

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU092320\  
 Data File : VU040256.D  
 Acq On : 23 Sep 2020 13:17  
 Operator : SY/MD  
 Sample : L4046-16DL 5X  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 6 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Sep 24 02:28:11 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR083120WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Thu Sep 24 02:21:14 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 6.26  | 114  | 172980   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.42  | 117  | 168881   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.81 | 152  | 80644    | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.60   | 65    | 42609    | 4.51     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 90.20%  |
| 7) Chloroethane-d5             | 1.92   | 69    | 39563    | 5.03     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 100.60% |
| 11) 1,1-Dichloroethene-d2      | 2.58   | 63    | 70945    | 2.93     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 58.60%# |
| 20) 2-Butanone-d5              | 4.64   | 46    | 163768   | 43.35    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 86.70%  |
| 24) Chloroform-d               | 5.08   | 84    | 94165    | 4.27     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 85.40%  |
| 26) 1,2-Dichloroethane-d4      | 5.71   | 65    | 56270    | 4.13     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 82.60%  |
| 32) Benzene-d6                 | 5.74   | 84    | 174723   | 4.43     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 88.60%  |
| 36) 1,2-Dichloropropane-d6     | 6.70   | 67    | 56704    | 4.36     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 87.20%  |
| 41) Toluene-d8                 | 7.90   | 98    | 143378   | 4.03     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 80.60%  |
| 43) trans-1,3-Dichloropropene- | 8.18   | 79    | 21288    | 3.57     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 71.40%  |
| 46) 2-Hexanone-d5              | 8.64   | 63    | 110536   | 39.09    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 78.18%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.75  | 84    | 46623    | 4.15     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 83.00%  |
| 64) 1,2-Dichlorobenzene-d4     | 12.19  | 152   | 61283    | 4.70     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 94.00%  |

## Target Compounds

|                               |       |     |        |              | Ovalue |
|-------------------------------|-------|-----|--------|--------------|--------|
| 8) Chloroethane               | 1.94  | 64  | 5222   | 0.521 ug/L   | 97     |
| 13) Acetone                   | 2.66  | 43  | 4286   | 1.226 ug/L   | 100    |
| 15) Methyl Acetate            | 3.05  | 43  | 2647   | 0.302 ug/L # | 54     |
| 16) Methylene chloride        | 3.05  | 84  | 4506   | 0.257 ug/L   | 79     |
| 25) Chloroform                | 5.10  | 83  | 2327   | 0.077 ug/L   | 89     |
| 27) 1,2-Dichloroethane        | 5.79  | 62  | 5178   | 0.233 ug/L # | 78     |
| 30) Cyclohexane               | 5.40  | 56  | 7428   | 0.289 ug/L   | 97     |
| 33) Benzene                   | 5.79  | 78  | 541506 | 8.963 ug/L   | 100    |
| 35) Methylcyclohexane         | 6.77  | 83  | 5673   | 0.229 ug/L   | 95     |
| 37) 1,2-Dichloropropane       | 6.70  | 63  | 7206   | 0.440 ug/L # | 93     |
| 39) cis-1,3-Dichloropropene   | 7.57  | 75  | 2034   | 0.084 ug/L # | 71     |
| 42) Toluene                   | 7.97  | 91  | 42970  | 0.691 ug/L   | 98     |
| 44) trans-1,3-Dichloropropene | 8.19  | 75  | 1077   | 0.048 ug/L # | 45     |
| 51) Chlorobenzene             | 9.45  | 112 | 366166 | 9.479 ug/L   | 96     |
| 52) Ethylbenzene              | 9.57  | 91  | 5778   | 0.082 ug/L # | 83     |
| 53) m,p-Xylene                | 9.69  | 106 | 10444  | 0.415 ug/L   | 96     |
| 54) o-Xylene                  | 10.10 | 106 | 4982   | 0.208 ug/L   | 99     |

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 Sample : L4046-16DL 5X  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 6 Sample Multiplier: 1

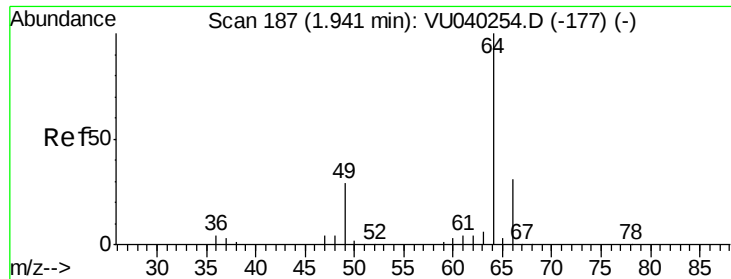
Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Sep 24 02:28:11 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR083120WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Thu Sep 24 02:21:14 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|----------------------------|-------|------|----------|-------|--------|----------|
| 56) Isopropylbenzene       | 10.48 | 105  | 35516    | 0.543 | ug/L   | 97       |
| 59) 1,2,3-Trichloropropane | 11.81 | 75   | 12099    | 0.998 | ug/L # | 44       |
| 62) 1,3-Dichlorobenzene    | 11.74 | 146  | 1976     | 0.067 | ug/L   | 90       |
| 63) 1,4-Dichlorobenzene    | 11.83 | 146  | 27865    | 0.934 | ug/L   | 93       |
| 65) 1,2-Dichlorobenzene    | 12.21 | 146  | 6182     | 0.217 | ug/L   | 88       |
| 67) 1,3,5-Trichlorobenzene | 13.84 | 180  | 1570     | 0.076 | ug/L   | 93       |
| 68) 1,2,4-trichlorobenzene | 13.84 | 180  | 1570     | 0.088 | ug/L   | 92       |
| 69) Naphthalene            | 14.08 | 128  | 5755     | 0.155 | ug/L # | 95       |

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

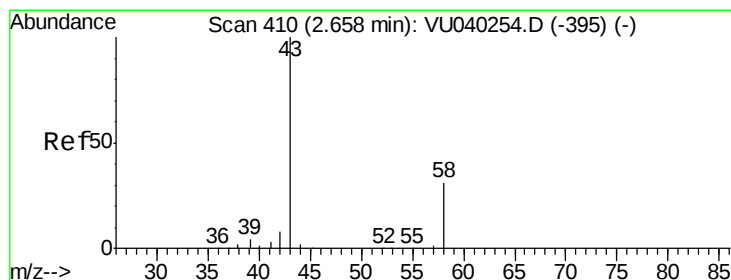
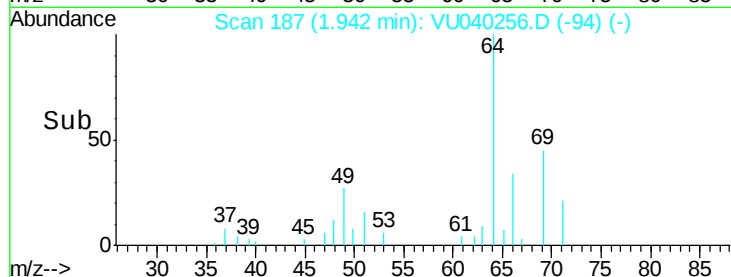
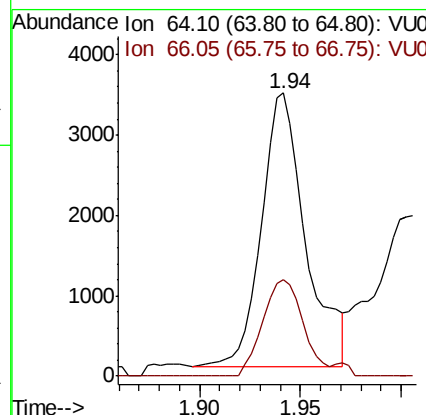
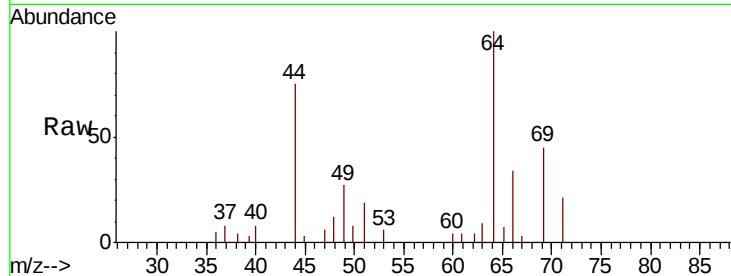




#8  
Chloroethane  
Concen: 0.521 ug/L  
RT: 1.94 min Scan# 187  
Delta R.T. 0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

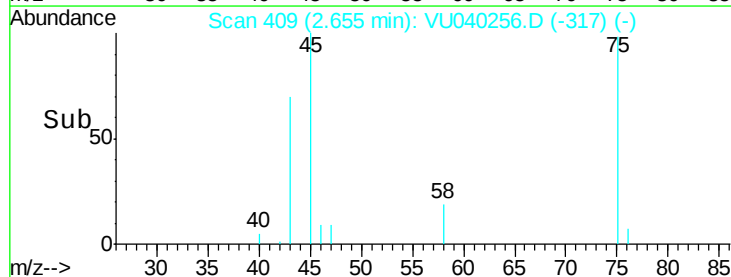
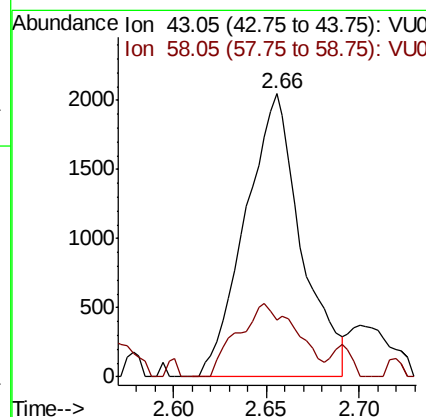
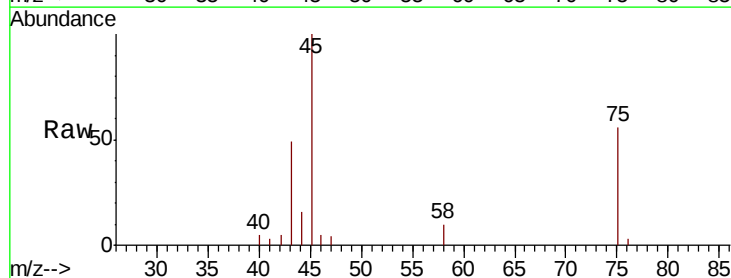
Instrument :  
MSVOA\_U  
ClientSampleId :

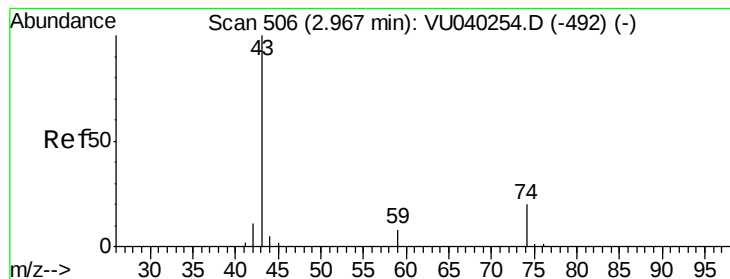
Tot Ion: 64 Resp: 5222  
Ion Ratio Lower Upper  
64 100  
66 34.3 22.7 42.1



#13  
Acetone  
Concen: 1.226 ug/L  
RT: 2.66 min Scan# 409  
Delta R.T. -0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

Tgt Ion: 43 Resp: 4286  
Ion Ratio Lower Upper  
43 100  
58 27.5 0.0 55.4





#15

Methyl Acetate

Concen: 0.302 ug/L

RT: 3.05 min Scan# 533

Delta R.T. 0.09 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

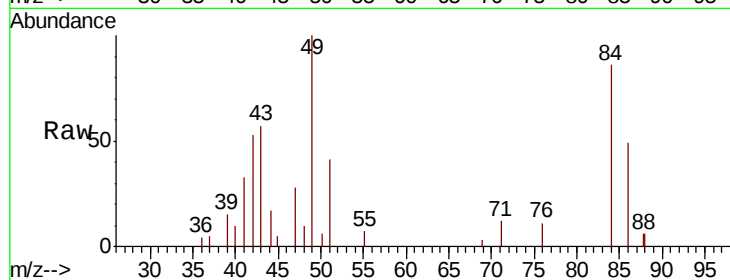
ClientSampled :

Tot Ion: 43 Resp: 2647

Ion Ratio Lower Upper

43 100

74 0.0 17.4 26.0#



Abundance Ion 43.05 (42.75 to 43.75): VU0

Ion 74.05 (73.75 to 74.75): VU0

6000

5000

4000

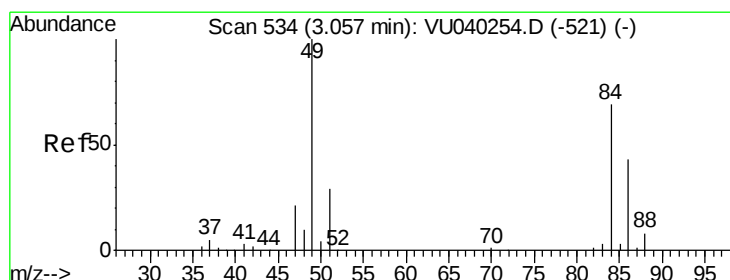
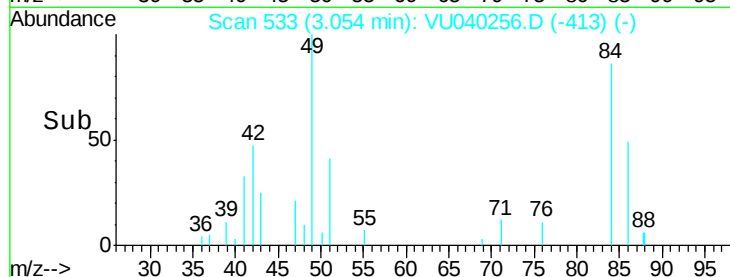
3000

2000

1000

0

Time-->



#16

Methylene chloride

Concen: 0.257 ug/L

RT: 3.05 min Scan# 533

Delta R.T. -0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

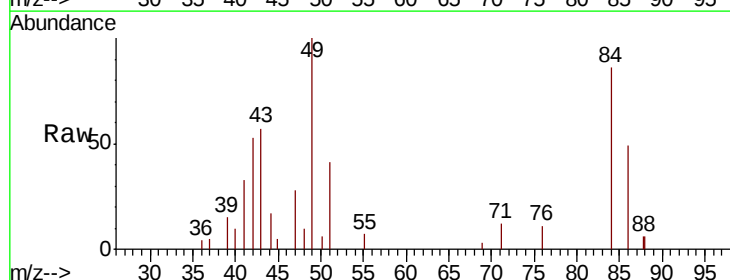
Tgt Ion: 84 Resp: 4506

Ion Ratio Lower Upper

84 100

86 56.9 45.2 84.0

49 116.3 104.0 193.2



Abundance Ion 84.05 (83.75 to 84.75): VU0

Ion 86.00 (85.70 to 86.70): VU0

Ion 49.10 (48.80 to 49.80): VU0

4000

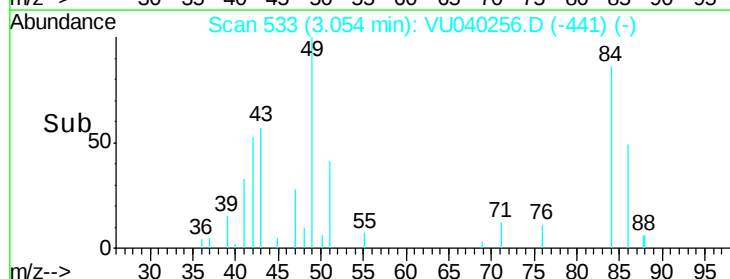
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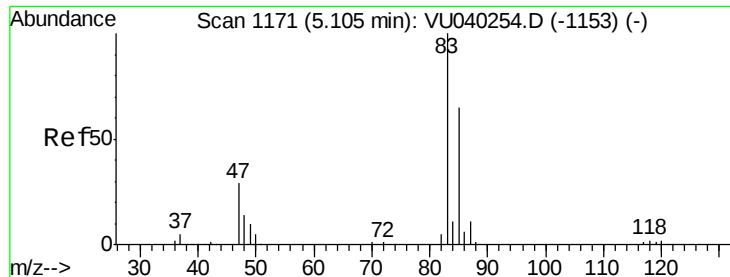
2000

1000

0

Time-->

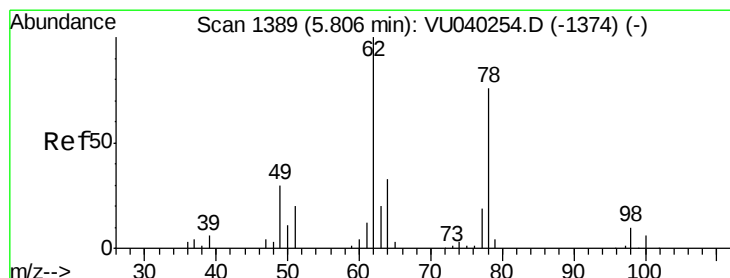
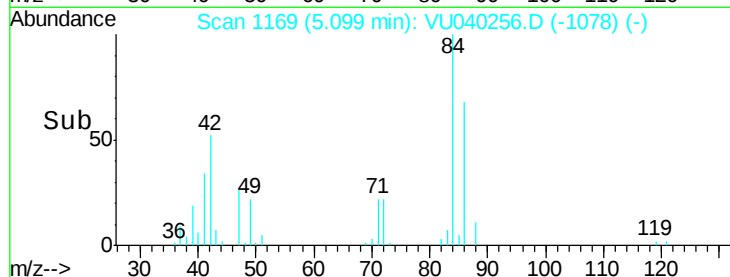
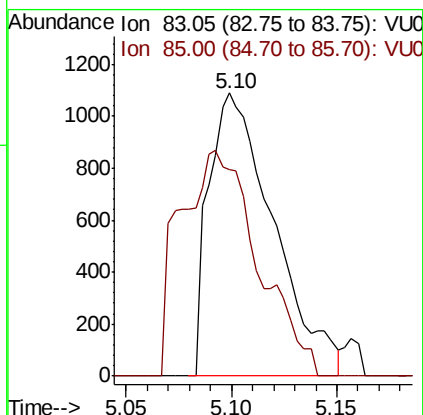
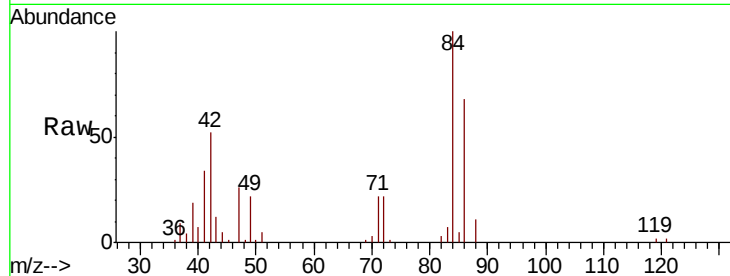




#25  
Chloroform  
Concen: 0.077 ug/L  
RT: 5.10 min Scan# 1169  
Delta R.T. -0.01 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

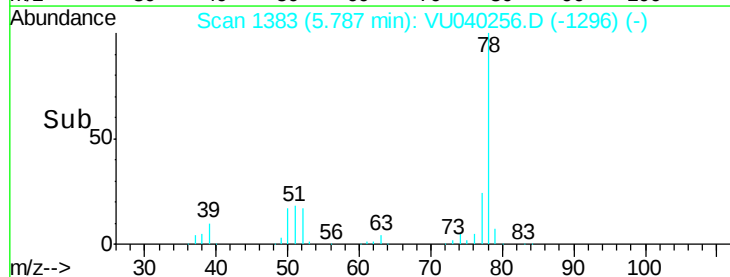
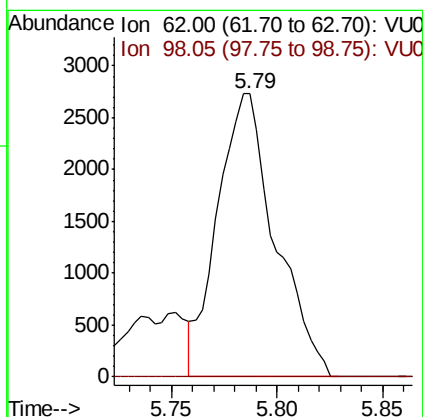
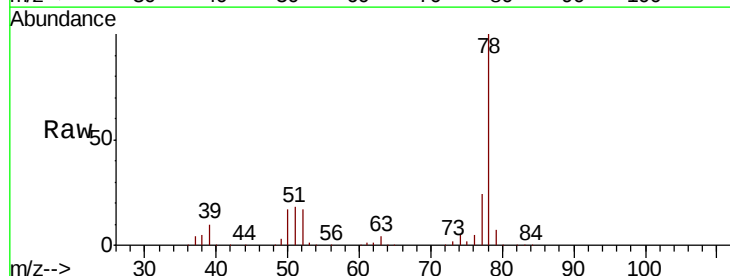
Instrument :  
MSVOA\_U  
ClientSampled :

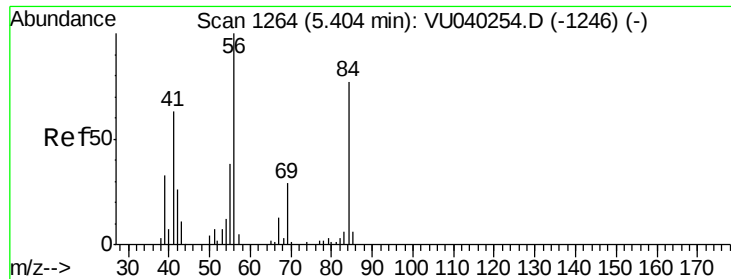
Tot Ion: 83 Resp: 2327  
Ion Ratio Lower Upper  
83 100  
85 73.2 45.3 84.1



#27  
1,2-Dichloroethane  
Concen: 0.233 ug/L  
RT: 5.79 min Scan# 1383  
Delta R.T. -0.02 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

Tgt Ion: 62 Resp: 5178  
Ion Ratio Lower Upper  
62 100  
98 0.0 6.1 9.1#

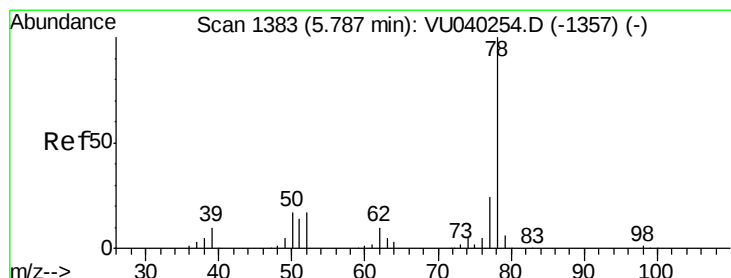
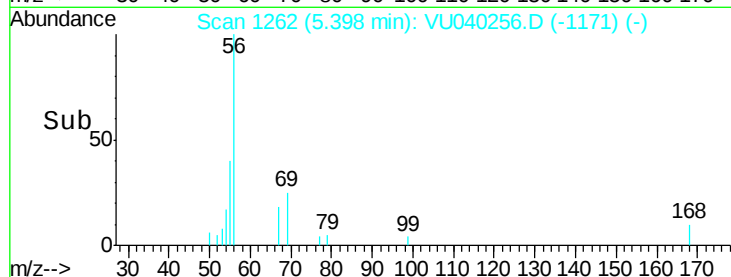
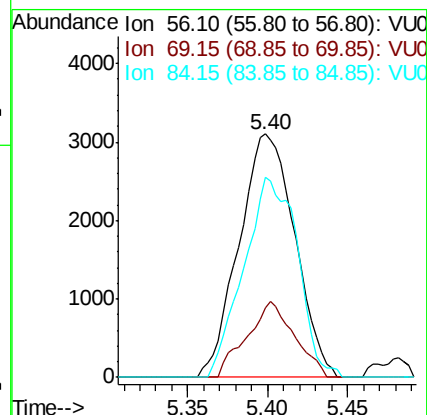
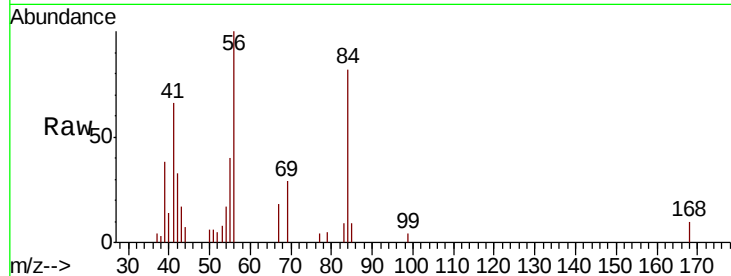




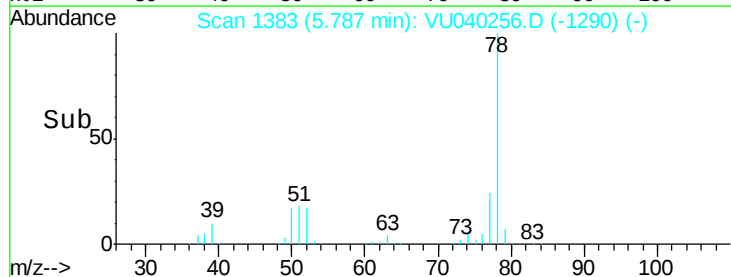
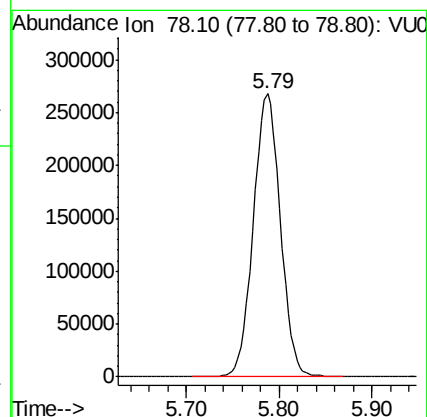
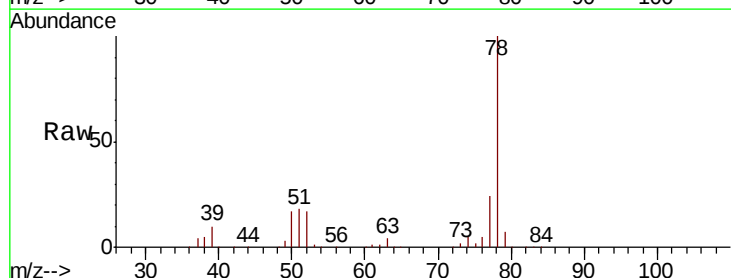
#30  
Cyclohexane  
Concen: 0.289 ug/L  
RT: 5.40 min Scan# 1262  
Delta R.T. -0.01 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

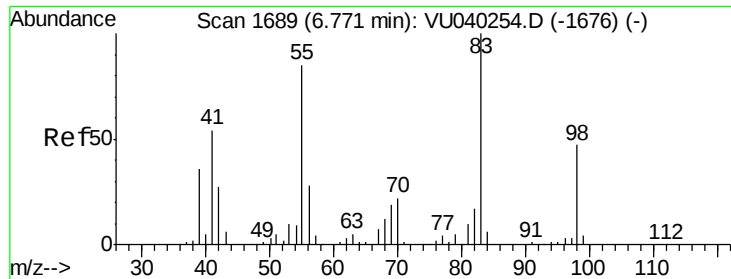
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 56 Resp: 7428  
Ion Ratio Lower Upper  
56 100  
69 26.8 24.1 36.1  
84 79.3 65.0 97.4



#33  
Benzene  
Concen: 8.963 ug/L  
RT: 5.79 min Scan# 1383  
Delta R.T. 0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17  
Tgt Ion: 78 Resp: 541506

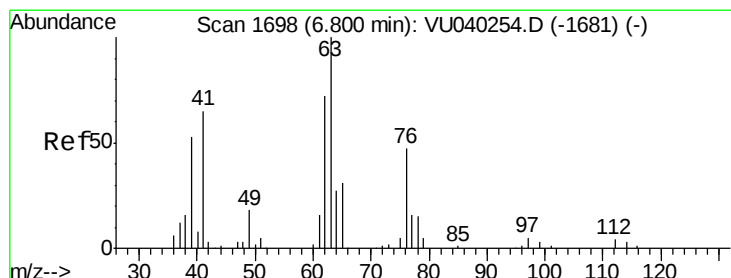
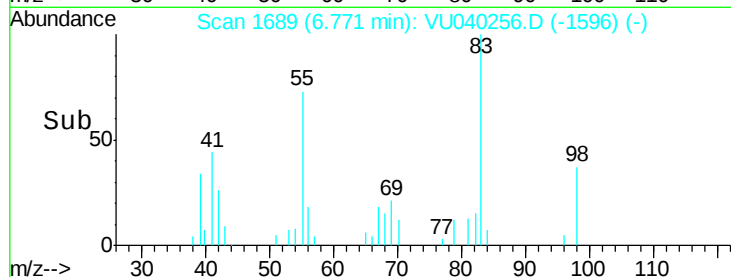
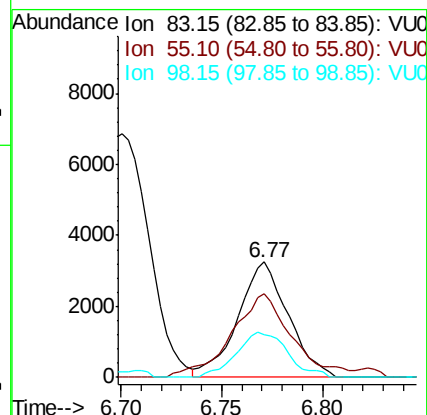
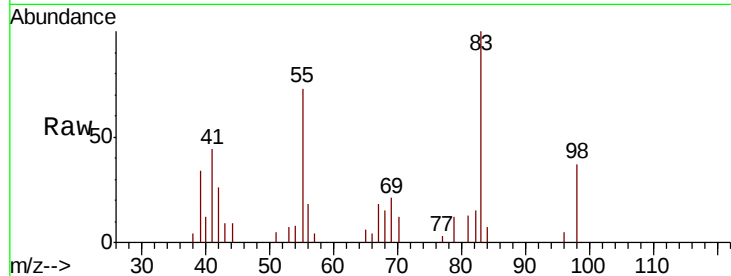




#35  
Methvlcvclohexane  
Concen: 0.229 ug/L  
RT: 6.77 min Scan# 1689  
Delta R.T. 0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

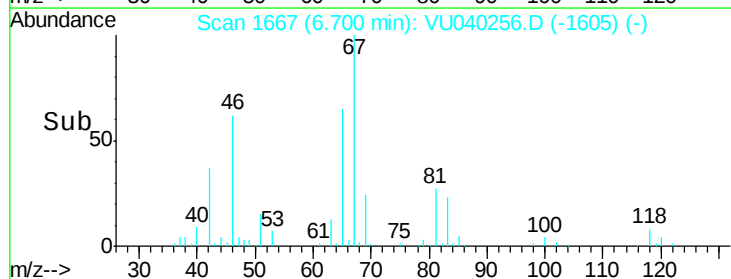
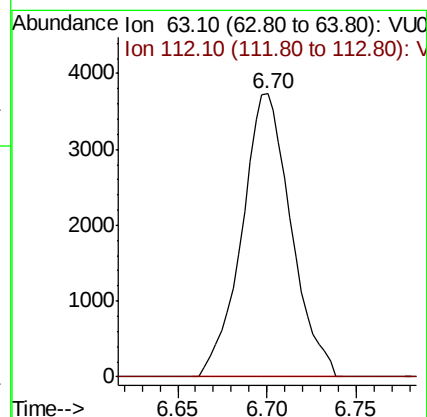
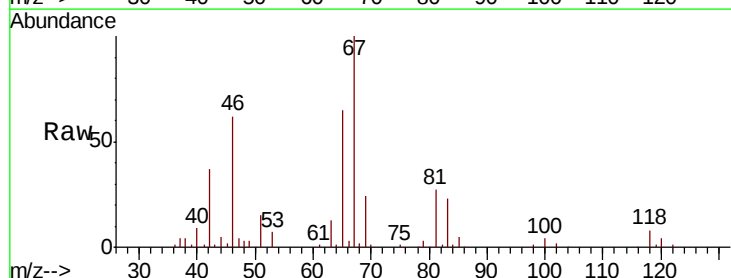
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MSVOA\_U  
ClientSampleId :

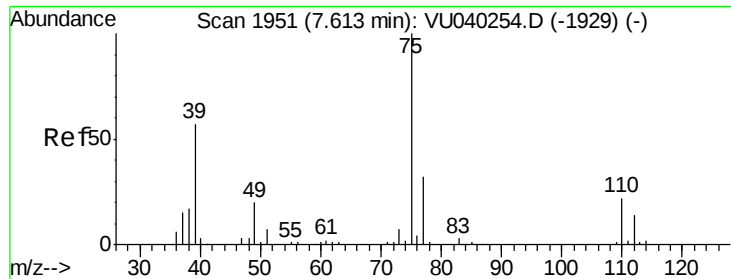
Tot Ion: 83 Resp: 5673  
Ion Ratio Lower Upper  
83 100  
55 86.9 70.5 105.7  
98 39.9 37.8 56.6



#37  
1,2-Dichloropropane  
Concen: 0.440 ug/L  
RT: 6.70 min Scan# 1667  
Delta R.T. -0.10 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

Tgt Ion: 63 Resp: 7206  
Ion Ratio Lower Upper  
63 100  
112 1.8 3.2 4.8#

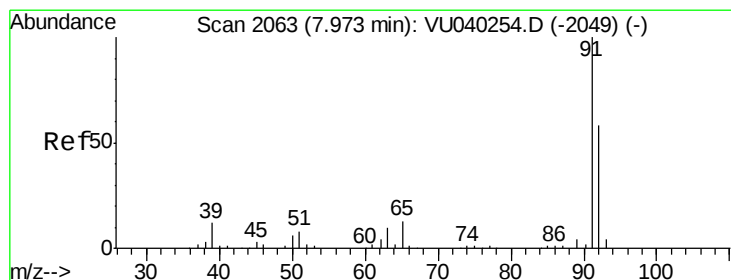
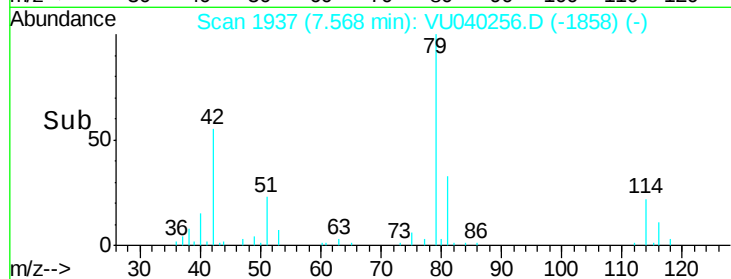
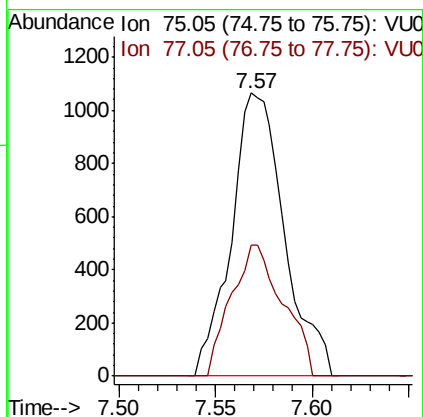
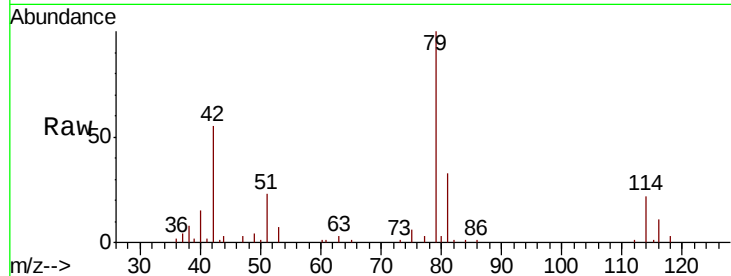




#39  
 cis-1,3-Dichloropropene  
 Concen: 0.084 ug/L  
 RT: 7.57 min Scan# 1937  
 Delta R.T. -0.04 min  
 Lab File: VU040256.D  
 Acq: 23 Sep 2020 13:17

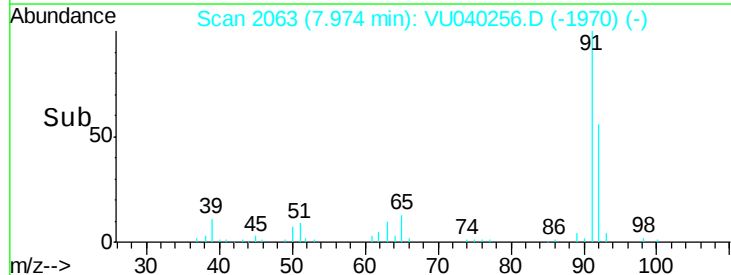
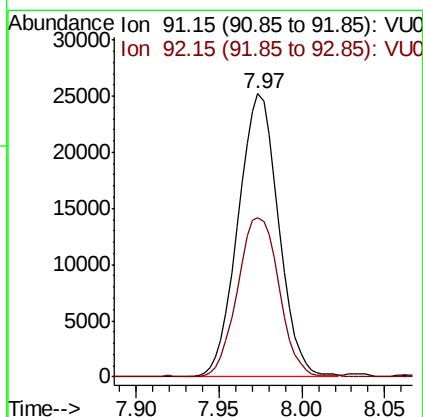
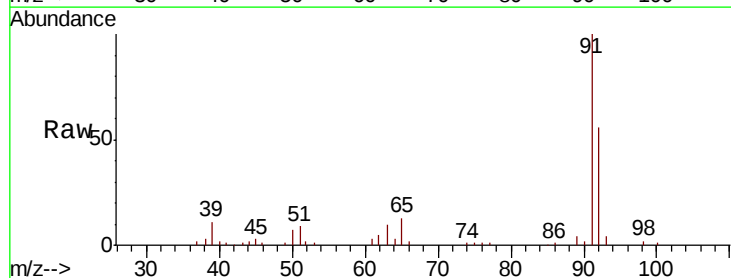
Instrument :  
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 ClientSampled :

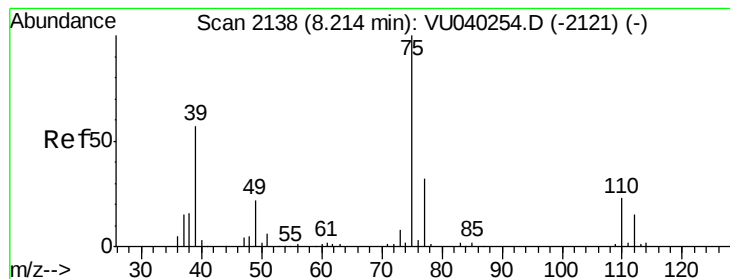
Tot Ion: 75 Resp: 2034  
 Ion Ratio Lower Upper  
 75 100  
 77 46.2 21.1 39.3#



#42  
 Toluene  
 Concen: 0.691 ug/L  
 RT: 7.97 min Scan# 2063  
 Delta R.T. 0.00 min  
 Lab File: VU040256.D  
 Acq: 23 Sep 2020 13:17

Tgt Ion: 91 Resp: 42970  
 Ion Ratio Lower Upper  
 91 100  
 92 56.3 40.7 75.5





#44

trans-1,3-Dichloropropene

Concen: 0.048 ug/L

RT: 8.19 min Scan# 2129

Delta R.T. -0.03 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

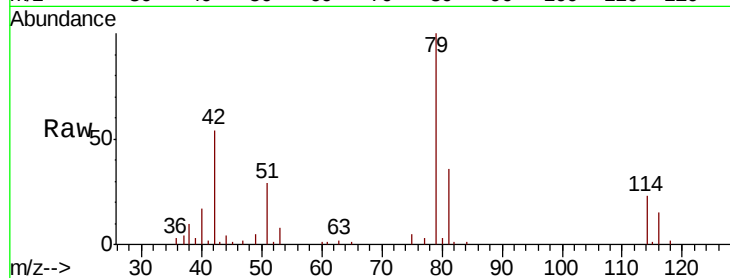
ClientSampleId :

Tot Ion: 75 Resp: 1077

Ion Ratio Lower Upper

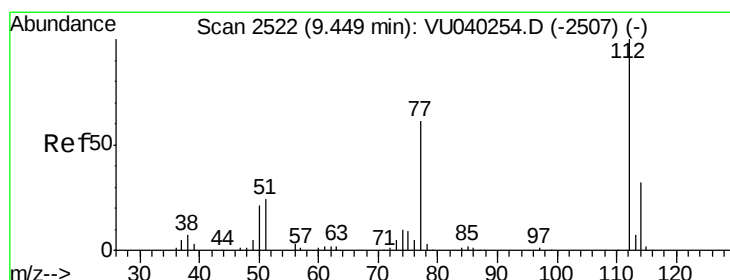
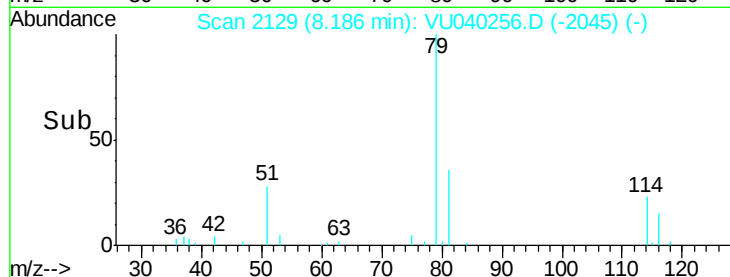
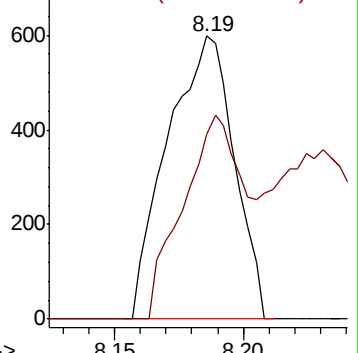
75 100

77 65.4 23.9 44.3#



Abundance Ion 75.05 (74.75 to 75.75): VU0

Ion 77.05 (76.75 to 77.75): VU0



#51

Chlorobenzene

Concen: 9.479 ug/L

RT: 9.45 min Scan# 2522

Delta R.T. 0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

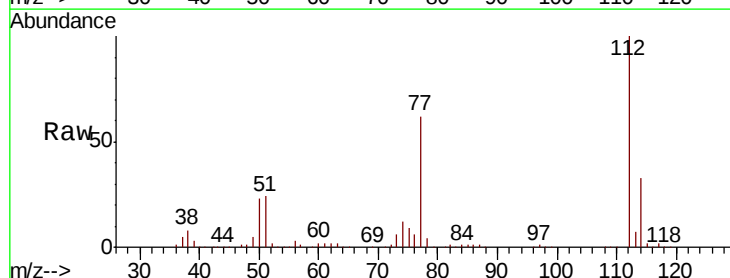
Tgt Ion: 112 Resp: 366166

Ion Ratio Lower Upper

112 100

114 32.6 22.7 42.3

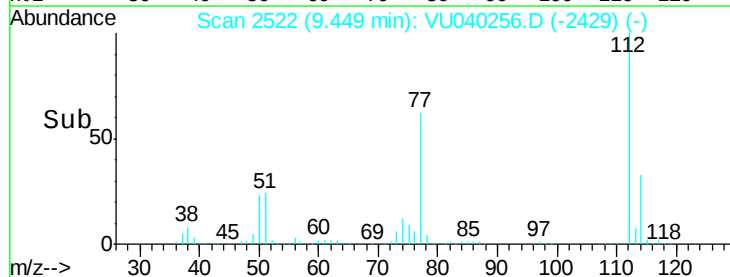
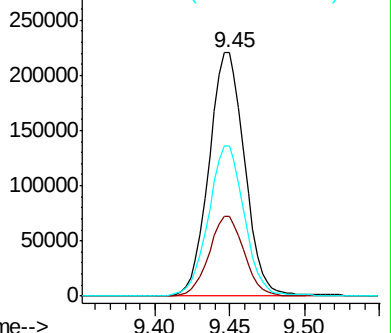
77 61.8 53.2 79.8

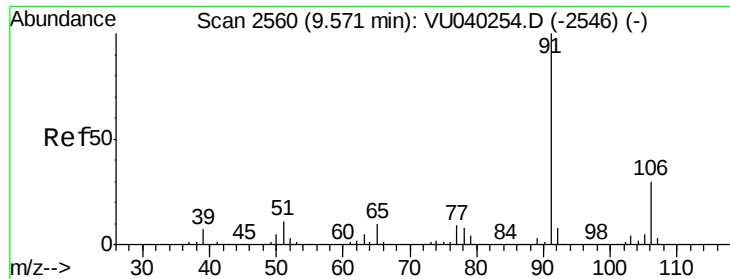


Abundance Ion 112.10 (111.80 to 112.80): V

Ion 114.05 (113.75 to 114.75): V

Ion 77.10 (76.80 to 77.80): VU0





#52

Ethylbenzene

Concen: 0.082 ug/L

RT: 9.57 min Scan# 2559

Delta R.T. -0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

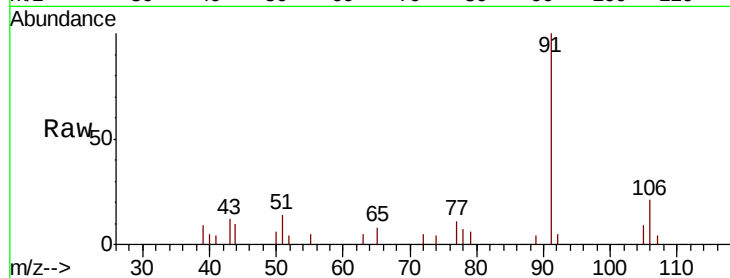
ClientSampleId :

Tot Ion: 91 Resp: 5778

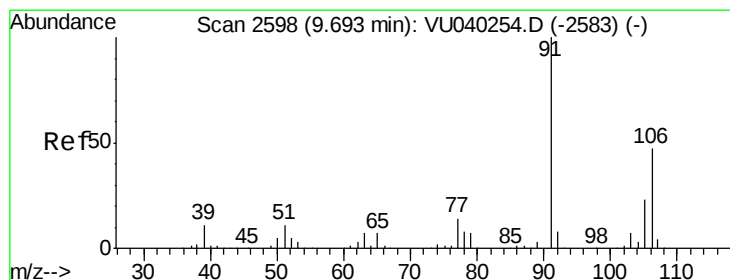
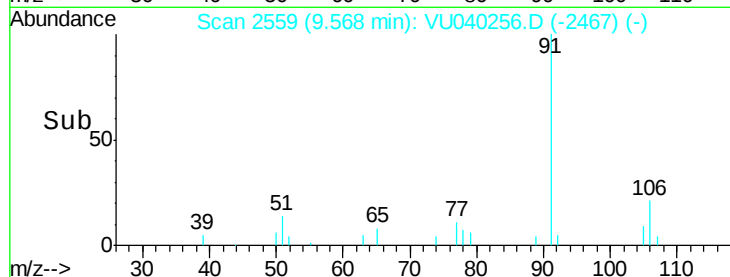
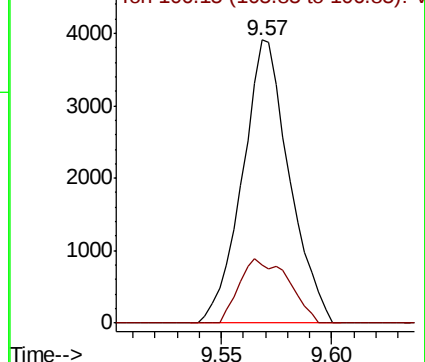
Ion Ratio Lower Upper

91 100

106 20.6 21.0 39.0#



Abundance Ion 91.15 (90.85 to 91.85): VU040256.D (-2559) (-)



#53

m,p-Xylene

Concen: 0.415 ug/L

RT: 9.69 min Scan# 2597

Delta R.T. -0.00 min

Lab File: VU040256.D

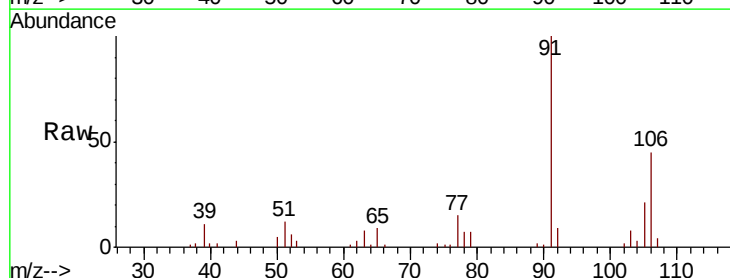
Acq: 23 Sep 2020 13:17

Tgt Ion: 106 Resp: 10444

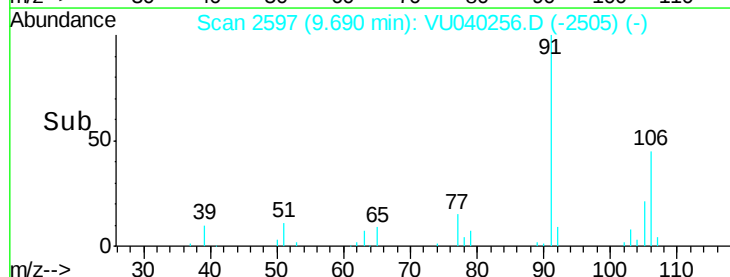
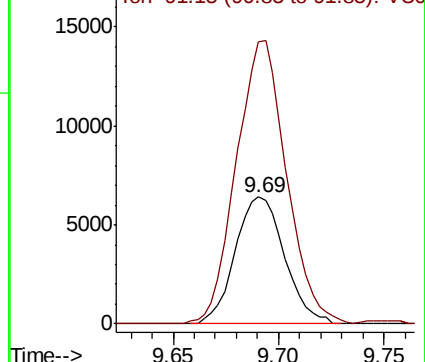
Ion Ratio Lower Upper

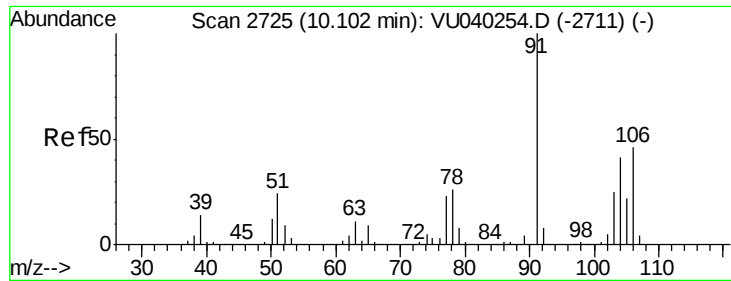
106 100

91 222.3 151.7 281.7



Abundance Ion 106.15 (105.85 to 106.85): VU040256.D (-2597) (-)

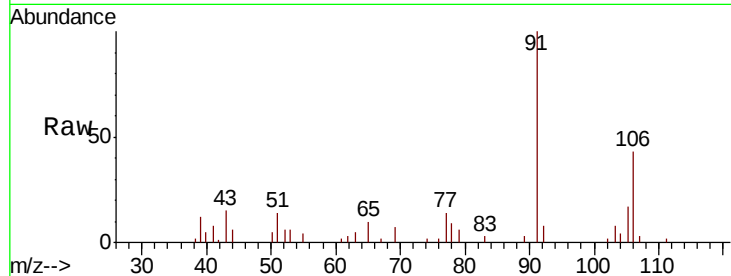




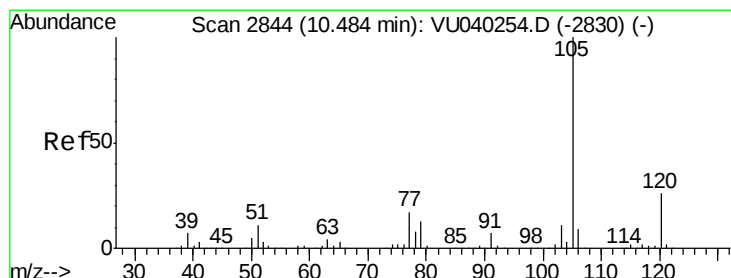
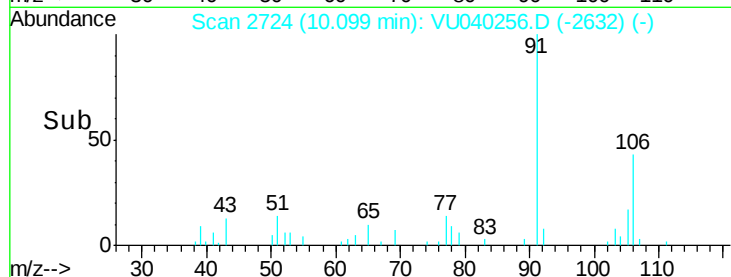
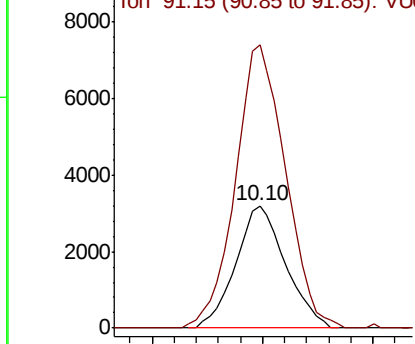
#54  
o-Xylene  
Concen: 0.208 ug/L  
RT: 10.10 min Scan# 2724  
Delta R.T. -0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion:106 Resp: 4982  
Ion Ratio Lower Upper  
106 100  
91 231.1 160.8 298.6

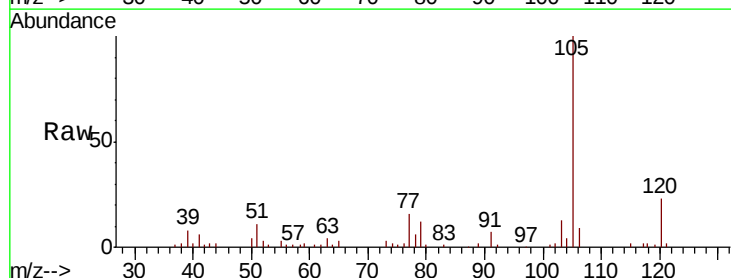


Abundance Ion 106.15 (105.85 to 106.85): V  
Ion 91.15 (90.85 to 91.85): VU0

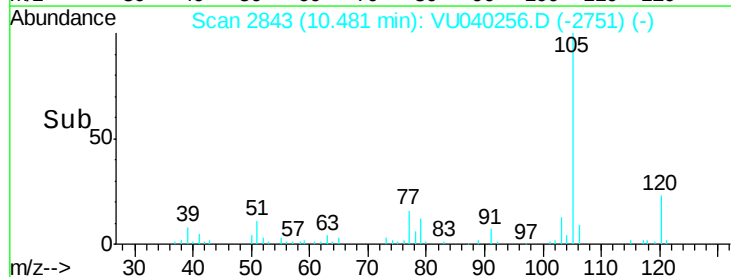
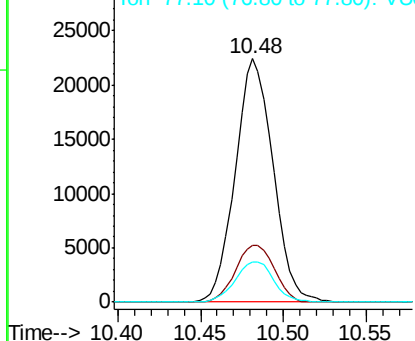


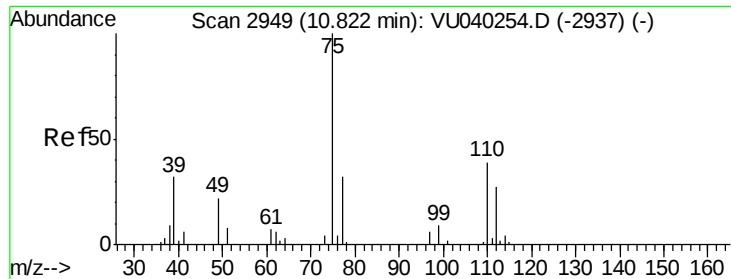
#56  
Isopropylbenzene  
Concen: 0.543 ug/L  
RT: 10.48 min Scan# 2843  
Delta R.T. -0.00 min  
Lab File: VU040256.D  
Acq: 23 Sep 2020 13:17

Tgt Ion:105 Resp: 35516  
Ion Ratio Lower Upper  
105 100  
120 23.8 20.1 30.1  
77 16.8 14.4 21.6



Abundance Ion 105.05 (104.75 to 105.75): V  
Ion 120.10 (119.80 to 120.80): V  
Ion 77.10 (76.80 to 77.80): VU0





#59

1,2,3-Trichloropropane

Concen: 0.998 ug/L

RT: 11.81 min Scan# 3255

Delta R.T. 0.98 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

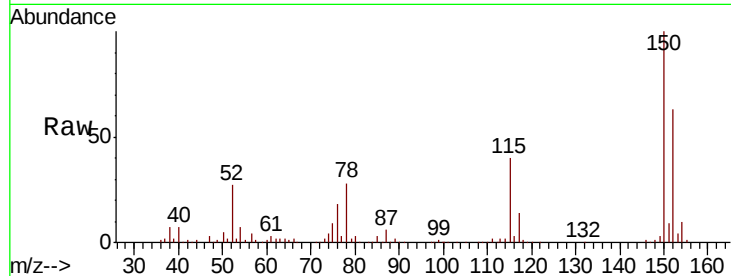
ClientSampled :

Tot Ion: 75 Resp: 12099

Ion Ratio Lower Upper

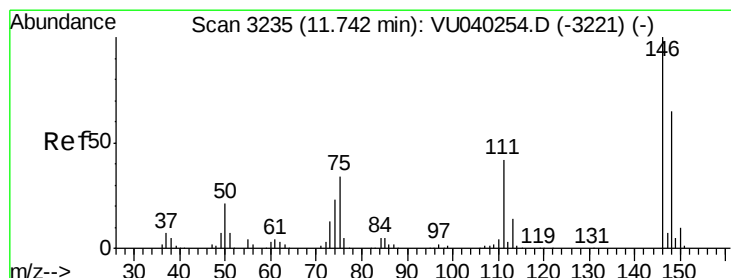
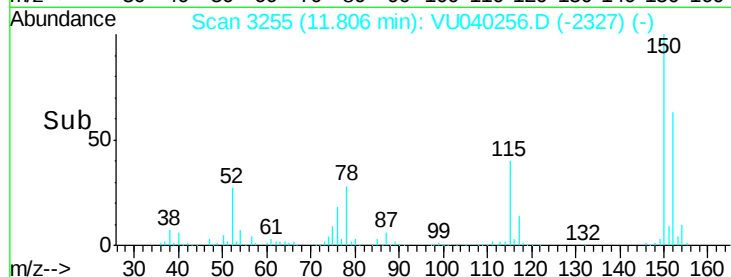
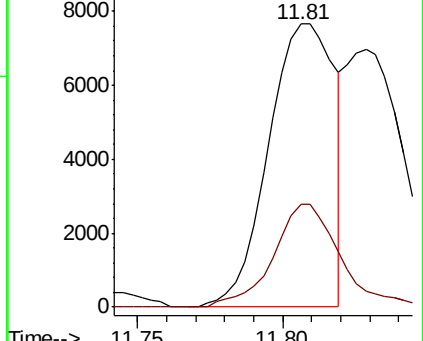
75 100

77 0.0 24.9 37.3#



Abundance Ion 75.00 (74.70 to 75.70): VU040256.D (-2937) (-)

Ion 77.00 (76.70 to 77.70): VU040256.D (-2937) (-)



#62

1,3-Dichlorobenzene

Concen: 0.067 ug/L

RT: 11.74 min Scan# 3234

Delta R.T. -0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

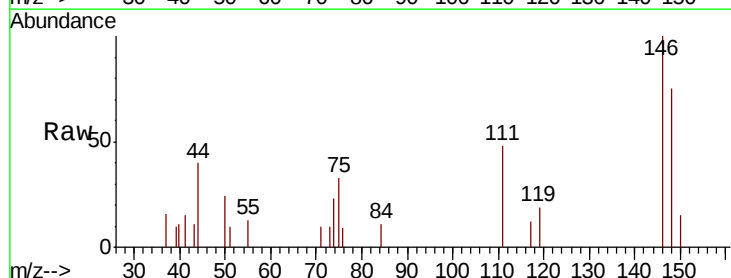
Tgt Ion: 146 Resp: 1976

Ion Ratio Lower Upper

146 100

111 48.1 31.6 58.8

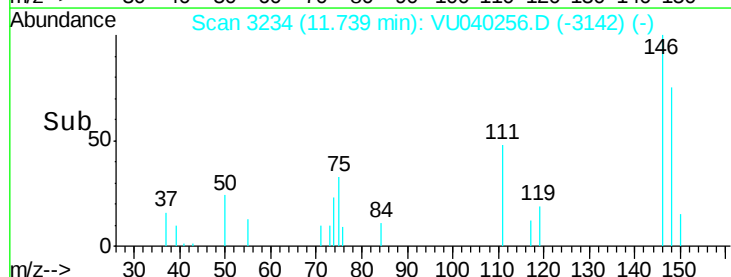
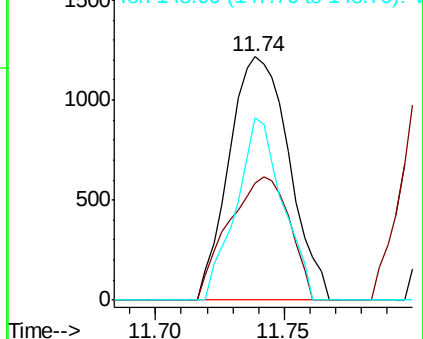
148 74.6 44.2 82.0

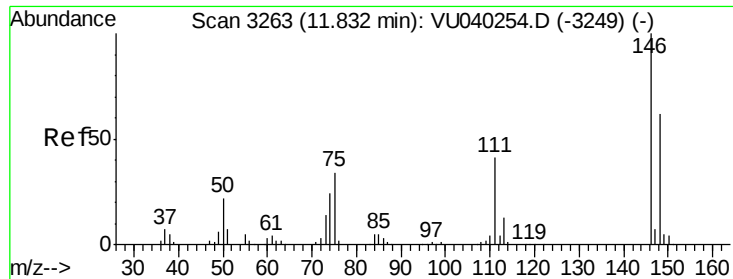


Abundance Ion 145.95 (145.65 to 146.65): VU040256.D (-3221) (-)

Ion 111.00 (110.70 to 111.70): VU040256.D (-3221) (-)

Ion 148.00 (147.70 to 148.70): VU040256.D (-3221) (-)





#63

1,4-Dichlorobenzene

Concen: 0.934 ug/L

RT: 11.83 min Scan# 3263

Delta R.T. 0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

ClientSampled :

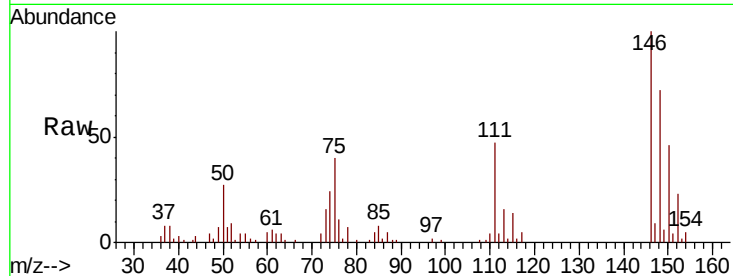
Tot Ion:146 Resp: 27865

Ion Ratio Lower Upper

146 100

111 47.5 30.5 56.7

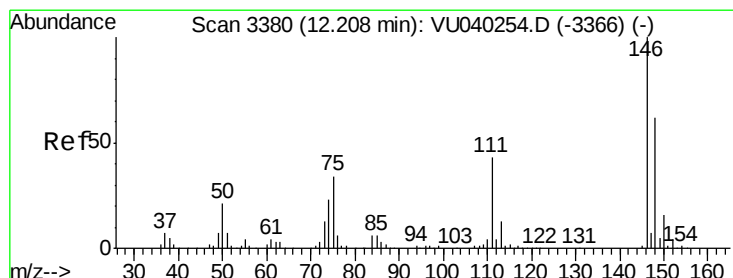
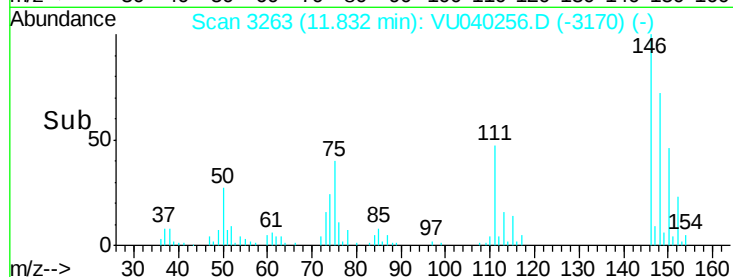
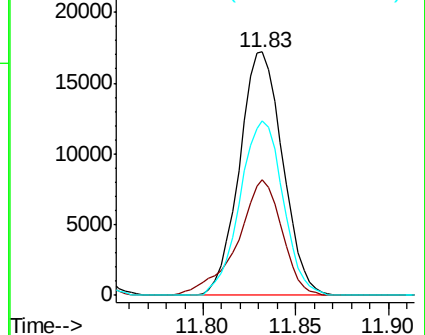
148 71.6 45.4 84.4



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



#65

1,2-Dichlorobenzene

Concen: 0.217 ug/L

RT: 12.21 min Scan# 3380

Delta R.T. 0.00 min

Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

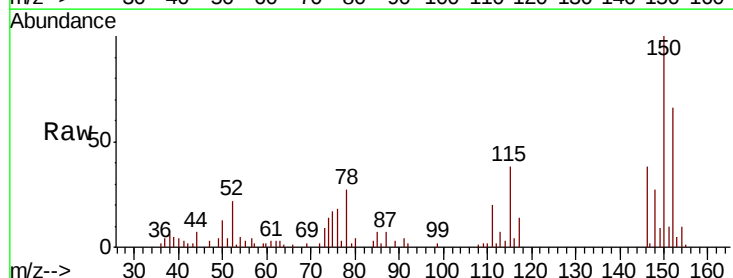
Tgt Ion:146 Resp: 6182

Ion Ratio Lower Upper

146 100

111 52.2 36.5 54.7

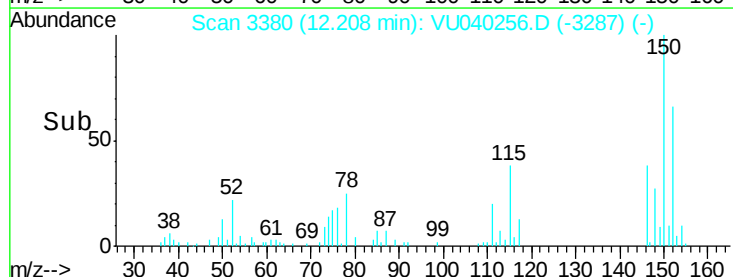
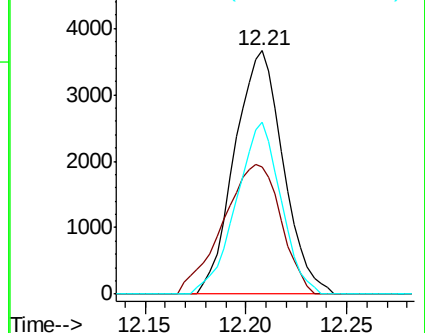
148 70.5 48.6 72.8

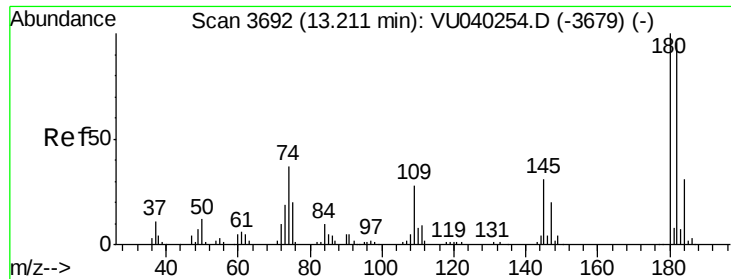


Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V

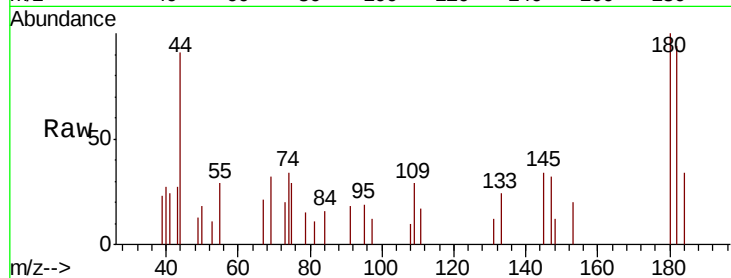




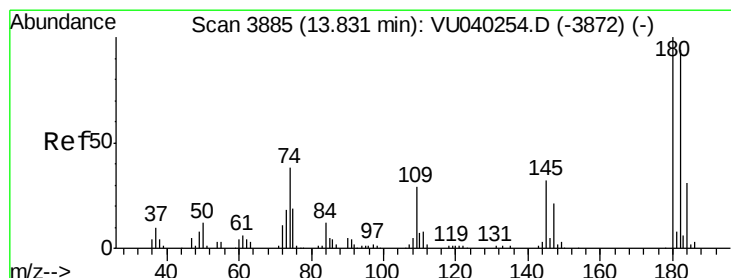
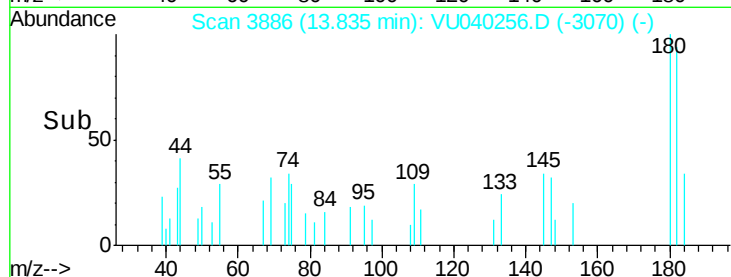
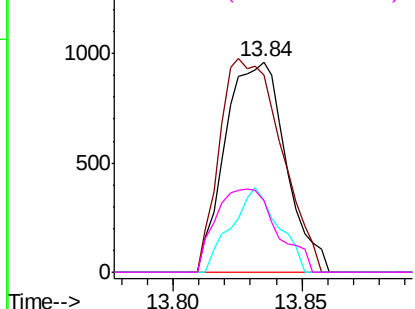
#67  
 1,3,5-Trichlorobenzene  
 Concen: 0.076 ug/L  
 RT: 13.84 min Scan# 3886  
 Delta R.T. 0.62 min  
 Lab File: VU040256.D  
 Acq: 23 Sep 2020 13:17

Instrument :  
 MSVOA\_U  
 ClientSampled :

Tot Ion:180 Resp: 1570  
 Ion Ratio Lower Upper  
 180 100  
 182 103.2 76.9 115.3  
 184 31.0 24.6 36.8  
 145 40.3 27.0 40.6

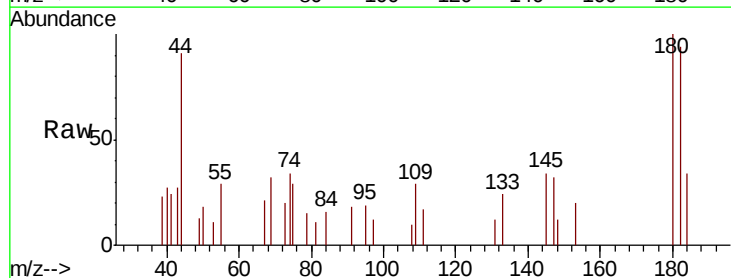


Abundance Ion 180.00 (179.70 to 180.70): V  
 1500  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

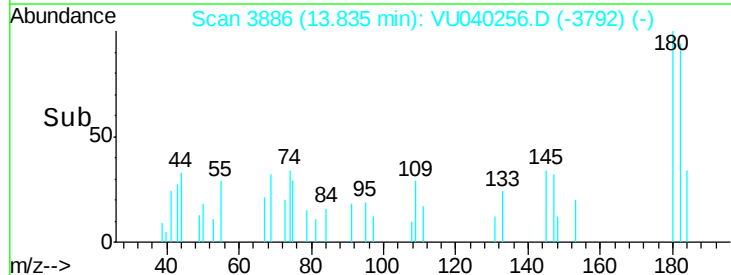
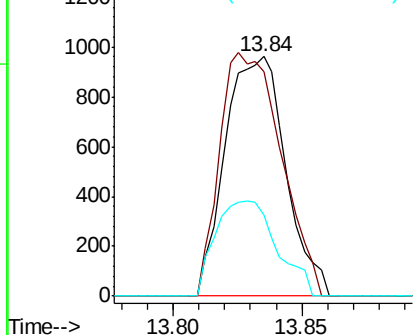


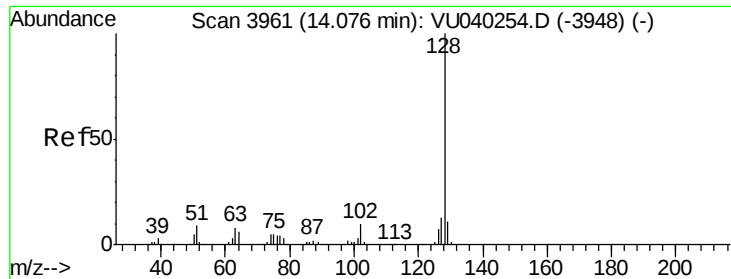
#68  
 1,2,4-trichlorobenzene  
 Concen: 0.088 ug/L  
 RT: 13.84 min Scan# 3886  
 Delta R.T. 0.00 min  
 Lab File: VU040256.D  
 Acq: 23 Sep 2020 13:17

Tgt Ion:180 Resp: 1570  
 Ion Ratio Lower Upper  
 180 100  
 182 103.2 76.0 114.0  
 145 40.3 28.4 42.6



Abundance Ion 179.90 (179.60 to 180.60): V  
 1200  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 144.95 (144.65 to 145.65): V





#69

Naphthalene

Concen: 0.155 ug/L

RT: 14.08 min Scan# 3961

Delta R.T. 0.00 min

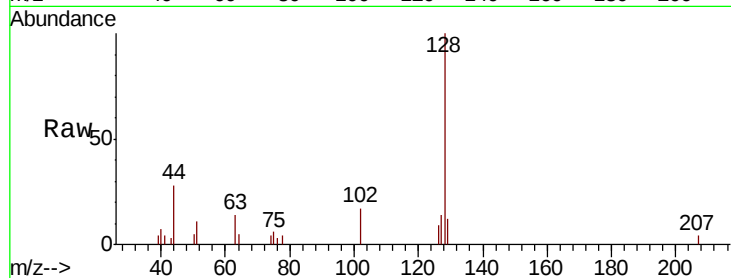
Lab File: VU040256.D

Acq: 23 Sep 2020 13:17

Instrument :

MSVOA\_U

ClientSampleId :



Tot Ion:128 Resp: 5755

Ion Ratio Lower Upper

128 100

129 7.8 8.7 13.1#

127 12.7 10.7 16.1

