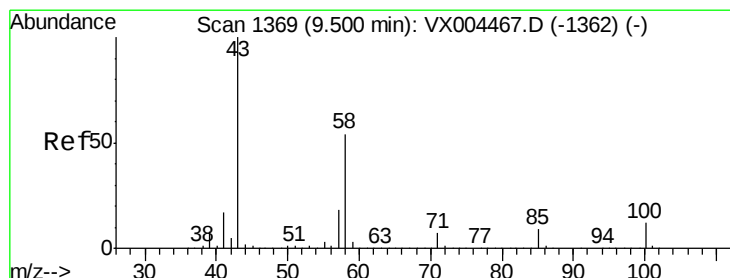
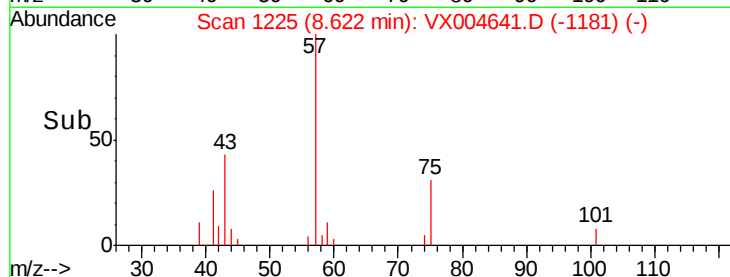
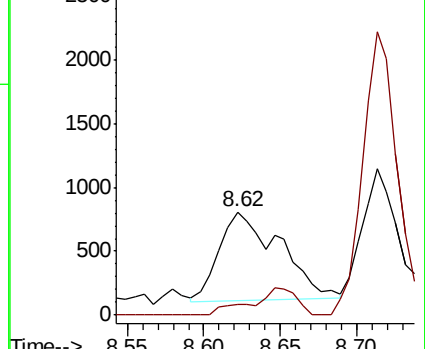
43 100

58 0.0 33.1 49.7#



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0



#59

2-Hexanone

Concen: 1.09 ug/l

RT: 9.55 min Scan# 1377

Delta R.T. 0.05 min

Lab File: VX004641.D

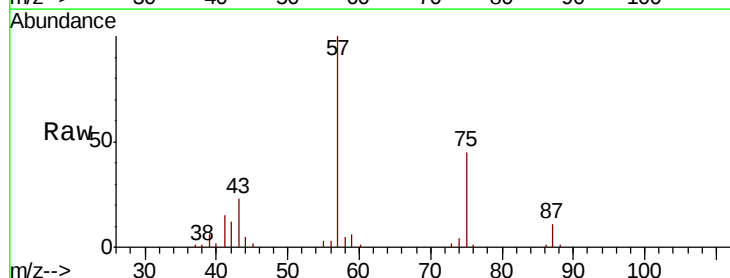
Acq: 18 Sep 2018 01:19

Tgt Ion: 43 Resp: 3614

Ion Ratio Lower Upper

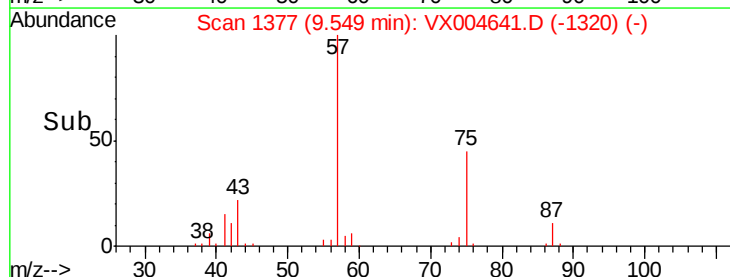
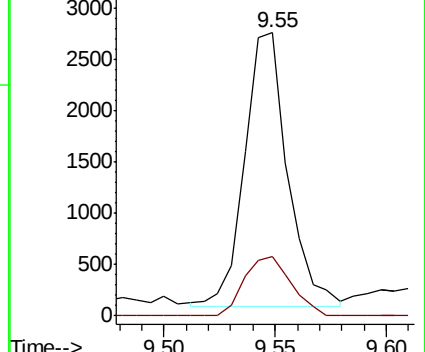
43 100

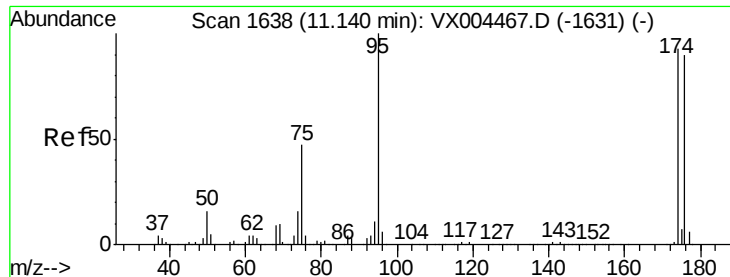
58 23.4 29.0 87.0#



Abundance Ion 43.00 (42.70 to 43.70): VX0

Ion 58.00 (57.70 to 58.70): VX0





#62

4-Bromofluorobenzene

Concen: 43.97 ug/l

RT: 11.14 min Scan# 1638

Delta R.T. -0.00 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

ClientSampleId :

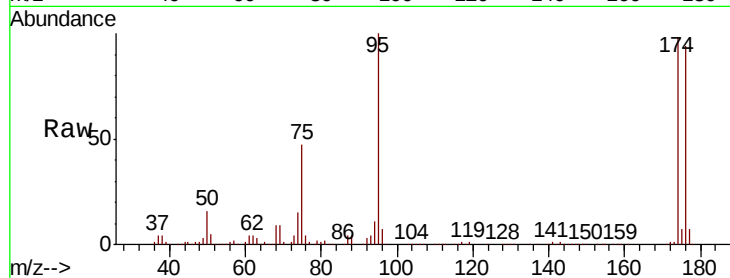
Tot Ion: 95 Resp: 160909

Ion Ratio Lower Upper

95 100

174 95.9 0.0 185.2

176 92.1 0.0 178.6



Abundance Ion 94.90 (94.60 to 95.60): VX004467.D (-1631) (-)

Ion 173.80 (173.50 to 174.50): VX004467.D (-1631) (-)

Ion 175.80 (175.50 to 176.50): VX004467.D (-1631) (-)

11.14

150000

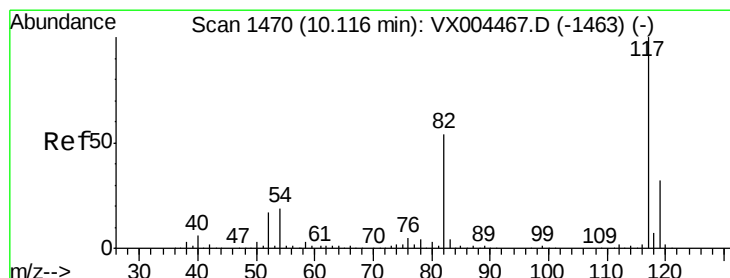
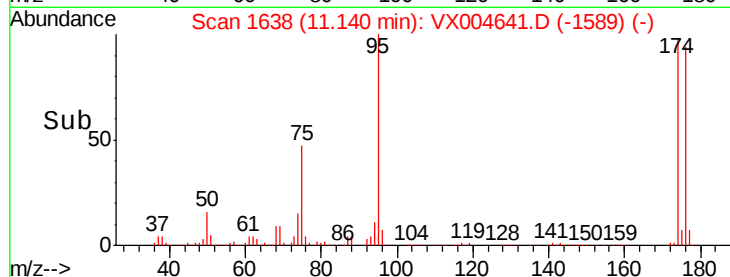
100000

50000

0

Time-->

11.10 11.20



#63

Chlorobenzene-d5

Concen: 50.00 ug/l

RT: 10.12 min Scan# 1470

Delta R.T. -0.00 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

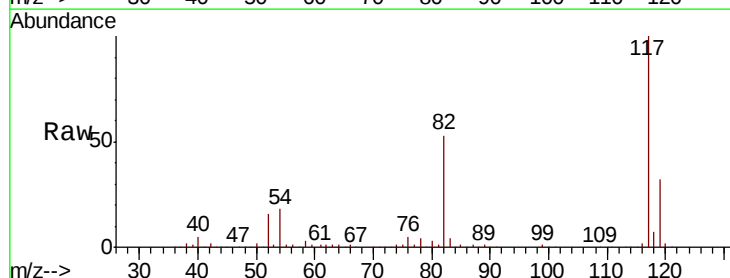
Tgt Ion: 117 Resp: 317287

Ion Ratio Lower Upper

117 100

82 52.8 47.8 71.6

119 32.3 29.3 43.9



Abundance Ion 116.90 (116.60 to 117.60): VX004467.D (-1463) (-)

Ion 82.00 (81.70 to 82.70): VX004467.D (-1463) (-)

Ion 118.90 (118.60 to 119.60): VX004467.D (-1463) (-)

10.12

300000

250000

200000

150000

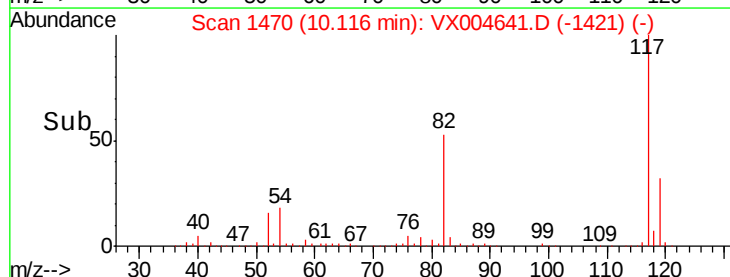
100000

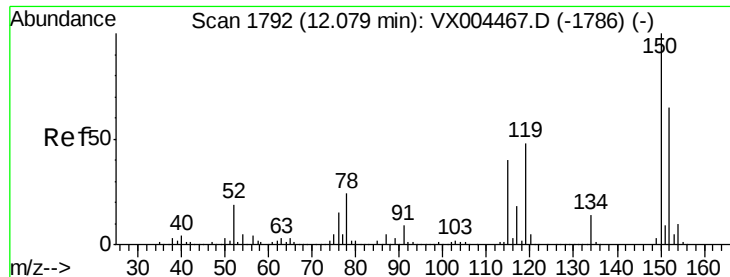
50000

0

Time-->

10.00 10.10 10.20 10.30





#72

1,4-Dichlorobenzene-d4

Concen: 50.00 ug/l

RT: 12.08 min Scan# 1792

Delta R.T. -0.00 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

ClientSampleId :

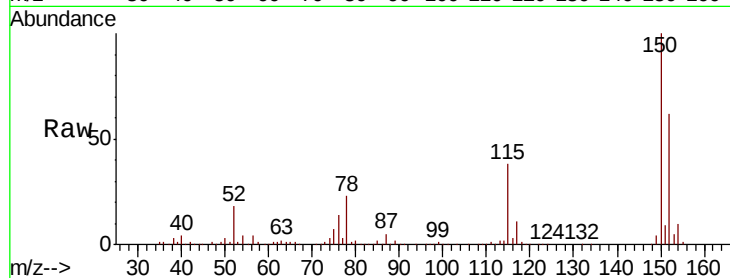
Tot Ion:152 Resp: 206734

Ion Ratio Lower Upper

152 100

115 56.0 39.0 117.0

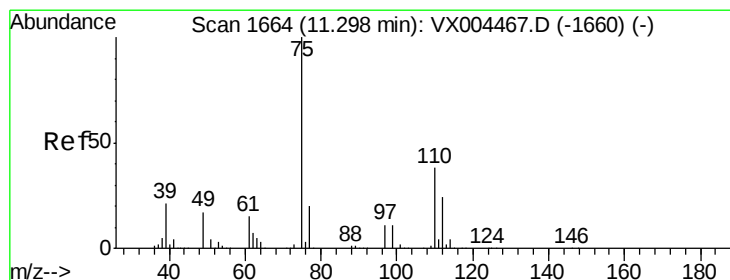
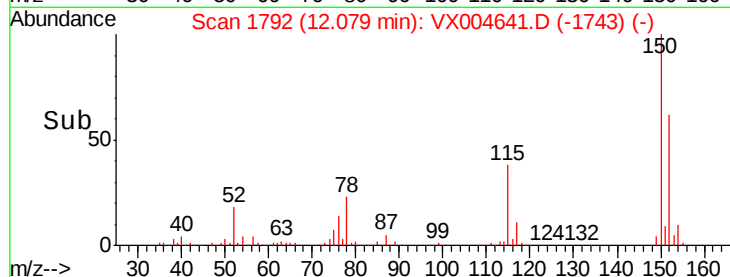
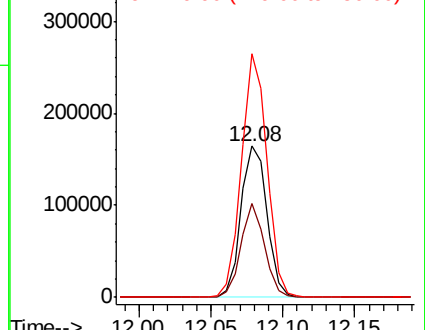
150 157.9 0.0 351.0



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: 18.18 ug/l

RT: 11.14 min Scan# 1638

Delta R.T. -0.16 min

Lab File: VX004641.D

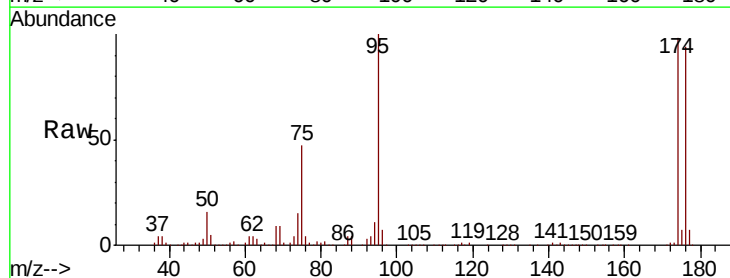
Acq: 18 Sep 2018 01:19

Tgt Ion: 75 Resp: 75610

Ion Ratio Lower Upper

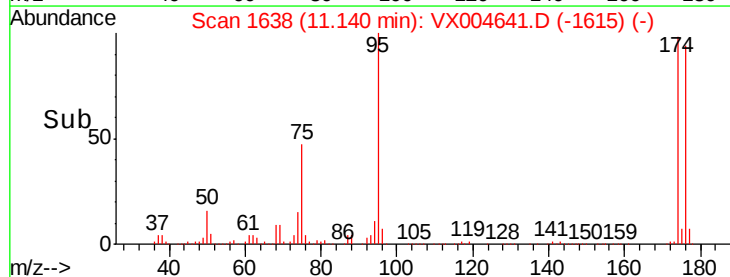
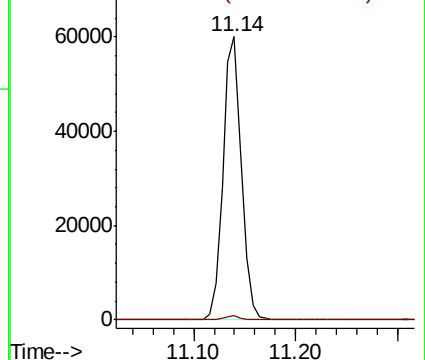
75 100

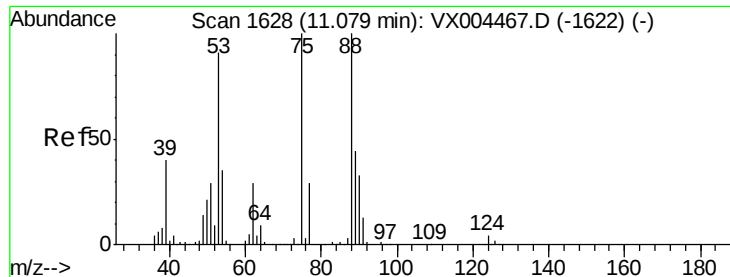
77 1.4 20.2 60.6#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 77.00 (76.70 to 77.70): VX0





#81

trans-1,4-Dichloro-2-butene

Concen: 57.94 ug/l

RT: 11.14 min Scan# 1638

Delta R.T. 0.06 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

Instrument :

MSVOA\_X

ClientSampleId :

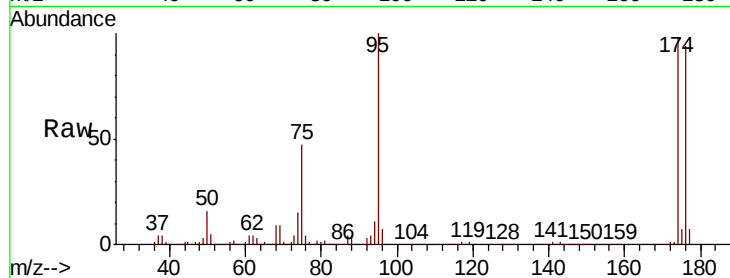
Tot Ion: 75 Resp: 75610

Ion Ratio Lower Upper

75 100

53 0.2 80.1 120.1#

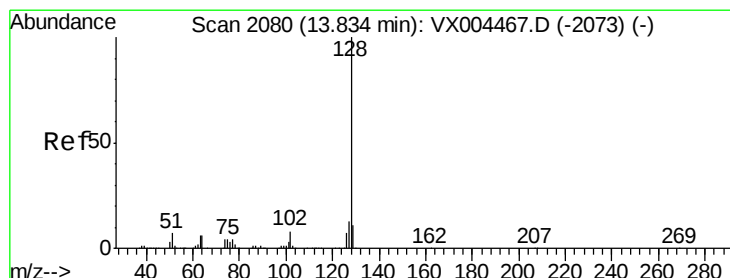
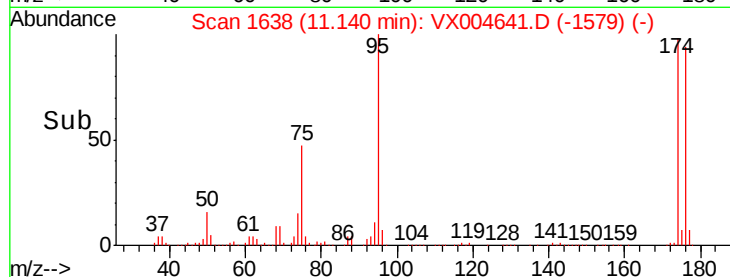
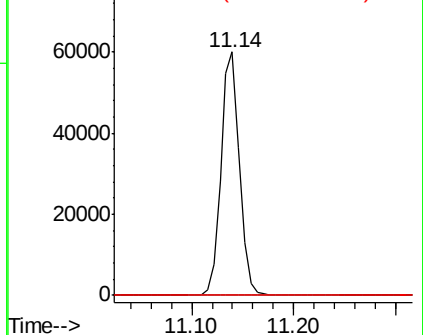
89 0.0 37.2 55.8#



Abundance Ion 74.90 (74.60 to 75.60): VX0

Ion 53.00 (52.70 to 53.70): VX0

Ion 88.90 (88.60 to 89.60): VX0



#95

Naphthalene

Concen: 1.62 ug/l

RT: 13.83 min Scan# 2080

Delta R.T. -0.00 min

Lab File: VX004641.D

Acq: 18 Sep 2018 01:19

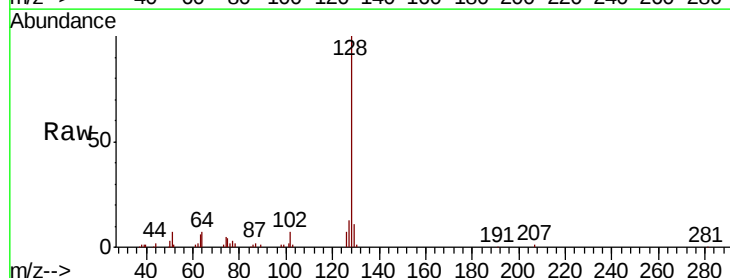
Tgt Ion: 128 Resp: 22898

Ion Ratio Lower Upper

128 100

127 12.8 10.2 15.2

129 10.0 8.6 12.8



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V

