

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU081219\  
 Data File : VU033766.D  
 Acq On : 12 Aug 2019 12:42  
 Operator : JC/SP  
 Sample : K4202-03  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 8 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Aug 12 16:29:51 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080919WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Mon Aug 12 16:26:52 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.86  | 114  | 382223   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.07  | 117  | 374084   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.47 | 152  | 162651   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.39    | 65    | 145970   | 51.88    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 103.76% |
| 7) Chloroethane-d5             | 1.67    | 69    | 133715   | 47.42    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 94.84%  |
| 11) 1,1-Dichloroethene-d2      | 2.26    | 63    | 186421   | 39.40    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 78.80%  |
| 21) 2-Butanone-d5              | 4.15    | 46    | 179562   | 102.94   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 102.94% |
| 24) Chloroform-d               | 4.62    | 84    | 226873   | 54.27    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 108.54% |
| 26) 1,2-Dichloroethane-d4      | 5.29    | 65    | 145511   | 55.67    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 111.34% |
| 32) Benzene-d6                 | 5.32    | 84    | 460987   | 52.21    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 104.42% |
| 36) 1,2-Dichloropropane-d6     | 6.31    | 67    | 149521   | 55.19    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 110.38% |
| 41) Toluene-d8                 | 7.55    | 98    | 402459   | 48.47    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 96.94%  |
| 43) trans-1,3-Dichloropropene- | 7.83    | 79    | 65525    | 47.89    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 95.78%  |
| 47) 2-Hexanone-d5              | 8.30    | 63    | 123099   | 87.72    | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 87.72%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.41   | 84    | 204999   | 51.15    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 102.30% |
| 64) 1,2-Dichlorobenzene-d4     | 11.85   | 152   | 149638   | 54.66    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 109.32% |

## Target Compounds

| Target Compounds             | R.T.  | QIon | Response | Conc     | Units  | Ovalue |
|------------------------------|-------|------|----------|----------|--------|--------|
| 5) Vinyl chloride            | 1.39  | 62   | 694949   | 215.985  | ug/L   | 98     |
| 12) 1,1-Dichloroethene       | 2.27  | 96   | 4036     | 1.796    | ug/L # | 1      |
| 17) trans-1,2-Dichloroethene | 2.96  | 96   | 90107    | 37.406   | ug/L   | 98     |
| 18) Methyl tert-butyl Ether  | 2.98  | 73   | 12350    | 1.567    | ug/L # | 1      |
| 20) cis-1,2-Dichloroethene   | 4.20  | 96   | 2902094  | 1056.190 | ug/L   | 95     |
| 27) 1,2-Dichloroethane       | 5.31  | 62   | 2852     | 0.790    | ug/L   | 99     |
| 29) Cyclohexane              | 4.97  | 56   | 7703     | 1.951    | ug/L # | 90     |
| 33) Benzene                  | 5.37  | 78   | 17132    | 1.646    | ug/L   | 100    |
| 34) Trichloroethene          | 6.16  | 95   | 964886   | 351.265  | ug/L   | 95     |
| 35) Methylcyclohexane        | 6.40  | 83   | 21603    | 5.167    | ug/L   | 90     |
| 39) cis-1,3-Dichloropropene  | 7.21  | 75   | 4035     | 0.914    | ug/L # | 73     |
| 45) 1,1,2-Trichloroethane    | 8.21  | 97   | 3652     | 1.345    | ug/L # | 1      |
| 46) Tetrachloroethene        | 8.21  | 164  | 425395   | 187.867  | ug/L   | 96     |
| 48) 2-Hexanone               | 8.29  | 43   | 14428    | 4.435    | ug/L # | 66     |
| 59) 1,2,3-Trichloropropane   | 11.47 | 75   | 19318    | 5.143    | ug/L   | 92     |

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Sample : K4202-03  
Misc : 5.0mL/MSVOA U/WATER  
ALS Vial : 8 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :

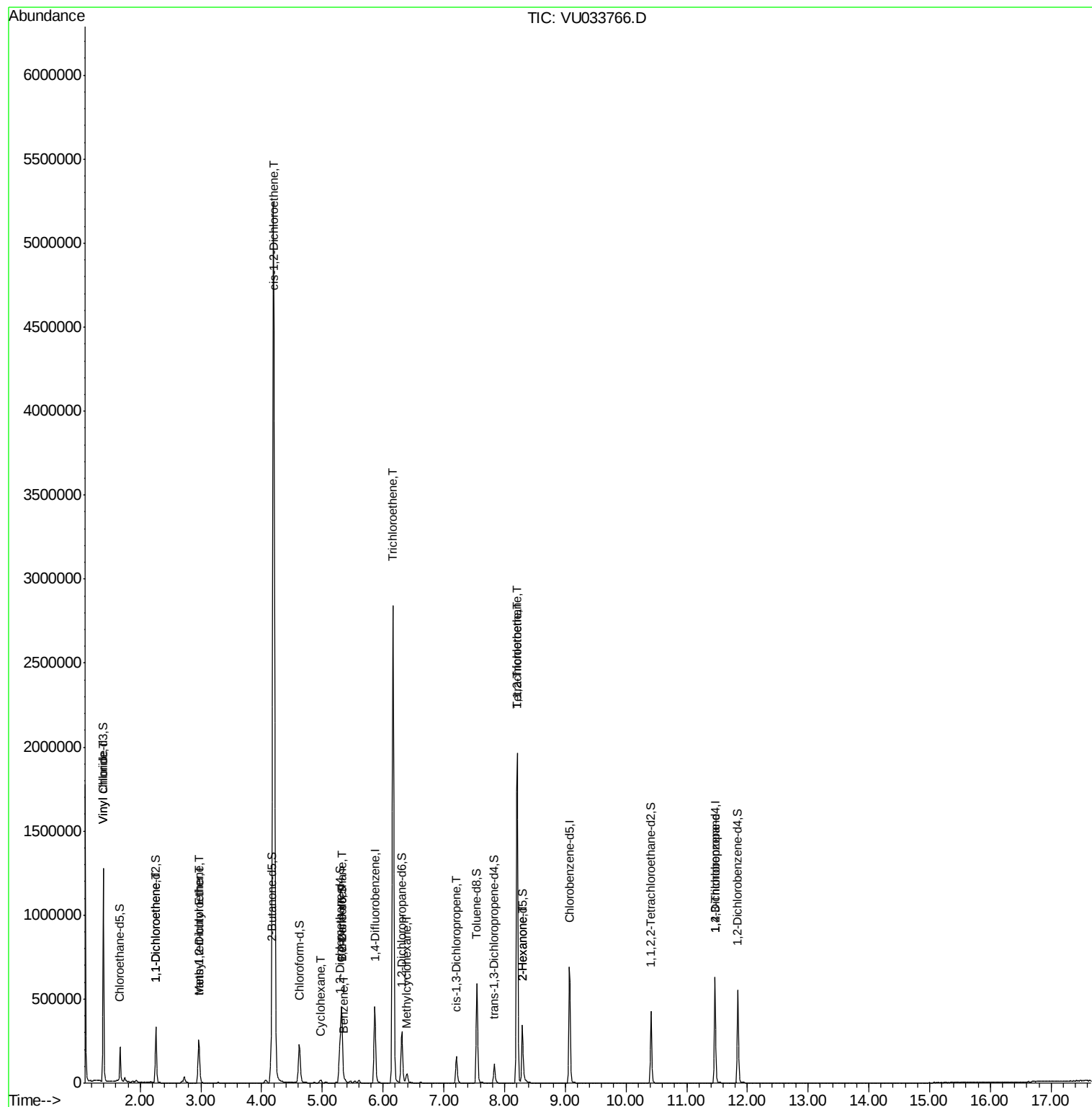
Quant Time: Aug 12 16:29:51 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080919WMA.M  
Quant Title : VOC Analysis  
QLast Update : Mon Aug 12 16:26:52 2019  
Response via : Initial Calibration

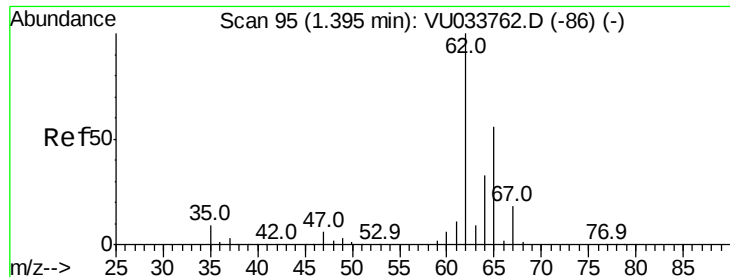
| Internal Standards                                                   | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------------------------------------------------|------|------|----------|------|-------|----------|
| -----                                                                |      |      |          |      |       |          |
| (#)=qualifier out of range (m)=manual integration (+)=signals summed |      |      |          |      |       |          |

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA U\DATA\VU081219\  
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ClientSampleId :

Quant Time: Aug 12 16:29:51 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080919WMA.M  
Quant Title : VOC Analysis  
QLast Update : Mon Aug 12 16:26:52 2019  
Response via : Initial Calibration





#5

Vinyl chloride

Concen: 215.985 ug/L

RT: 1.39 min Scan# 94

Delta R.T. -0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

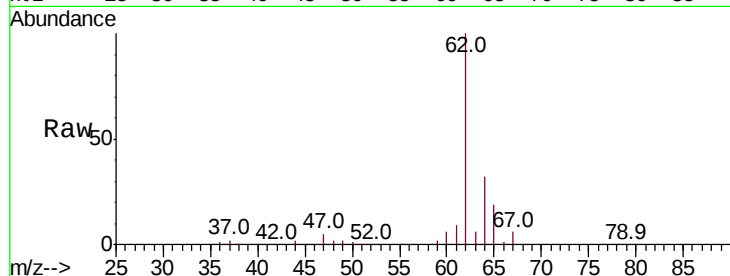
Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion: 62 Resp: 694949

Ion Ratio Lower Upper

62 100

64 32.4 23.7 43.9



Abundance Ion 62.00 (61.70 to 62.70): VU033766.D (-86) (-)

Ion 64.00 (63.70 to 64.70): VU033766.D (-86) (-)

1.39

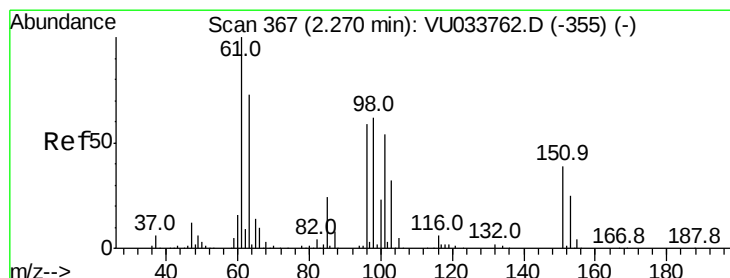
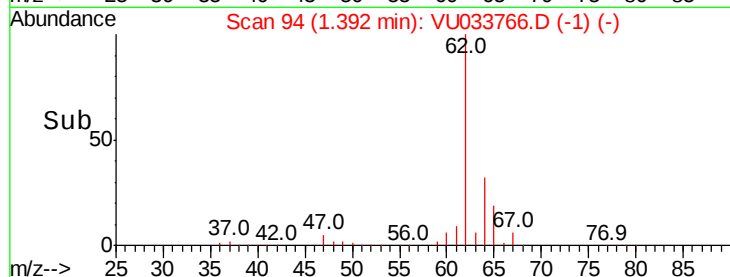
600000

400000

200000

0

Time-->



#12

1,1-Dichloroethene

Concen: 1.796 ug/L

RT: 2.27 min Scan# 366

Delta R.T. -0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

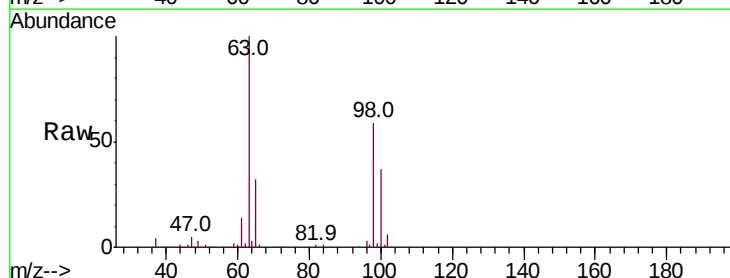
Tgt Ion: 96 Resp: 4036

Ion Ratio Lower Upper

96 100

61 519.5 118.2 219.6#

63 3780.1 90.7 168.5#



Abundance Ion 96.00 (95.70 to 96.70): VU033766.D (-274) (-)

Ion 61.00 (60.70 to 61.70): VU033766.D (-274) (-)

Ion 63.00 (62.70 to 63.70): VU033766.D (-274) (-)

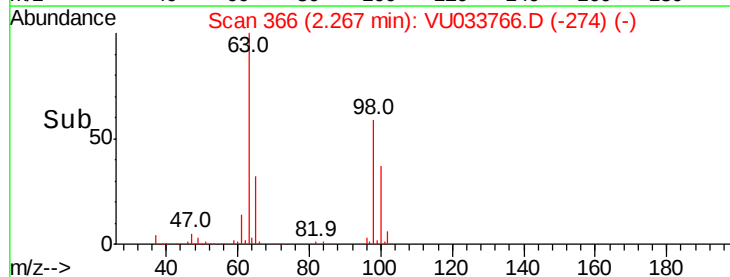
150000

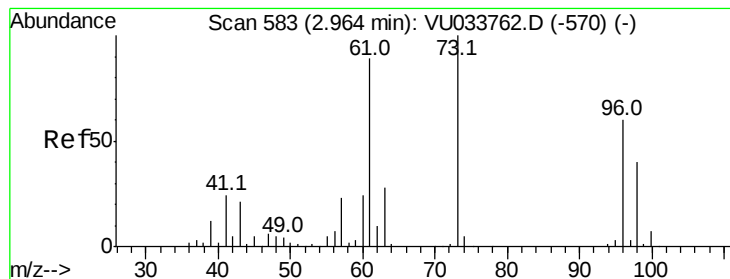
100000

50000

0

Time-->





#17

trans-1,2-Dichloroethene

Concen: 37.406 ug/L

RT: 2.96 min Scan# 583

Delta R.T. 0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

Instrument :

MSVOA\_U

ClientSampleId :

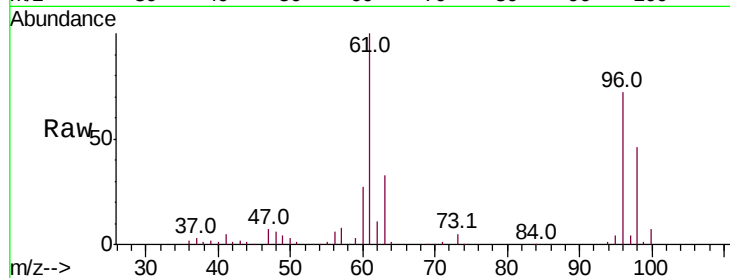
Tot Ion: 96 Resp: 90107

Ion Ratio Lower Upper

96 100

61 139.7 95.6 177.6

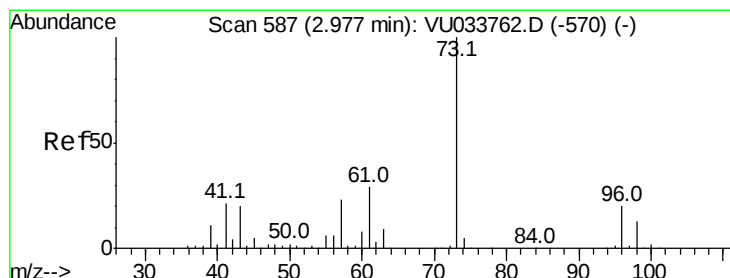
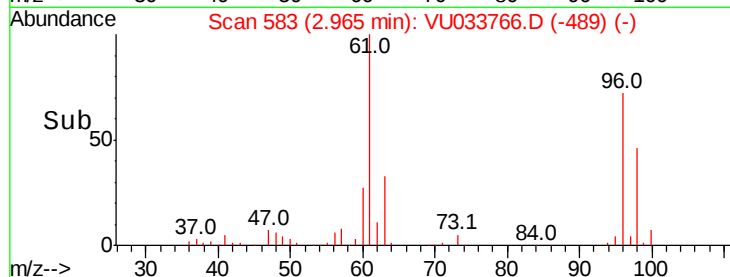
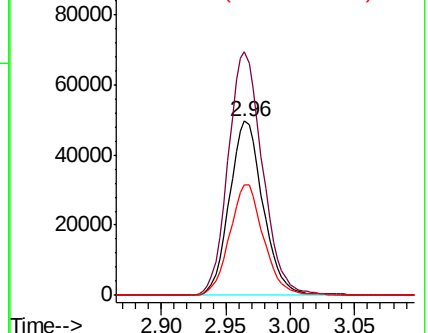
98 63.7 44.6 82.8



Abundance Ion 96.00 (95.70 to 96.70): VU033766.D (-570) (-)

Ion 61.00 (60.70 to 61.70): VU033766.D (-570) (-)

Ion 98.00 (97.70 to 98.70): VU033766.D (-570) (-)



#18

Methyl tert-butyl Ether

Concen: 1.567 ug/L

RT: 2.98 min Scan# 587

Delta R.T. -0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

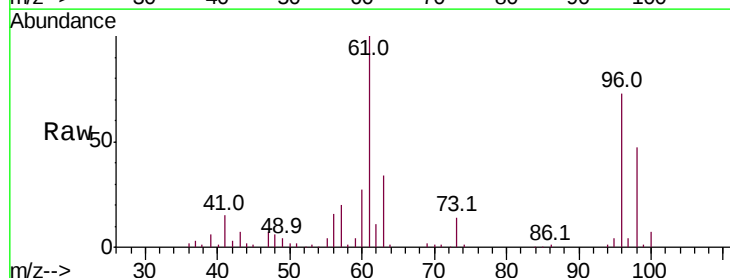
Tgt Ion: 73 Resp: 12350

Ion Ratio Lower Upper

73 100

43 47.0 15.1 22.7#

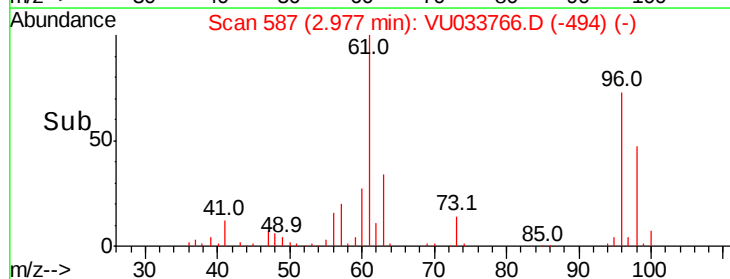
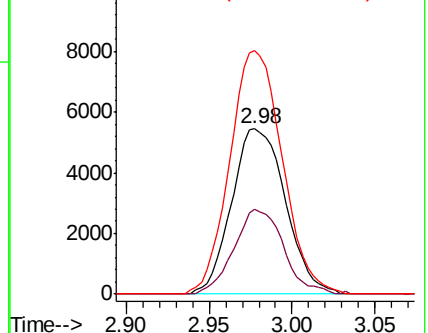
57 143.5 17.4 26.0#

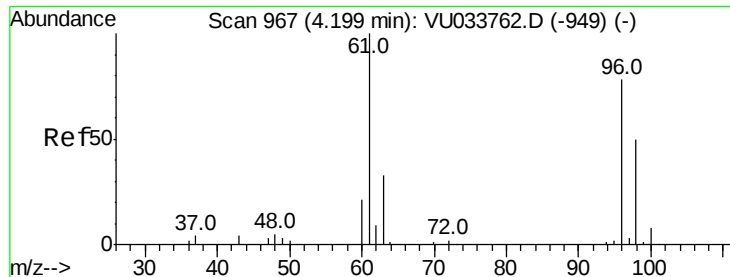


Abundance Ion 73.00 (72.70 to 73.70): VU033766.D (-570) (-)

Ion 43.00 (42.70 to 43.70): VU033766.D (-570) (-)

Ion 57.00 (56.70 to 57.70): VU033766.D (-570) (-)



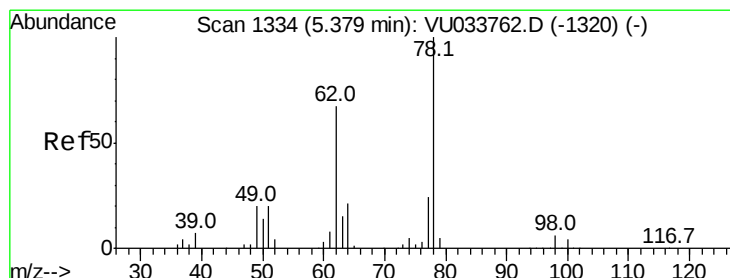
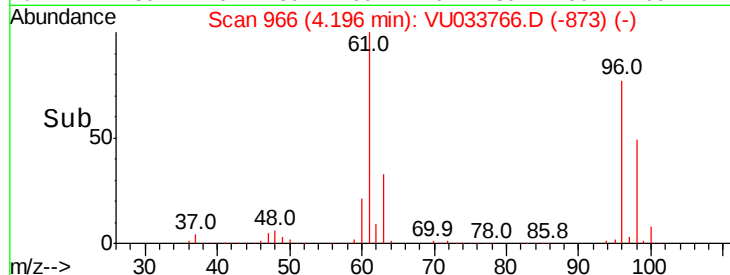
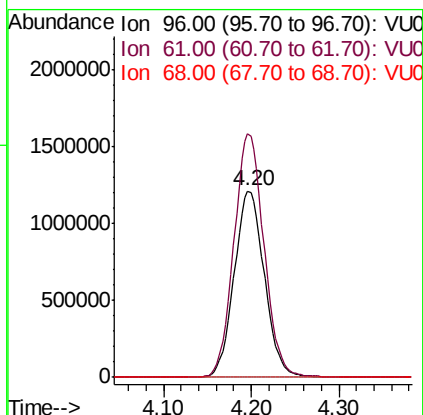
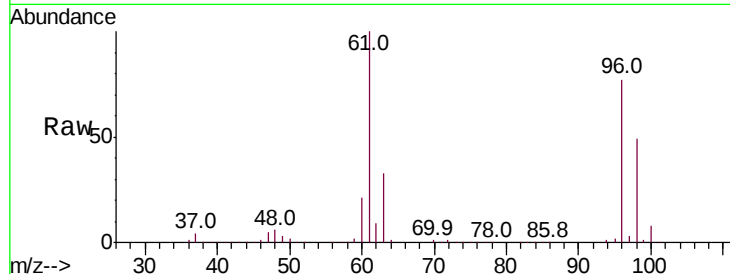


#20  
 cis-1,2-Dichloroethene  
 Concen: 1056.190 ug/L  
 RT: 4.20 min Scan# 966  
 Delta R.T. -0.00 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Tot Ion: 96 Resp: 2902094  

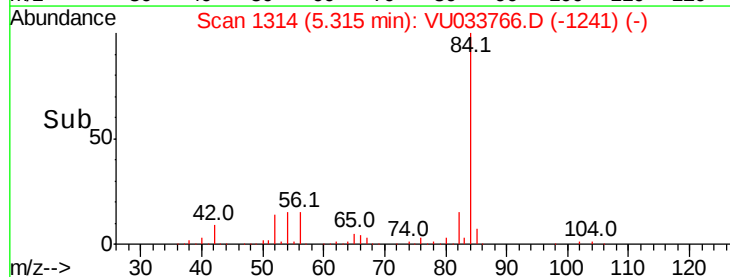
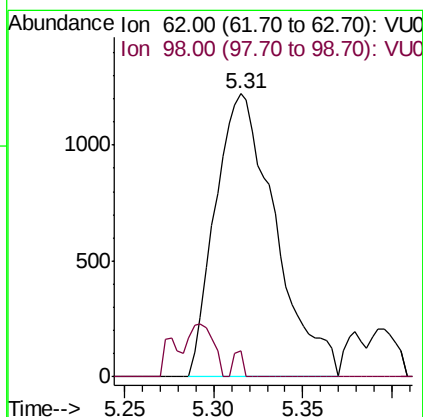
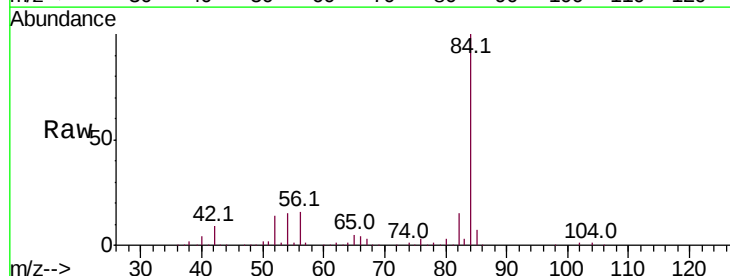
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 96  | 100   |       |       |
| 61  | 130.5 | 87.0  | 161.6 |
| 68  | 0.0   | 0.0   | 0.0   |

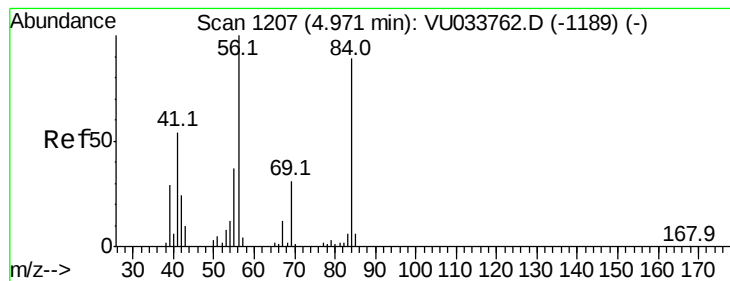


#27  
 1,2-Dichloroethane  
 Concen: 0.790 ug/L  
 RT: 5.31 min Scan# 1314  
 Delta R.T. -0.06 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

Tgt Ion: 62 Resp: 2852  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 62  | 100   |       |       |
| 98  | 9.1   | 7.4   | 11.2  |





#29

Cyclohexane

Concen: 1.951 ug/L

RT: 4.97 min Scan# 1207

Delta R.T. -0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

Instrument :  
MSVOA\_U  
ClientSampleId :

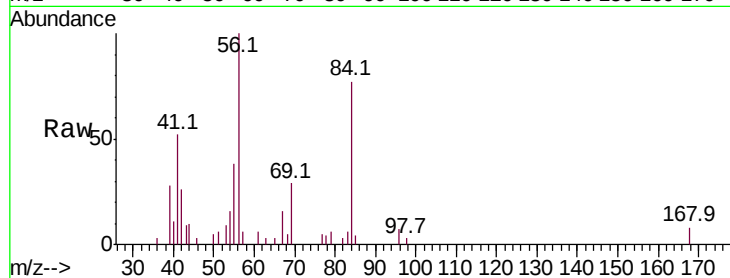
Tot Ion: 56 Resp: 7703

Ion Ratio Lower Upper

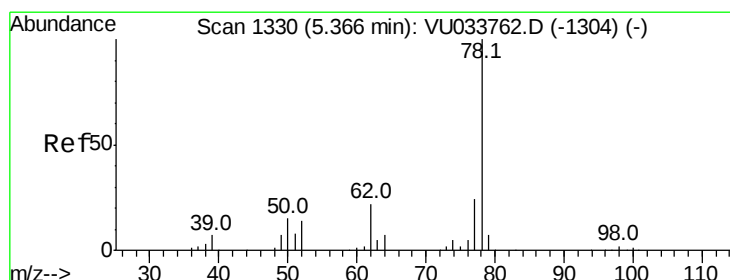
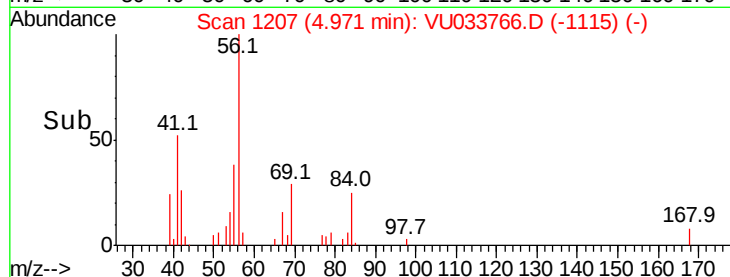
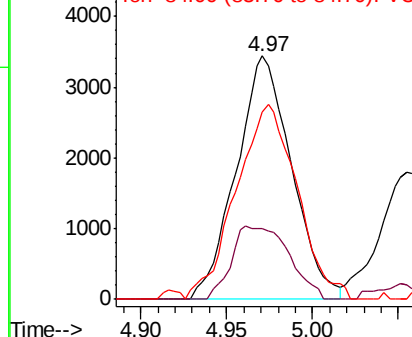
56 100

69 14.6 25.3 37.9#

84 87.2 71.8 107.8



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



#33

Benzene

Concen: 1.646 ug/L

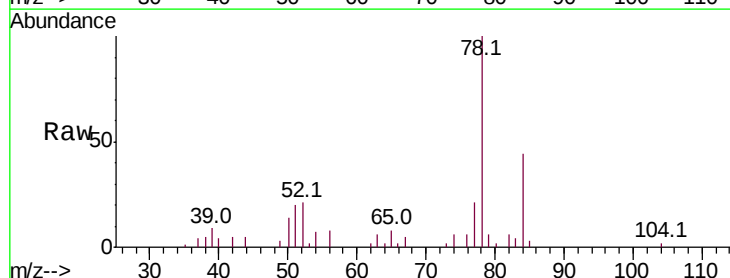
RT: 5.37 min Scan# 1330

Delta R.T. -0.00 min

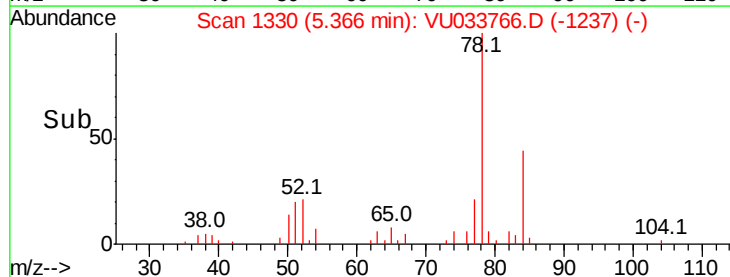
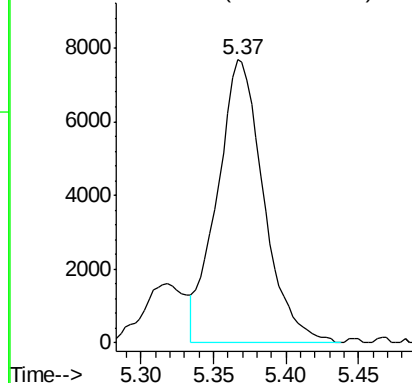
Lab File: VU033766.D

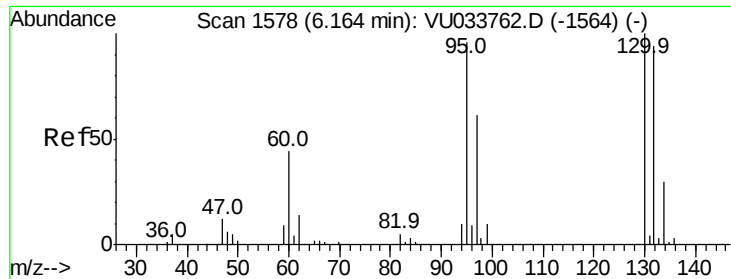
Acq: 12 Aug 2019 12:42

Tgt Ion: 78 Resp: 17132



Abundance Ion 78.00 (77.70 to 78.70): VU0

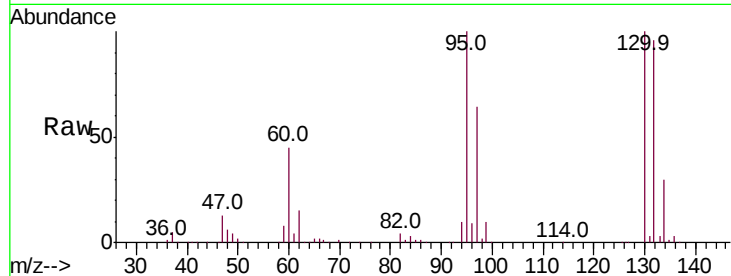




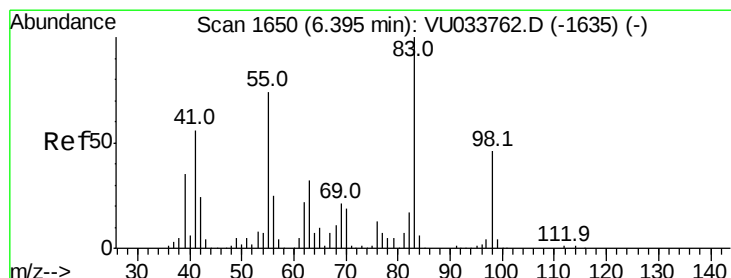
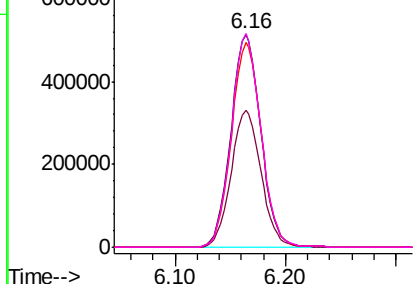
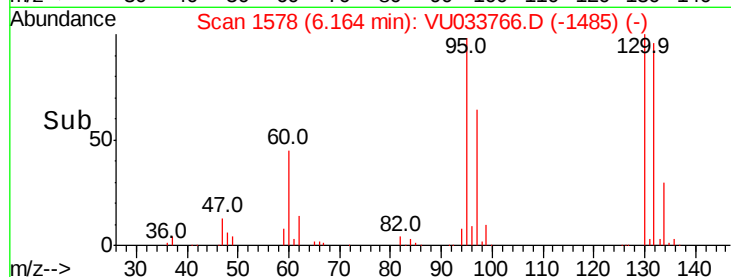
#34  
 Trichloroethene  
 Concen: 351.265 ug/L  
 RT: 6.16 min Scan# 1578  
 Delta R.T. -0.00 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

Instrument :  
 MSVOA\_U  
 ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 95    | Resp: | 964886 |
| Ion      | Ratio | Lower | Upper  |
| 95       | 100   |       |        |
| 97       | 64.3  | 45.6  | 84.8   |
| 132      | 96.0  | 72.0  | 133.8  |
| 130      | 100.4 | 74.3  | 138.1  |

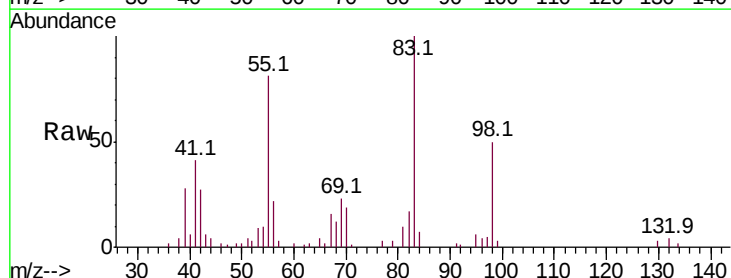


Abundance Ion 95.00 (94.70 to 95.70): VU0  
 Ion 97.00 (96.70 to 97.70): VU0  
 Ion 132.00 (131.70 to 132.70): V  
 Ion 130.00 (129.70 to 130.70): V

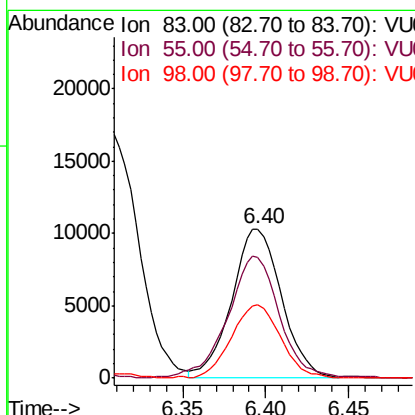
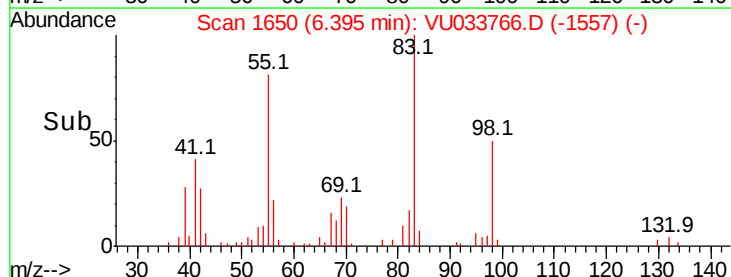


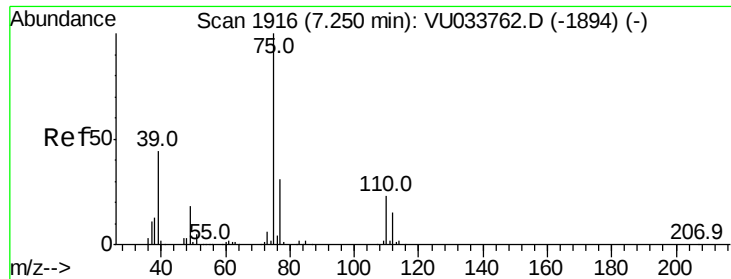
#35  
 Methylcyclohexane  
 Concen: 5.167 ug/L  
 RT: 6.40 min Scan# 1650  
 Delta R.T. -0.00 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 83    | Resp: | 21603 |
| Ion      | Ratio | Lower | Upper |
| 83       | 100   |       |       |
| 55       | 84.7  | 58.1  | 87.1  |
| 98       | 48.3  | 36.8  | 55.2  |



Abundance Ion 83.00 (82.70 to 83.70): VU0  
 Ion 55.00 (54.70 to 55.70): VU0  
 Ion 98.00 (97.70 to 98.70): VU0

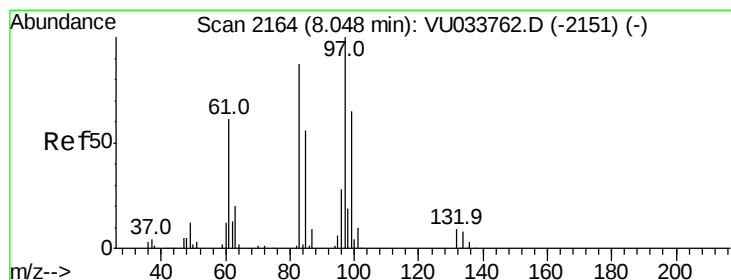
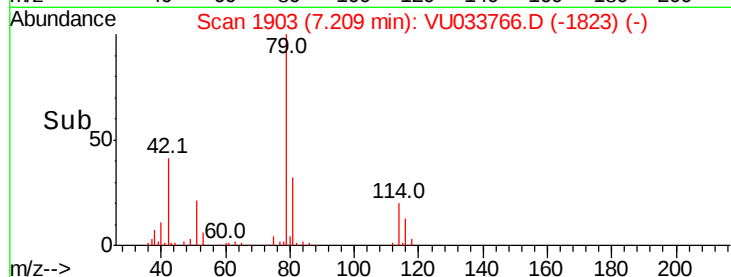
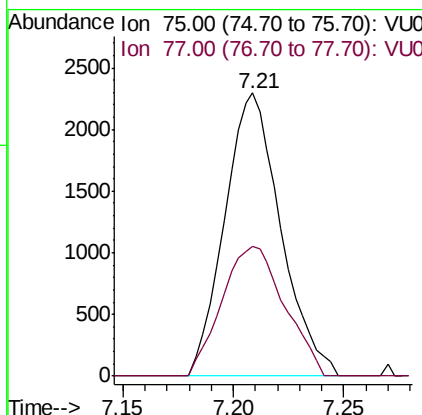
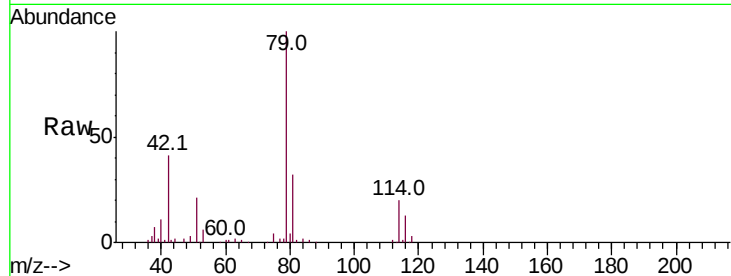




#39  
 cis-1,3-Dichloropropene  
 Concen: 0.914 ug/L  
 RT: 7.21 min Scan# 1903  
 Delta R.T. -0.04 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

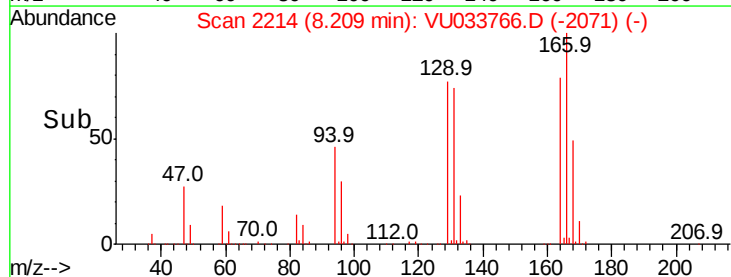
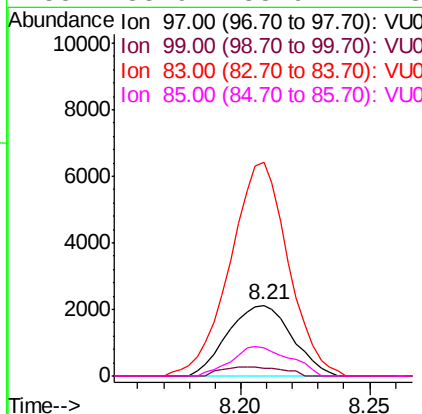
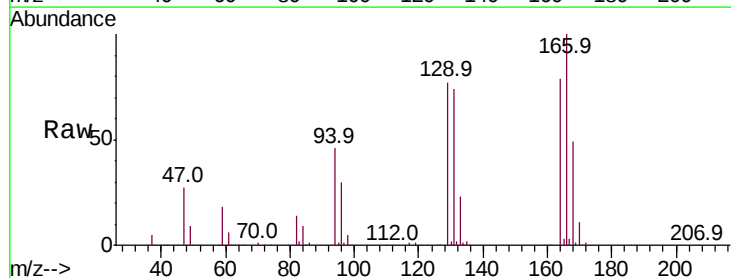
Instrument :  
 MSVOA\_U  
 ClientSampled :

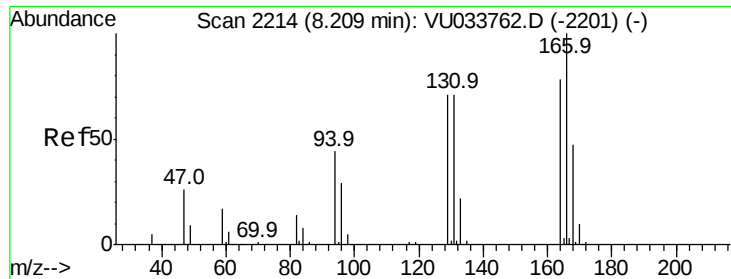
Tot Ion: 75 Resp: 4035  
 Ion Ratio Lower Upper  
 75 100  
 77 45.7 21.7 40.3#



#45  
 1,1,2-Trichloroethane  
 Concen: 1.345 ug/L  
 RT: 8.21 min Scan# 2214  
 Delta R.T. 0.16 min  
 Lab File: VU033766.D  
 Acq: 12 Aug 2019 12:42

Tgt Ion: 97 Resp: 3652  
 Ion Ratio Lower Upper  
 97 100  
 99 11.6 43.3 80.5#  
 83 300.9 60.5 112.5#  
 85 38.9 38.9 72.3#





#46

Tetrachloroethene

Concen: 187.867 ug/L

RT: 8.21 min Scan# 2214

Delta R.T. -0.00 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion:164 Resp: 425395

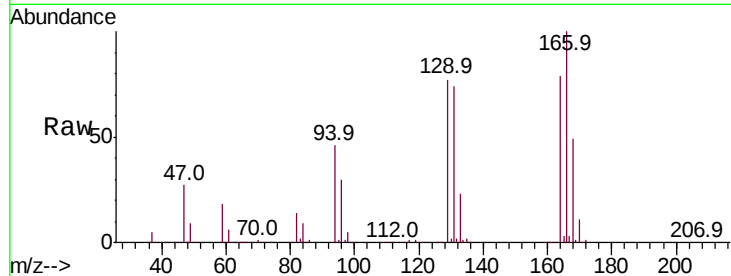
Ion Ratio Lower Upper

164 100

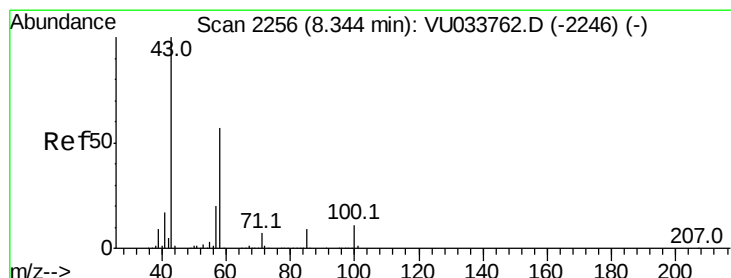
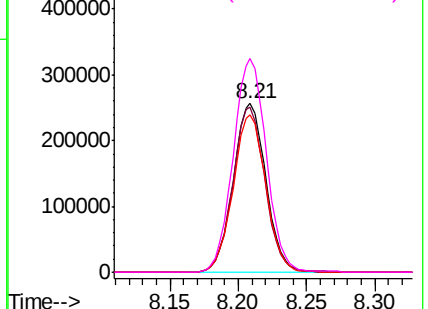
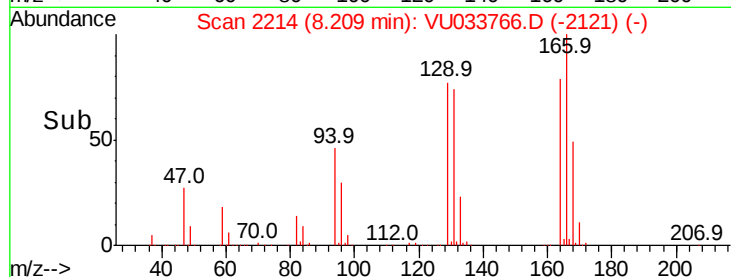
129 97.9 65.5 121.7

131 93.6 63.6 118.0

166 126.8 92.7 172.3



Abundance Ion 164.00 (163.70 to 164.70): V  
500000  
Ion 129.00 (128.70 to 129.70): V  
Ion 131.00 (130.70 to 131.70): V  
Ion 166.00 (165.70 to 166.70): V



#48

2-Hexanone

Concen: 4.435 ug/L

RT: 8.29 min Scan# 2240

Delta R.T. -0.05 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

Tgt Ion: 43 Resp: 14428

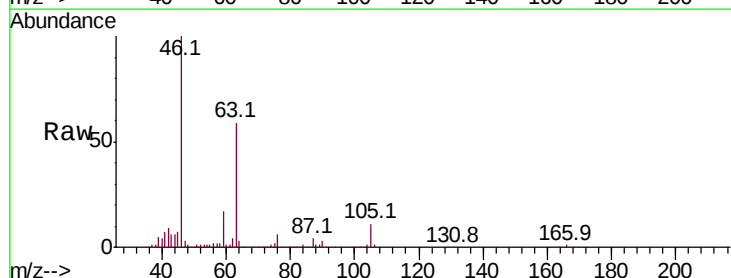
Ion Ratio Lower Upper

43 100

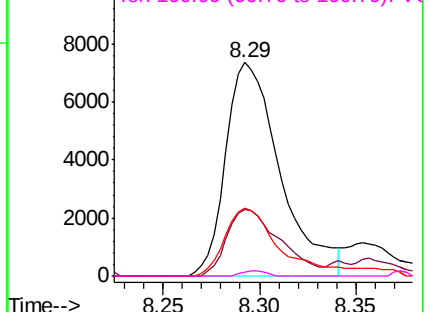
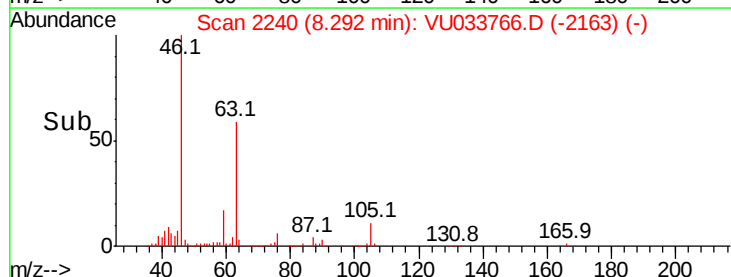
58 30.1 46.6 70.0#

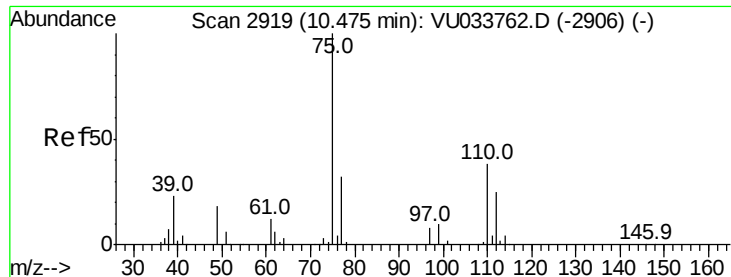
57 31.4 16.2 24.4#

100 1.1 10.1 15.1#



Abundance Ion 43.00 (42.70 to 43.70): VU0  
10000  
Ion 58.00 (57.70 to 58.70): VU0  
Ion 57.00 (56.70 to 57.70): VU0  
Ion 100.00 (99.70 to 100.70): VU0





#59

1,2,3-Trichloropropane

Concen: 5.143 ug/L

RT: 11.47 min Scan# 3227

Delta R.T. 0.99 min

Lab File: VU033766.D

Acq: 12 Aug 2019 12:42

Instrument :

MSVOA\_U

ClientSampleId :

Tot Ion: 75 Resp: 19318

Ion Ratio Lower Upper

75 100

77 37.5 26.4 39.6

