

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU051420\  
 Data File : VU038161.D  
 Acq On : 14 May 2020 12:05  
 Operator : JC/MD  
 Sample : L2630-03  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 5 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: May 15 01:07:23 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR050720WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Fri May 15 01:05:40 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 6.28  | 114  | 438166   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.44  | 117  | 422197   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.83 | 152  | 201831   | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.61   | 65    | 95364    | 2.38     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 47.60%  |
| 7) Chloroethane-d5             | 1.93   | 69    | 92197    | 2.66     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 53.20%# |
| 11) 1,1-Dichloroethene-d2      | 2.59   | 63    | 130132   | 1.94     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 38.80%# |
| 20) 2-Butanone-d5              | 4.67   | 46    | 346726   | 35.06    | ug/L | -0.01   |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 70.12%  |
| 24) Chloroform-d               | 5.10   | 84    | 189782   | 3.12     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 62.40%# |
| 26) 1,2-Dichloroethane-d4      | 5.74   | 65    | 109150   | 3.13     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 62.60%# |
| 32) Benzene-d6                 | 5.76   | 84    | 381288   | 3.01     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 60.20%# |
| 36) 1,2-Dichloropropane-d6     | 6.72   | 67    | 124950   | 3.06     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 61.20%  |
| 41) Toluene-d8                 | 7.92   | 98    | 331308   | 2.91     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 58.20%# |
| 43) trans-1,3-Dichloropropene- | 8.20   | 79    | 44739    | 2.74     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 54.80%# |
| 46) 2-Hexanone-d5              | 8.66   | 63    | 280353   | 36.30    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 72.60%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.77  | 84    | 102405   | 3.18     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 63.60%# |
| 64) 1,2-Dichlorobenzene-d4     | 12.21  | 152   | 124915   | 3.18     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 63.60%# |

## Target Compounds

|                              |       |     |        |       | Ovalue    |
|------------------------------|-------|-----|--------|-------|-----------|
| 5) Vinyl chloride            | 1.62  | 62  | 72308  | 1.528 | ug/L 100  |
| 12) 1,1-Dichloroethene       | 2.61  | 96  | 11444  | 0.376 | ug/L # 1  |
| 15) Methyl Acetate           | 3.07  | 43  | 12402  | 0.715 | ug/L # 53 |
| 18) trans-1,2-Dichloroethene | 3.39  | 96  | 3953   | 0.119 | ug/L 80   |
| 19) 1,1-Dichloroethane       | 3.91  | 63  | 55448  | 0.855 | ug/L 99   |
| 22) cis-1,2-Dichloroethene   | 4.71  | 96  | 326710 | 9.133 | ug/L 99   |
| 25) Chloroform               | 5.13  | 83  | 174750 | 2.890 | ug/L 99   |
| 29) 1,1,1-Trichloroethane    | 5.35  | 97  | 92783  | 1.918 | ug/L 98   |
| 30) Cyclohexane              | 5.43  | 56  | 8079   | 0.141 | ug/L 92   |
| 31) Carbon tetrachloride     | 5.35  | 117 | 12610  | 0.324 | ug/L 98   |
| 34) Trichloroethene          | 6.57  | 95  | 13694  | 0.405 | ug/L 97   |
| 35) Methylcyclohexane        | 6.72  | 83  | 28525  | 0.521 | ug/L # 16 |
| 37) 1,2-Dichloropropane      | 6.72  | 63  | 13998  | 0.381 | ug/L # 88 |
| 48) 2-Hexanone               | 8.71  | 43  | 18943  | 1.016 | ug/L 92   |
| 51) Chlorobenzene            | 9.47  | 112 | 42942  | 0.485 | ug/L 99   |
| 59) 1,2,3-Trichloropropane   | 11.83 | 75  | 29240  | 1.186 | ug/L 98   |
| 62) 1,3-Dichlorobenzene      | 11.76 | 146 | 11523  | 0.175 | ug/L 94   |

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Sample : L2630-03  
Misc : 25.0mL/MSVOA U/WATER  
ALS Vial : 5 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :

Quant Time: May 15 01:07:23 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR050720WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri May 15 01:05:40 2020  
Response via : Initial Calibration

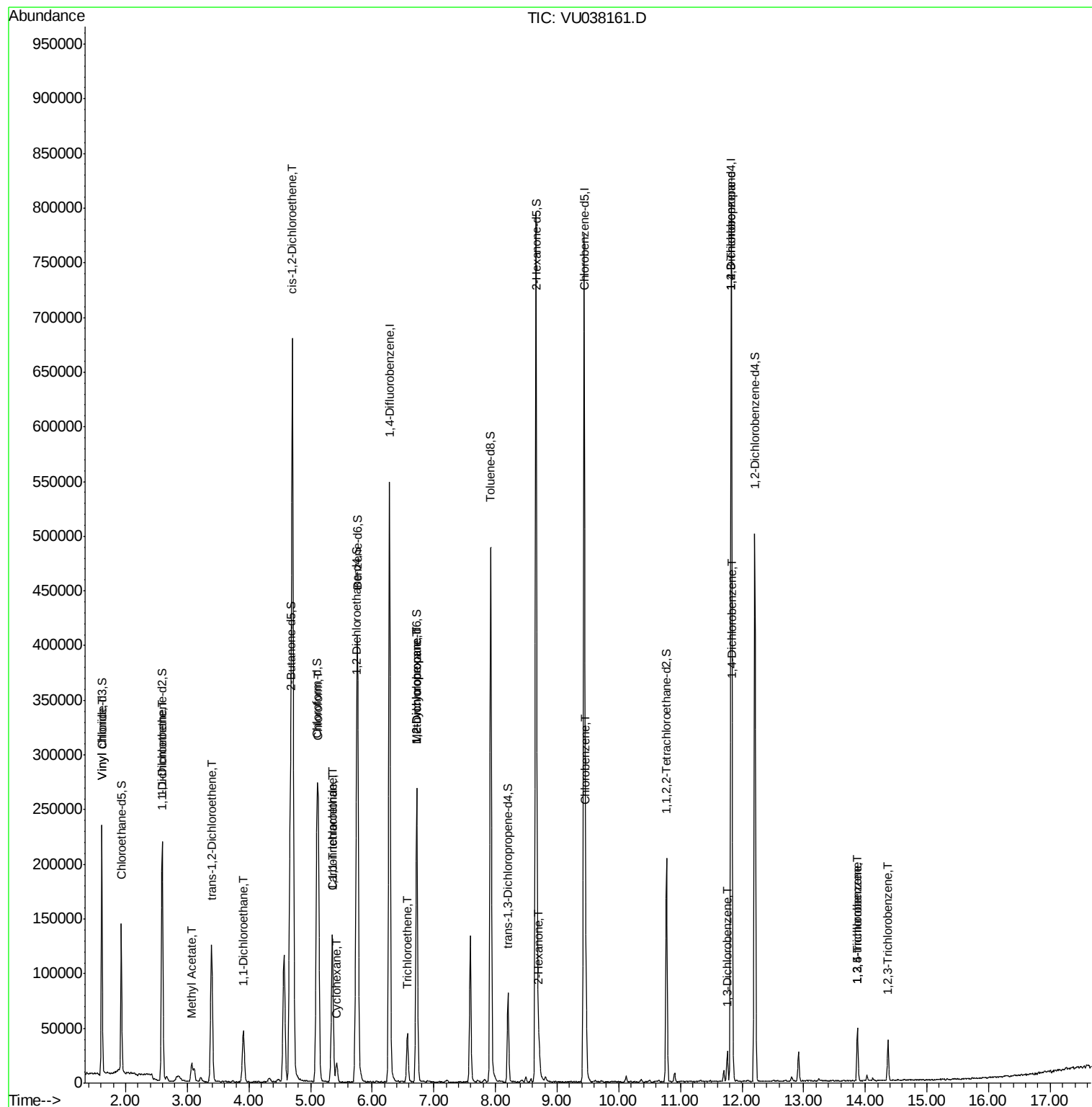
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 63) 1,4-Dichlorobenzene    | 11.85 | 146  | 10036    | 0.151 | ug/L  | 93       |
| 67) 1,3,5-Trichlorobenzene | 13.87 | 180  | 13867    | 0.291 | ug/L  | 96       |
| 68) 1,2,4-trichlorobenzene | 13.87 | 180  | 13867    | 0.321 | ug/L  | 98       |
| 70) 1,2,3-Trichlorobenzene | 14.37 | 180  | 11431    | 0.285 | ug/L  | 98       |

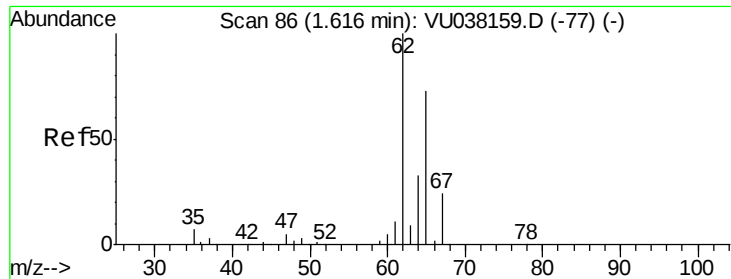
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#5

Vinyl chloride

Concen: 1.528 ug/L

RT: 1.62 min Scan# 86

Delta R.T. 0.00 min

Lab File: VU038161.D

Acq: 14 May 2020 12:05

Instrument :

MSVOA\_U

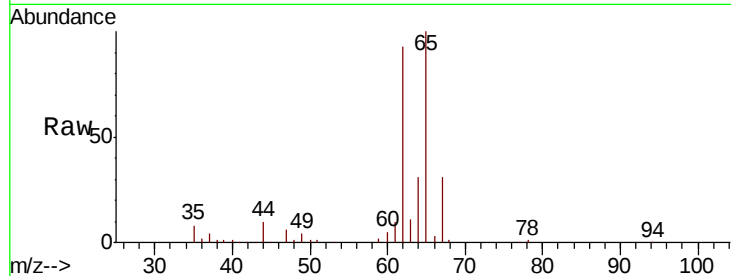
ClientSampleId :

Tot Ion: 62 Resp: 72308

Ion Ratio Lower Upper

62 100

64 32.9 22.8 42.4



Abundance Ion 62.00 (61.70 to 62.70): VU038161.D (-1) (-)

Ion 64.10 (63.80 to 64.80): VU038161.D (-1) (-)

1.62

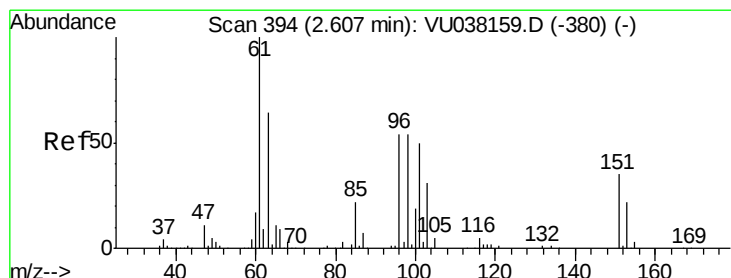
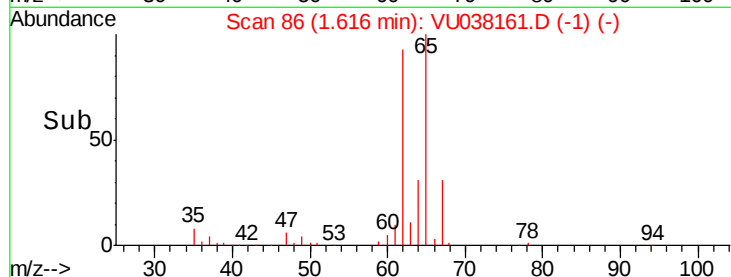
60000

40000

20000

0

Time--> 1.55 1.60 1.65



#12

1,1-Dichloroethene

Concen: 0.376 ug/L

RT: 2.61 min Scan# 394

Delta R.T. 0.00 min

Lab File: VU038161.D

Acq: 14 May 2020 12:05

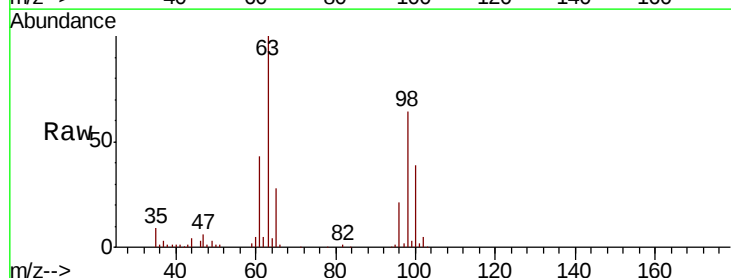
Tgt Ion: 96 Resp: 11444

Ion Ratio Lower Upper

96 100

61 203.5 126.2 234.4

63 468.5 96.9 179.9#



Abundance Ion 96.00 (95.70 to 96.70): VU038161.D (-301) (-)

Ion 61.05 (60.75 to 61.75): VU038161.D (-301) (-)

Ion 63.00 (62.70 to 63.70): VU038161.D (-301) (-)

100000

80000

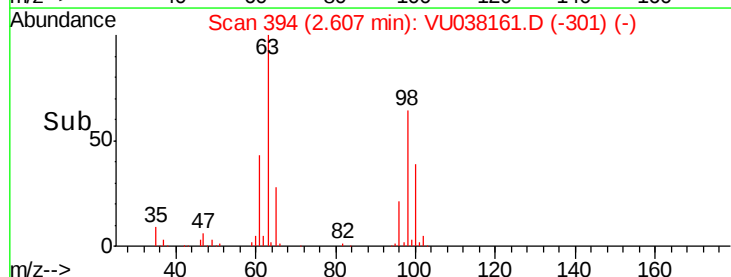
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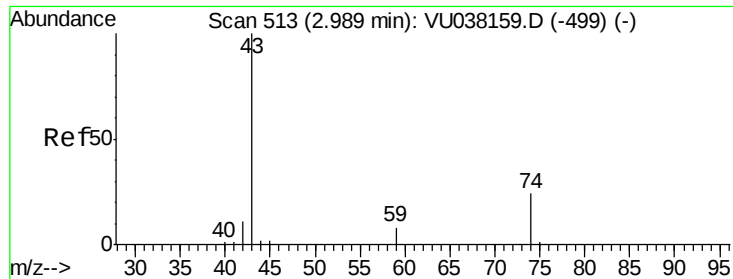
40000

20000

0

Time--> 2.55 2.60 2.65





#15

Methyl Acetate

Concen: 0.715 ug/L

RT: 3.07 min Scan# 539

Delta R.T. 0.08 min

Lab File: VU038161.D

Acq: 14 May 2020 12:05

Instrument :

MSVOA\_U

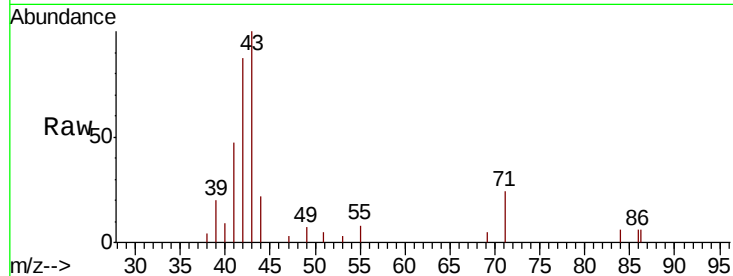
ClientSampled :

Tot Ion: 43 Resp: 12402

Ion Ratio Lower Upper

43 100

74 0.0 18.0 27.0#



Abundance Ion 43.05 (42.75 to 43.75): VU038159.D (-499) (-)

Ion 74.05 (73.75 to 74.75): VU038159.D (-499) (-)

6000

5000

4000

3000

2000

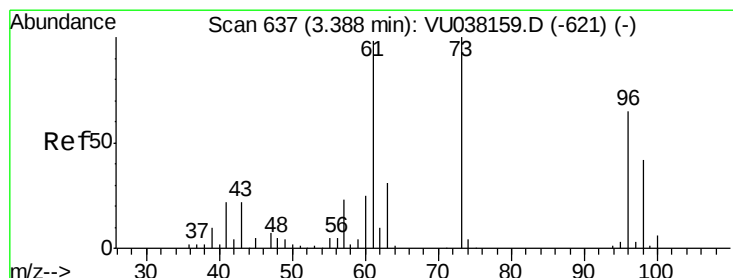
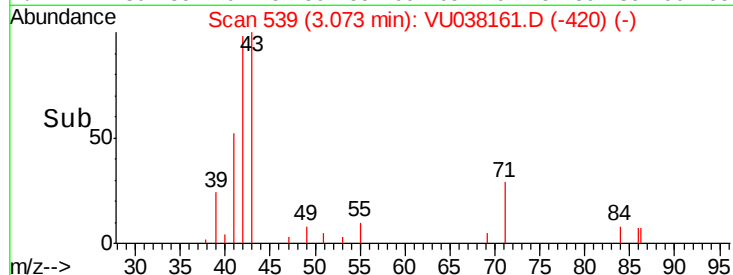
1000

0

Time-->

3.00 3.05 3.10

3.07



#18

trans-1,2-Dichloroethene

Concen: 0.119 ug/L

RT: 3.39 min Scan# 637

Delta R.T. 0.00 min

Lab File: VU038161.D

Acq: 14 May 2020 12:05

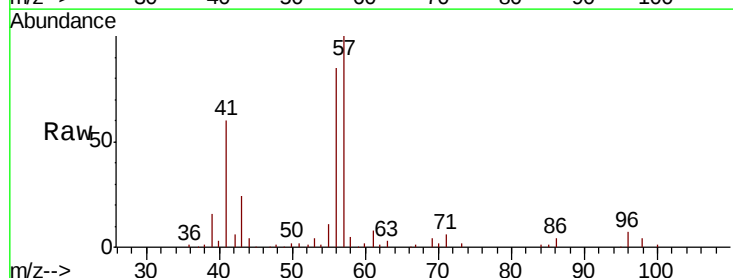
Tgt Ion: 96 Resp: 3953

Ion Ratio Lower Upper

96 100

61 116.7 102.1 189.5

98 54.9 45.6 84.8



Abundance Ion 96.00 (95.70 to 96.70): VU038159.D (-621) (-)

Ion 61.05 (60.75 to 61.75): VU038159.D (-621) (-)

Ion 97.95 (97.65 to 98.65): VU038159.D (-621) (-)

3000

2000

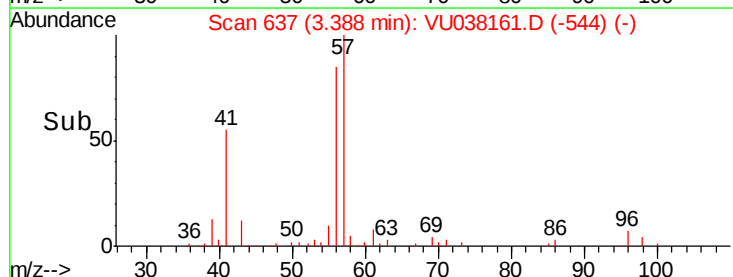
1000

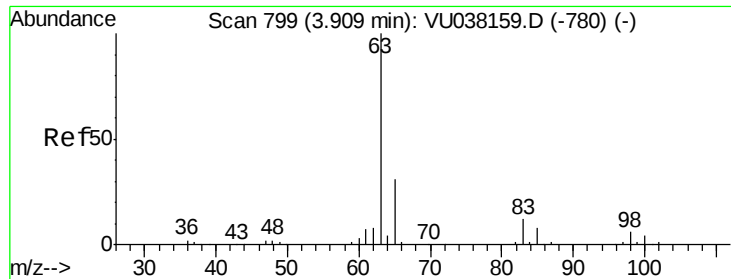
0

Time-->

3.35 3.40 3.45

3.39

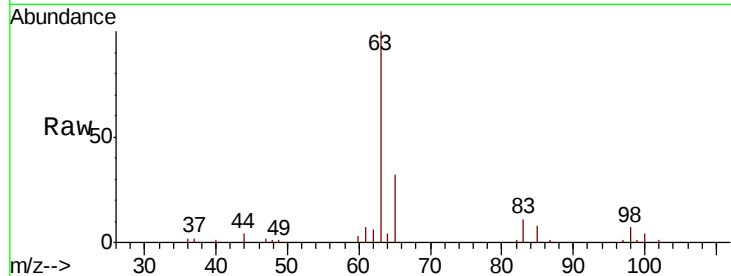




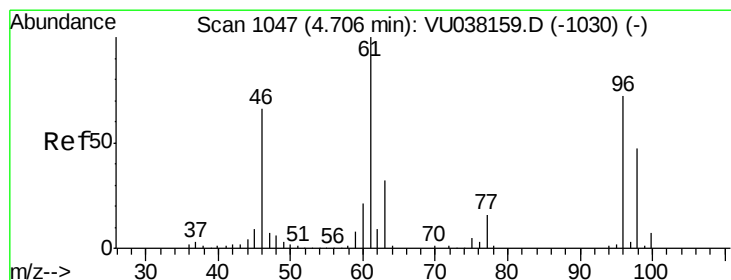
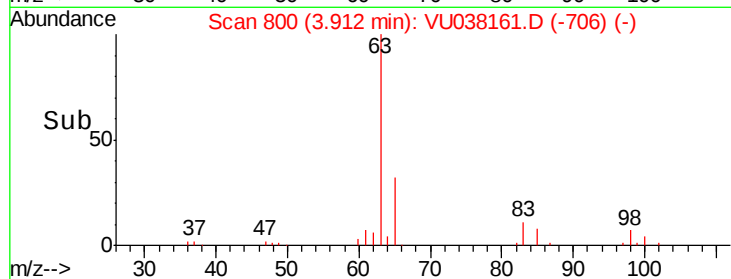
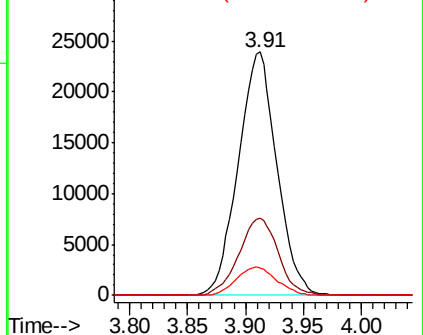
#19  
 1,1-Dichloroethane  
 Concen: 0.855 ug/L  
 RT: 3.91 min Scan# 800  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Tot Ion: 63 Resp: 55448  
 Ion Ratio Lower Upper  
 63 100  
 65 31.7 22.5 41.7  
 83 11.3 8.9 16.5

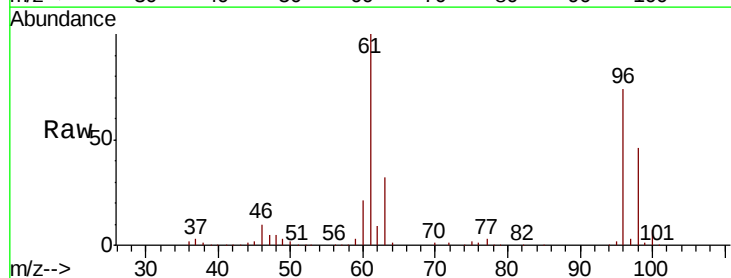


Abundance Ion 63.10 (62.80 to 63.80): VU0  
 Ion 65.10 (64.80 to 65.80): VU0  
 Ion 83.05 (82.75 to 83.75): VU0

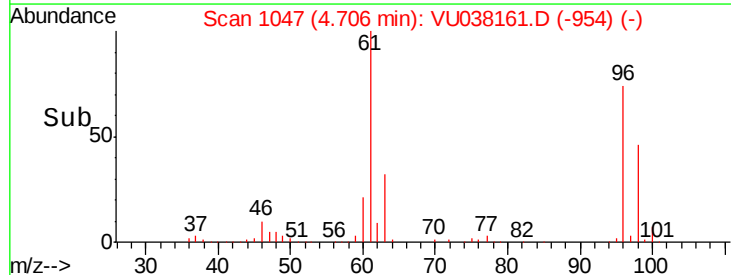
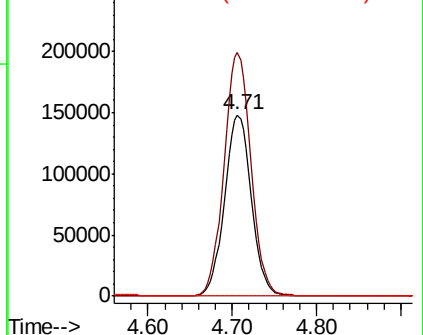


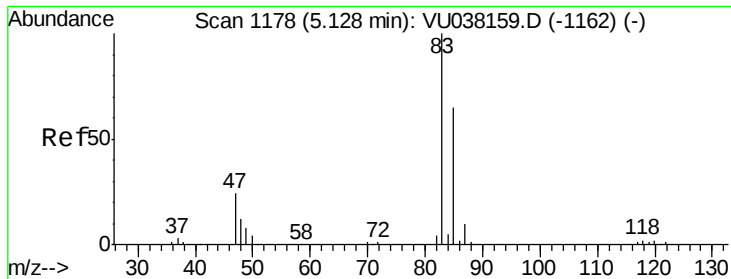
#22  
 cis-1,2-Dichloroethene  
 Concen: 9.133 ug/L  
 RT: 4.71 min Scan# 1047  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Tgt Ion: 96 Resp: 326710  
 Ion Ratio Lower Upper  
 96 100  
 61 134.4 95.3 176.9  
 68 0.0 0.0 0.0



Abundance Ion 96.00 (95.70 to 96.70): VU0  
 Ion 61.05 (60.75 to 61.75): VU0  
 Ion 68.15 (67.85 to 68.85): VU0

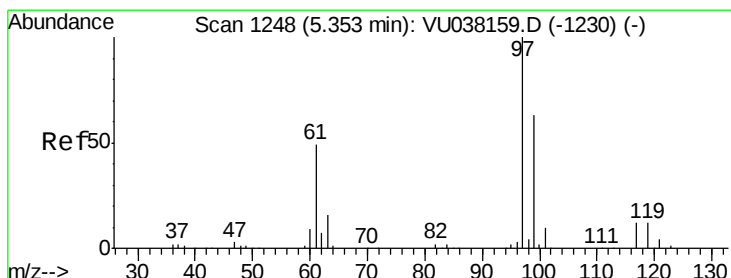
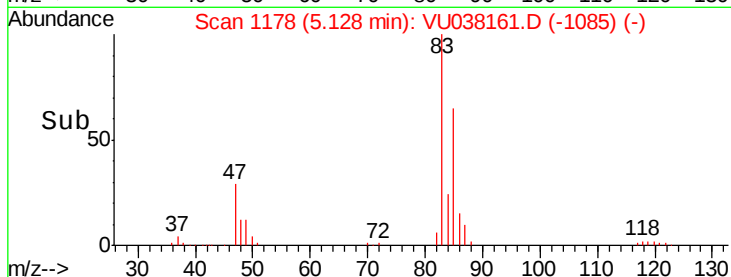
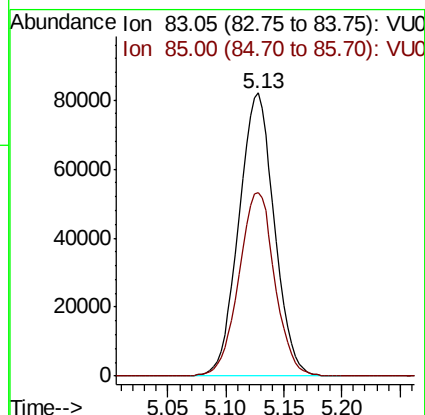
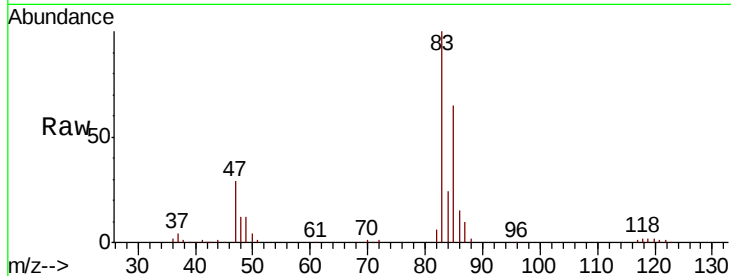




#25  
Chloroform  
Concen: 2.890 ug/L  
RT: 5.13 min Scan# 1178  
Delta R.T. 0.00 min  
Lab File: VU038161.D  
Acq: 14 May 2020 12:05

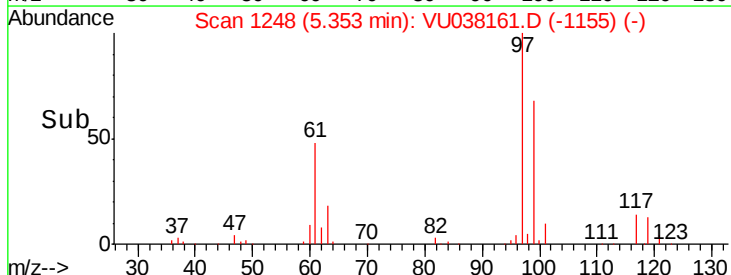
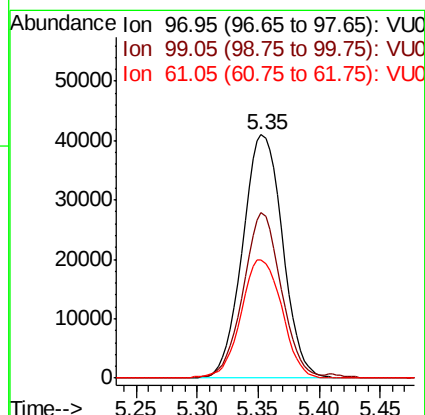
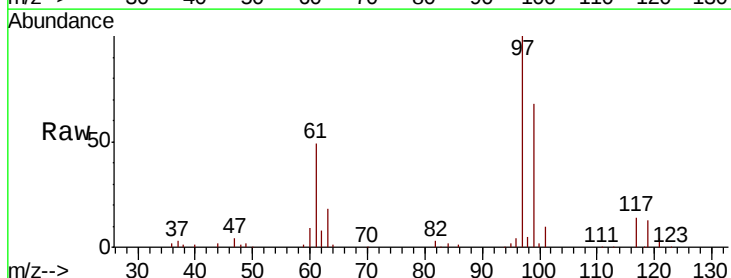
Instrument :  
MSVOA\_U  
ClientSampleId :

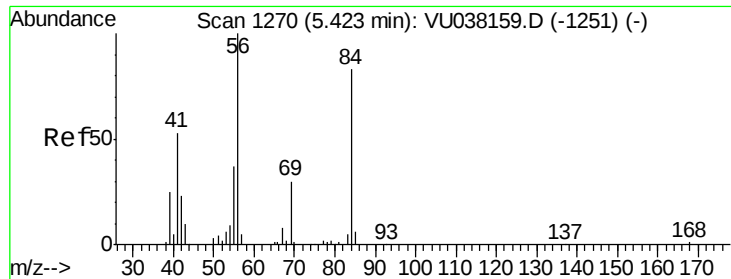
Tot Ion: 83 Resp: 174750  
Ion Ratio Lower Upper  
83 100  
85 65.0 46.2 85.8



#29  
1,1,1-Trichloroethane  
Concen: 1.918 ug/L  
RT: 5.35 min Scan# 1248  
Delta R.T. 0.00 min  
Lab File: VU038161.D  
Acq: 14 May 2020 12:05

Tgt Ion: 97 Resp: 92783  
Ion Ratio Lower Upper  
97 100  
99 64.7 51.0 76.4  
61 49.7 38.2 57.4

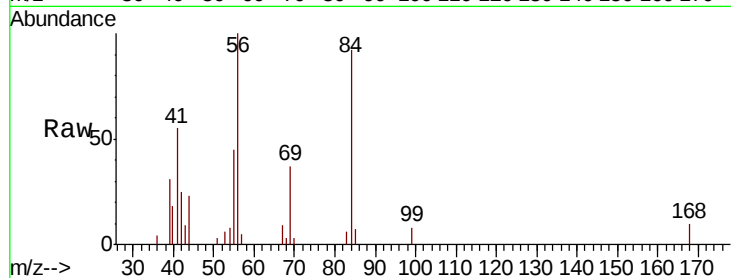




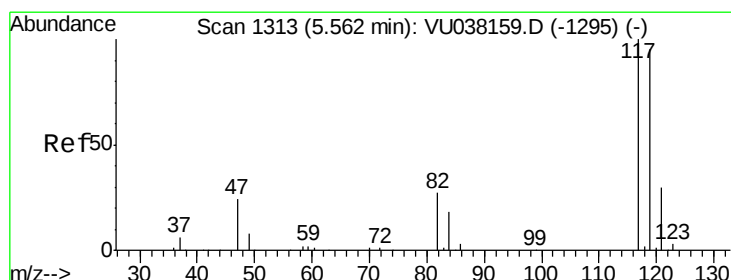
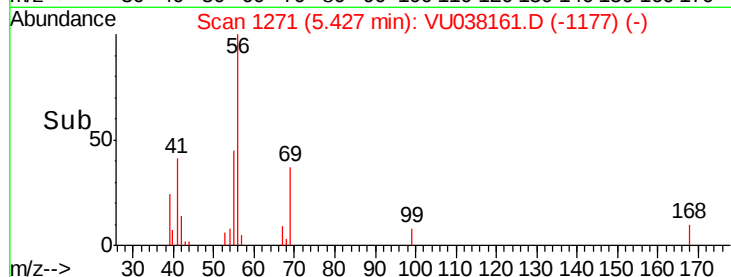
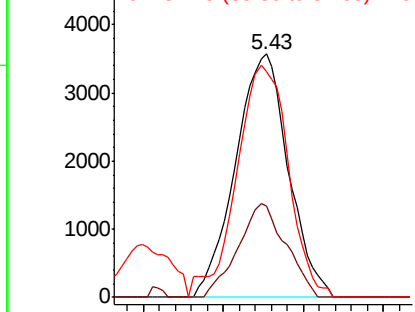
#30  
Cyclohexane  
Concen: 0.141 ug/L  
RT: 5.43 min Scan# 1271  
Delta R.T. 0.00 min  
Lab File: VU038161.D  
Acq: 14 May 2020 12:05

Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 56 Resp: 8079  
Ion Ratio Lower Upper  
56 100  
69 34.6 24.2 36.4  
84 93.0 68.5 102.7

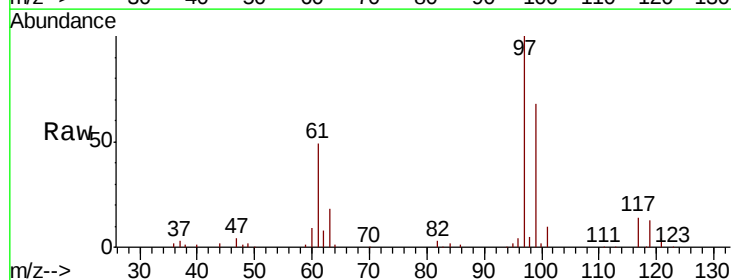


Abundance Ion 56.10 (55.80 to 56.80): VU0  
Ion 69.15 (68.85 to 69.85): VU0  
Ion 84.15 (83.85 to 84.85): VU0

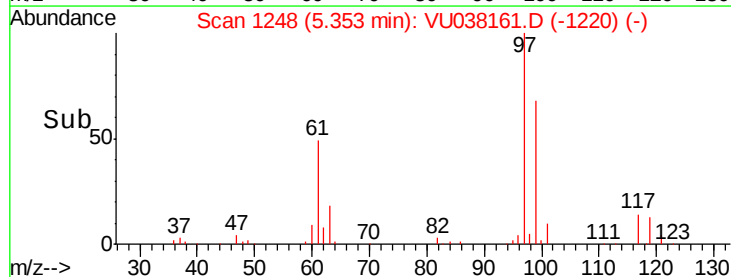
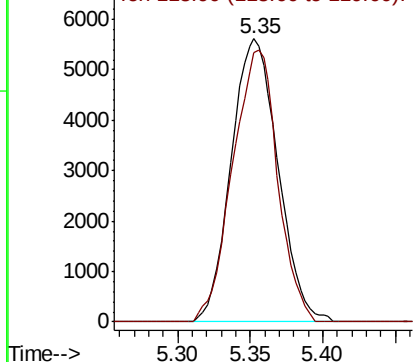


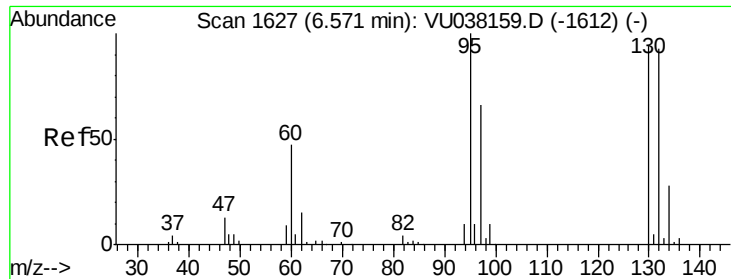
#31  
Carbon tetrachloride  
Concen: 0.324 ug/L  
RT: 5.35 min Scan# 1248  
Delta R.T. -0.21 min  
Lab File: VU038161.D  
Acq: 14 May 2020 12:05

Tgt Ion: 117 Resp: 12610  
Ion Ratio Lower Upper  
117 100  
119 92.2 75.4 113.2



Abundance Ion 116.90 (116.60 to 117.60): V  
Ion 118.90 (118.60 to 119.60): V

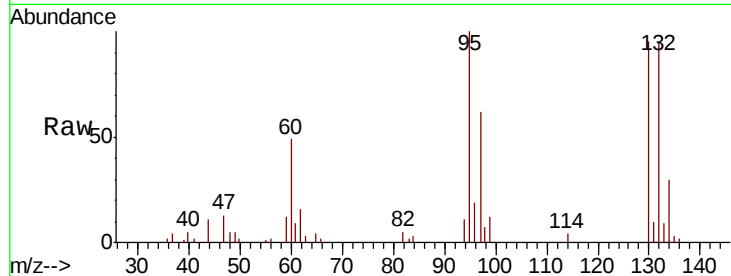




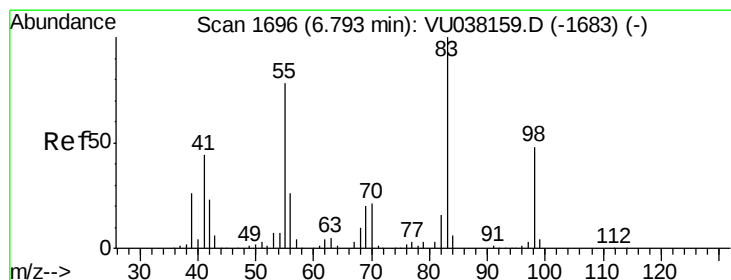
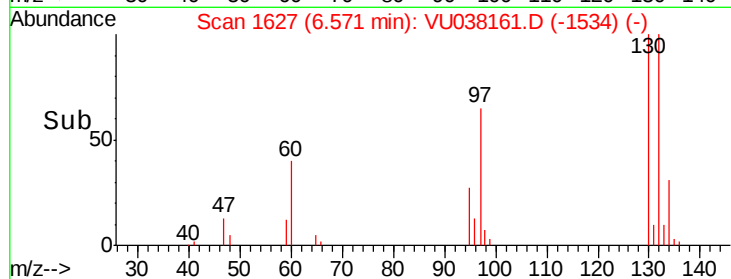
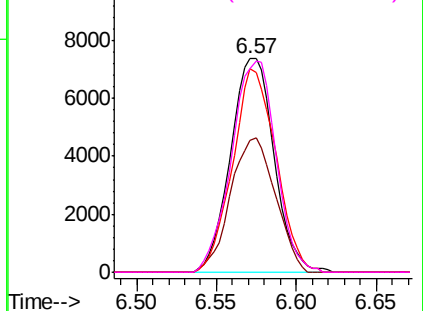
#34  
 Trichloroethene  
 Concen: 0.405 ug/L  
 RT: 6.57 min Scan# 1627  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Instrument :  
 MSVOA\_U  
 ClientSampled :

Tot Ion: 95 Resp: 13694  
 Ion Ratio Lower Upper  
 95 100  
 97 61.8 44.9 83.3  
 132 95.2 63.3 117.5  
 130 95.2 65.7 122.1

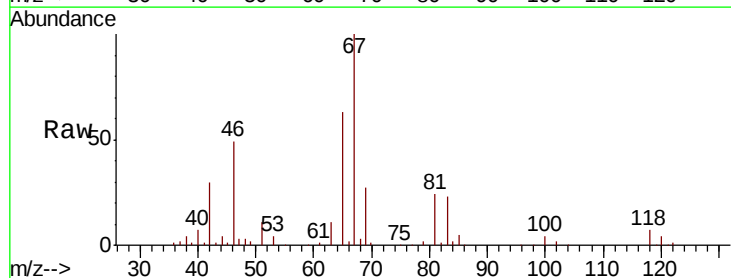


Abundance Ion 95.00 (94.70 to 95.70): VU0  
 Ion 96.95 (96.65 to 97.65): VU0  
 Ion 131.95 (131.65 to 132.65): V  
 Ion 129.95 (129.65 to 130.65): V

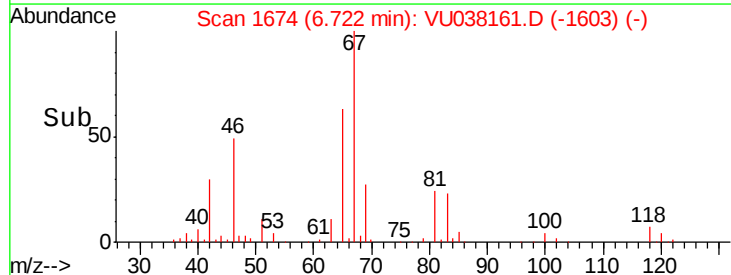
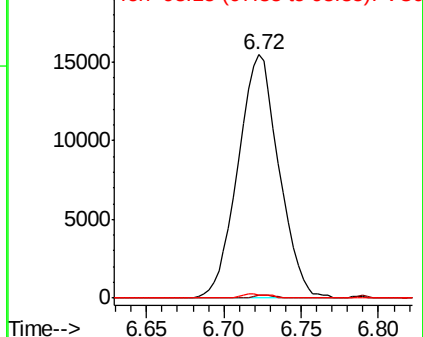


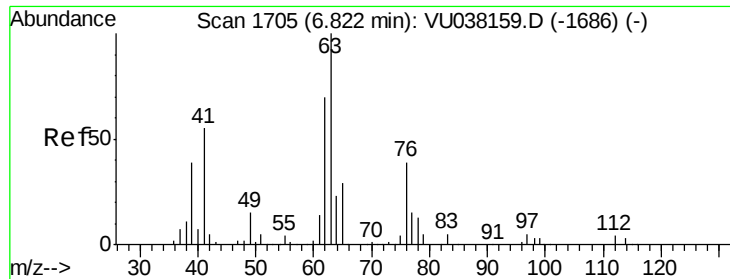
#35  
 Methylcyclohexane  
 Concen: 0.521 ug/L  
 RT: 6.72 min Scan# 1674  
 Delta R.T. -0.07 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Tgt Ion: 83 Resp: 28525  
 Ion Ratio Lower Upper  
 83 100  
 55 0.6 66.7 100.1#  
 98 1.1 39.4 59.2#



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

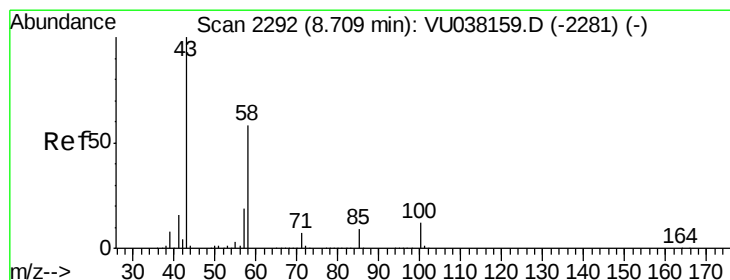
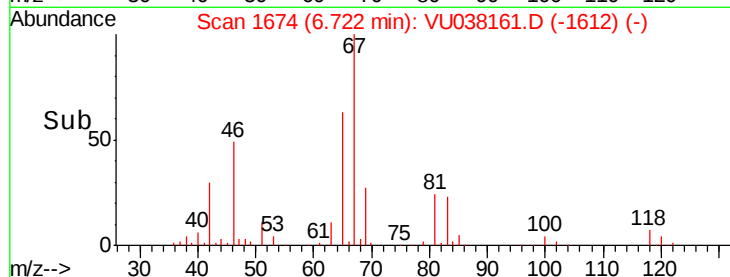
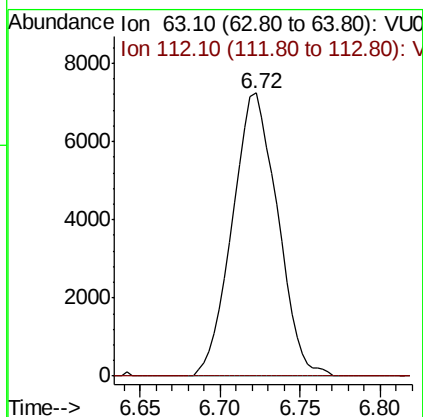
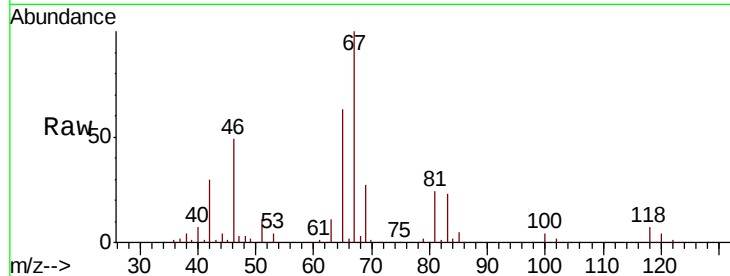




#37  
 1,2-Dichloropropane  
 Concen: 0.381 ug/L  
 RT: 6.72 min Scan# 1674  
 Delta R.T. -0.10 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

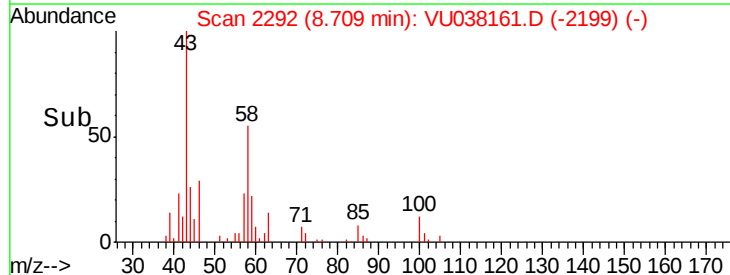
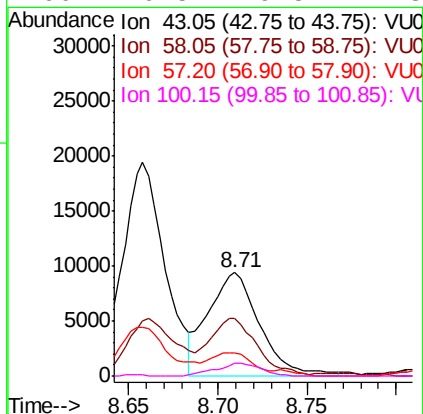
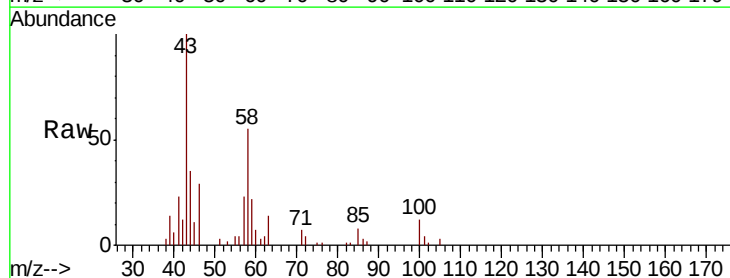
Instrument :  
 MSVOA\_U  
 ClientSampleId :

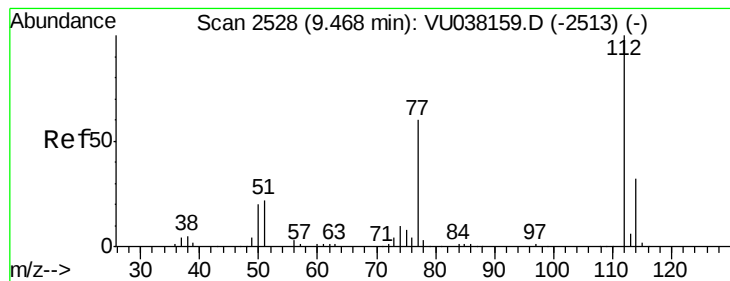
Tot Ion: 63 Resp: 13998  
 Ion Ratio Lower Upper  
 63 100  
 112 0.0 3.1 4.7#



#48  
 2-Hexanone  
 Concen: 1.016 ug/L  
 RT: 8.71 min Scan# 2292  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Tgt Ion: 43 Resp: 18943  
 Ion Ratio Lower Upper  
 43 100  
 58 48.5 45.2 67.8  
 57 20.8 15.5 23.3  
 100 10.5 9.5 14.3





#51

Chlorobenzene

Concen: 0.485 ug/L

RT: 9.47 min Scan# 2528

Delta R.T. 0.00 min

Lab File: VU038161.D

Acq: 14 May 2020 12:05

Instrument :

MSVOA\_U

ClientSampleId :

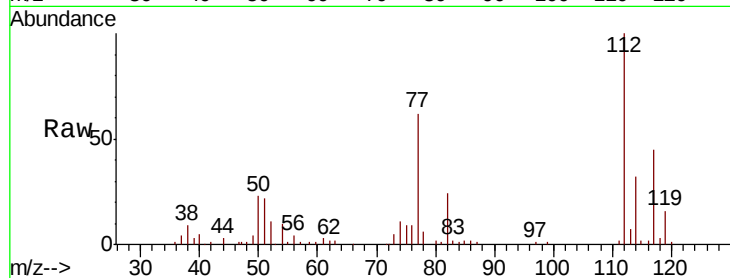
Tot Ion:112 Resp: 42942

Ion Ratio Lower Upper

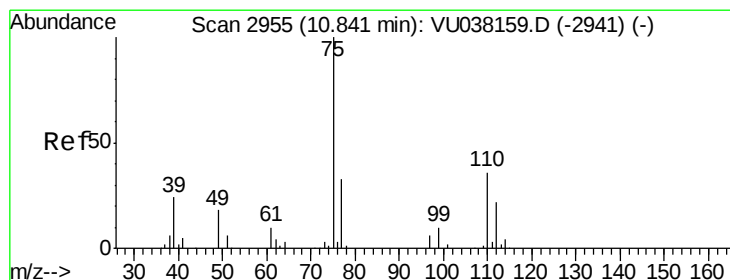
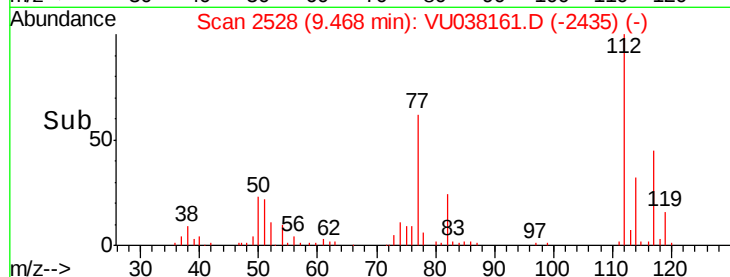
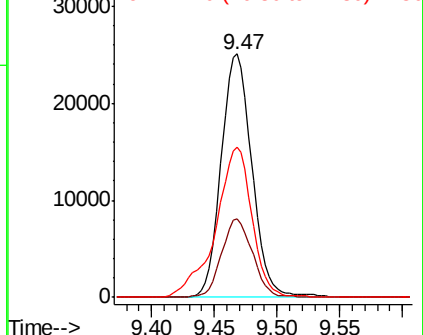
112 100

114 32.5 22.5 41.7

77 61.8 49.9 74.9



Abundance Ion 112.10 (111.80 to 112.80): V  
Ion 114.05 (113.75 to 114.75): V  
Ion 77.10 (76.80 to 77.80): V



#59

1,2,3-Trichloropropane

Concen: 1.186 ug/L

RT: 11.83 min Scan# 3261

Delta R.T. 0.98 min

Lab File: VU038161.D

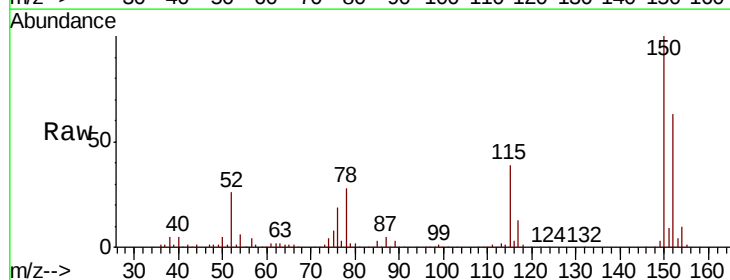
Acq: 14 May 2020 12:05

Tgt Ion: 75 Resp: 29240

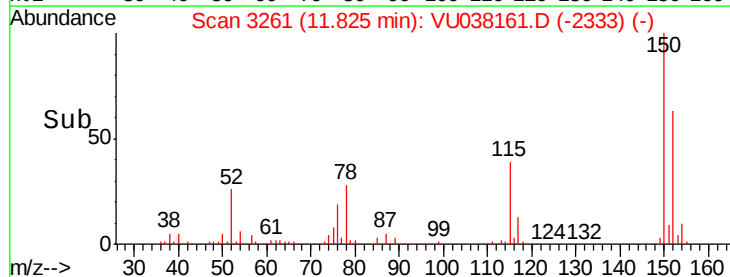
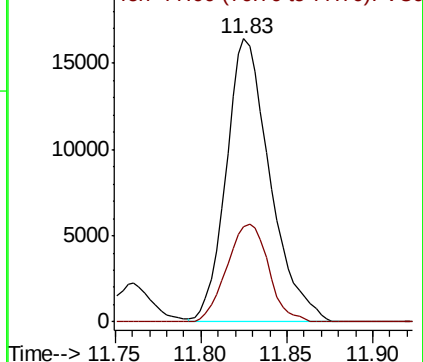
Ion Ratio Lower Upper

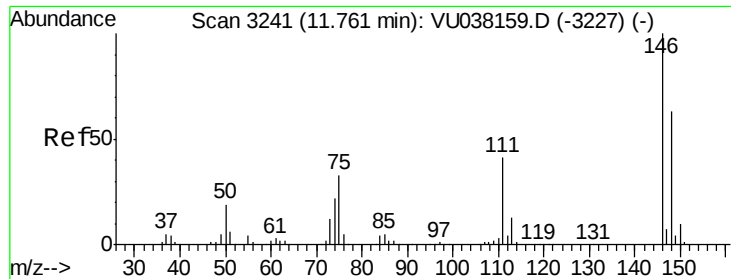
75 100

77 32.9 25.4 38.0



Abundance Ion 75.00 (74.70 to 75.70): VU0  
Ion 77.00 (76.70 to 77.70): VU0

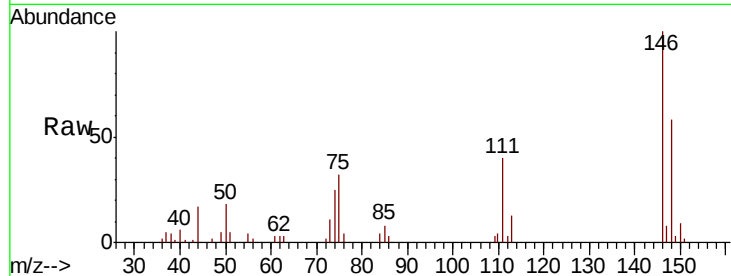




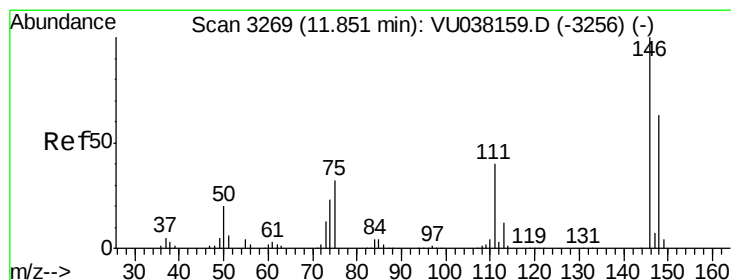
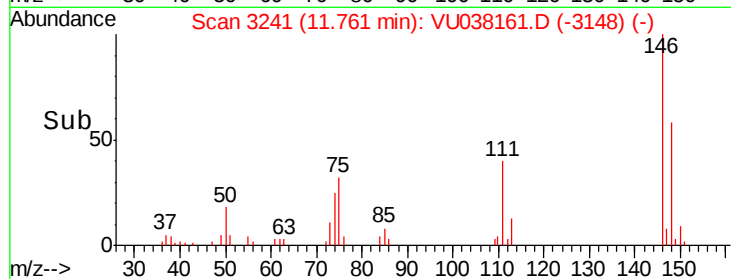
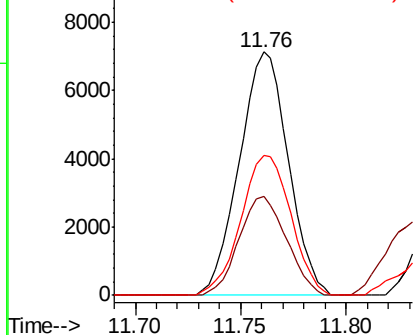
#62  
 1,3-Dichlorobenzene  
 Concen: 0.175 ug/L  
 RT: 11.76 min Scan# 3241  
 Delta R.T. -0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Instrument :  
 MSVOA\_U  
 ClientSampled :

Tot Ion:146 Resp: 11523  
 Ion Ratio Lower Upper  
 146 100  
 111 40.4 28.6 53.2  
 148 57.5 45.2 84.0

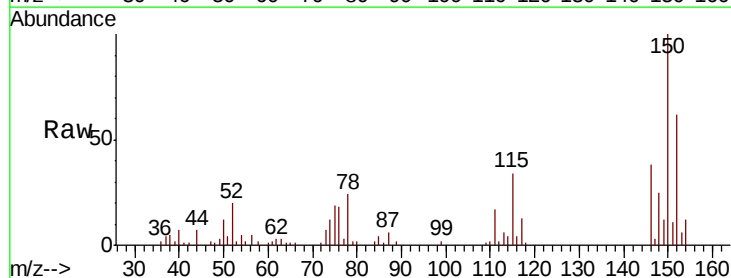


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

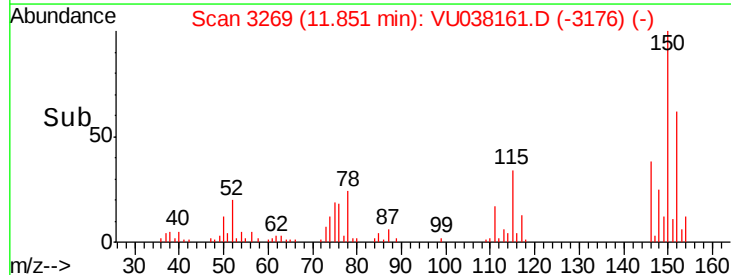
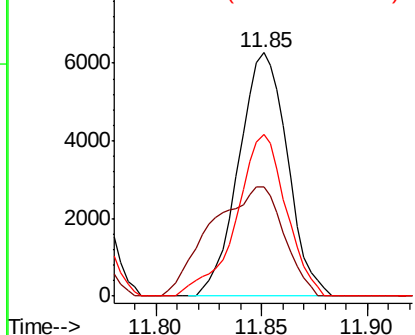


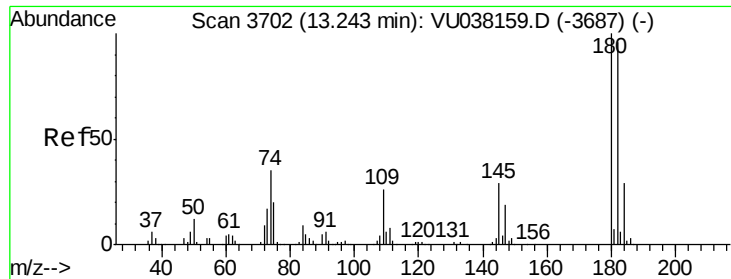
#63  
 1,4-Dichlorobenzene  
 Concen: 0.151 ug/L  
 RT: 11.85 min Scan# 3269  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Tgt Ion:146 Resp: 10036  
 Ion Ratio Lower Upper  
 146 100  
 111 44.7 27.2 50.6  
 148 66.6 43.8 81.3



Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

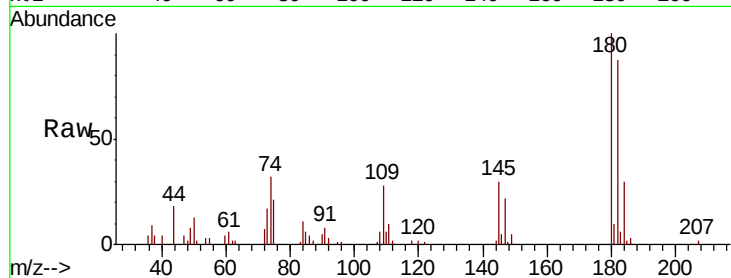




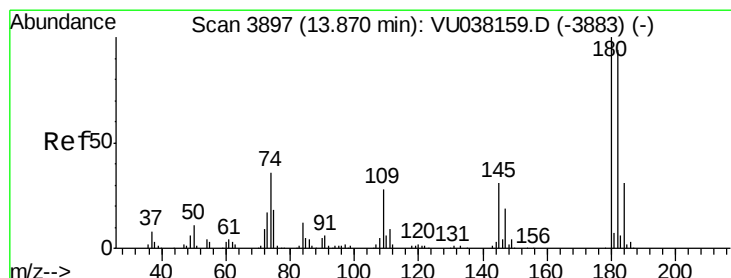
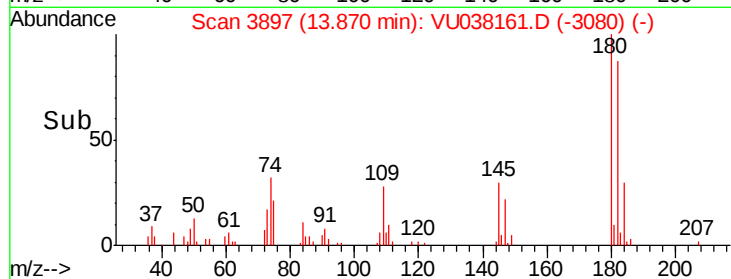
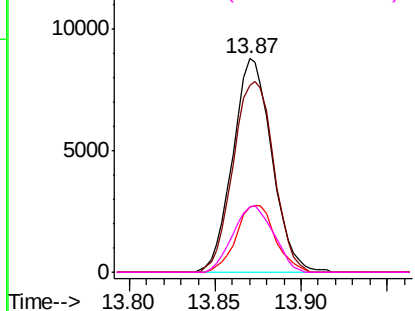
#67  
 1,3,5-Trichlorobenzene  
 Concen: 0.291 ug/L  
 RT: 13.87 min Scan# 3897  
 Delta R.T. 0.63 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Instrument :  
 MSVOA\_U  
 ClientSampleId :

|             |       |             |
|-------------|-------|-------------|
| Tot Ion:180 | Resp: | 13867       |
| Ion         | Ratio | Lower Upper |
| 180         | 100   |             |
| 182         | 92.4  | 77.4 116.2  |
| 184         | 31.0  | 24.2 36.2   |
| 145         | 32.1  | 24.0 36.0   |

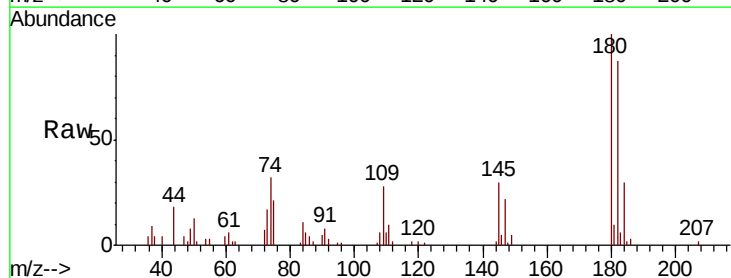


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

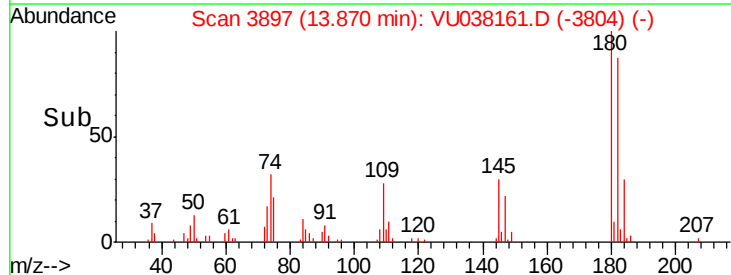
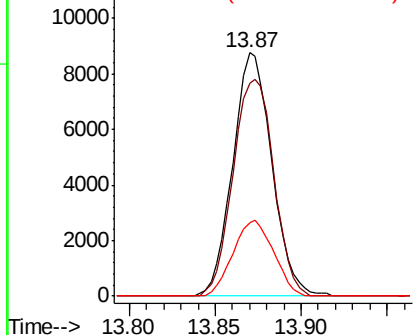


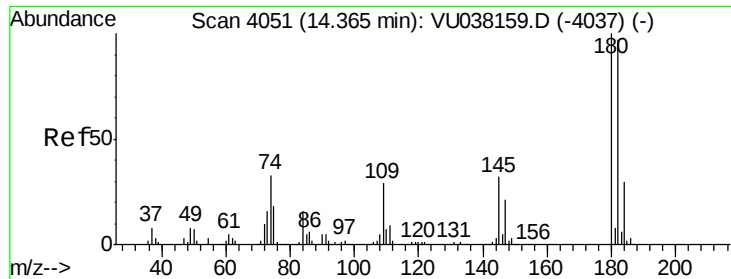
#68  
 1,2,4-trichlorobenzene  
 Concen: 0.321 ug/L  
 RT: 13.87 min Scan# 3897  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

|             |       |             |
|-------------|-------|-------------|
| Tgt Ion:180 | Resp: | 13867       |
| Ion         | Ratio | Lower Upper |
| 180         | 100   |             |
| 182         | 92.4  | 75.0 112.6  |
| 145         | 32.1  | 24.8 37.2   |



Abundance Ion 179.90 (179.60 to 180.60): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 144.95 (144.65 to 145.65): V

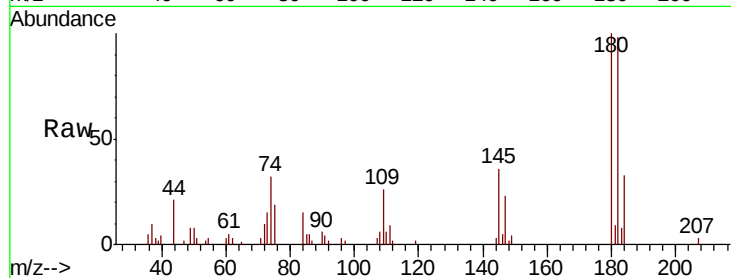




#70  
 1,2,3-Trichlorobenzene  
 Concen: 0.285 ug/L  
 RT: 14.37 min Scan# 4051  
 Delta R.T. 0.00 min  
 Lab File: VU038161.D  
 Acq: 14 May 2020 12:05

Instrument :  
 MSVOA\_U  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 96.9  | 76.3  | 114.5 |
| 145     | 31.7  | 26.1  | 39.1  |



Abundance

Ion 179.90 (179.60 to 180.60): V

Ion 181.90 (181.60 to 182.60): V

Ion 144.95 (144.65 to 145.65): V

