

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU111418\  
 Data File : VU028142.D  
 Acq On : 15 Nov 2018 00:31  
 Operator : MD/SY  
 Sample : J5943-04  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 36 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Nov 15 06:18:07 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR111418WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Thu Nov 15 06:14:20 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.89  | 114  | 132346   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 123335   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 57816    | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40   | 65    | 60255    | 5.49     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 109.80% |
| 7) Chloroethane-d5             | 1.68   | 69    | 42392    | 4.86     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 97.20%  |
| 11) 1,1-Dichloroethene-d2      | 2.28   | 63    | 74095    | 3.61     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 72.20%  |
| 20) 2-Butanone-d5              | 4.20   | 46    | 179659   | 56.40    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 112.80% |
| 24) Chloroform-d               | 4.65   | 84    | 87187    | 4.99     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 99.80%  |
| 26) 1,2-Dichloroethane-d4      | 5.31   | 65    | 50844    | 5.21     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 104.20% |
| 32) Benzene-d6                 | 5.34   | 84    | 178853   | 5.05     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 101.00% |
| 36) 1,2-Dichloropropane-d6     | 6.33   | 67    | 65947    | 5.21     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 104.20% |
| 41) Toluene-d8                 | 7.57   | 98    | 155096   | 4.71     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 94.20%  |
| 43) trans-1,3-Dichloropropene- | 7.85   | 79    | 20146    | 4.46     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 89.20%  |
| 46) 2-Hexanone-d5              | 8.31   | 63    | 138061   | 53.50    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 107.00% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43  | 84    | 46648    | 5.21     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 104.20% |
| 64) 1,2-Dichlorobenzene-d4     | 11.86  | 152   | 55180    | 5.11     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 102.20% |

## Target Compounds

|                                |      |     |         | Ovalue          |
|--------------------------------|------|-----|---------|-----------------|
| 3) Chloromethane               | 1.40 | 50  | 7154    | 0.479 ug/L # 42 |
| 5) Vinyl chloride              | 1.40 | 62  | 1239999 | 87.473 ug/L 98  |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.28 | 101 | 554     | 0.064 ug/L # 44 |
| 12) 1,1-Dichloroethene         | 2.29 | 96  | 3945    | 0.448 ug/L # 1  |
| 13) Acetone                    | 2.32 | 43  | 3942    | 1.838 ug/L 78   |
| 18) trans-1,2-Dichloroethene   | 2.98 | 96  | 345338  | 36.912 ug/L 99  |
| 19) 1,1-Dichloroethane         | 3.45 | 63  | 4169    | 0.212 ug/L 96   |
| 22) cis-1,2-Dichloroethene     | 4.23 | 96  | 922137  | 89.396 ug/L 97  |
| 27) 1,2-Dichloroethane         | 5.42 | 62  | 772     | 0.067 ug/L # 76 |
| 33) Benzene                    | 5.40 | 78  | 4395    | 0.106 ug/L 100  |
| 34) Trichloroethene            | 6.19 | 95  | 33072   | 3.221 ug/L 97   |
| 35) Methylcyclohexane          | 6.33 | 83  | 13042   | 0.739 ug/L # 16 |
| 37) 1,2-Dichloropropane        | 6.33 | 63  | 6504    | 0.566 ug/L # 92 |
| 39) cis-1,3-Dichloropropene    | 7.23 | 75  | 1312    | 0.084 ug/L # 57 |
| 42) Toluene                    | 7.64 | 91  | 2218    | 0.052 ug/L 85   |
| 47) Tetrachloroethene          | 8.22 | 164 | 760     | 0.091 ug/L # 77 |
| 48) 2-Hexanone                 | 8.37 | 43  | 2573    | 0.457 ug/L # 77 |

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ALS Vial : 36 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :

Quant Time: Nov 15 06:18:07 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR111418WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Thu Nov 15 06:14:20 2018  
Response via : Initial Calibration

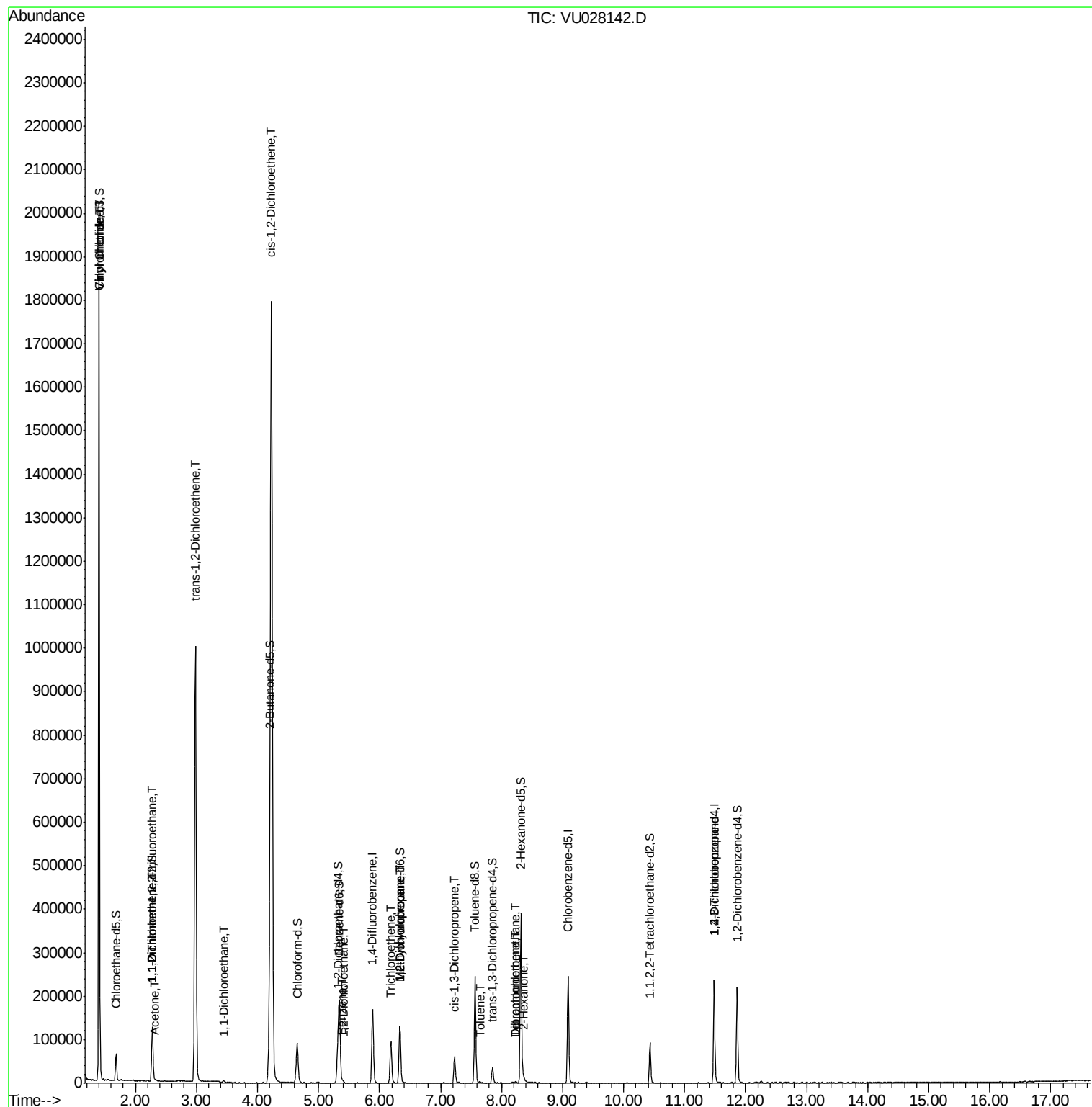
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|----------------------------|-------|------|----------|-------|--------|----------|
| 49) Dibromochloromethane   | 8.23  | 129  | 784      | 0.106 | ug/L # | 11       |
| 59) 1,2,3-Trichloropropane | 11.48 | 75   | 8343     | 1.293 | ug/L   | 92       |

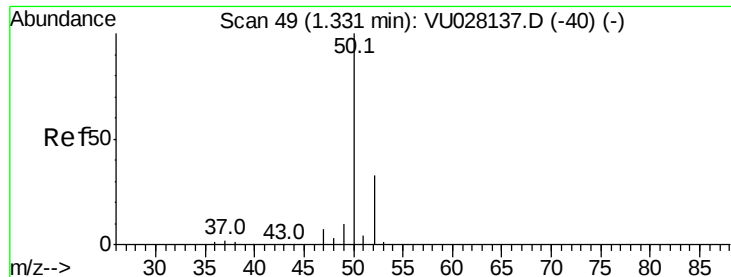
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Nov 15 06:18:07 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR111418WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Thu Nov 15 06:14:20 2018  
Response via : Initial Calibration





#3

Chloromethane

Concen: 0.479 ug/L

RT: 1.40 min Scan# 72

Delta R.T. 0.07 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

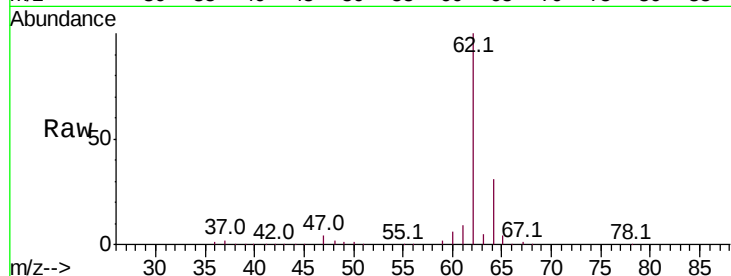
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 50 Resp: 7154

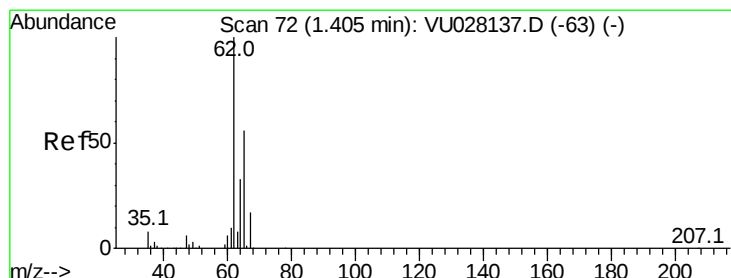
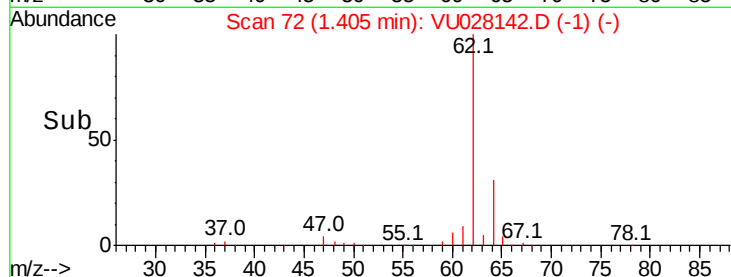
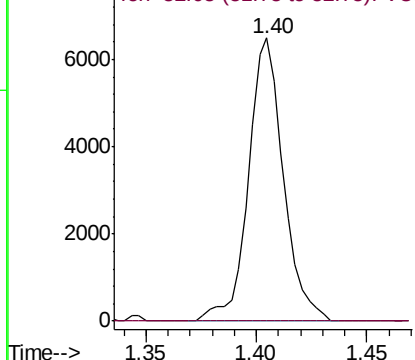
Ion Ratio Lower Upper

50 100

52 0.0 23.0 42.6#



Abundance Ion 50.05 (49.75 to 50.75): VU0  
Ion 52.05 (51.75 to 52.75): VU0



#5

Vinyl chloride

Concen: 87.473 ug/L

RT: 1.40 min Scan# 72

Delta R.T. -0.00 min

Lab File: VU028142.D

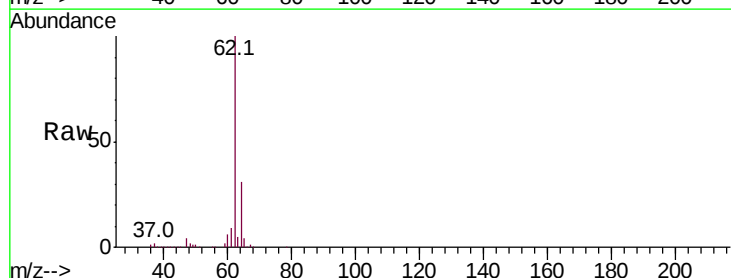
Acq: 15 Nov 2018 00:31

Tgt Ion: 62 Resp: 1239999

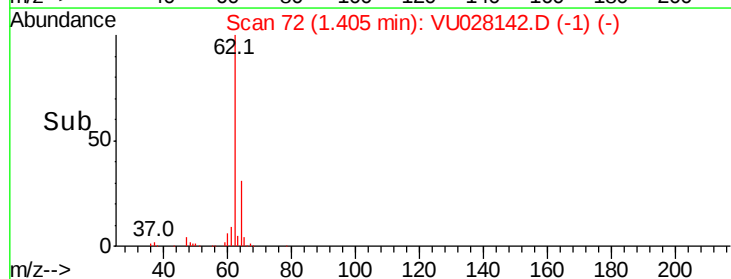
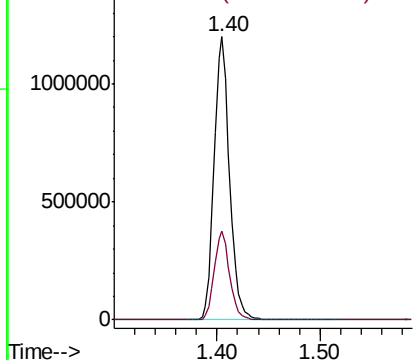
Ion Ratio Lower Upper

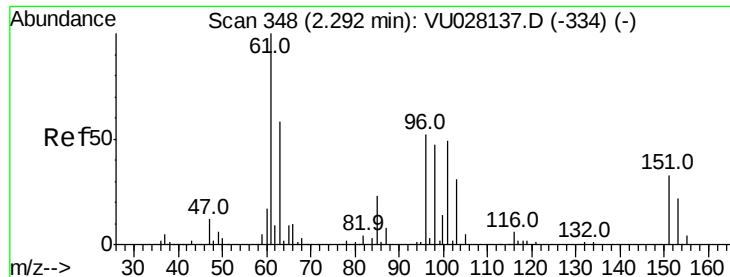
62 100

64 31.3 22.7 42.3



Abundance Ion 62.00 (61.70 to 62.70): VU0  
Ion 64.10 (63.80 to 64.80): VU0





#10

1,1,2-Trichloro-1,2,2-trifluoroethane

Concen: 0.064 ug/L

RT: 2.28 min Scan# 343

Delta R.T. -0.02 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

Instrument :

MSVOA\_U

ClientSampleId :

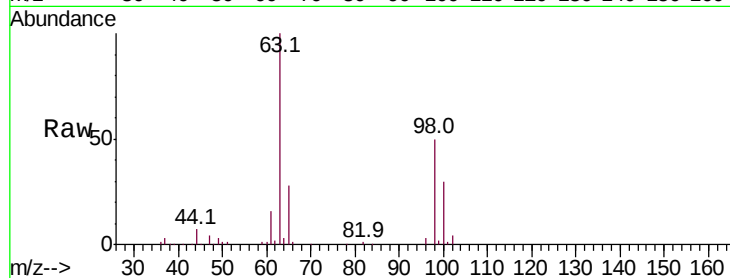
Tot Ion:101 Resp: 554

Ion Ratio Lower Upper

101 100

85 52.3 37.6 56.4

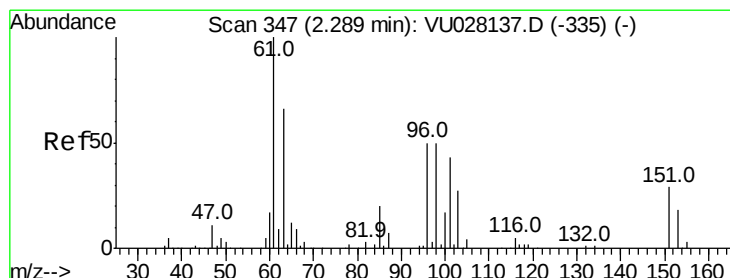
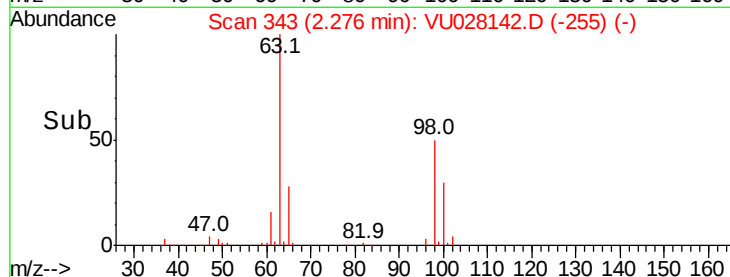
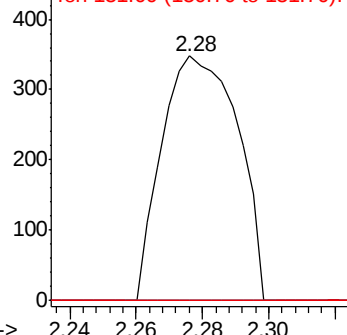
151 0.0 58.2 87.2#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 85.00 (84.70 to 85.70): VU0

Ion 151.00 (150.70 to 151.70): V



#12

1,1-Dichloroethene

Concen: 0.448 ug/L

RT: 2.29 min Scan# 346

Delta R.T. -0.00 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

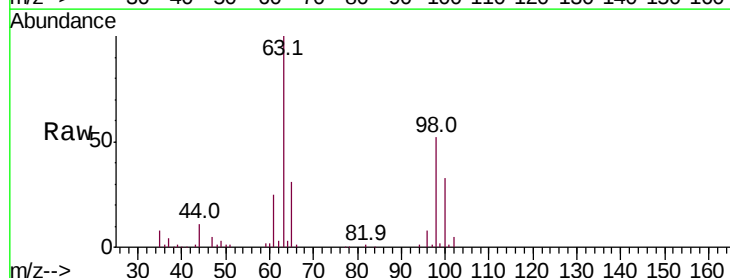
Tgt Ion: 96 Resp: 3945

Ion Ratio Lower Upper

96 100

61 324.8 134.8 250.3#

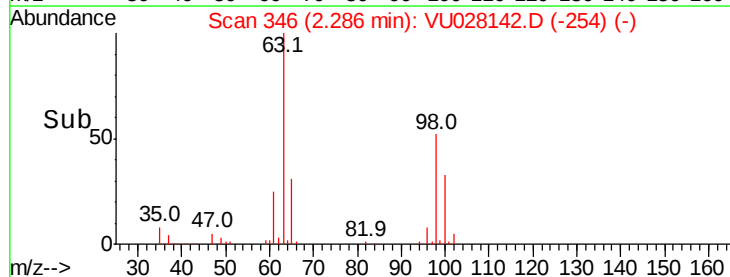
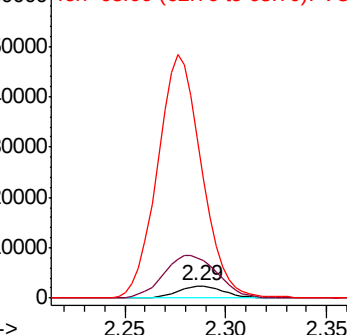
63 1286.1 100.1 185.9#

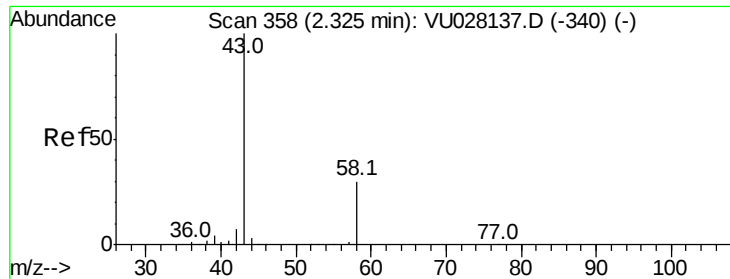


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 1.838 ug/L

RT: 2.32 min Scan# 358

Delta R.T. -0.00 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

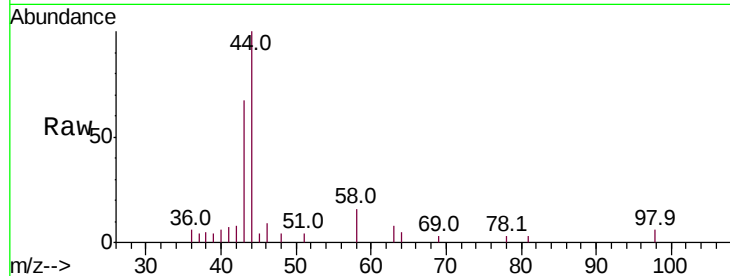
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 43 Resp: 3942

Ion Ratio Lower Upper

43 100

58 18.5 0.0 61.6



Abundance Ion 43.05 (42.75 to 43.75): VU028137.D (-340) (-)

Ion 58.05 (57.75 to 58.75): VU028137.D (-340) (-)

2500

2000

1500

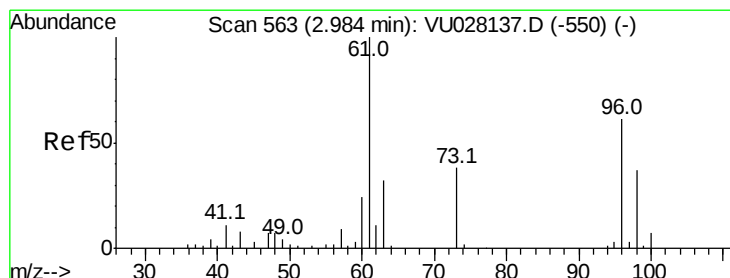
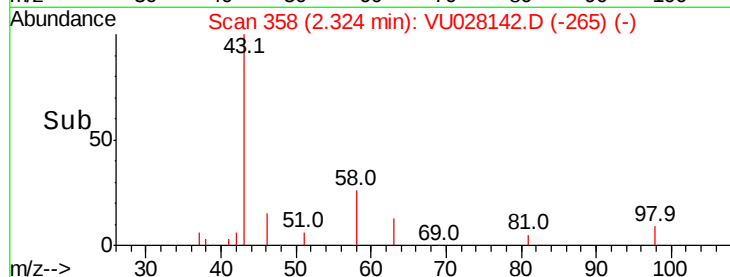
1000

500

0

2.25 2.30 2.35

Time-->



#18

trans-1,2-Dichloroethene

Concen: 36.912 ug/L

RT: 2.98 min Scan# 563

Delta R.T. -0.00 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

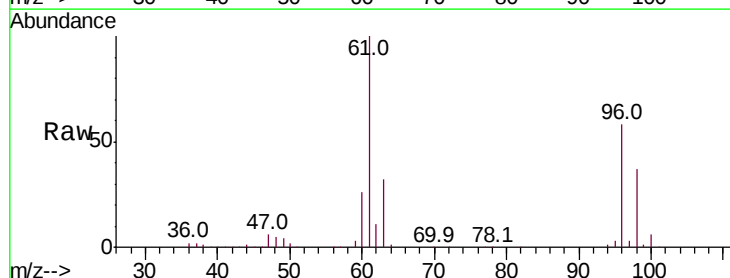
Tgt Ion: 96 Resp: 345338

Ion Ratio Lower Upper

96 100

61 171.6 118.5 220.1

98 63.6 44.9 83.5



Abundance Ion 96.00 (95.70 to 96.70): VU028137.D (-550) (-)

Ion 61.05 (60.75 to 61.75): VU028137.D (-550) (-)

Ion 97.95 (97.65 to 98.65): VU028137.D (-550) (-)

400000

300000

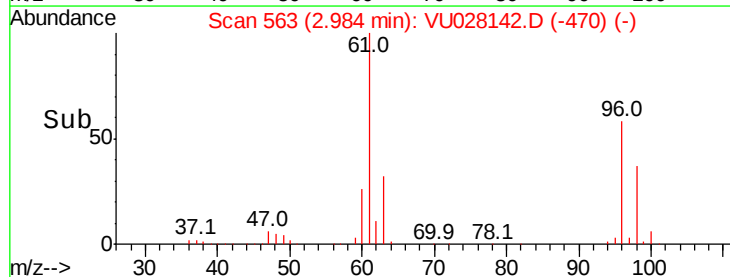
200000

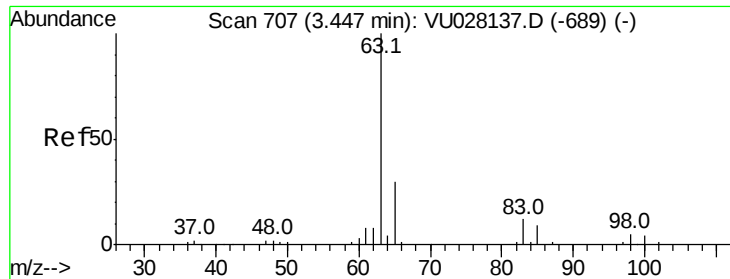
100000

0

2.90 3.00 3.10

Time-->



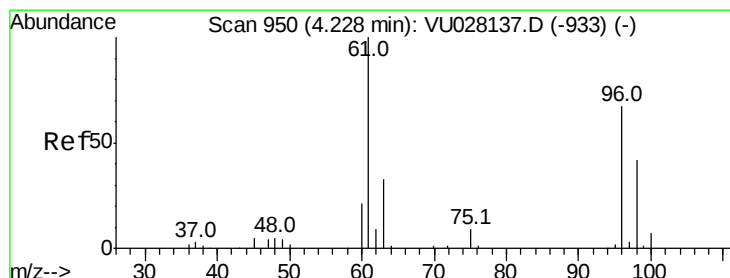
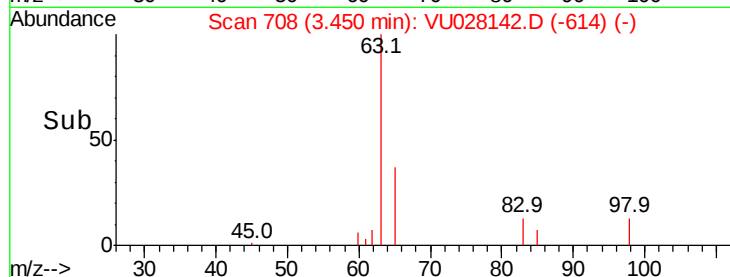
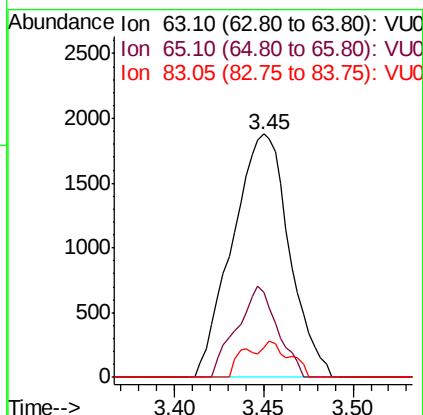
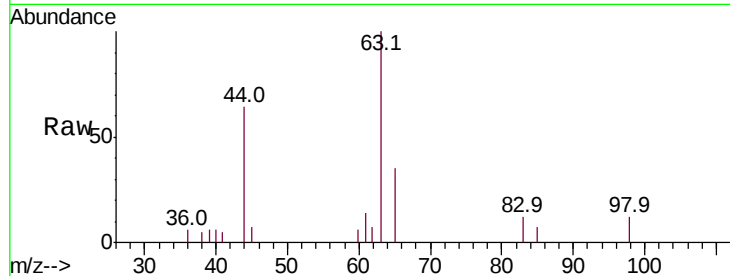


#19  
 1,1-Dichloroethane  
 Concen: 0.212 ug/L  
 RT: 3.45 min Scan# 708  
 Delta R.T. 0.00 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Tot Ion: 63 Resp: 4169  

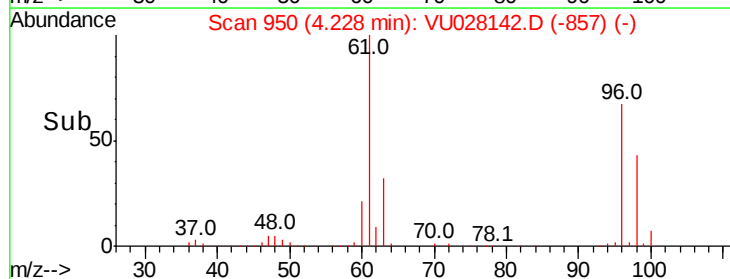
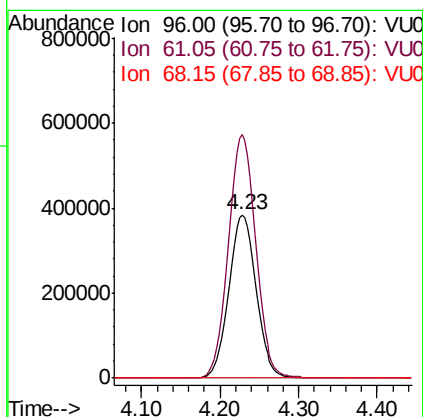
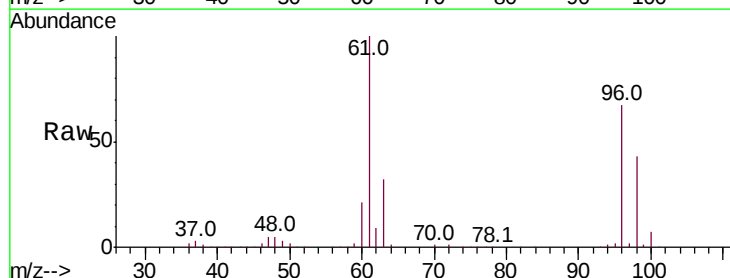
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 63  | 100   |       |       |
| 65  | 34.8  | 22.2  | 41.2  |
| 83  | 12.4  | 8.9   | 16.5  |

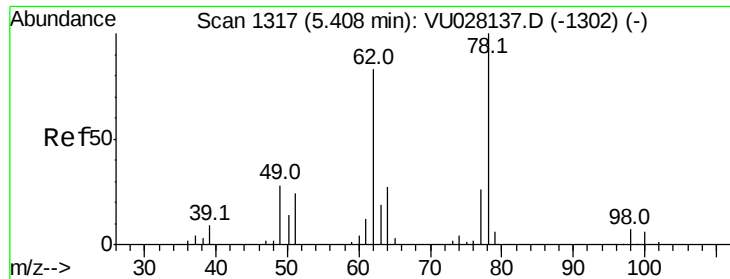


#22  
 cis-1,2-Dichloroethene  
 Concen: 89.396 ug/L  
 RT: 4.23 min Scan# 950  
 Delta R.T. -0.00 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

Tgt Ion: 96 Resp: 922137  

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 96  | 100   |       |       |
| 61  | 148.9 | 101.8 | 189.0 |
| 68  | 0.0   | 0.0   | 0.0   |

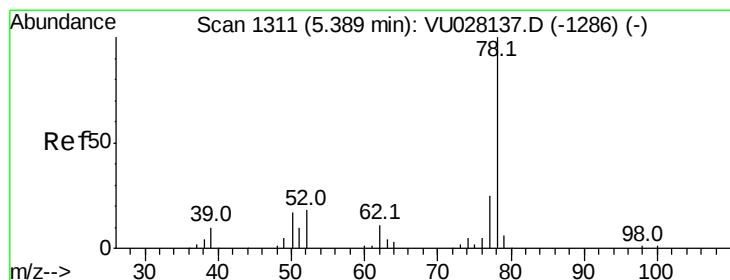
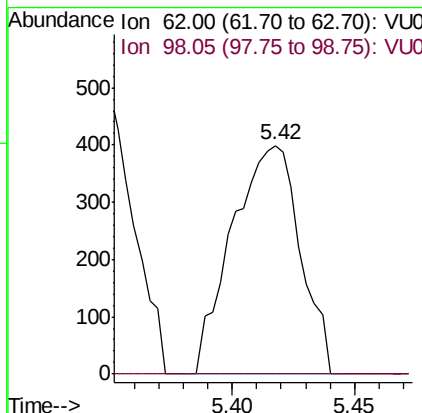
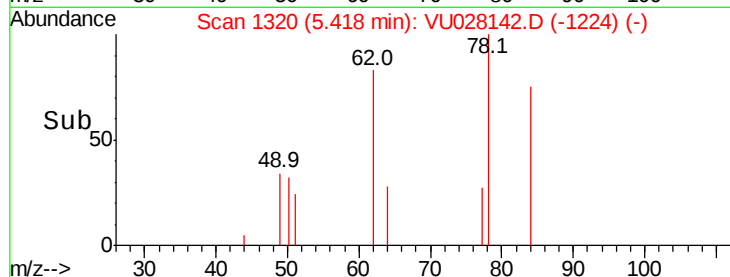
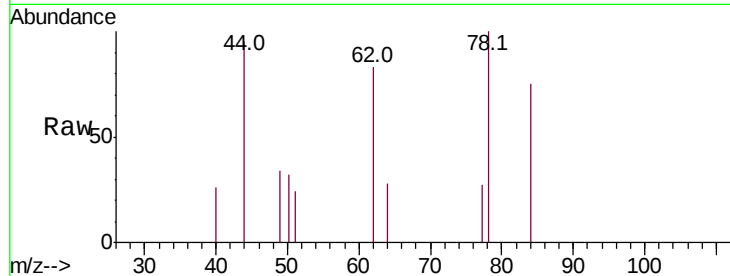




#27  
 1,2-Dichloroethane  
 Concen: 0.067 ug/L  
 RT: 5.42 min Scan# 1320  
 Delta R.T. 0.01 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

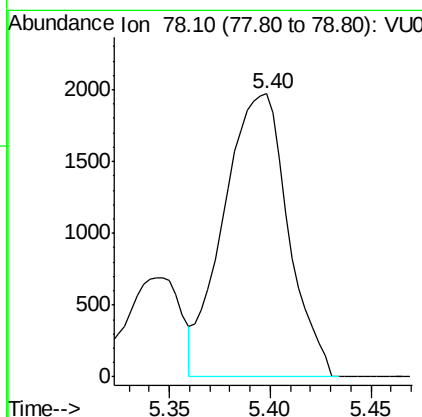
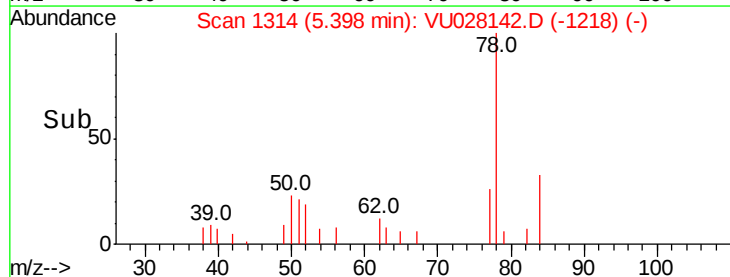
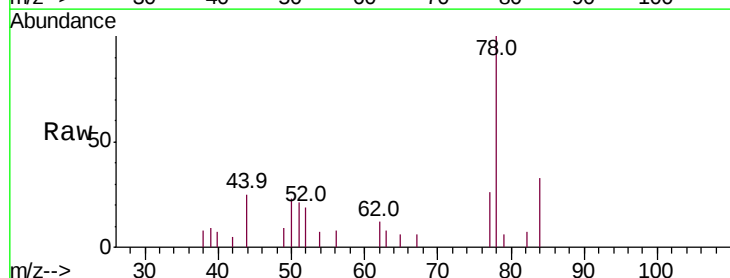
Instrument :  
 MSVOA\_U  
 ClientSampleId :

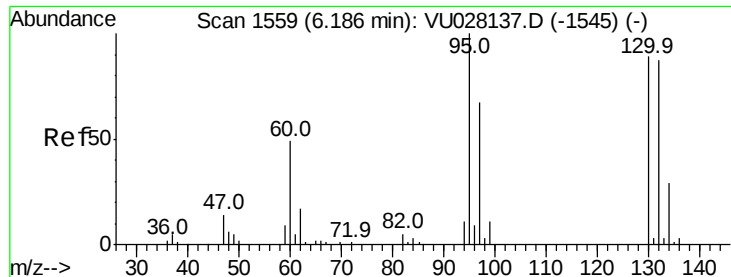
Tot Ion: 62 Resp: 772  
 Ion Ratio Lower Upper  
 62 100  
 98 0.0 7.0 10.4#



#33  
 Benzene  
 Concen: 0.106 ug/L  
 RT: 5.40 min Scan# 1314  
 Delta R.T. 0.01 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

Tgt Ion: 78 Resp: 4395





#34

Trichloroethene

Concen: 3.221 ug/L

RT: 6.19 min Scan# 1559

Delta R.T. -0.00 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion: 95 Resp: 33072

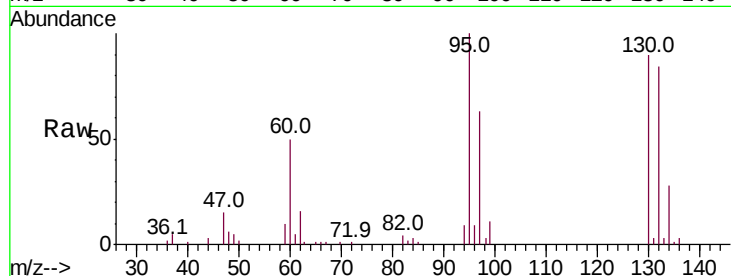
Ion Ratio Lower Upper

95 100

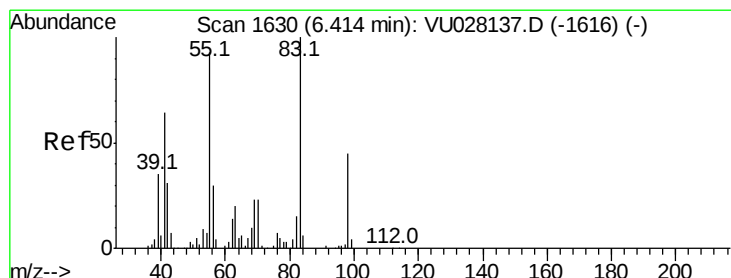
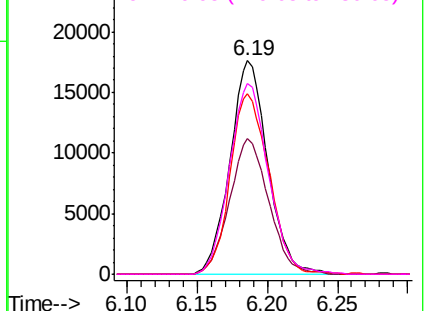
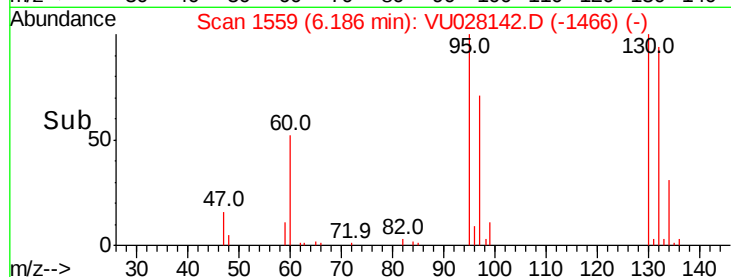
97 63.5 45.3 84.1

132 84.3 63.0 117.0

130 89.5 63.6 118.2



Abundance Ion 95.00 (94.70 to 95.70): VU0  
Ion 96.95 (96.65 to 97.65): VU0  
Ion 131.95 (131.65 to 132.65): V  
Ion 129.95 (129.65 to 130.65): V



#35

Methylcyclohexane

Concen: 0.739 ug/L

RT: 6.33 min Scan# 1605

Delta R.T. -0.08 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

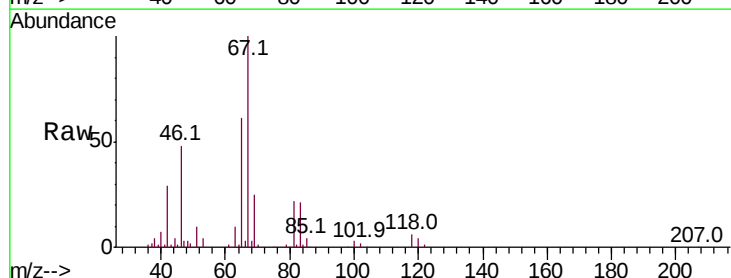
Tgt Ion: 83 Resp: 13042

Ion Ratio Lower Upper

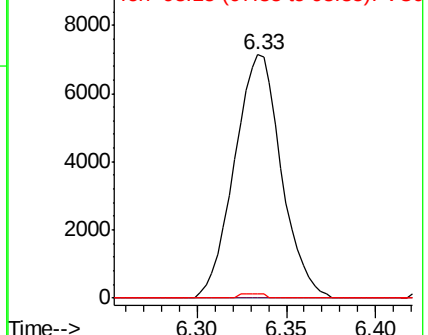
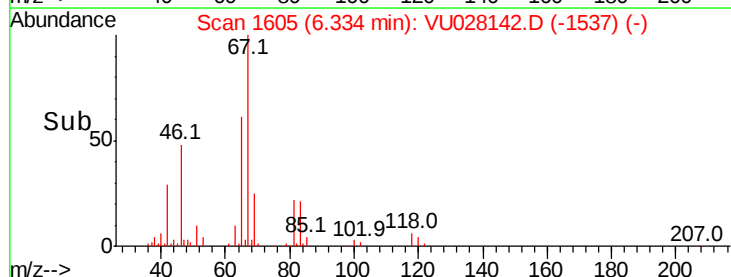
83 100

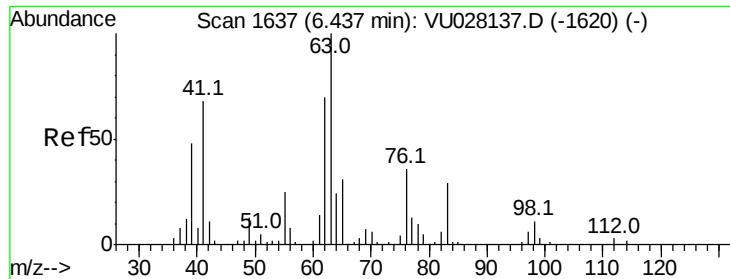
55 0.0 69.0 103.4#

98 0.9 33.3 49.9#



Abundance Ion 83.15 (82.85 to 83.85): VU0  
Ion 55.10 (54.80 to 55.80): VU0  
Ion 98.15 (97.85 to 98.85): VU0

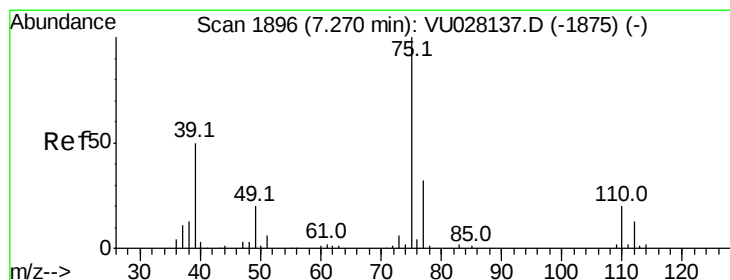
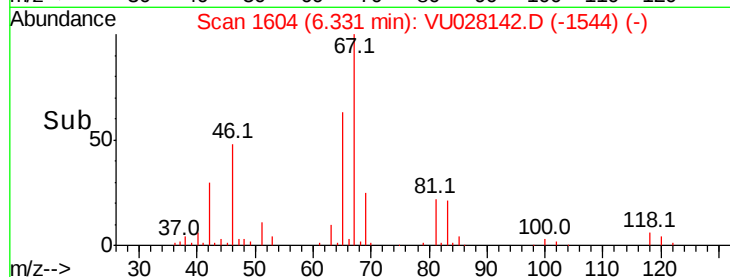
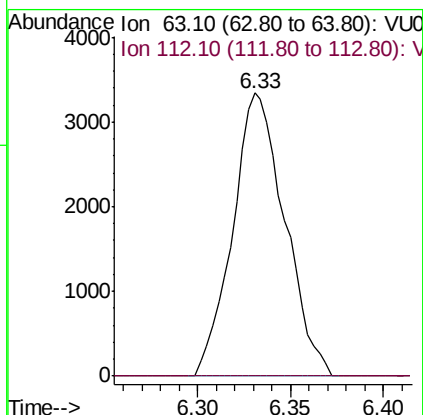
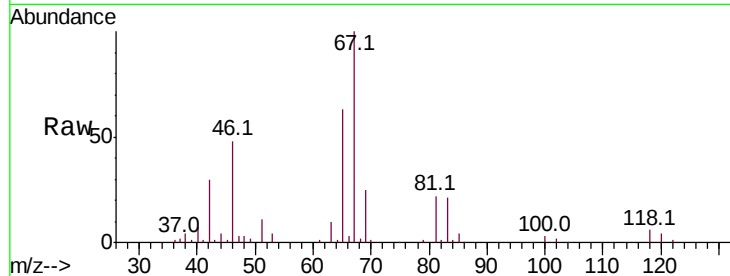




#37  
 1,2-Dichloropropane  
 Concen: 0.566 ug/L  
 RT: 6.33 min Scan# 1604  
 Delta R.T. -0.11 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

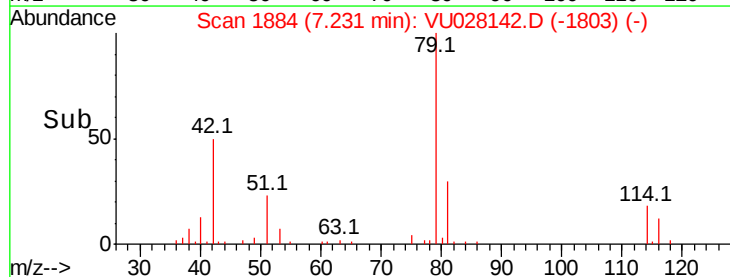
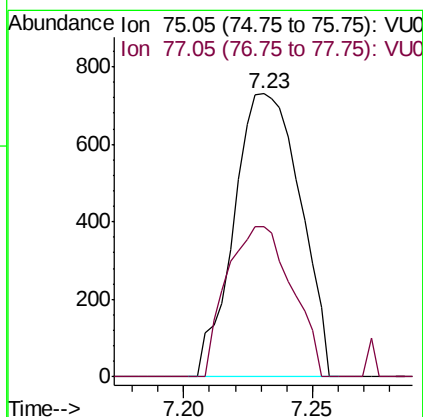
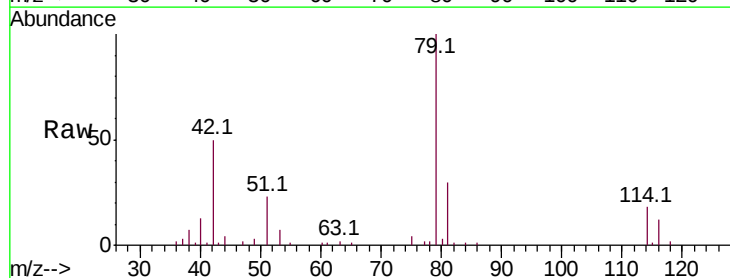
Instrument :  
 MSVOA\_U  
 ClientSampleId :

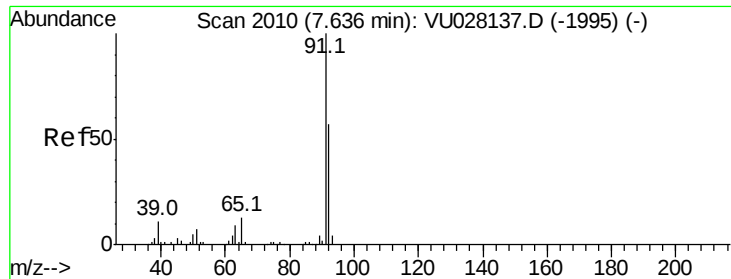
Tot Ion: 63 Resp: 6504  
 Ion Ratio Lower Upper  
 63 100  
 112 0.0 2.2 3.4#



#39  
 cis-1,3-Dichloropropene  
 Concen: 0.084 ug/L  
 RT: 7.23 min Scan# 1884  
 Delta R.T. -0.04 min  
 Lab File: VU028142.D  
 Acq: 15 Nov 2018 00:31

Tgt Ion: 75 Resp: 1312  
 Ion Ratio Lower Upper  
 75 100  
 77 53.0 20.9 38.9#





#42

Toluene

Concen: 0.052 ug/L

RT: 7.64 min Scan# 2011

Delta R.T. 0.00 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

Instrument :

MSVOA\_U

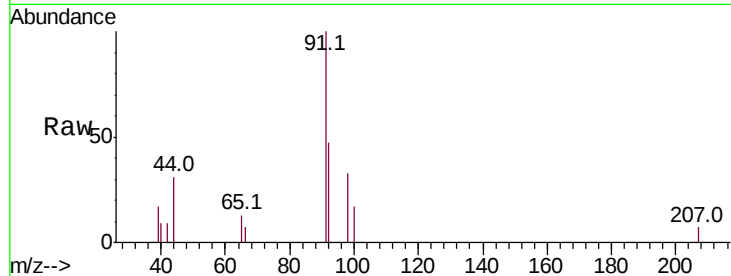
ClientSampleId :

Tot Ion: 91 Resp: 2218

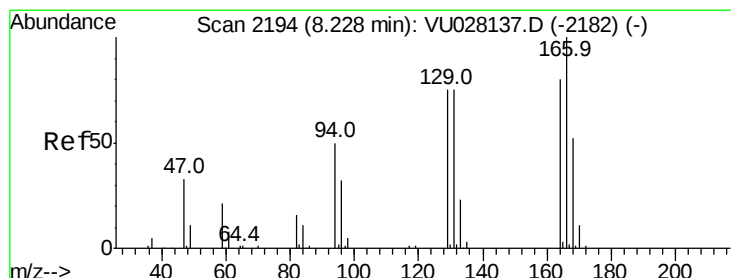
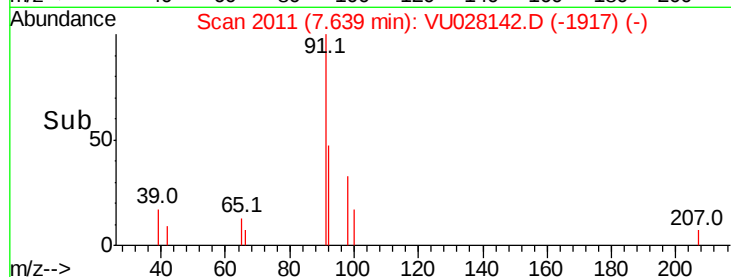
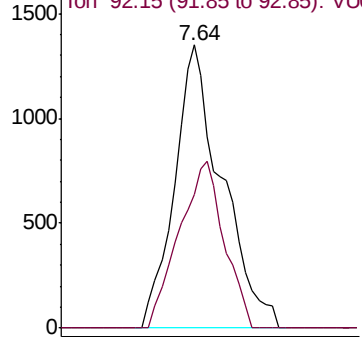
Ion Ratio Lower Upper

91 100

92 47.4 40.7 75.7



Abundance Ion 91.15 (90.85 to 91.85): VU028137.D (-1995) (-)



#47

Tetrachloroethene

Concen: 0.091 ug/L

RT: 8.22 min Scan# 2192

Delta R.T. -0.01 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

Tgt Ion:164 Resp: 760

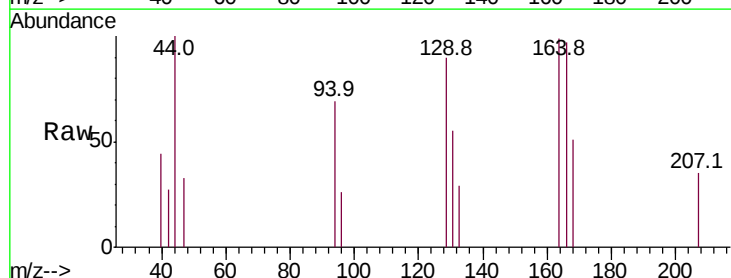
Ion Ratio Lower Upper

164 100

129 90.4 69.7 129.4

131 55.8 64.0 118.8#

166 97.5 86.4 160.4

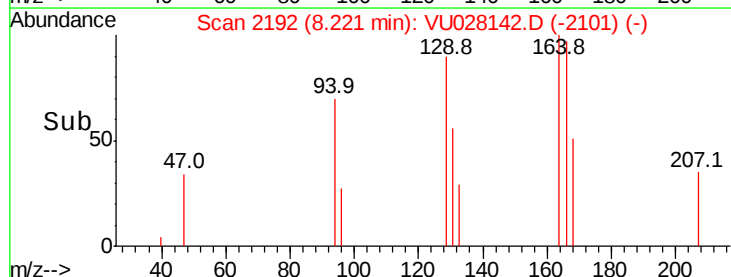
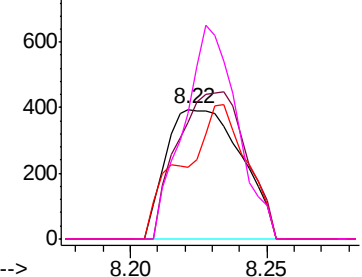


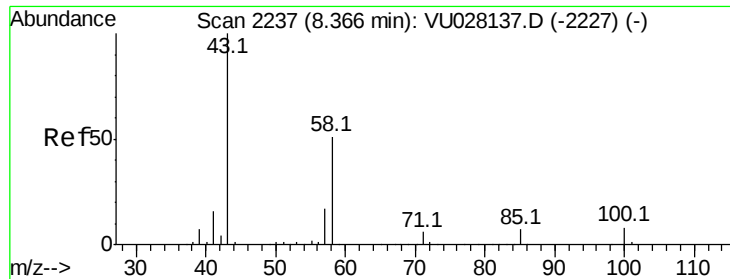
Abundance Ion 163.90 (163.60 to 164.60): VU028137.D (-2182) (-)

Ion 128.95 (128.65 to 129.65): VU028137.D (-2182) (-)

Ion 130.95 (130.65 to 131.65): VU028137.D (-2182) (-)

Ion 165.90 (165.60 to 166.60): VU028137.D (-2182) (-)

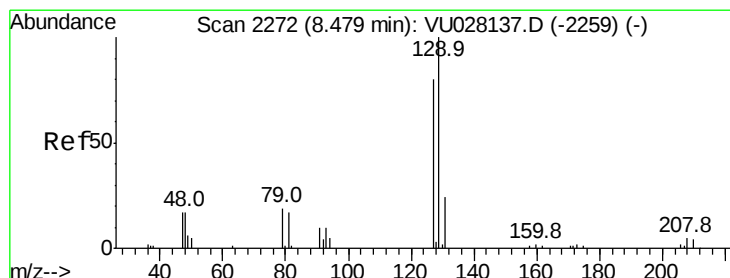
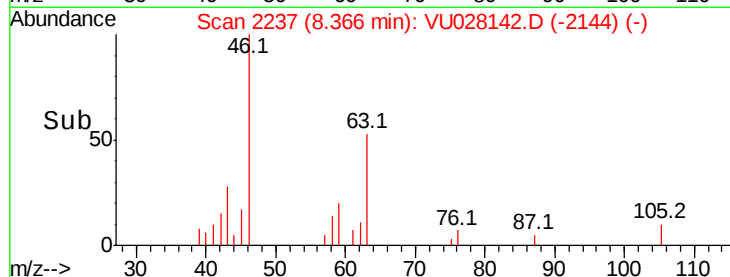
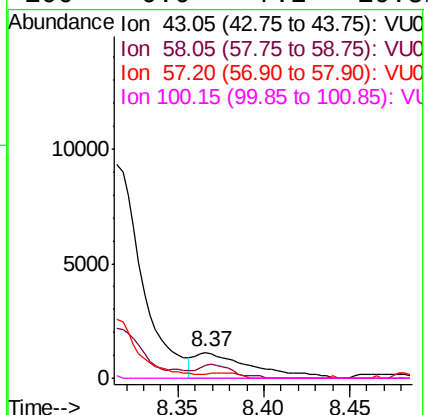
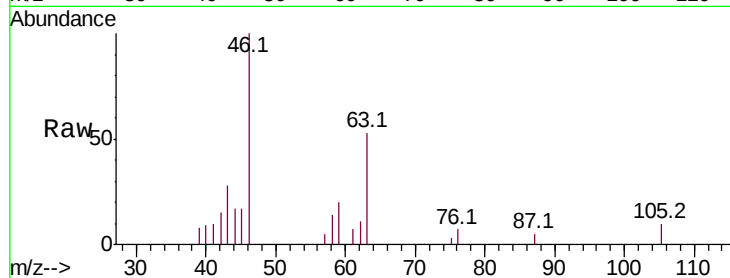




#48  
2-Hexanone  
Concen: 0.457 ug/L  
RT: 8.37 min Scan# 2237  
Delta R.T. -0.00 min  
Lab File: VU028142.D  
Acq: 15 Nov 2018 00:31

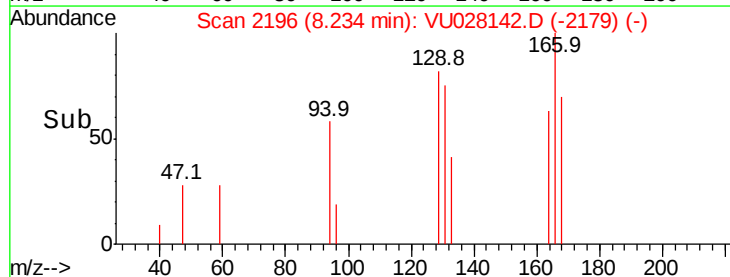
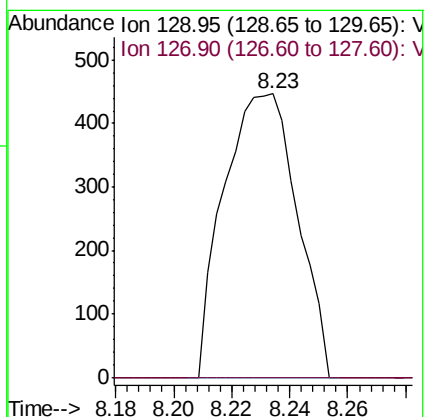
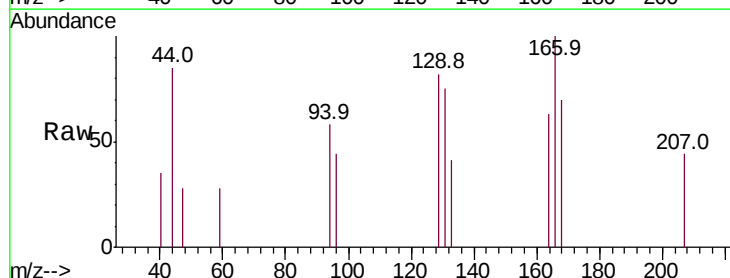
Instrument :  
MSVOA\_U  
ClientSampleId :

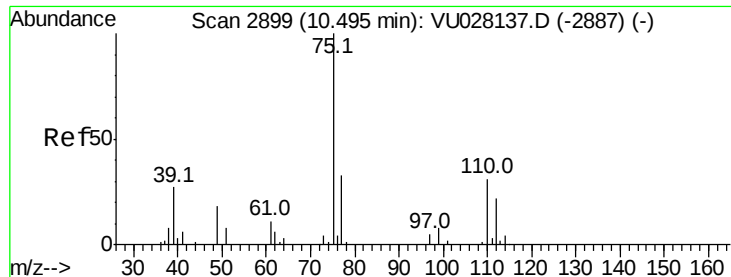
Tot Ion: 43 Resp: 2573  
Ion Ratio Lower Upper  
43 100  
58 33.5 41.7 62.5#  
57 11.5 14.0 21.0#  
100 0.0 7.2 10.8#



#49  
Dibromochloromethane  
Concen: 0.106 ug/L  
RT: 8.23 min Scan# 2196  
Delta R.T. -0.24 min  
Lab File: VU028142.D  
Acq: 15 Nov 2018 00:31

Tgt Ion: 129 Resp: 784  
Ion Ratio Lower Upper  
129 100  
127 0.0 54.1 100.5#





#59

1,2,3-Trichloropropane

Concen: 1.293 ug/L

RT: 11.48 min Scan# 3207

Delta R.T. 0.99 min

Lab File: VU028142.D

Acq: 15 Nov 2018 00:31

Instrument :

MSVOA\_U

ClientSampleId :

Tot Ion: 75 Resp: 8343

Ion Ratio Lower Upper

75 100

77 36.1 25.4 38.0

