

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_U\DATA\VU091518\  
 Data File : VU026735.D  
 Acq On : 13 Sep 2018 19:03  
 Operator : MD/SY  
 Sample : J4893-05  
 Misc : 5.0mL/MSVOA\_U/WATER  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

Quant Time: Sep 14 01:22:45 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM091018WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Fri Sep 14 01:21:50 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.89  | 114  | 195686   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.11  | 117  | 204196   | 50.00 | ug/L  | 0.01     |
| 60) 1,4-Dichlorobenzene-d4 | 11.49 | 152  | 115886   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40    | 65    | 61946    | 42.48    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 84.96%  |
| 7) Chloroethane-d5             | 1.68    | 69    | 50774    | 43.21    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 86.42%  |
| 11) 1,1-Dichloroethene-d2      | 2.27    | 63    | 84601    | 32.42    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 64.84%  |
| 21) 2-Butanone-d5              | 4.18    | 46    | 83773    | 92.31    | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 92.31%  |
| 24) Chloroform-d               | 4.65    | 84    | 100027   | 41.25    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 82.50%  |
| 26) 1,2-Dichloroethane-d4      | 5.31    | 65    | 68193    | 42.97    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 85.94%  |
| 32) Benzene-d6                 | 5.35    | 84    | 214879   | 40.66    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 81.32%  |
| 36) 1,2-Dichloropropane-d6     | 6.33    | 67    | 71253    | 40.18    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 80.36%  |
| 41) Toluene-d8                 | 7.57    | 98    | 195400   | 39.40    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 78.80%# |
| 43) trans-1,3-Dichloropropene- | 7.85    | 79    | 31458    | 38.15    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 76.30%  |
| 47) 2-Hexanone-d5              | 8.31    | 63    | 61870    | 85.50    | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 85.50%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43   | 84    | 94293    | 38.83    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 77.66%  |
| 64) 1,2-Dichlorobenzene-d4     | 11.87   | 152   | 99608    | 43.12    | ug/L | 0.01    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 86.24%  |

## Target Compounds

|                               |       |     |         |                | Qvalue |
|-------------------------------|-------|-----|---------|----------------|--------|
| 12) 1,1-Dichloroethene        | 2.28  | 96  | 650     | 0.563 ug/L #   | 1      |
| 13) Acetone                   | 2.32  | 43  | 2242    | 2.169 ug/L     | 94     |
| 18) Methyl tert-butyl Ether   | 3.00  | 73  | 2493    | 0.662 ug/L     | 99     |
| 25) Chloroform                | 4.67  | 83  | 12789   | 5.366 ug/L     | 97     |
| 27) 1,2-Dichloroethane        | 5.40  | 62  | 234904  | 124.127 ug/L # | 75     |
| 29) Cyclohexane               | 5.00  | 56  | 4207    | 1.881 ug/L     | 99     |
| 31) Carbon tetrachloride      | 5.14  | 117 | 25590   | 13.088 ug/L    | 99     |
| 34) Trichloroethene           | 6.19  | 95  | 1142    | 0.803 ug/L     | 85     |
| 35) Methylcyclohexane         | 6.42  | 83  | 2034    | 0.894 ug/L #   | 43     |
| 37) 1,2-Dichloropropane       | 6.33  | 63  | 7264    | 4.547 ug/L #   | 89     |
| 39) cis-1,3-Dichloropropene   | 7.23  | 75  | 1877    | 0.794 ug/L #   | 73     |
| 42) Toluene                   | 7.64  | 91  | 3554    | 0.600 ug/L     | 98     |
| 44) trans-1,3-Dichloropropene | 7.85  | 75  | 1319    | 0.600 ug/L     | 86     |
| 46) Tetrachloroethene         | 8.23  | 164 | 2891    | 2.420 ug/L     | 95     |
| 49) Dibromochloromethane      | 8.23  | 129 | 2759    | 1.685 ug/L #   | 9      |
| 62) 1,3-Dichlorobenzene       | 11.42 | 146 | 1030068 | 309.564 ug/L   | 99     |
| 63) 1,4-Dichlorobenzene       | 11.42 | 146 | 1030068 | 292.219 ug/L   | 98     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_U\DATA\VU091518\  
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Acq On : 13 Sep 2018 19:03  
Operator : MD/SY  
Sample : J4893-05  
Misc : 5.0mL/MSVOA\_U/WATER  
ALS Vial : 10 Sample Multiplier: 1

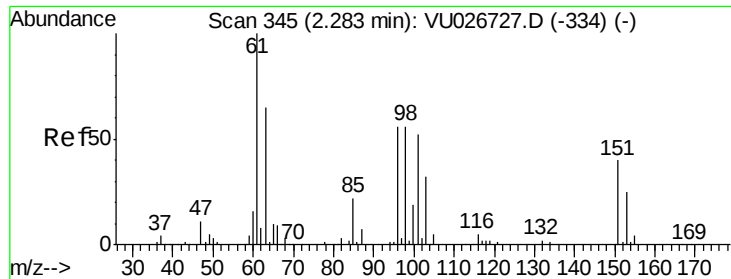
Instrument :  
MSVOA\_U  
ClientSampleId :  
C08K6

Quant Time: Sep 14 01:22:45 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM091018WMA.M  
Quant Title : VOC Analysis  
QLast Update : Fri Sep 14 01:21:50 2018  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc    | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|---------|--------|----------|
| 66) 1,2-Dibromo-3-chloropropan | 12.64 | 75   | 2859     | 5.032   | ug/L # | 1        |
| 67) 1,3,5-Trichlorobenzene     | 13.51 | 180  | 1828388  | 692.728 | ug/L   | 99       |
| 68) 1,2,4-trichlorobenzene     | 13.51 | 180  | 1828388  | 797.006 | ug/L   | 99       |
| 69) Naphthalene                | 13.75 | 128  | 4222     | 0.601   | ug/L # | 96       |
| 70) 1,2,3-Trichlorobenzene     | 13.99 | 180  | 322439   | 129.756 | ug/L   | 100      |

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

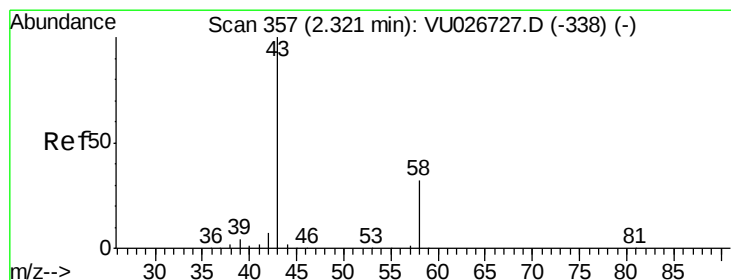
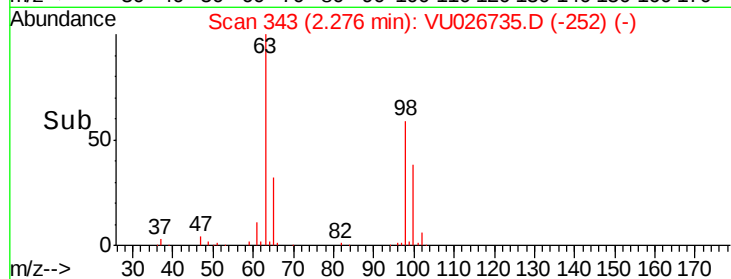
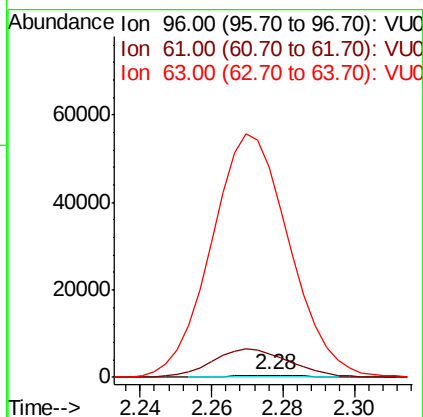
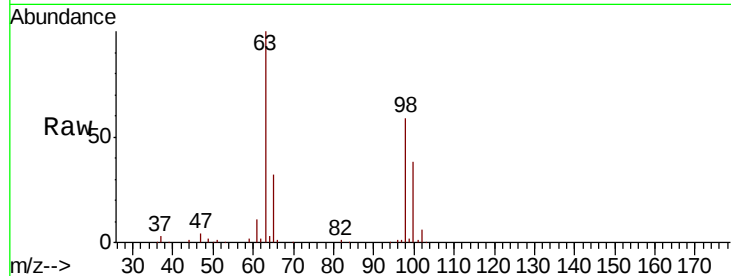




#12  
 1,1-Dichloroethene  
 Concen: 0.563 ug/L  
 RT: 2.28 min Scan# 343  
 Delta R.T. -0.01 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

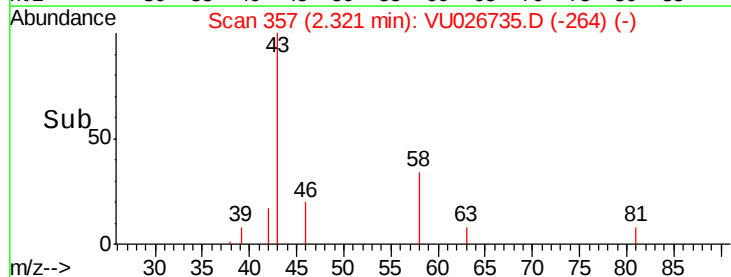
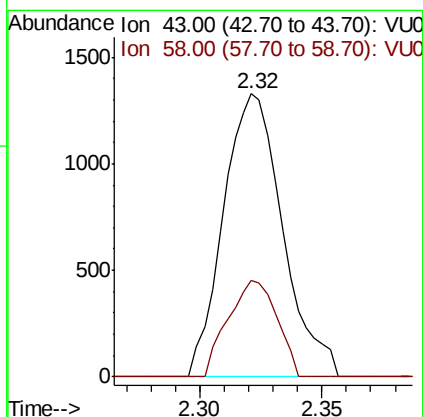
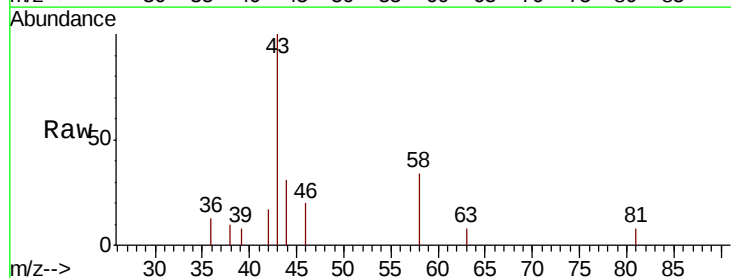
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

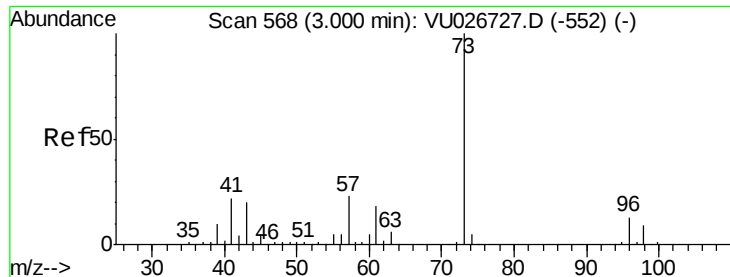
Tgt Ion: 96 Resp: 650  
 Ion Ratio Lower Upper  
 96 100  
 61 1240.8 121.0 224.8#  
 63 11018.3 89.9 166.9#



#13  
 Acetone  
 Concen: 2.169 ug/L  
 RT: 2.32 min Scan# 357  
 Delta R.T. -0.00 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Tgt Ion: 43 Resp: 2242  
 Ion Ratio Lower Upper  
 43 100  
 58 28.1 0.0 62.8

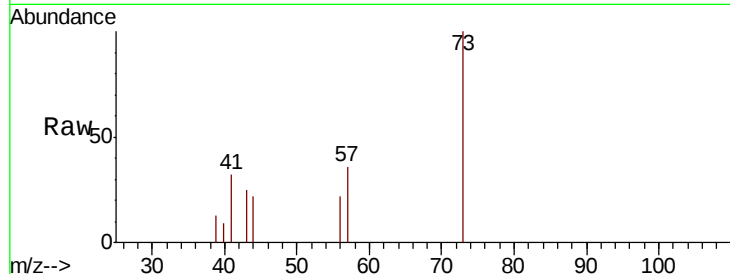




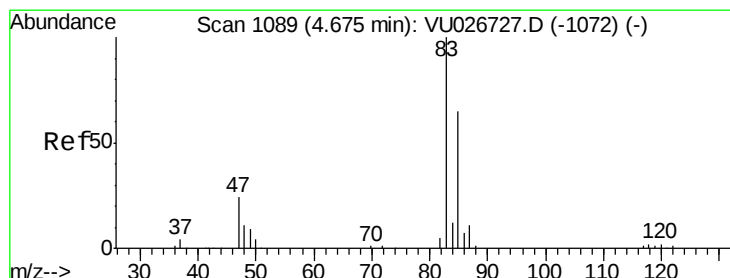
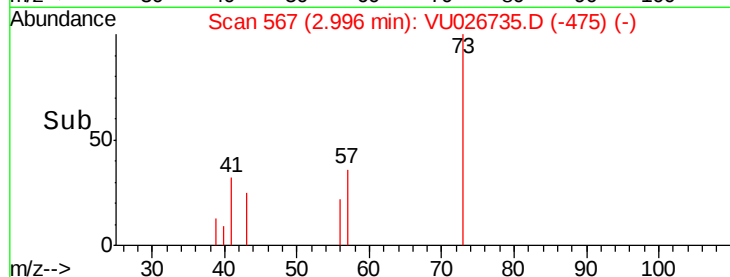
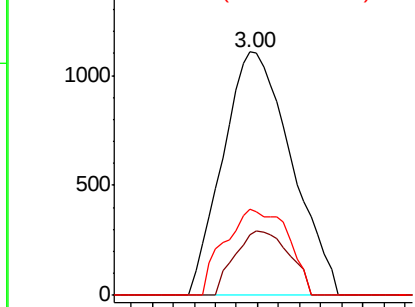
#18  
Methyl tert-butyl Ether  
Concen: 0.662 ug/L  
RT: 3.00 min Scan# 567  
Delta R.T. -0.00 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

Instrument :  
MSVOA\_U  
ClientSampled :  
C08K6

Tgt Ion: 73 Resp: 2493  
Ion Ratio Lower Upper  
73 100  
43 21.1 16.0 24.0  
57 23.2 18.6 27.8

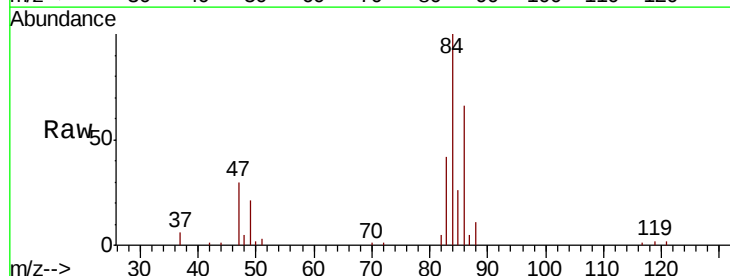


Abundance Ion 73.00 (72.70 to 73.70): VU0  
Ion 43.00 (42.70 to 43.70): VU0  
Ion 57.00 (56.70 to 57.70): VU0

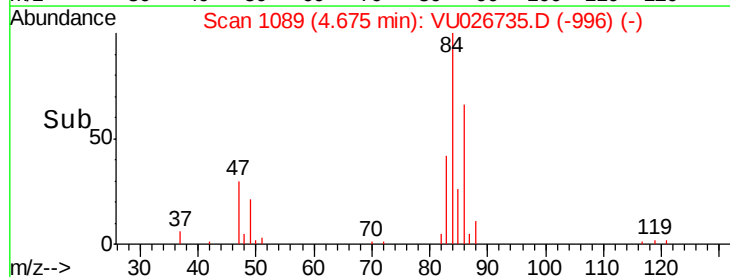
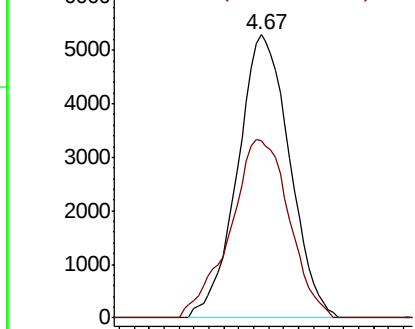


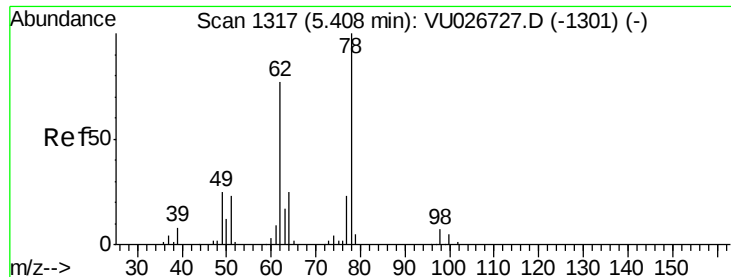
#25  
Chloroform  
Concen: 5.366 ug/L  
RT: 4.67 min Scan# 1089  
Delta R.T. -0.00 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

Tgt Ion: 83 Resp: 12789  
Ion Ratio Lower Upper  
83 100  
85 62.6 45.6 84.6



Abundance Ion 83.00 (82.70 to 83.70): VU0  
Ion 85.00 (84.70 to 85.70): VU0





#27

1,2-Dichloroethane

Concen: 124.127 ug/L

RT: 5.40 min Scan# 1316

Delta R.T. -0.00 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

Instrument :

MSVOA\_U

ClientSampleId :

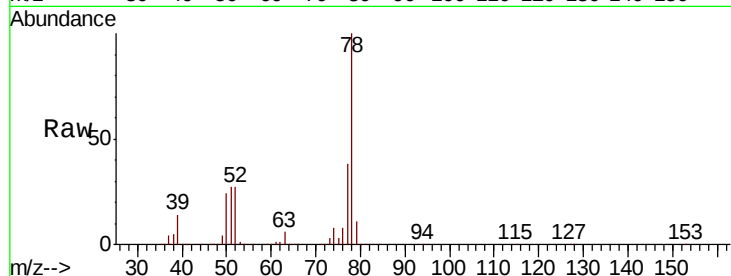
C08K6

Tgt Ion: 62 Resp: 234904

Ion Ratio Lower Upper

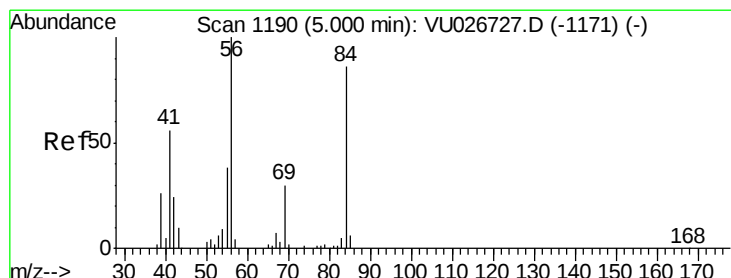
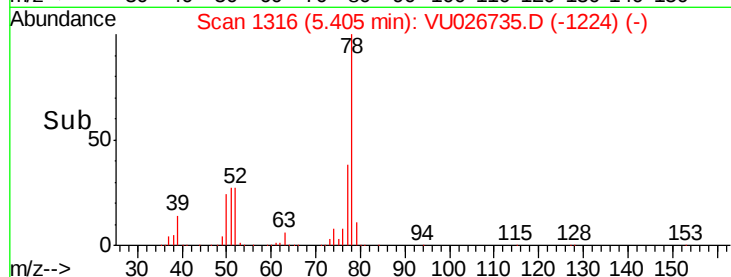
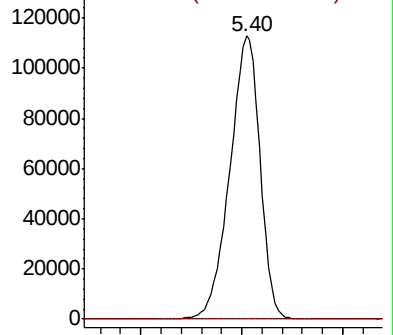
62 100

98 0.0 7.4 11.0#



Abundance Ion 62.00 (61.70 to 62.70): VU0

Ion 98.00 (97.70 to 98.70): VU0



#29

Cyclohexane

Concen: 1.881 ug/L

RT: 5.00 min Scan# 1190

Delta R.T. -0.00 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

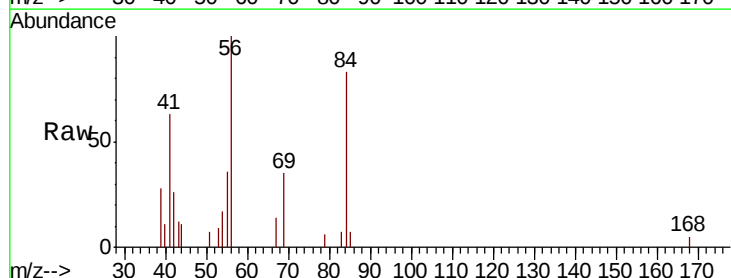
Tgt Ion: 56 Resp: 4207

Ion Ratio Lower Upper

56 100

69 30.9 23.0 34.6

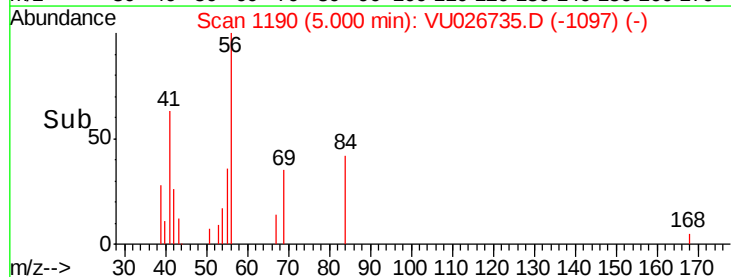
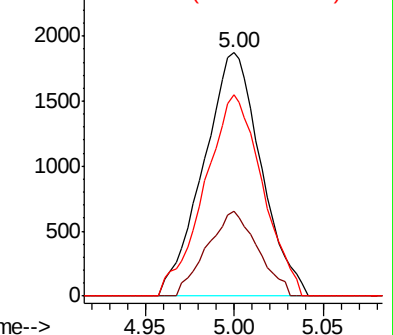
84 83.1 66.5 99.7

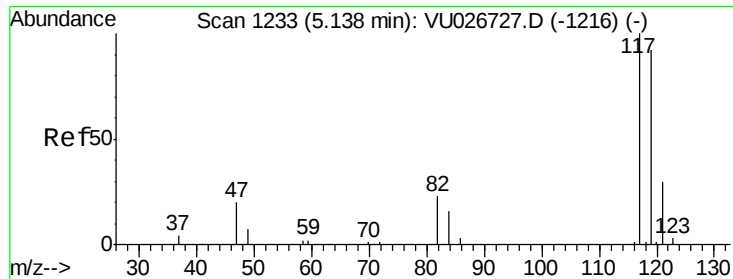


Abundance Ion 56.00 (55.70 to 56.70): VU0

Ion 69.00 (68.70 to 69.70): VU0

Ion 84.00 (83.70 to 84.70): VU0

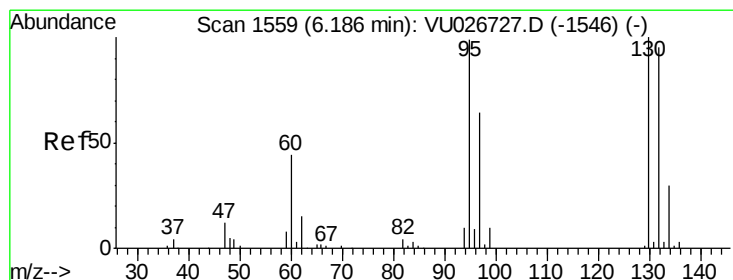
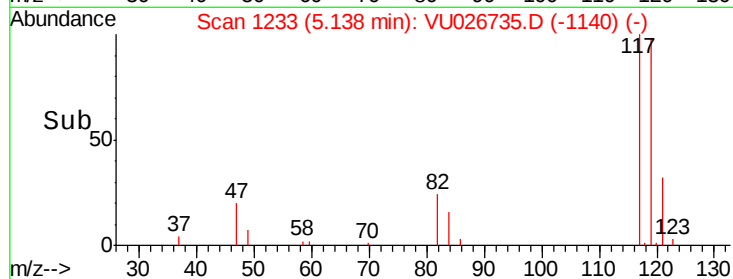
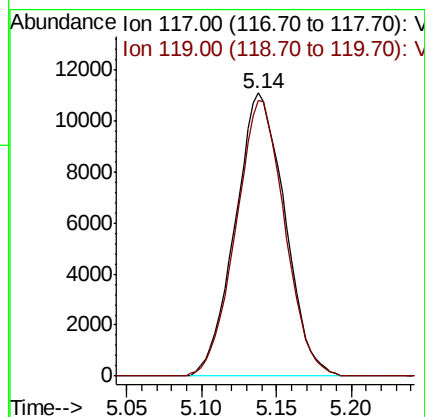
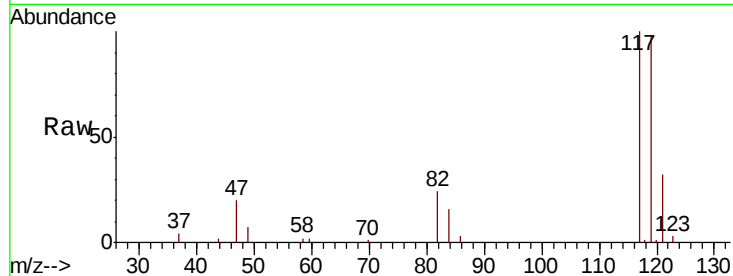




#31  
Carbon tetrachloride  
Concen: 13.088 ug/L  
RT: 5.14 min Scan# 1233  
Delta R.T. -0.00 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

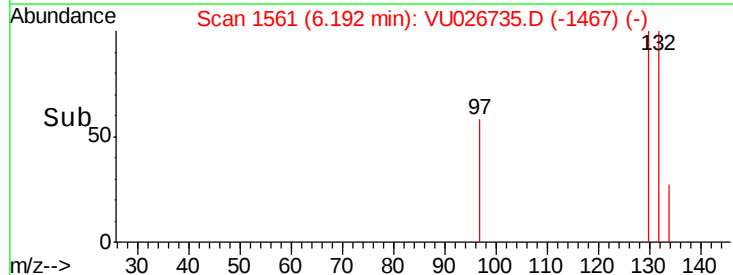
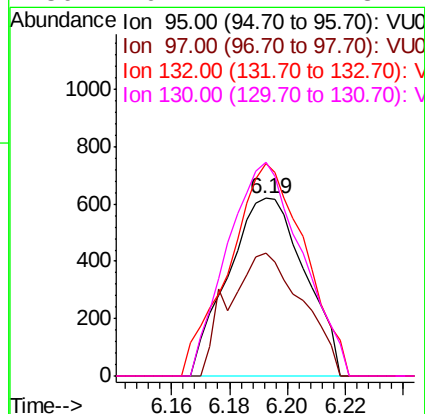
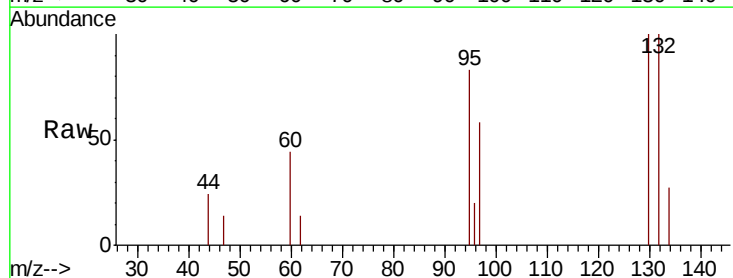
Instrument :  
MSVOA\_U  
ClientSampled :  
C08K6

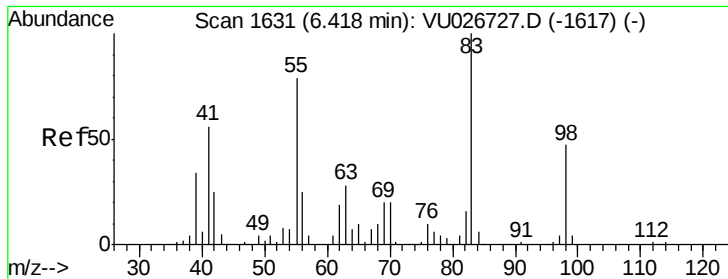
Tgt Ion: 117 Resp: 25590  
Ion Ratio Lower Upper  
117 100  
119 95.7 77.6 116.4



#34  
Trichloroethene  
Concen: 0.803 ug/L  
RT: 6.19 min Scan# 1561  
Delta R.T. 0.00 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

Tgt Ion: 95 Resp: 1142  
Ion Ratio Lower Upper  
95 100  
97 69.5 44.9 83.5  
132 119.7 69.7 129.5  
130 120.2 72.4 134.4

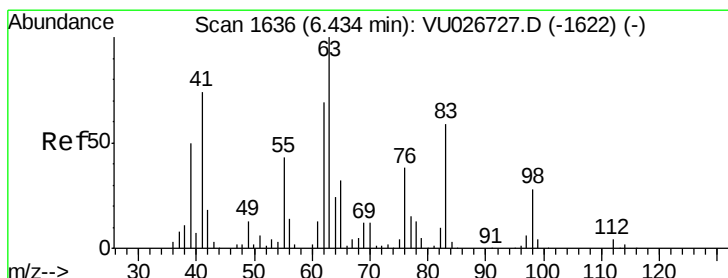
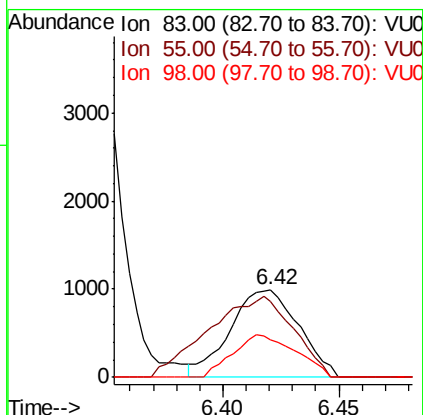
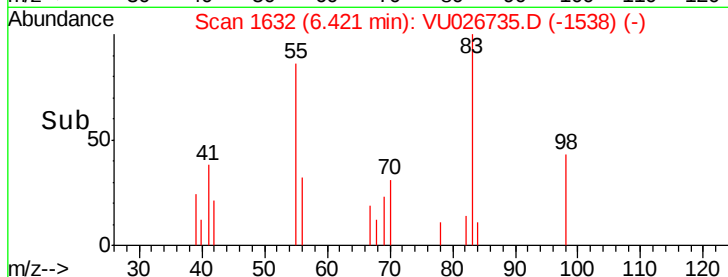
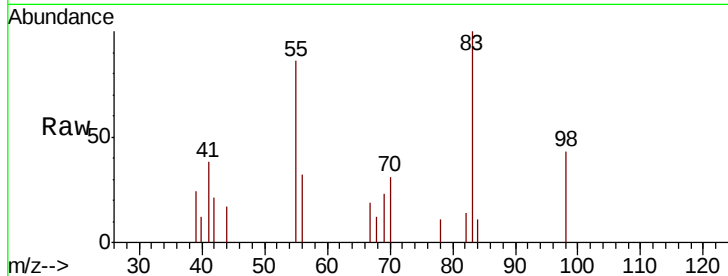




#35  
Methylcyclohexane  
Concen: 0.894 ug/L  
RT: 6.42 min Scan# 1632  
Delta R.T. 0.00 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

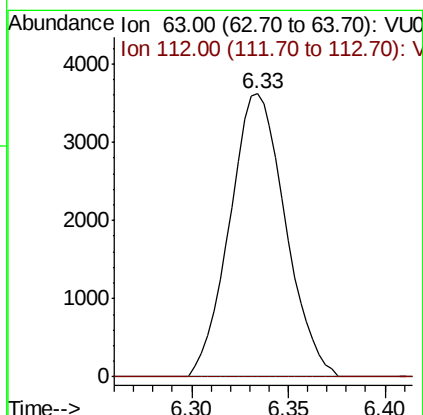
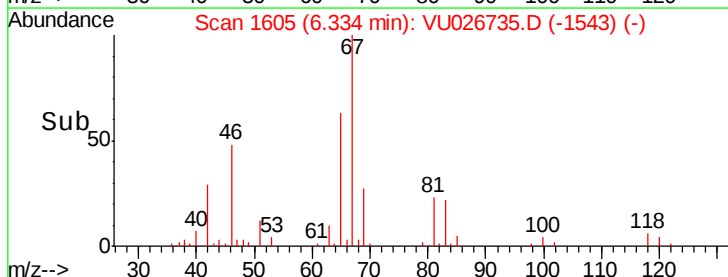
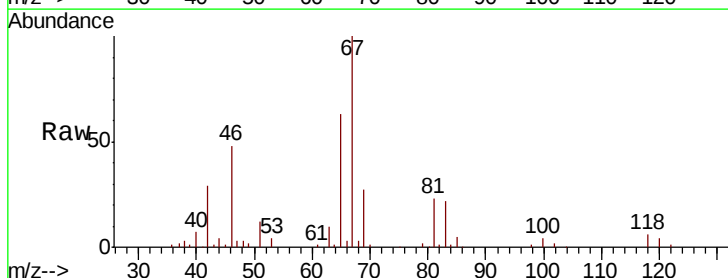
Instrument :  
MSVOA\_U  
ClientSampleId :  
C08K6

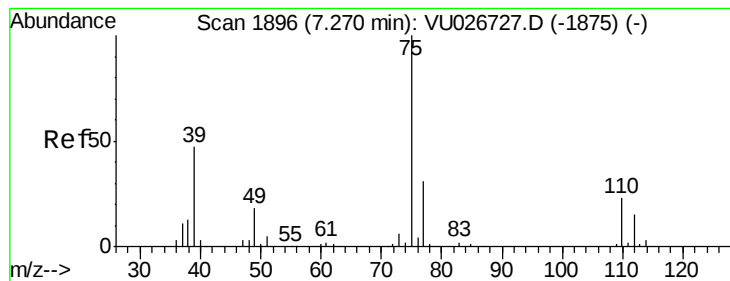
Tgt Ion: 83 Resp: 2034  
Ion Ratio Lower Upper  
83 100  
55 0.0 62.9 94.3#  
98 44.8 37.0 55.4



#37  
1,2-Dichloropropane  
Concen: 4.547 ug/L  
RT: 6.33 min Scan# 1605  
Delta R.T. -0.10 min  
Lab File: VU026735.D  
Acq: 13 Sep 2018 19:03

Tgt Ion: 63 Resp: 7264  
Ion Ratio Lower Upper  
63 100  
112 0.0 2.9 4.3#



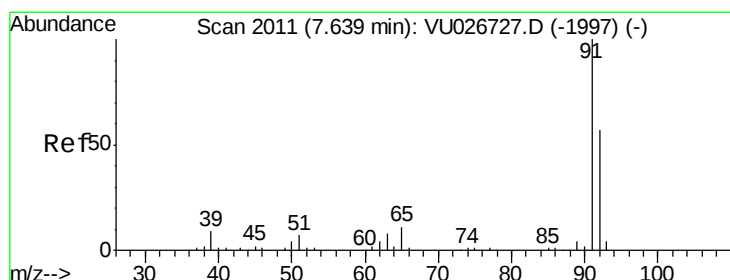
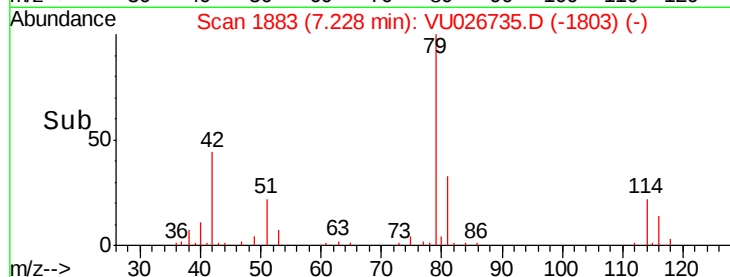
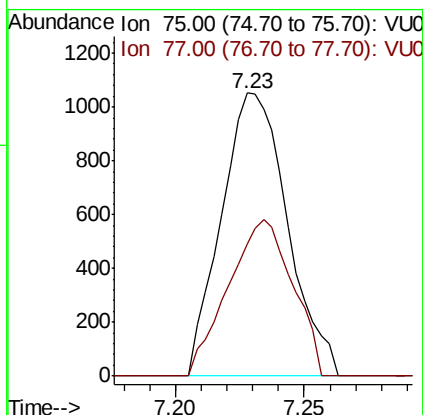
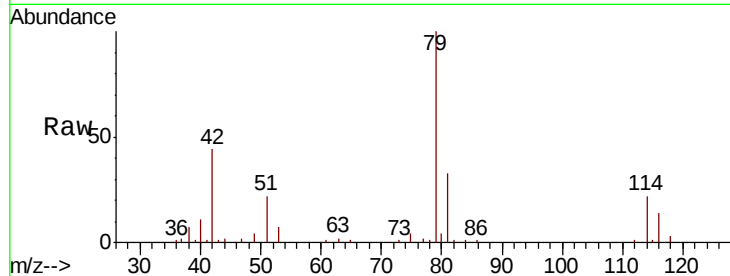


#39

cis-1,3-Dichloropropene  
 Concen: 0.794 ug/L  
 RT: 7.23 min Scan# 1883  
 Delta R.T. -0.04 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

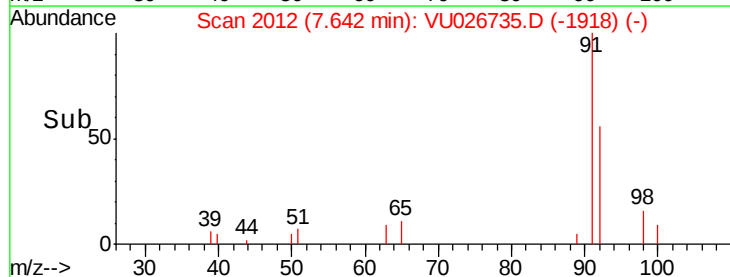
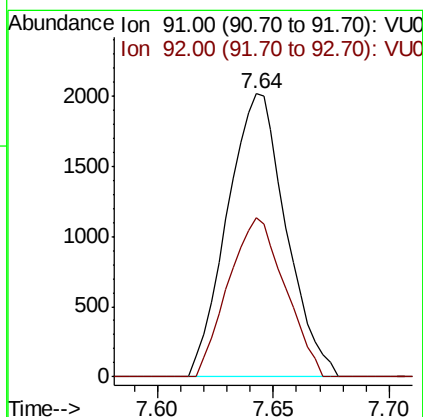
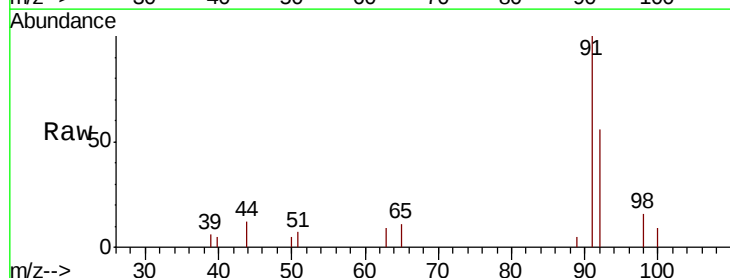
Tgt Ion: 75 Resp: 1877  
 Ion Ratio Lower Upper  
 75 100  
 77 46.6 22.3 41.3#

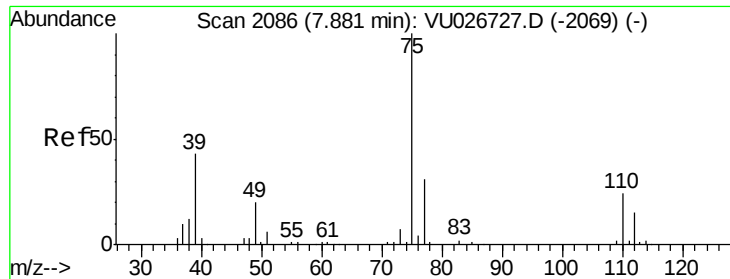


#42

Toluene  
 Concen: 0.600 ug/L  
 RT: 7.64 min Scan# 2012  
 Delta R.T. 0.00 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Tgt Ion: 91 Resp: 3554  
 Ion Ratio Lower Upper  
 91 100  
 92 56.1 40.3 74.9





#44

trans-1,3-Dichloropropene

Concen: 0.600 ug/L

RT: 7.85 min Scan# 2077

Delta R.T. -0.03 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

Instrument :

MSVOA\_U

ClientSampleId :

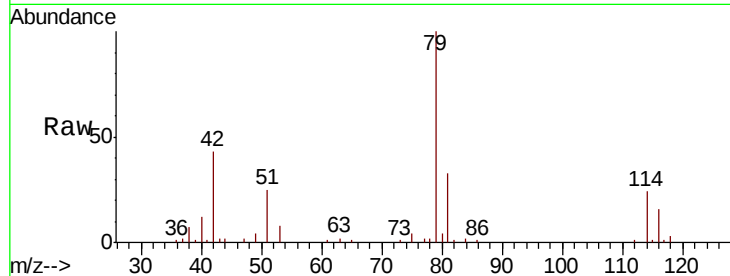
C08K6

Tgt Ion: 75 Resp: 1319

Ion Ratio Lower Upper

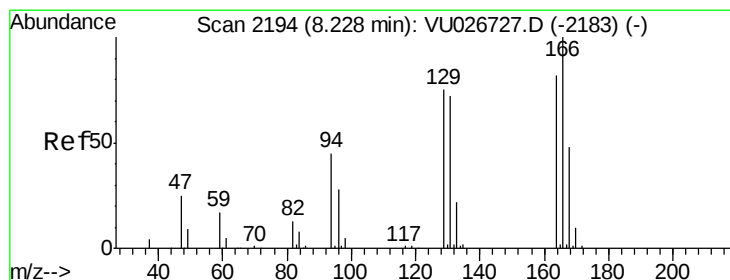
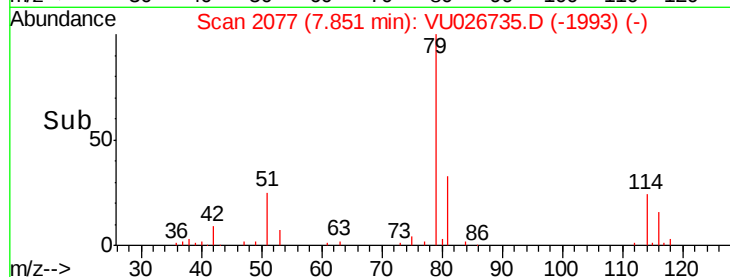
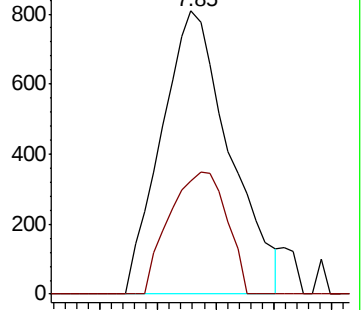
75 100

77 40.0 22.4 41.6



Abundance Ion 75.00 (74.70 to 75.70): VU026735.D (-1993) (-)

Ion 77.00 (76.70 to 77.70): VU026735.D (-1993) (-)



#46

Tetrachloroethene

Concen: 2.420 ug/L

RT: 8.23 min Scan# 2195

Delta R.T. 0.00 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

Tgt Ion: 164 Resp: 2891

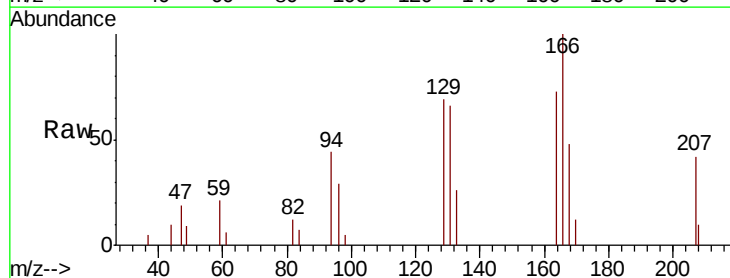
Ion Ratio Lower Upper

164 100

129 94.5 65.0 120.8

131 91.1 62.5 116.1

166 137.4 89.0 165.2

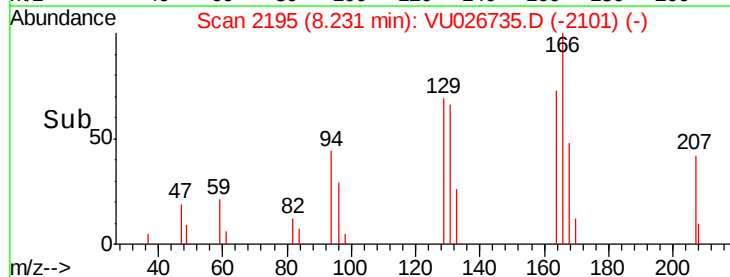
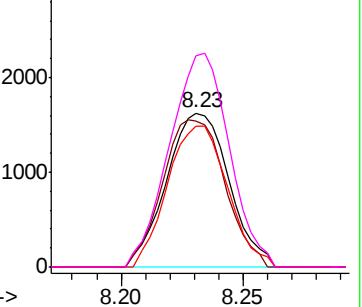


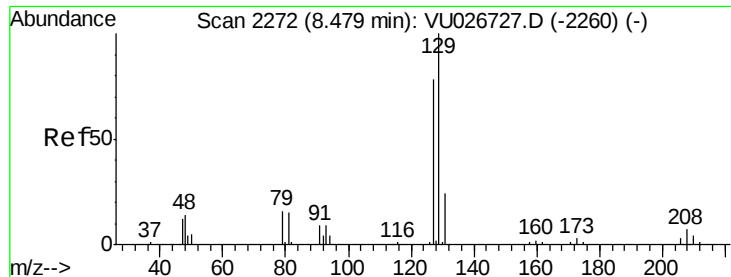
Abundance Ion 164.00 (163.70 to 164.70): VU026735.D (-2101) (-)

Ion 129.00 (128.70 to 129.70): VU026735.D (-2101) (-)

Ion 131.00 (130.70 to 131.70): VU026735.D (-2101) (-)

Ion 166.00 (165.70 to 166.70): VU026735.D (-2101) (-)

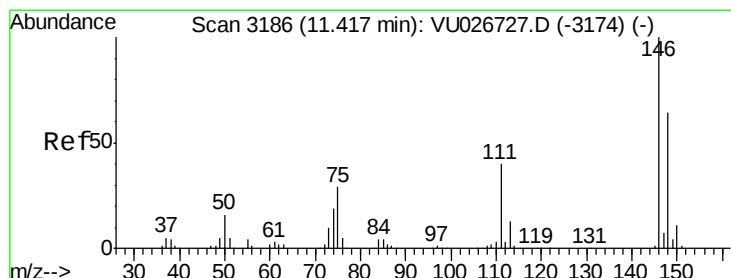
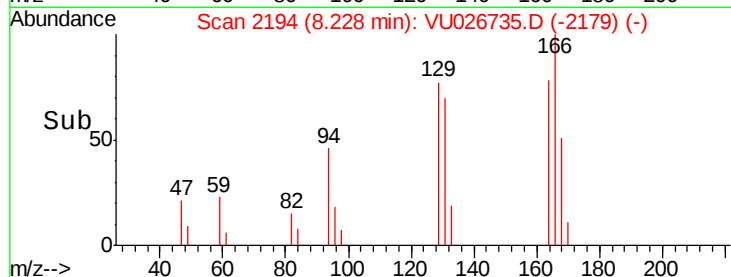
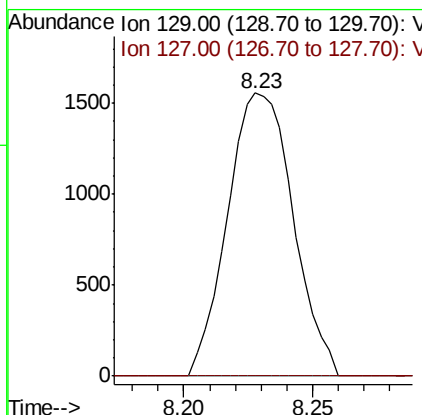
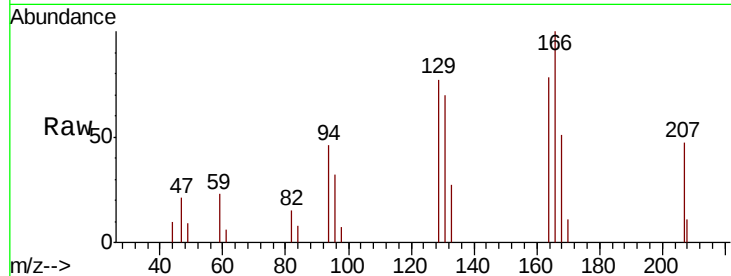




#49  
 Dibromochloromethane  
 Concen: 1.685 ug/L  
 RT: 8.23 min Scan# 2194  
 Delta R.T. -0.25 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

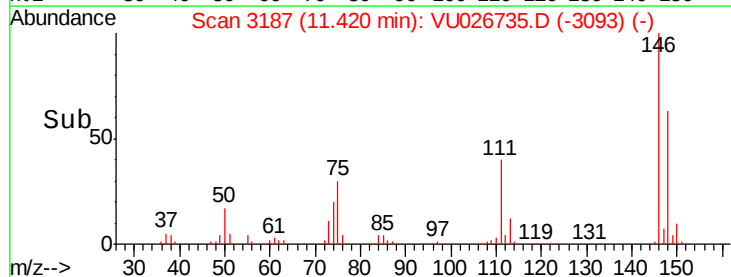
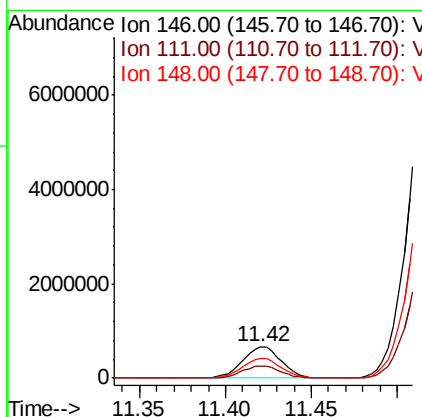
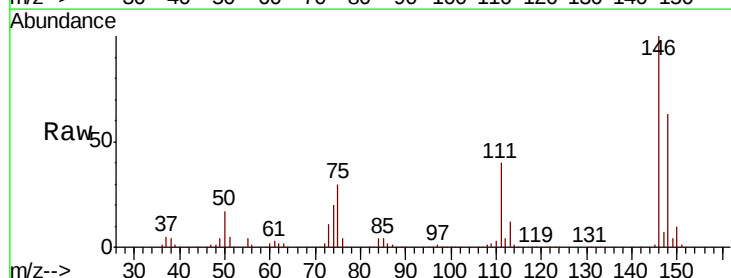
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

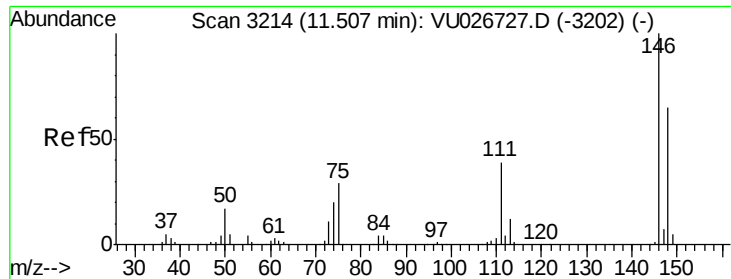
Tgt Ion:129 Resp: 2759  
 Ion Ratio Lower Upper  
 129 100  
 127 0.0 55.8 103.6#



#62  
 1,3-Dichlorobenzene  
 Concen: 309.564 ug/L  
 RT: 11.42 min Scan# 3187  
 Delta R.T. 0.00 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Tgt Ion:146 Resp: 1030068  
 Ion Ratio Lower Upper  
 146 100  
 111 39.6 26.7 49.5  
 148 63.3 44.2 82.2

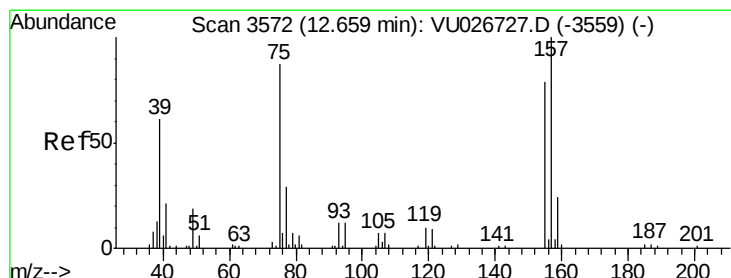
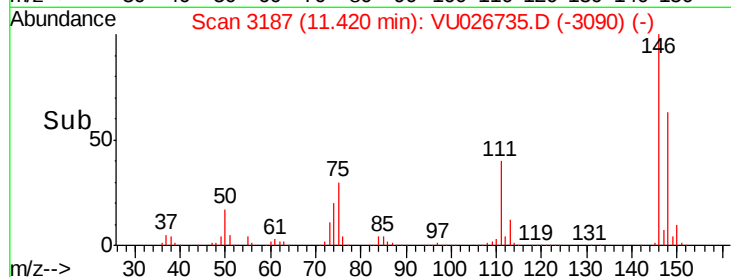
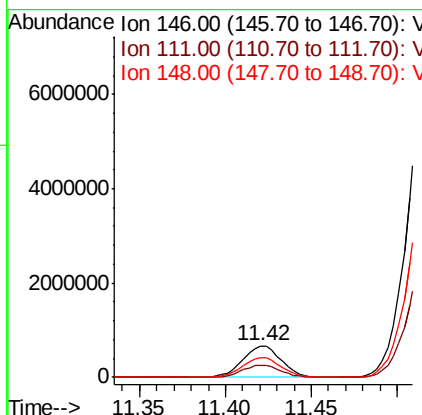
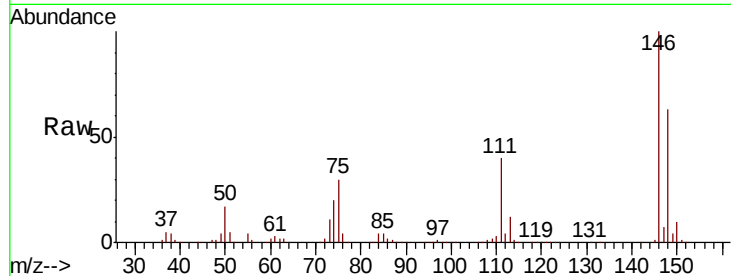




#63  
 1,4-Dichlorobenzene  
 Concen: 292.219 ug/L  
 RT: 11.42 min Scan# 3187  
 Delta R.T. -0.09 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

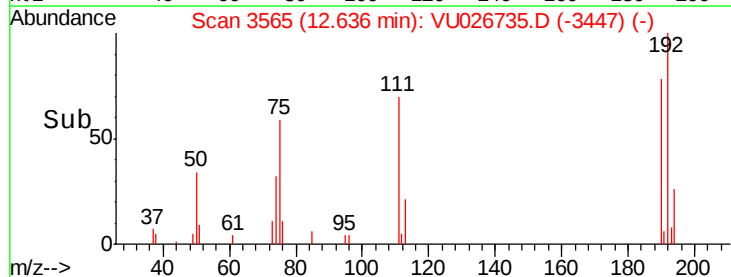
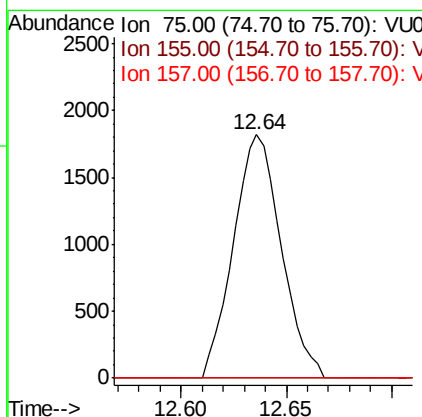
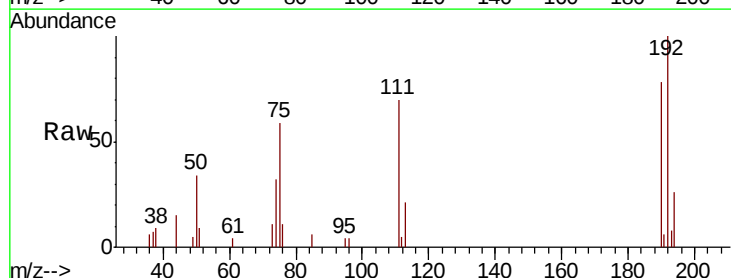
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

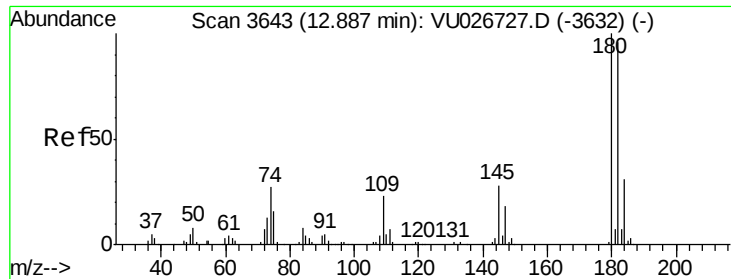
Tgt Ion: 146 Resp: 1030068  
 Ion Ratio Lower Upper  
 146 100  
 111 39.6 26.5 49.3  
 148 63.3 45.2 84.0



#66  
 1,2-Dibromo-3-chloropropane  
 Concen: 5.032 ug/L  
 RT: 12.64 min Scan# 3565  
 Delta R.T. -0.02 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Tgt Ion: 75 Resp: 2859  
 Ion Ratio Lower Upper  
 75 100  
 155 0.0 69.3 103.9#  
 157 0.0 93.4 140.0#

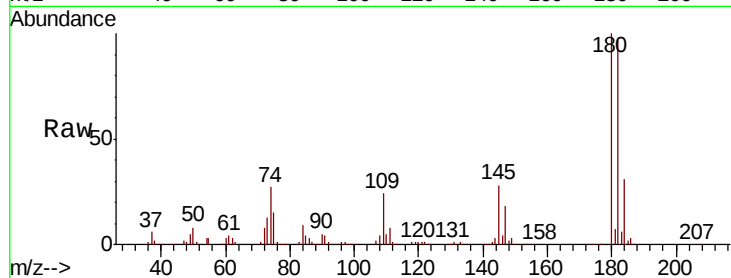




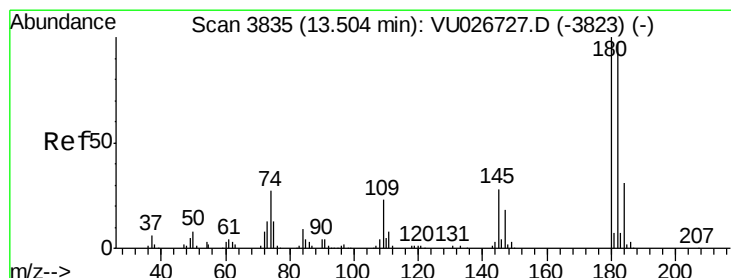
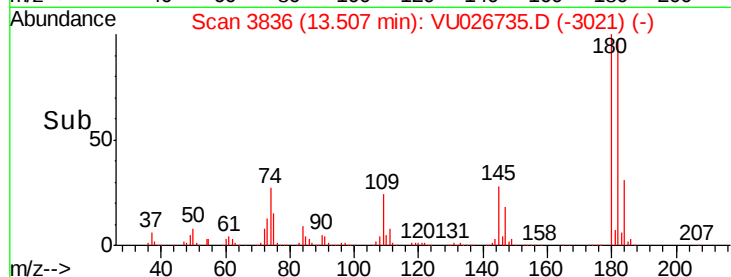
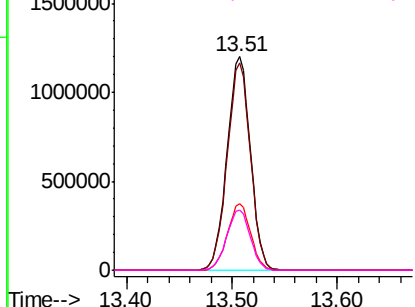
#67  
 1,3,5-Trichlorobenzene  
 Concen: 692.728 ug/L  
 RT: 13.51 min Scan# 3836  
 Delta R.T. 0.62 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 C08K6

Tgt Ion:180 Resp: 1828388  
 Ion Ratio Lower Upper  
 180 100  
 182 96.2 76.8 115.2  
 184 30.9 24.2 36.2  
 145 28.4 21.4 32.2

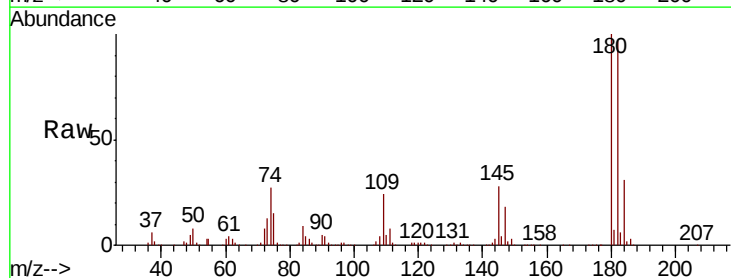


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

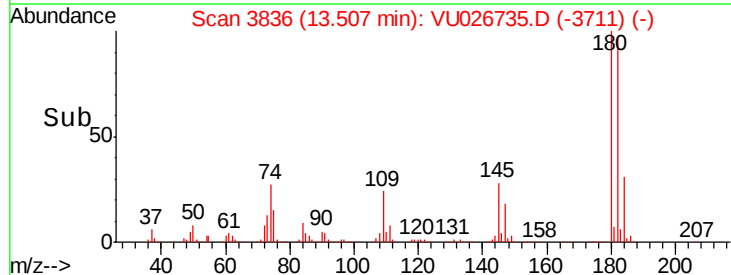
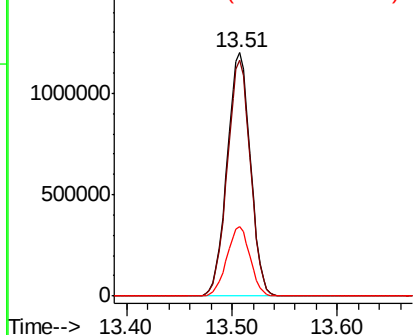


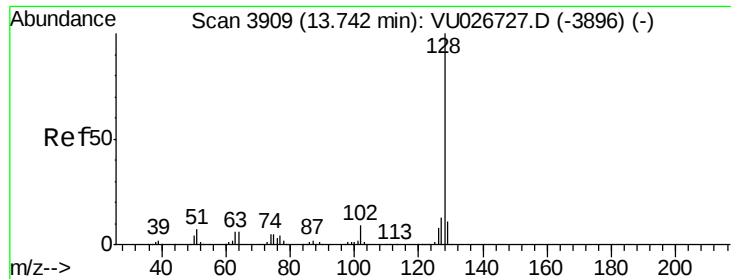
#68  
 1,2,4-trichlorobenzene  
 Concen: 797.006 ug/L  
 RT: 13.51 min Scan# 3836  
 Delta R.T. 0.00 min  
 Lab File: VU026735.D  
 Acq: 13 Sep 2018 19:03

Tgt Ion:180 Resp: 1828388  
 Ion Ratio Lower Upper  
 180 100  
 182 96.2 76.0 114.0  
 145 28.4 23.4 35.0



Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 145.00 (144.70 to 145.70): V





#69

Naphthalene

Concen: 0.601 ug/L

RT: 13.75 min Scan# 3910

Delta R.T. 0.00 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

Instrument :

MSVOA\_U

ClientSampleId :

C08K6

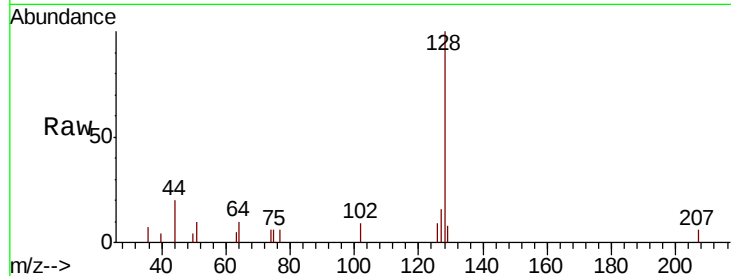
Tgt Ion:128 Resp: 4222

Ion Ratio Lower Upper

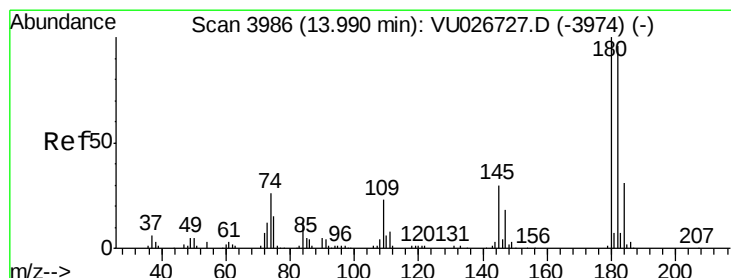
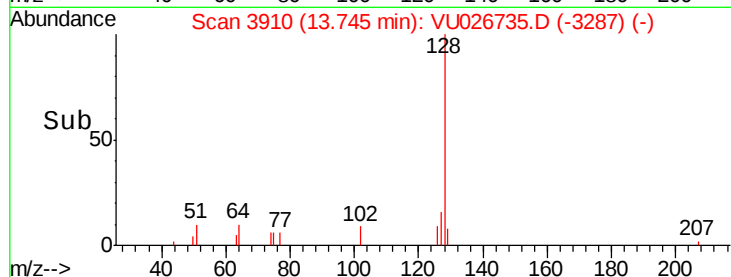
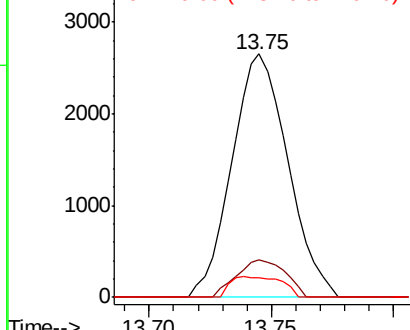
128 100

127 13.5 10.3 15.5

129 7.7 8.6 13.0#



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



#70

1,2,3-Trichlorobenzene

Concen: 129.756 ug/L

RT: 13.99 min Scan# 3986

Delta R.T. 0.00 min

Lab File: VU026735.D

Acq: 13 Sep 2018 19:03

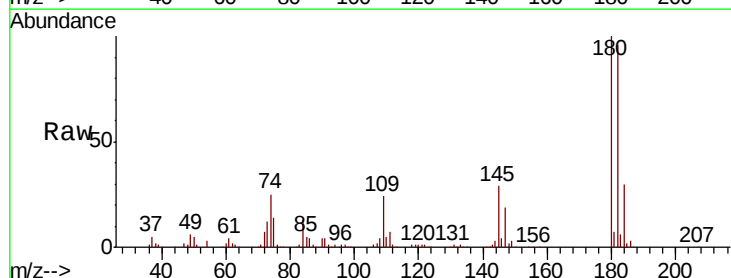
Tgt Ion:180 Resp: 322439

Ion Ratio Lower Upper

180 100

182 95.7 76.7 115.1

145 29.4 23.0 34.6



Abundance Ion 180.00 (179.70 to 180.70): V  
Ion 182.00 (181.70 to 182.70): V  
Ion 145.00 (144.70 to 145.70): V

