

Data Path : Z:\VOASRV\HPCHEM1\MSVOA X\DATA\VX100819\  
 Data File : VX012917.D  
 Acq On : 09 Oct 2019 03:08  
 Operator : JC/SP  
 Sample : K5154-21  
 Misc : 5.0mL/MSVOA X/WATER  
 ALS Vial : 41 Sample Multiplier: 1

Instrument :  
 MSVOA\_X  
 ClientSampleId :

Quant Time: Oct 09 03:48:05 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X100819W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Oct 09 01:51:23 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.65  | 168  | 185130   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 6.85  | 114  | 313697   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 10.11 | 117  | 272067   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.07 | 152  | 110227   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units   | Dev(Min) |
|-----------------------------|-------|------|----------|-------|---------|----------|
| 33) 1,2-Dichloroethane-d4   | 6.05  | 65   | 122576   | 52.97 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 105.94% |          |
| 35) Dibromofluoromethane    | 5.48  | 113  | 91905    | 51.05 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 102.10% |          |
| 50) Toluene-d8              | 8.71  | 98   | 369887   | 52.67 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 105.34% |          |
| 62) 4-Bromofluorobenzene    | 11.14 | 95   | 127099   | 46.58 | ug/l    | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 93.16%  |          |

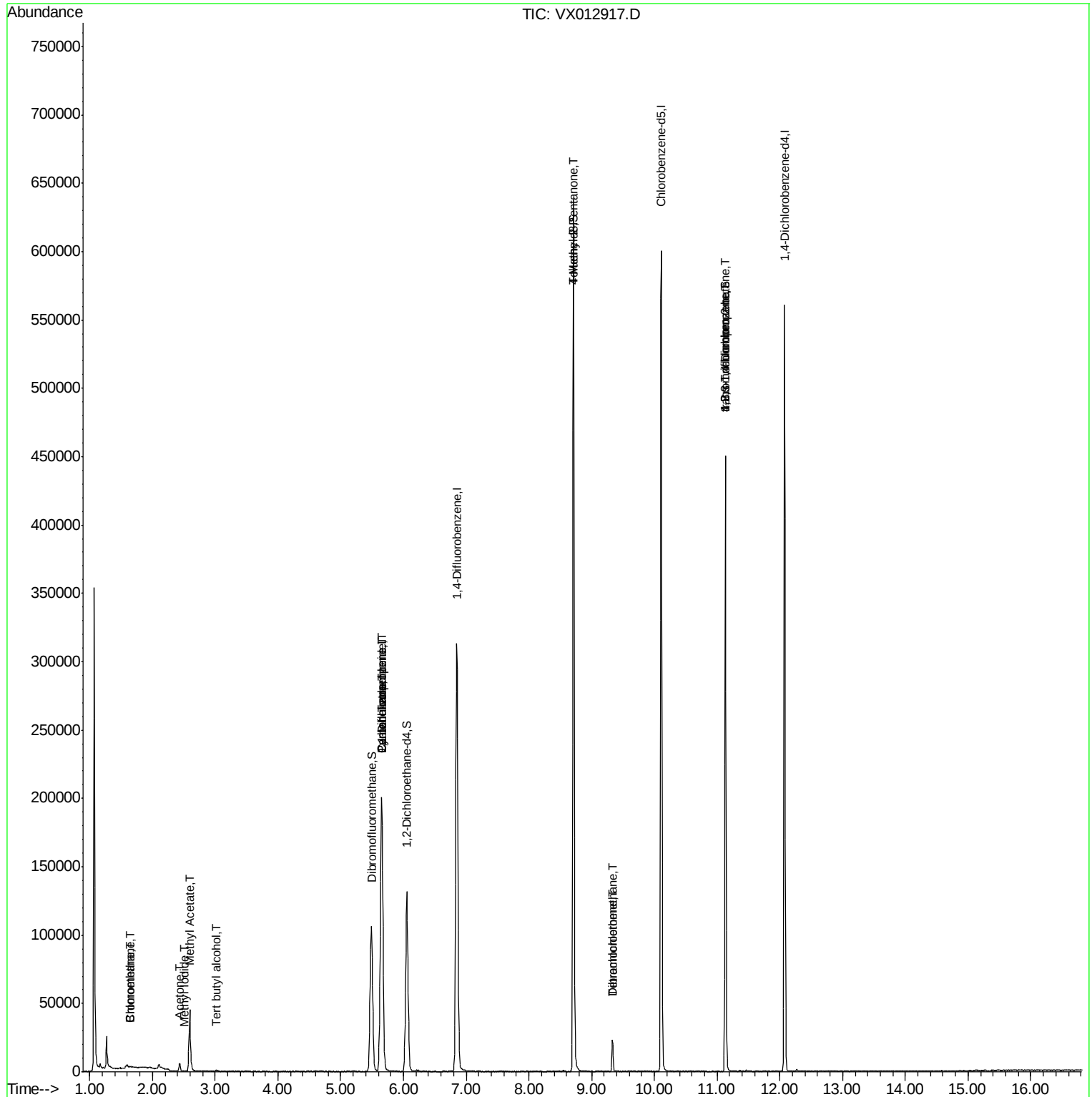
| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Qvalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 5) Bromomethane                | 1.65  | 94   | 368      | 0.418  | ug/l # | 46     |
| 6) Chloroethane                | 1.65  | 64   | 3305     | 2.901  | ug/l # | 58     |
| 10) Methyl Iodide              | 2.51  | 142  | 41       | 5.099  | ug/l # | 40     |
| 11) Tert butyl alcohol         | 3.01  | 59   | 727      | 1.185  | ug/l # | 72     |
| 16) Acetone                    | 2.44  | 43   | 5990     | 4.911  | ug/l   | 99     |
| 18) Methyl Acetate             | 2.59  | 43   | 12204    | 4.222  | ug/l # | 51     |
| 31) Cyclohexane                | 5.65  | 56   | 4063     | 1.210  | ug/l # | 1      |
| 36) 1,1-Dichloropropene        | 5.65  | 75   | 15165    | 5.498  | ug/l # | 50     |
| 38) Carbon Tetrachloride       | 5.65  | 117  | 19655    | 7.322  | ug/l # | 17     |
| 51) 4-Methyl-2-Pentanone       | 8.71  | 43   | 1751     | 0.567  | ug/l # | 1      |
| 60) Dibromochloromethane       | 9.33  | 129  | 3989     | 3.530  | ug/l # | 10     |
| 64) Tetrachloroethene          | 9.33  | 164  | 4026     | 2.133  | ug/l   | 94     |
| 76) 1,2,3-Trichloropropane     | 11.13 | 75   | 63615    | 26.020 | ug/l # | 33     |
| 81) trans-1,4-Dichloro-2-buten | 11.13 | 75   | 63615    | 65.529 | ug/l # | 10     |

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

```
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Data File : VX012917.D
Acq On    : 09 Oct 2019   03:08
Operator  : JC/SP
Sample    : K5154-21
Misc      : 5.0mL/MSVOA X/WATER
ALS Vial  : 41      Sample Multiplier: 1
```

**Instrument :**  
MSVOA\_X  
**ClientSampleId :**

Quant Time: Oct 09 03:48:05 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_X\METHOD\82X100819W.M  
Quant Title : SW846 8260  
QLast Update : Wed Oct 09 01:51:23 2019  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.65 min Scan# 782

Delta R.T. -0.00 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

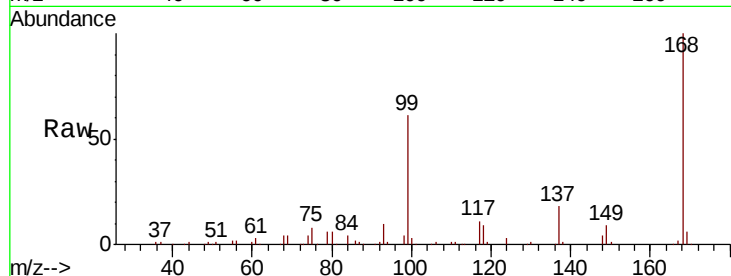
Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion:168 Resp: 185130

Ion Ratio Lower Upper

168 100

99 61.0 49.4 74.0



Abundance Ion 167.90 (167.60 to 168.60): V

Ion 98.90 (98.60 to 99.60): VX0

5.65

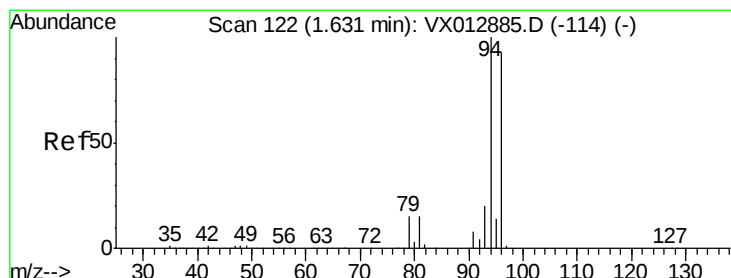
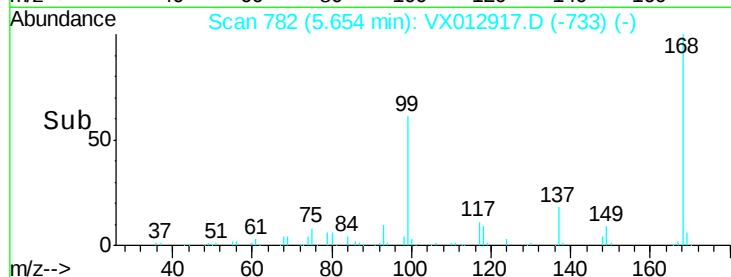
60000

40000

20000

0

Time--> 5.50 5.60 5.70 5.80



#5

Bromomethane

Concen: 0.418 ug/l

RT: 1.65 min Scan# 125

Delta R.T. 0.02 min

Lab File: VX012917.D

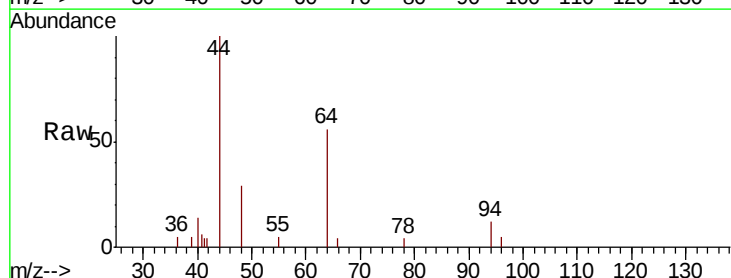
Acq: 09 Oct 2019 03:08

Tgt Ion: 94 Resp: 368

Ion Ratio Lower Upper

94 100

96 41.2 74.7 112.1#



Abundance Ion 93.90 (93.60 to 94.60): VX0

Ion 95.90 (95.60 to 96.60): VX0

250

200

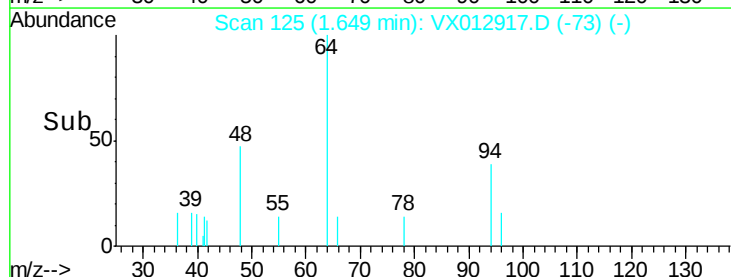
150

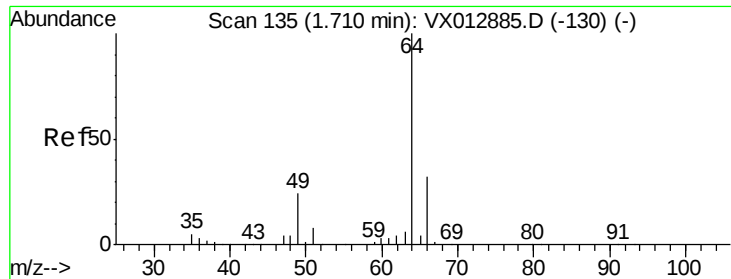
100

50

0

Time--> 1.60 1.65





#6

Chloroethane

Concen: 2.901 ug/l

RT: 1.65 min Scan# 125

Delta R.T. -0.06 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

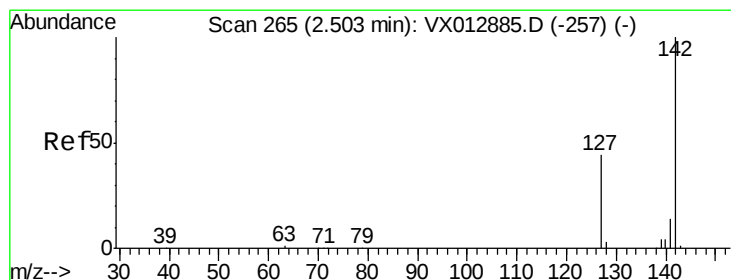
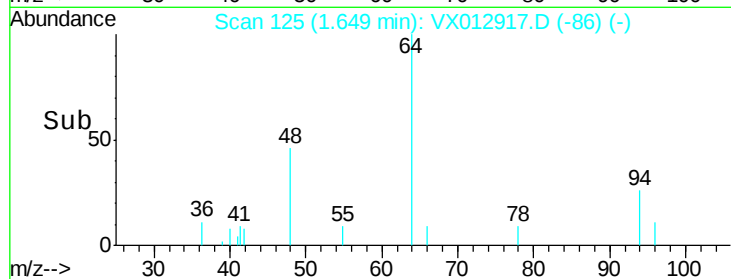
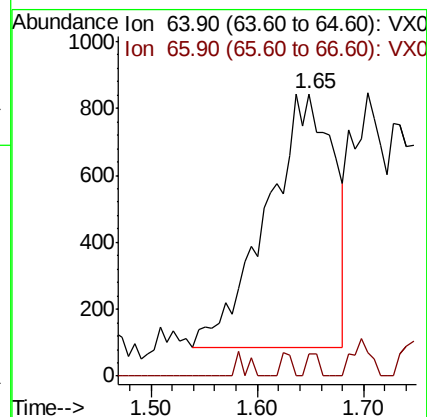
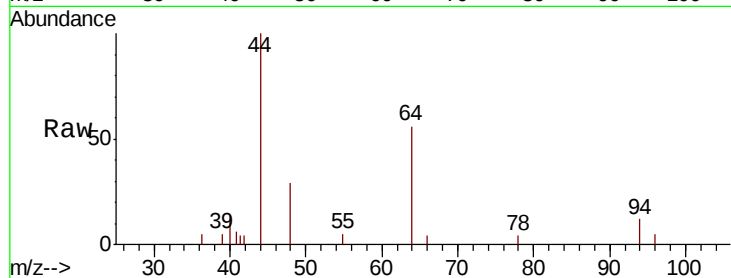
Instrument :  
MSVOA\_X  
ClientSampled :

Tot Ion: 64 Resp: 3305

Ion Ratio Lower Upper

64 100

66 8.9 25.6 38.4#



#10

Methyl Iodide

Concen: 5.099 ug/l

RT: 2.51 min Scan# 266

Delta R.T. 0.01 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

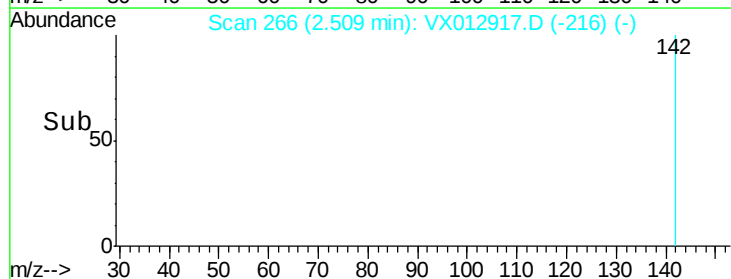
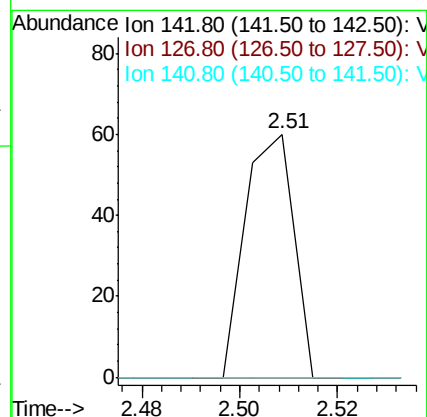
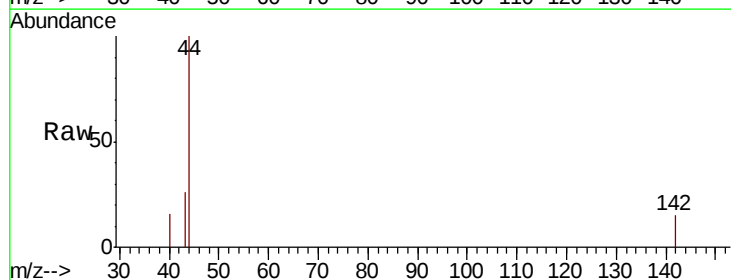
Tgt Ion: 142 Resp: 41

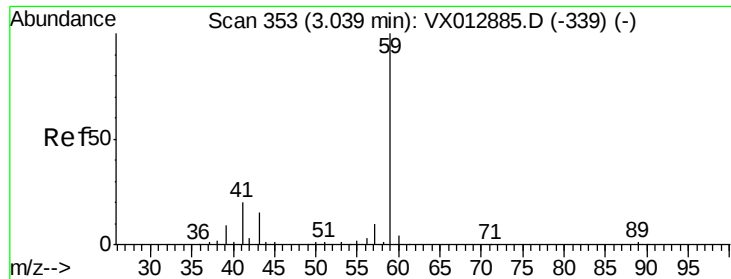
Ion Ratio Lower Upper

142 100

127 0.0 34.9 52.3#

141 0.0 11.6 17.4#

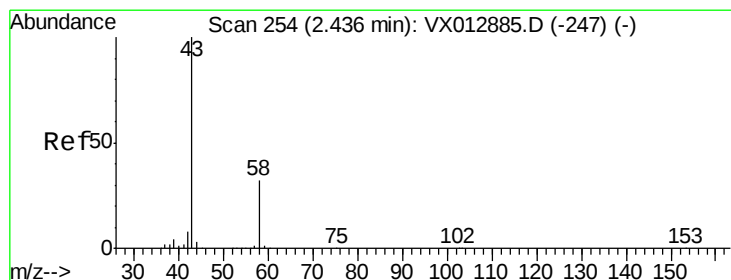
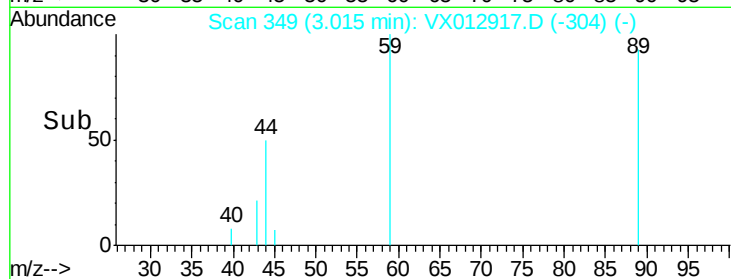
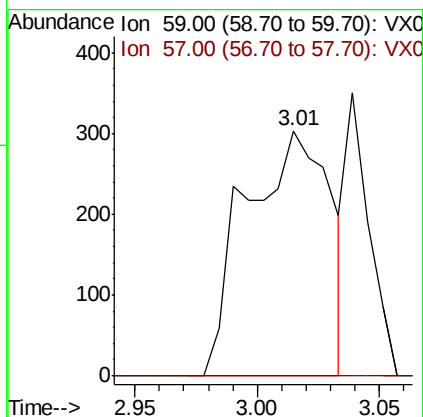
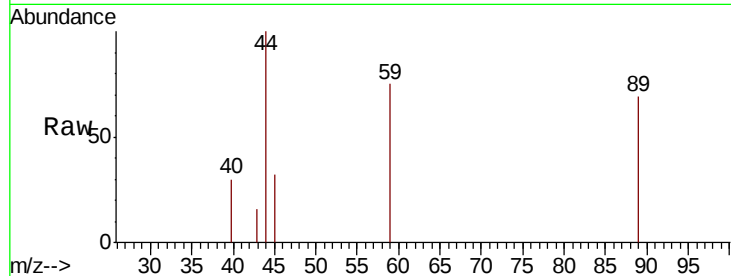




#11  
Tert butyl alcohol  
Concen: 1.185 ug/l  
RT: 3.01 min Scan# 349  
Delta R.T. -0.02 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

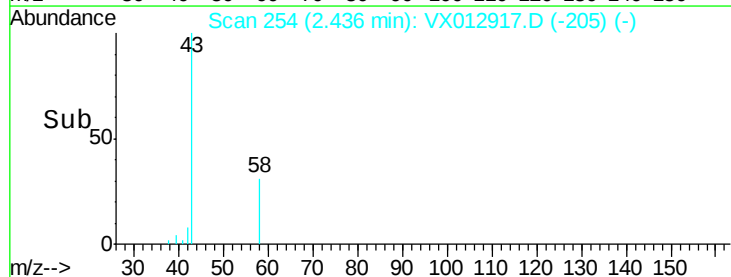
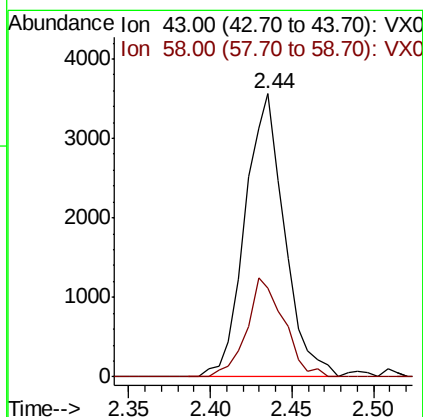
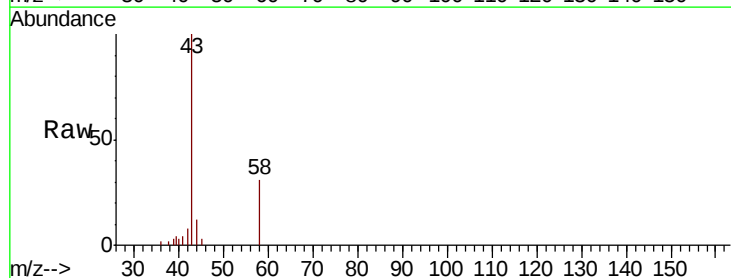
Instrument :  
MSVOA\_X  
ClientSampled :

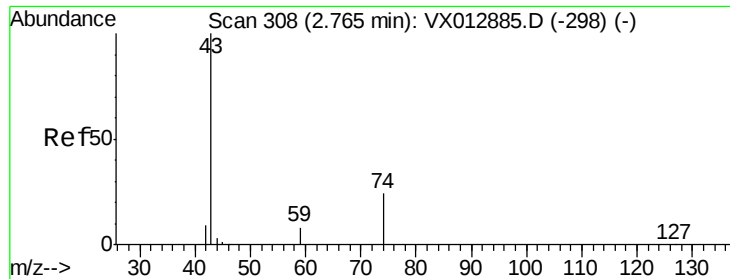
Tot Ion: 59 Resp: 727  
Ion Ratio Lower Upper  
59 100  
57 0.0 8.3 12.5#



#16  
Acetone  
Concen: 4.911 ug/l  
RT: 2.44 min Scan# 254  
Delta R.T. -0.00 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

Tgt Ion: 43 Resp: 5990  
Ion Ratio Lower Upper  
43 100  
58 31.2 25.4 38.2

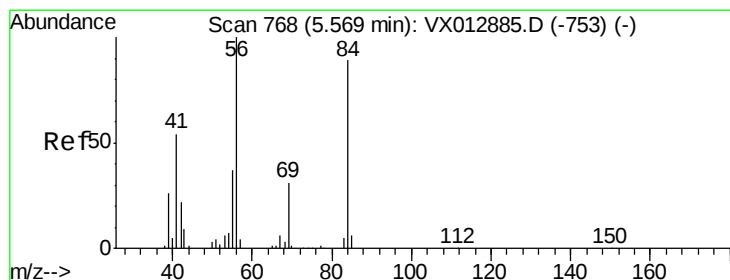
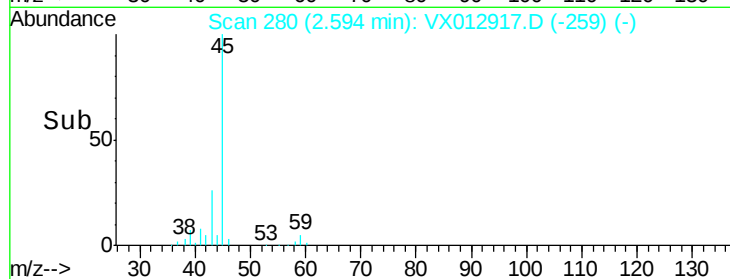
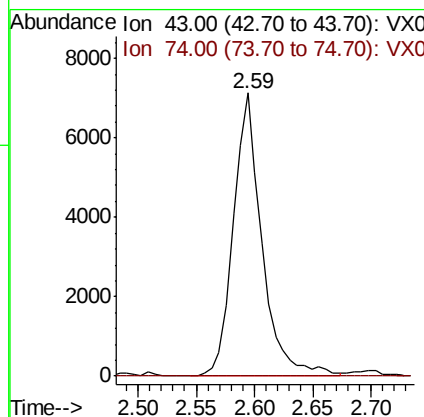
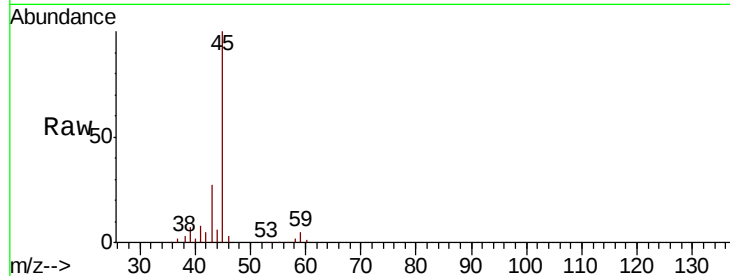




#18  
Methvl Acetate  
Concen: 4.222 ug/l  
RT: 2.59 min Scan# 280  
Delta R.T. -0.17 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

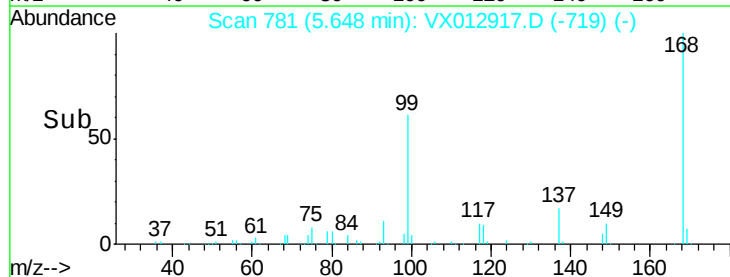
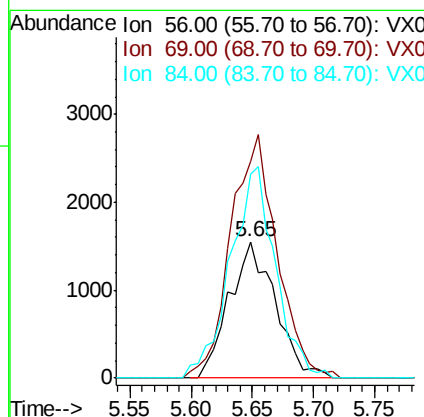
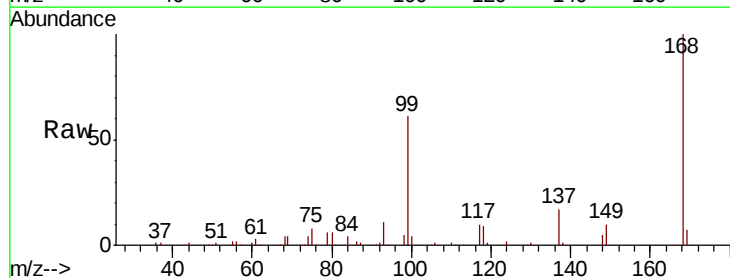
Instrument :  
MSVOA\_X  
ClientSampleId :

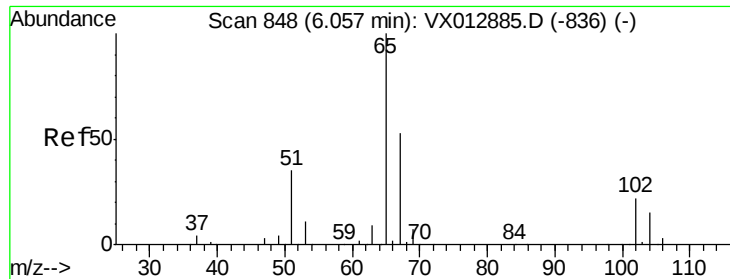
Tot Ion: 43 Resp: 12204  
Ion Ratio Lower Upper  
43 100  
74 0.0 19.2 28.8#



#31  
Cyclohexane  
Concen: 1.210 ug/l  
RT: 5.65 min Scan# 781  
Delta R.T. 0.08 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

Tgt Ion: 56 Resp: 4063  
Ion Ratio Lower Upper  
56 100  
69 159.2 25.2 37.8#  
84 149.4 71.3 106.9#

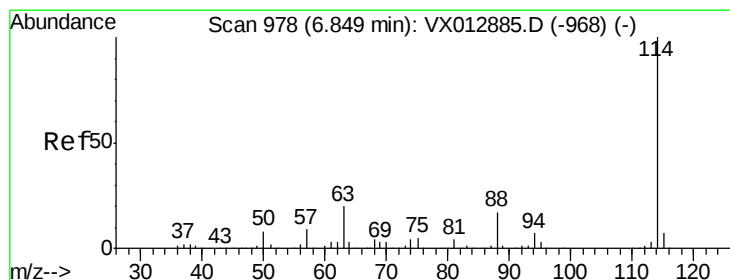
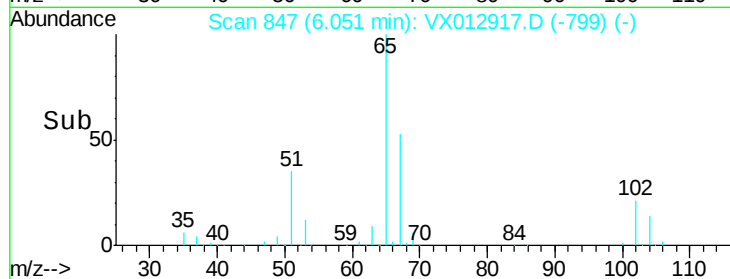
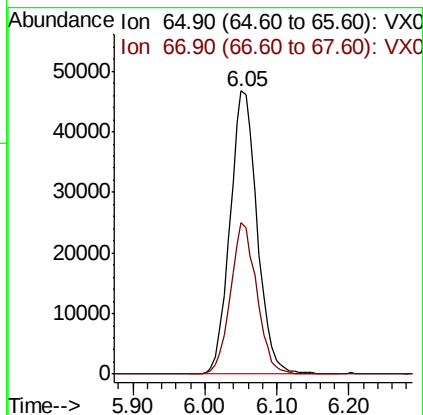
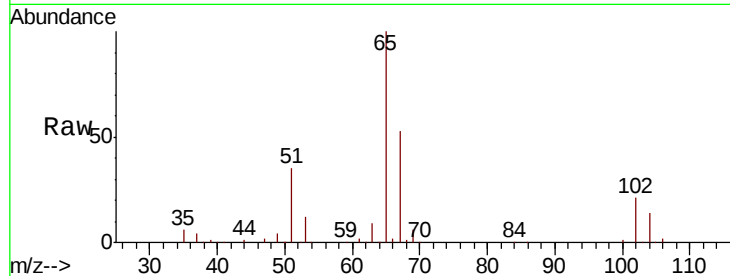




#33  
 1,2-Dichloroethane-d4  
 Concen: 52.974 ug/l  
 RT: 6.05 min Scan# 847  
 Delta R.T. -0.01 min  
 Lab File: VX012917.D  
 Acq: 09 Oct 2019 03:08

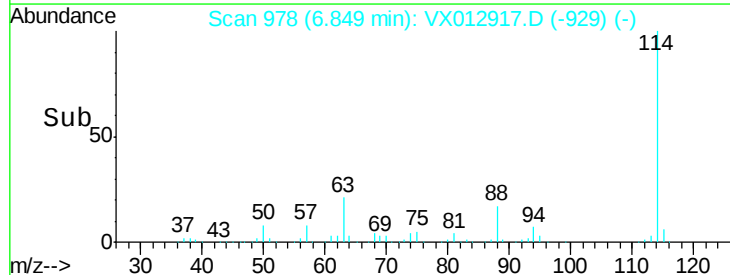
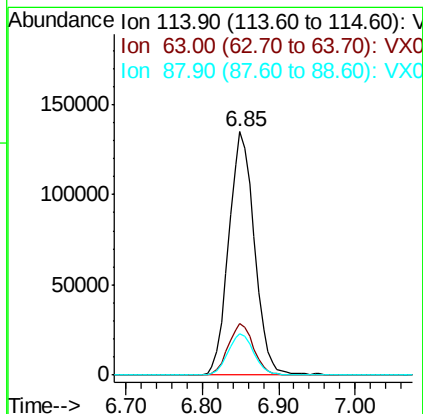
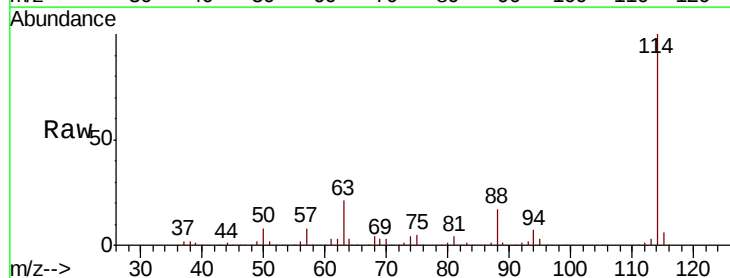
Instrument :  
 MSVOA\_X  
 ClientSampled :

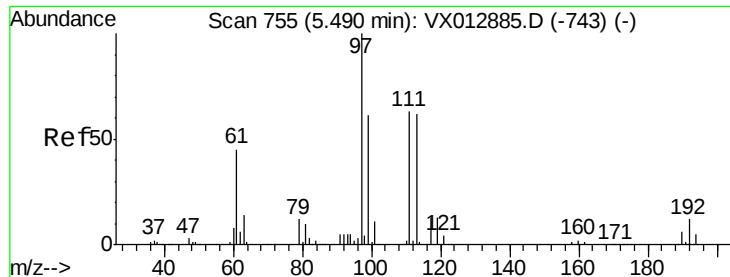
Tot Ion: 65 Resp: 122576  
 Ion Ratio Lower Upper  
 65 100  
 67 52.1 0.0 104.4



#34  
 1,4-Difluorobenzene  
 Concen: 50.000 ug/l  
 RT: 6.85 min Scan# 978  
 Delta R.T. -0.00 min  
 Lab File: VX012917.D  
 Acq: 09 Oct 2019 03:08

Tgt Ion: 114 Resp: 313697  
 Ion Ratio Lower Upper  
 114 100  
 63 21.4 0.0 40.8  
 88 17.0 0.0 33.8

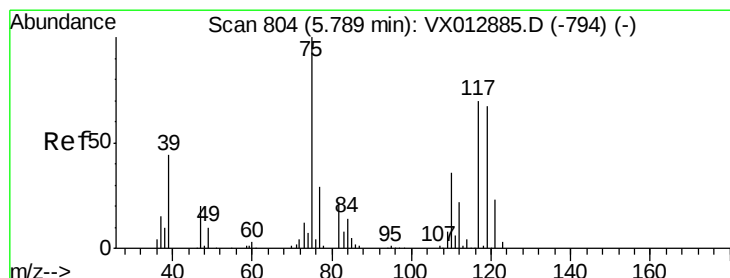
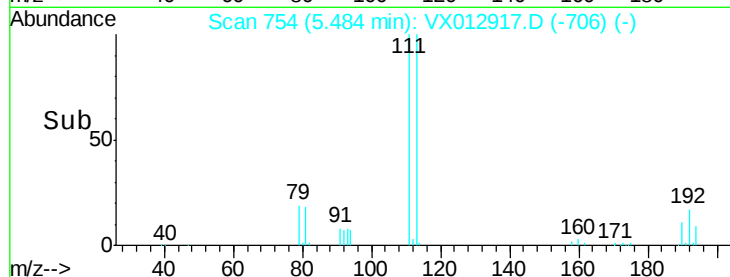
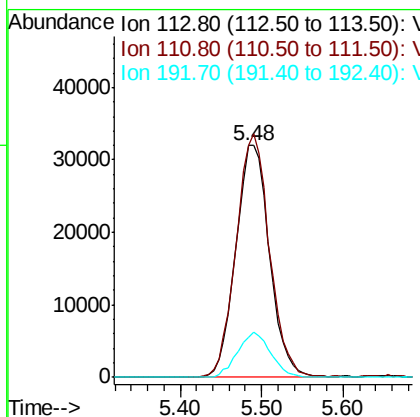
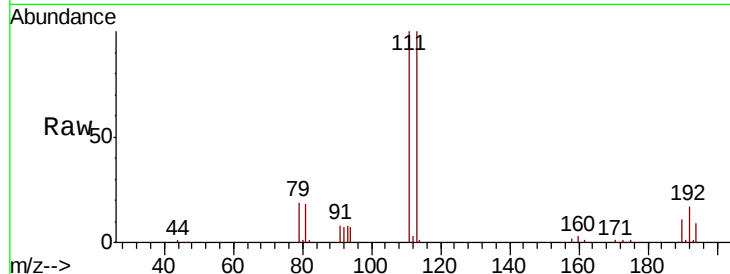




#35  
 Dibromofluoromethane  
 Concen: 51.045 ug/l  
 RT: 5.48 min Scan# 754  
 Delta R.T. -0.01 min  
 Lab File: VX012917.D  
 Acq: 09 Oct 2019 03:08

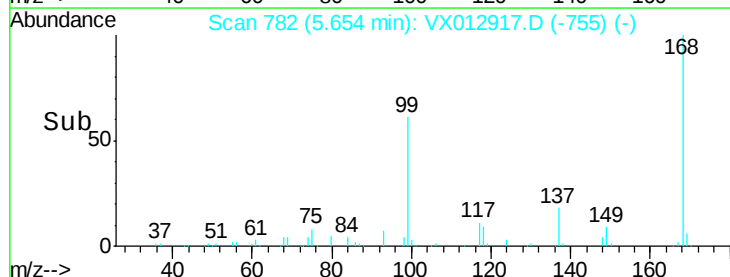
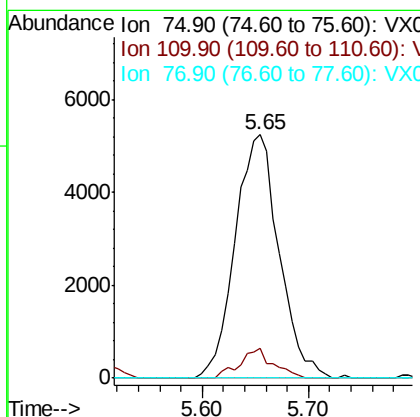
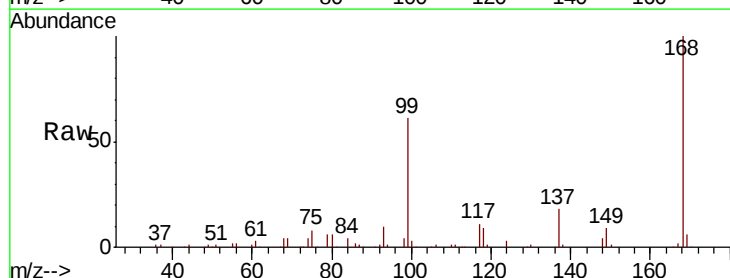
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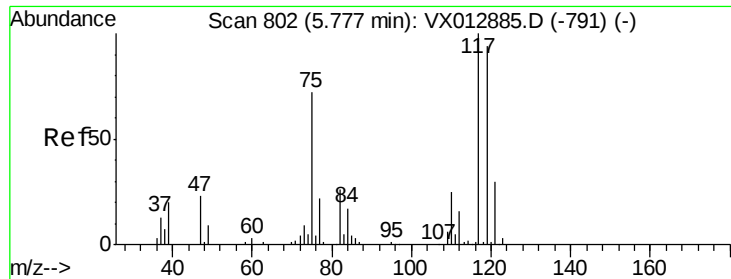
Tot Ion:113 Resp: 91905  
 Ion Ratio Lower Upper  
 113 100  
 111 103.5 83.2 124.8  
 192 19.3 15.4 23.2



#36  
 1,1-Dichloropropene  
 Concen: 5.498 ug/l  
 RT: 5.65 min Scan# 782  
 Delta R.T. -0.13 min  
 Lab File: VX012917.D  
 Acq: 09 Oct 2019 03:08

Tgt Ion: 75 Resp: 15165  
 Ion Ratio Lower Upper  
 75 100  
 110 9.2 17.6 52.9#  
 77 0.0 24.4 36.6#

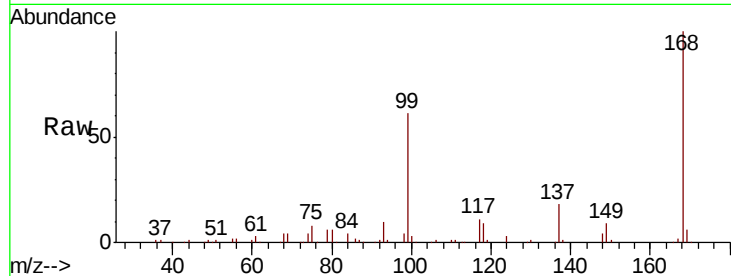




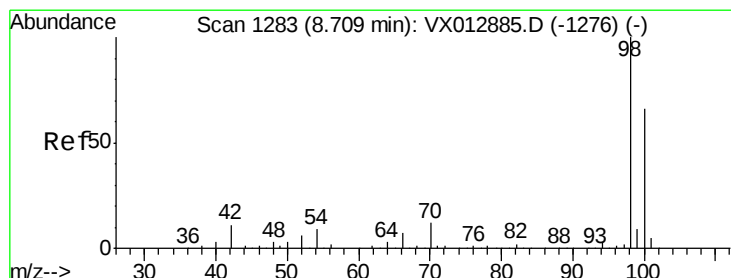
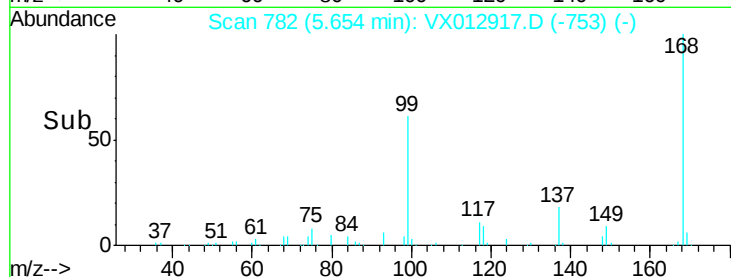
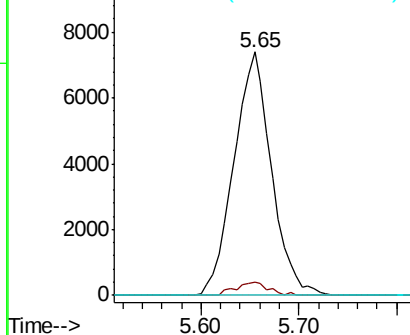
#38  
Carbon Tetrachloride  
Concen: 7.322 ug/l  
RT: 5.65 min Scan# 782  
Delta R.T. -0.12 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

Instrument :  
MSVOA\_X  
ClientSampleId :

Tot Ion:117 Resp: 19655  
Ion Ratio Lower Upper  
117 100  
119 5.2 74.5 111.7#  
121 0.0 24.2 36.4#

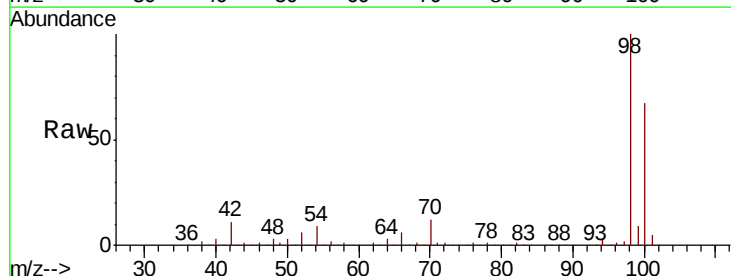


Abundance Ion 116.80 (116.50 to 117.50): V  
Ion 118.80 (118.50 to 119.50): V  
Ion 120.80 (120.50 to 121.50): V

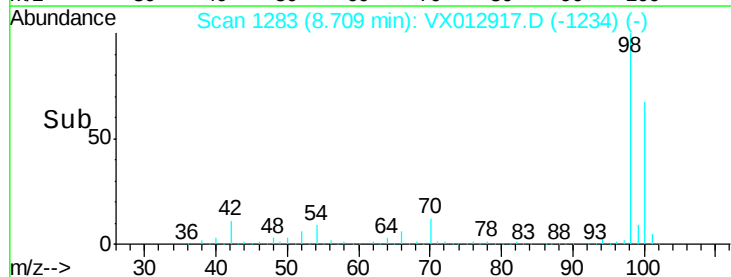
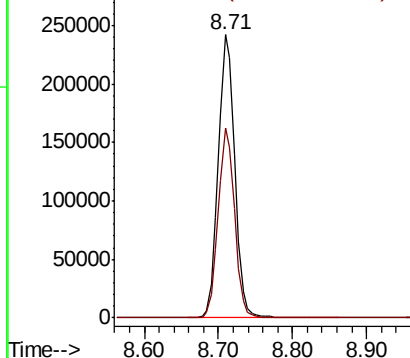


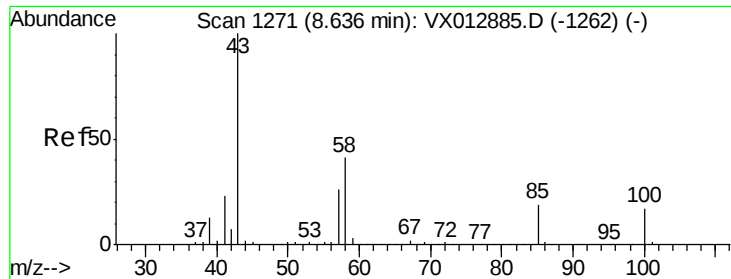
#50  
Toluene-d8  
Concen: 52.674 ug/l  
RT: 8.71 min Scan# 1283  
Delta R.T. -0.00 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

Tgt Ion: 98 Resp: 369887  
Ion Ratio Lower Upper  
98 100  
100 66.7 53.4 80.2



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: 0.567 ug/l

RT: 8.71 min Scan# 1283

Delta R.T. 0.07 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

Instrument :

MSVOA\_X

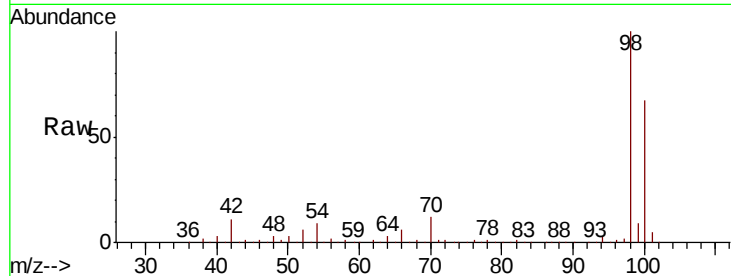
ClientSampled :

Tot Ion: 43 Resp: 1751

Ion Ratio Lower Upper

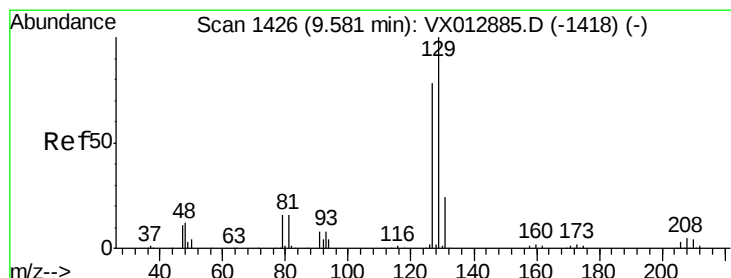
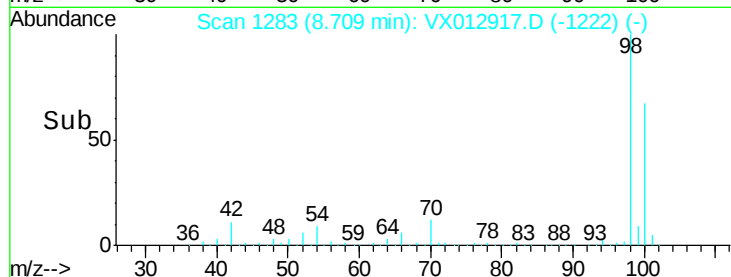
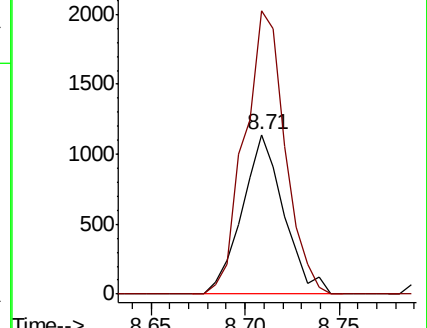
43 100

58 172.3 32.4 48.6#



Abundance Ion 43.00 (42.70 to 43.70): VX012885.D (-1262) (-)

Ion 58.00 (57.70 to 58.70): VX012885.D (-1262) (-)



#60

Dibromochloromethane

Concen: 3.530 ug/l

RT: 9.33 min Scan# 1385

Delta R.T. -0.25 min

Lab File: VX012917.D

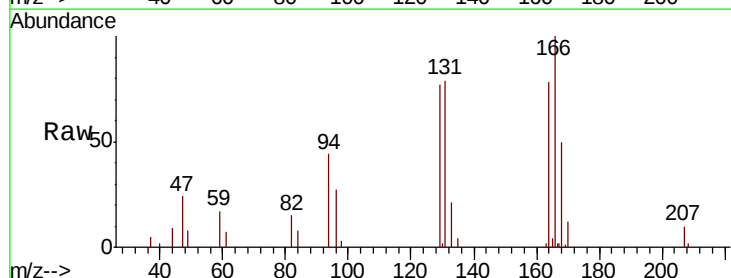
Acq: 09 Oct 2019 03:08

Tgt Ion: 129 Resp: 3989

Ion Ratio Lower Upper

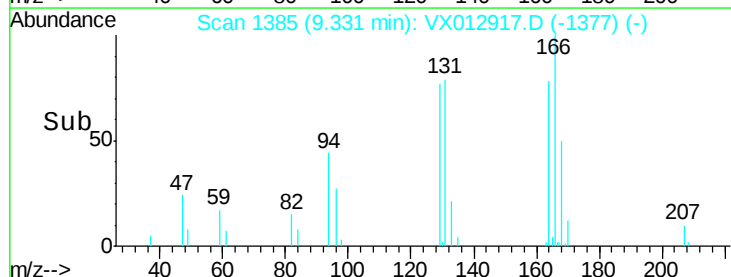
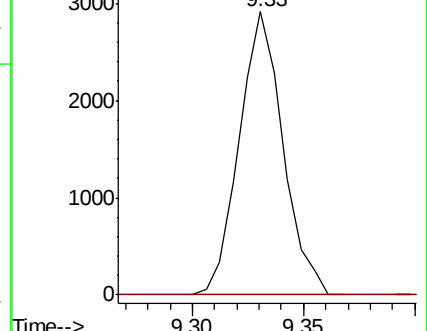
129 100

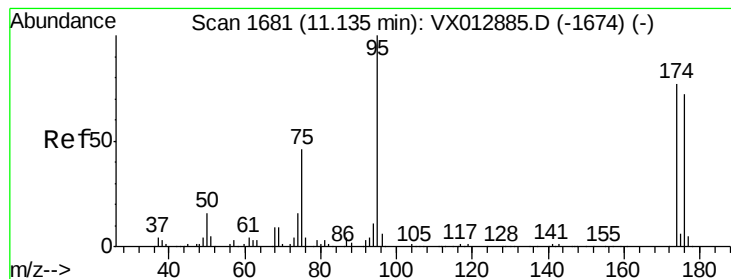
127 0.0 38.9 116.7#



Abundance Ion 128.80 (128.50 to 129.50): VX012885.D (-1418) (-)

Ion 126.80 (126.50 to 127.50): VX012885.D (-1418) (-)





#62

4-Bromofluorobenzene

Concen: 46.581 ug/l

RT: 11.14 min Scan# 1681

Delta R.T. -0.00 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

Instrument :

MSVOA\_X

ClientSampleId :

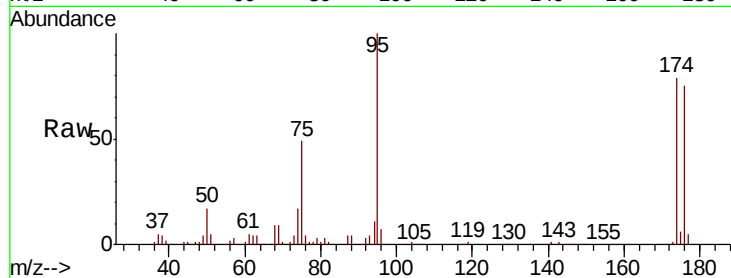
Tot Ion: 95 Resp: 127099

Ion Ratio Lower Upper

95 100

174 73.4 0.0 143.4

176 70.0 0.0 136.0

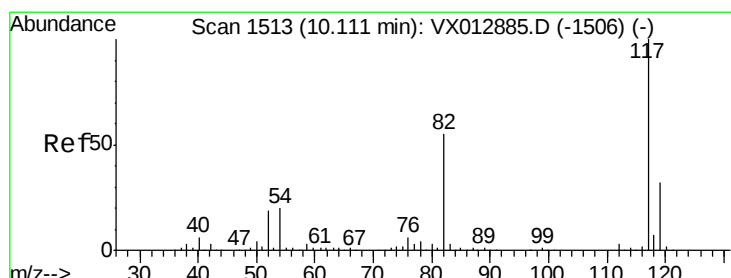
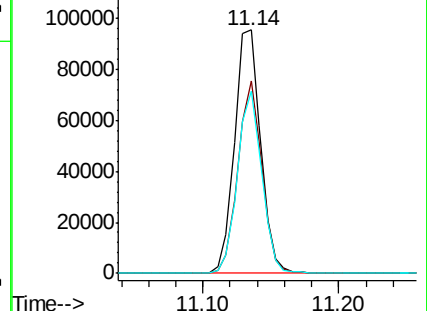
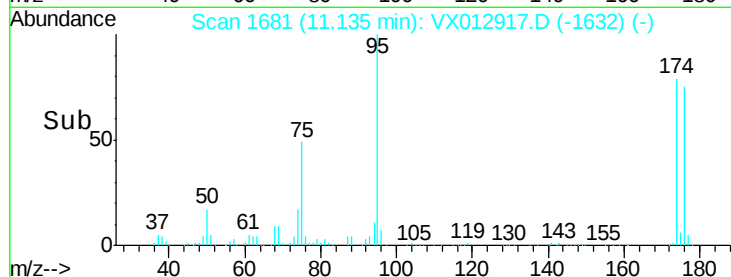


Abundance Ion 94.90 (94.60 to 95.60): VX012885.D (-1674) (-)

Ion 173.80 (173.50 to 174.50): VX012885.D (-1674) (-)

Ion 175.80 (175.50 to 176.50): VX012885.D (-1674) (-)

Time-->



#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.11 min Scan# 1513

Delta R.T. -0.00 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

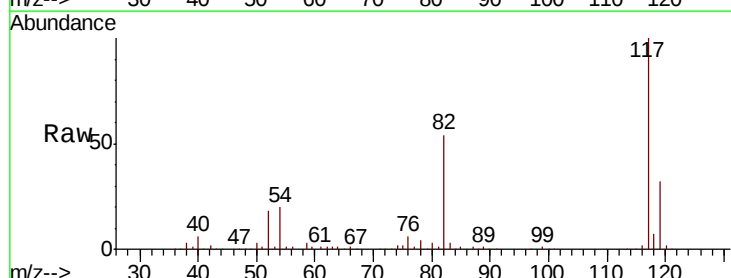
Tgt Ion: 117 Resp: 272067

Ion Ratio Lower Upper

117 100

82 53.9 44.1 66.1

119 31.9 25.8 38.8

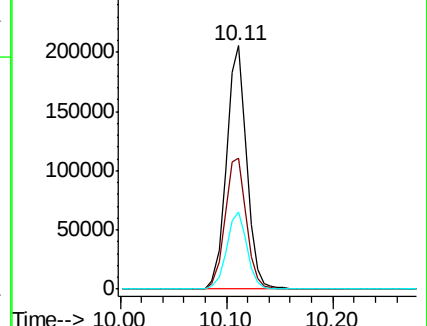
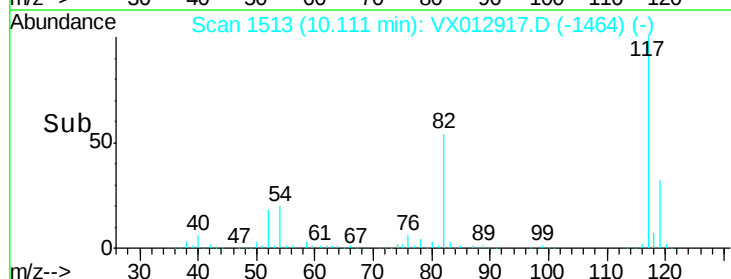


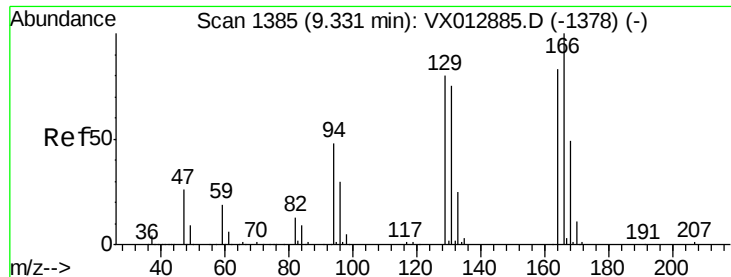
Abundance Ion 116.90 (116.60 to 117.60): VX012885.D (-1506) (-)

Ion 82.00 (81.70 to 82.70): VX012885.D (-1506) (-)

Ion 118.90 (118.60 to 119.60): VX012885.D (-1506) (-)

Time-->

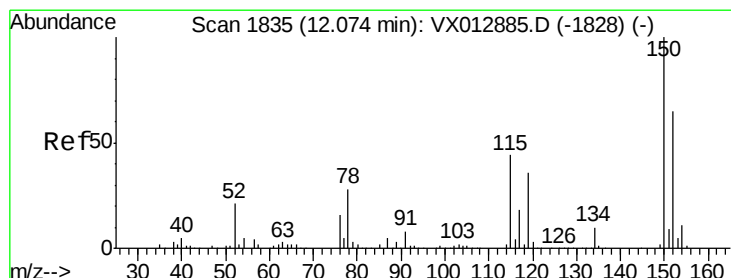
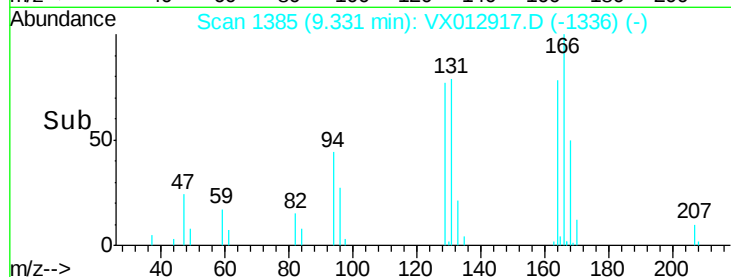
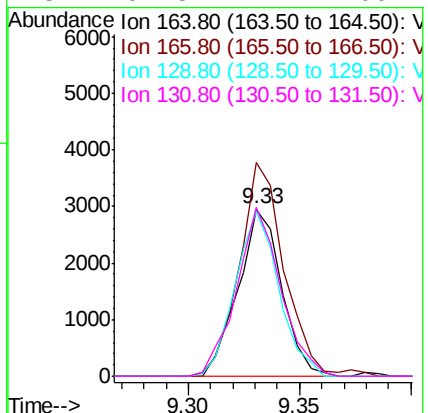
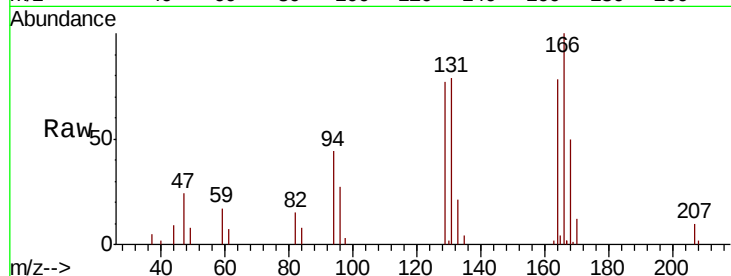




#64  
Tetrachloroethene  
Concen: 2.133 ug/l  
RT: 9.33 min Scan# 1385  
Delta R.T. -0.00 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

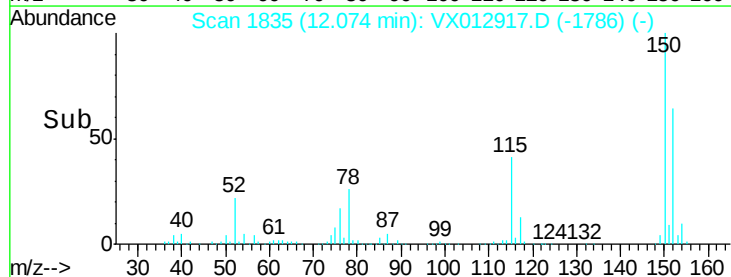
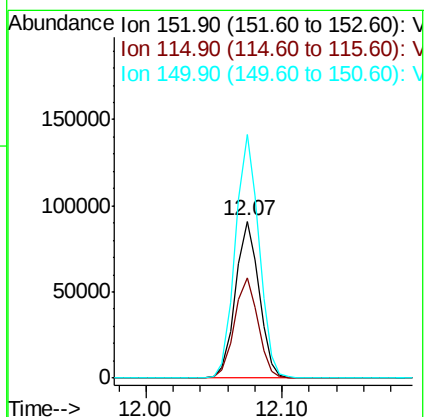
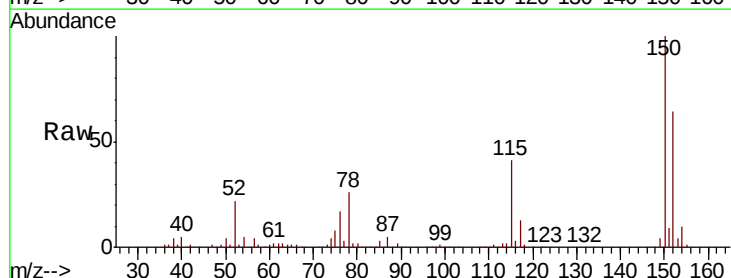
Instrument :  
MSVOA\_X  
ClientSampleId :

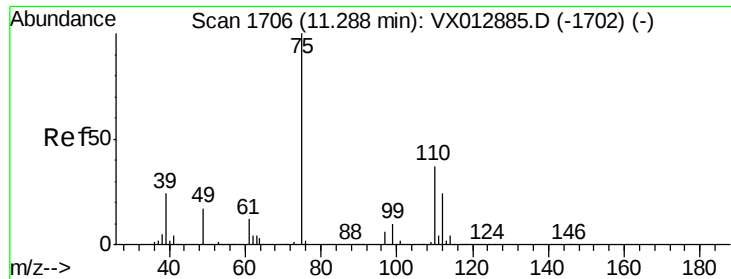
Tot Ion:164 Resp: 4026  
Ion Ratio Lower Upper  
164 100  
166 128.3 96.9 145.3  
129 99.1 77.9 116.9  
131 101.3 72.7 109.1



#72  
1,4-Dichlorobenzene-d4  
Concen: 50.000 ug/l  
RT: 12.07 min Scan# 1835  
Delta R.T. -0.00 min  
Lab File: VX012917.D  
Acq: 09 Oct 2019 03:08

Tgt Ion:152 Resp: 110227  
Ion Ratio Lower Upper  
152 100  
115 63.9 44.5 133.5  
150 155.5 0.0 353.4





#76

1,2,3-Trichloropropane

Concen: 26.020 ug/l

RT: 11.13 min Scan# 1680

Delta R.T. -0.16 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

Instrument :

MSVOA\_X

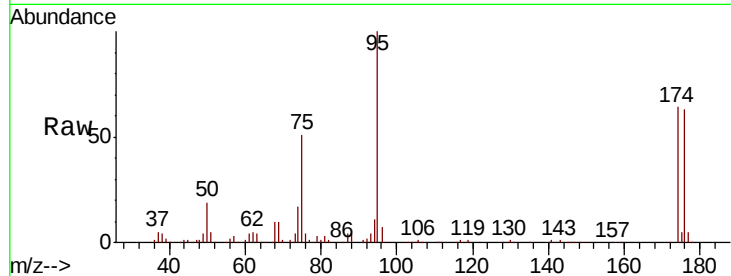
ClientSampled :

Tot Ion: 75 Resp: 63615

Ion Ratio Lower Upper

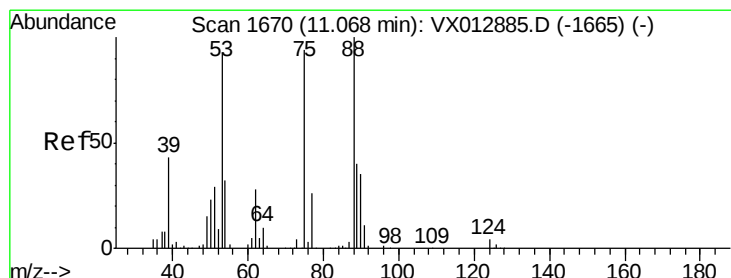
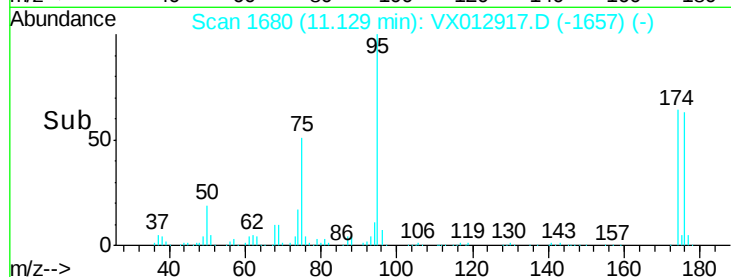
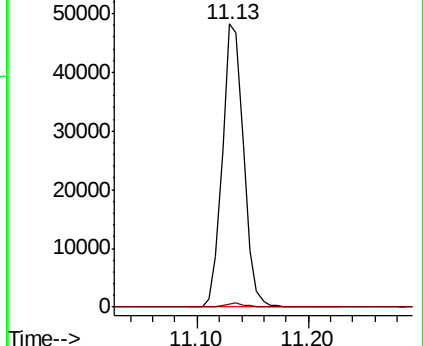
75 100

77 1.4 22.9 68.8#



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: 65.529 ug/l

RT: 11.13 min Scan# 1680

Delta R.T. 0.06 min

Lab File: VX012917.D

Acq: 09 Oct 2019 03:08

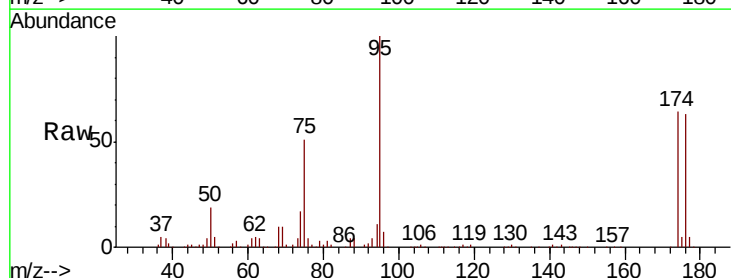
Tgt Ion: 75 Resp: 63615

Ion Ratio Lower Upper

75 100

53 0.0 78.5 117.7#

89 0.1 37.4 56.2#



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

