

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU041620\  
 Data File : VU037749.D  
 Acq On : 16 Apr 2020 12:57  
 Operator : JC/MD  
 Sample : L2296-05  
 Misc : 25mL/MSVOA U/WATER  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 BFS91

Quant Time: Apr 17 03:05:42 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR041420WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Fri Apr 17 01:29:02 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 6.28  | 114  | 309497   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.44  | 117  | 299539   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.83 | 152  | 151775   | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.61   | 65    | 87801    | 3.75     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 75.00%  |
| 7) Chloroethane-d5             | 1.93   | 69    | 75564    | 3.82     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 76.40%  |
| 11) 1,1-Dichloroethene-d2      | 2.59   | 63    | 115469   | 2.77     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 55.40%# |
| 20) 2-Butanone-d5              | 4.67   | 46    | 266881   | 41.49    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 82.98%  |
| 24) Chloroform-d               | 5.10   | 84    | 148640   | 3.98     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 79.60%  |
| 26) 1,2-Dichloroethane-d4      | 5.74   | 65    | 87591    | 4.08     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 81.60%  |
| 32) Benzene-d6                 | 5.76   | 84    | 313674   | 3.86     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 77.20%  |
| 36) 1,2-Dichloropropane-d6     | 6.72   | 67    | 103929   | 3.95     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 79.00%  |
| 41) Toluene-d8                 | 7.92   | 98    | 283325   | 3.86     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 77.20%  |
| 43) trans-1,3-Dichloropropene- | 8.20   | 79    | 45447    | 3.84     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 76.80%  |
| 46) 2-Hexanone-d5              | 8.65   | 63    | 247280   | 40.83    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 81.66%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.77  | 84    | 80913    | 3.89     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 77.80%  |
| 64) 1,2-Dichlorobenzene-d4     | 12.20  | 152   | 107489   | 3.97     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 79.40%# |

## Target Compounds

|                              |       |     |        |       | Ovalue   |
|------------------------------|-------|-----|--------|-------|----------|
| 5) Vinyl chloride            | 1.62  | 62  | 126216 | 3.870 | ug/L 97  |
| 13) Acetone                  | 2.66  | 43  | 4192   | 0.989 | ug/L 98  |
| 17) Methyl tert-butyl Ether  | 3.41  | 73  | 7790   | 0.126 | ug/L # 1 |
| 18) trans-1,2-Dichloroethene | 3.38  | 96  | 3510   | 0.152 | ug/L 95  |
| 19) 1,1-Dichloroethane       | 3.91  | 63  | 113922 | 2.544 | ug/L 99  |
| 22) cis-1,2-Dichloroethene   | 4.71  | 96  | 96945  | 3.875 | ug/L 92  |
| 25) Chloroform               | 5.13  | 83  | 16311  | 0.383 | ug/L 99  |
| 27) 1,2-Dichloroethane       | 5.83  | 62  | 18169  | 0.632 | ug/L 98  |
| 29) 1,1,1-Trichloroethane    | 5.36  | 97  | 10330  | 0.284 | ug/L 97  |
| 30) Cyclohexane              | 5.42  | 56  | 8118   | 0.180 | ug/L 98  |
| 33) Benzene                  | 5.81  | 78  | 28971  | 0.293 | ug/L 100 |
| 34) Trichloroethene          | 6.57  | 95  | 3954   | 0.163 | ug/L 89  |
| 45) 1,1,2-Trichloroethane    | 8.42  | 97  | 8401   | 0.475 | ug/L 97  |
| 51) Chlorobenzene            | 9.47  | 112 | 58179  | 0.920 | ug/L 99  |
| 54) o-Xylene                 | 10.12 | 106 | 5593   | 0.130 | ug/L 89  |
| 62) 1,3-Dichlorobenzene      | 11.76 | 146 | 5575   | 0.110 | ug/L 95  |
| 63) 1,4-Dichlorobenzene      | 11.85 | 146 | 9016   | 0.177 | ug/L 96  |

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ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
BFS91

Quant Time: Apr 17 03:05:42 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR041420WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri Apr 17 01:29:02 2020  
Response via : Initial Calibration

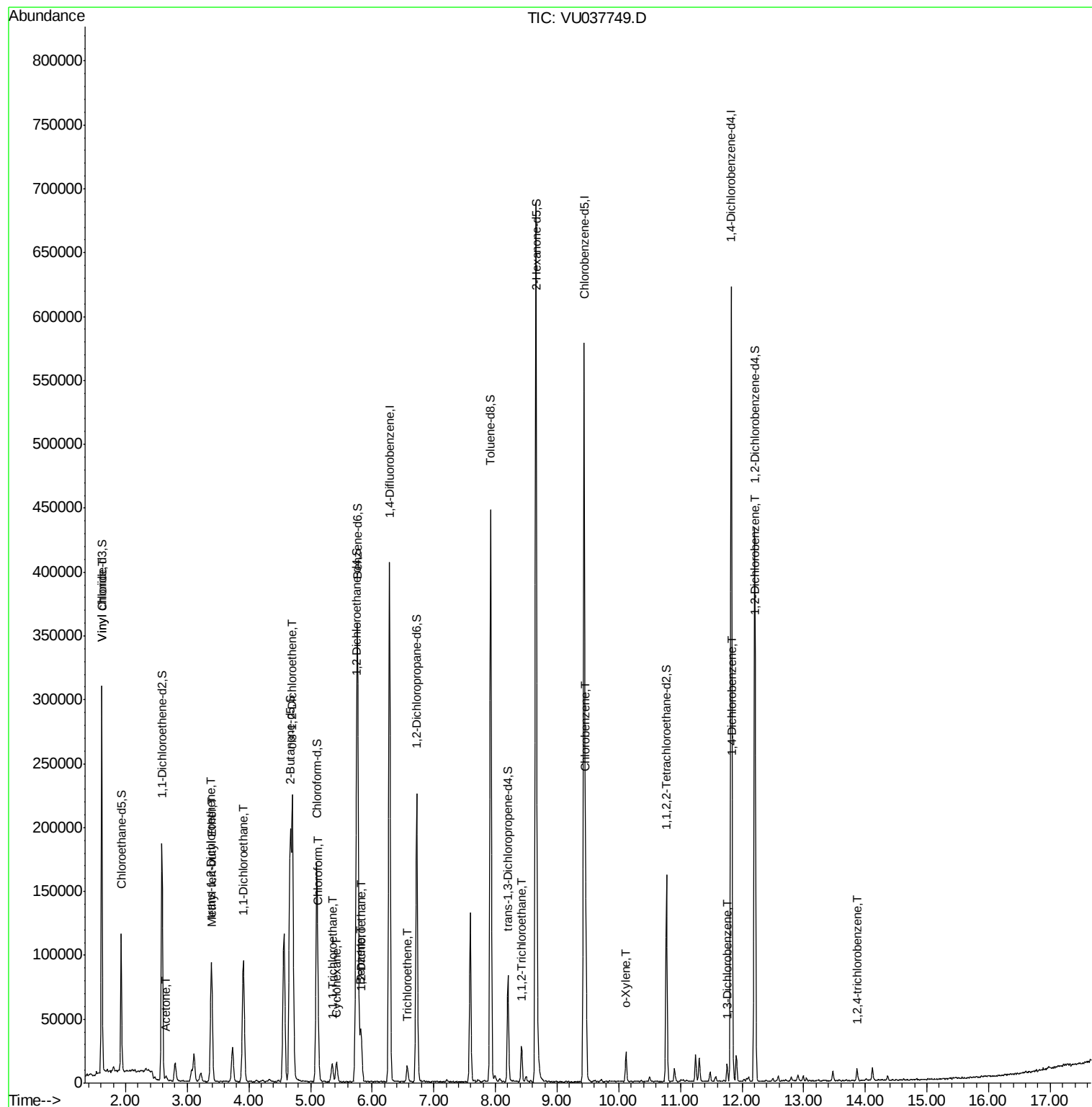
| Internal Standards         | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|----------------------------|-------|------|----------|-------|--------|----------|
| 65) 1,2-Dichlorobenzene    | 12.22 | 146  | 4236     | 0.089 | ug/L   | 93       |
| 68) 1,2,4-trichlorobenzene | 13.87 | 180  | 2894     | 0.085 | ug/L # | 93       |

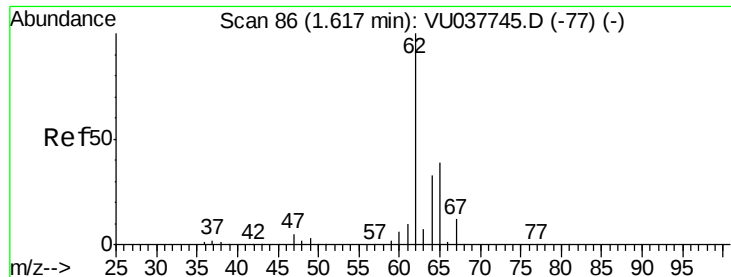
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA U\DATA\VU041620\  
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#5

Vinyl chloride

Concen: 3.870 ug/L

RT: 1.62 min Scan# 86

Delta R.T. 0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

Instrument :

MSVOA\_U

ClientSampleId :

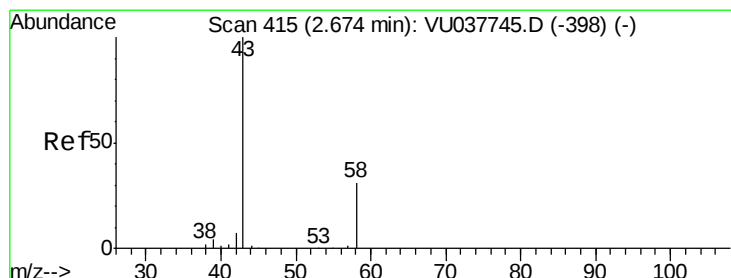
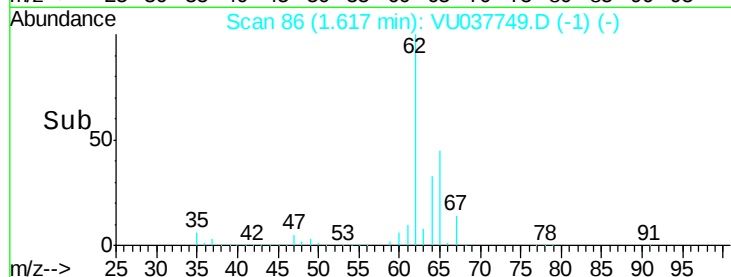
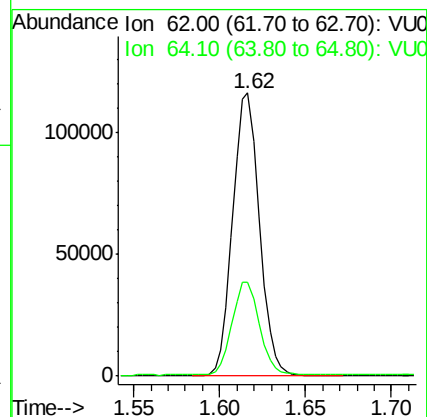
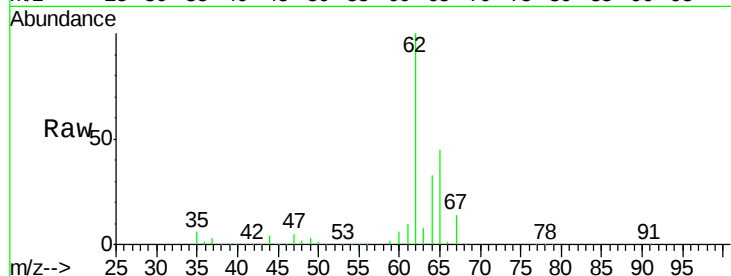
BFS91

Tot Ion: 62 Resp: 126216

Ion Ratio Lower Upper

62 100

64 33.4 22.1 41.1



#13

Acetone

Concen: 0.989 ug/L

RT: 2.66 min Scan# 410

Delta R.T. -0.02 min

Lab File: VU037749.D

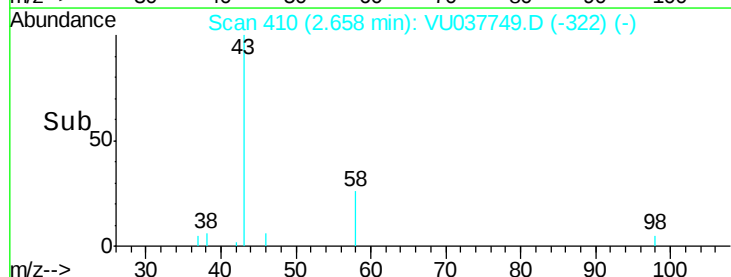
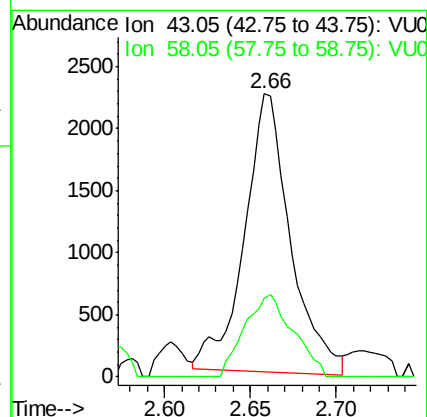
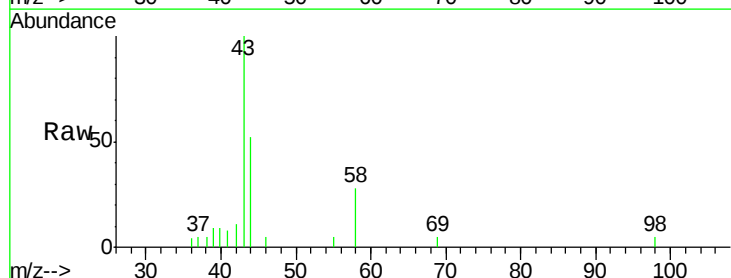
Acq: 16 Apr 2020 12:57

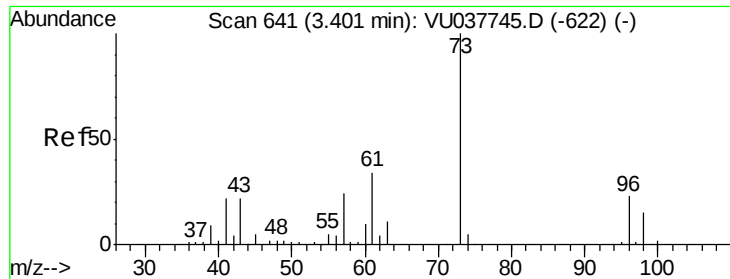
Tgt Ion: 43 Resp: 4192

Ion Ratio Lower Upper

43 100

58 31.0 0.0 64.8



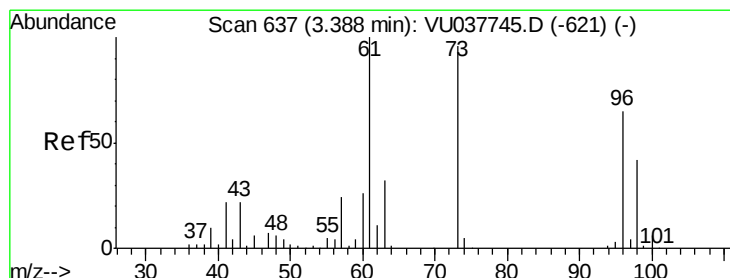
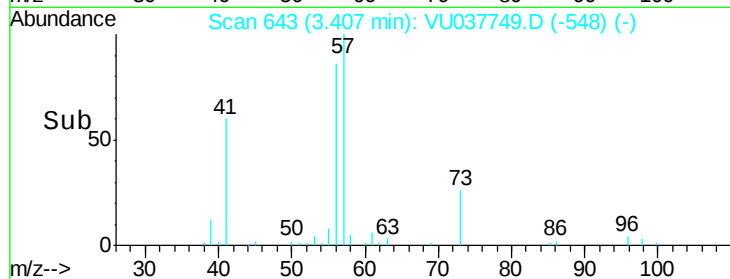
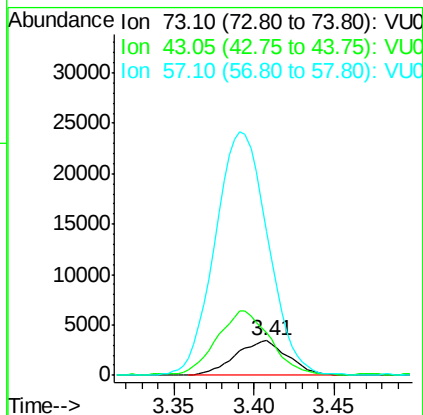
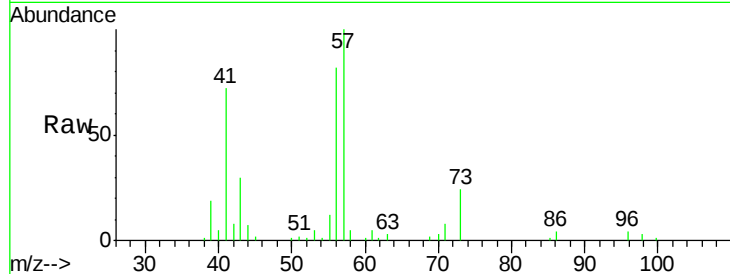


#17

Methvl tert-butvl Ether  
 Concen: 0.126 ug/L  
 RT: 3.41 min Scan# 643  
 Delta R.T. 0.01 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 BFS91

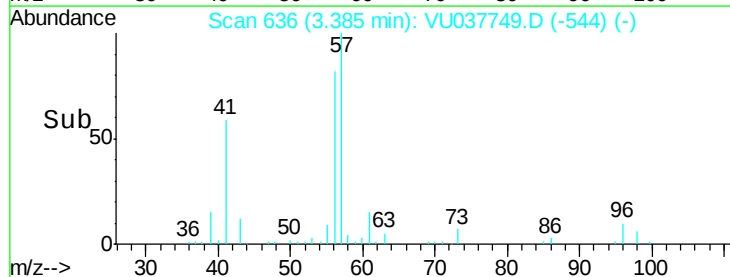
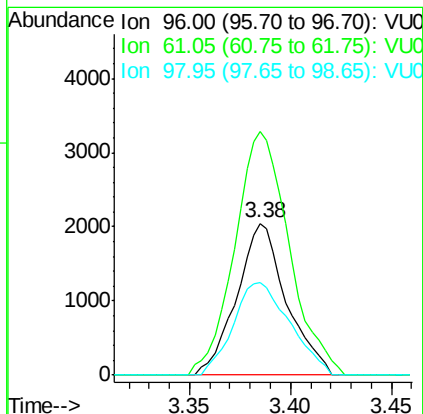
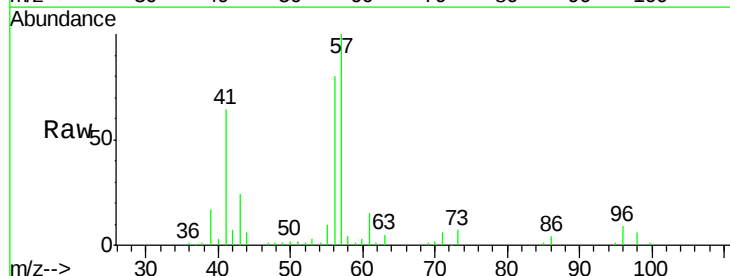
Tot Ion: 73 Resp: 7790  
 Ion Ratio Lower Upper  
 73 100  
 43 191.5 16.4 24.6#  
 57 702.3 18.4 27.6#

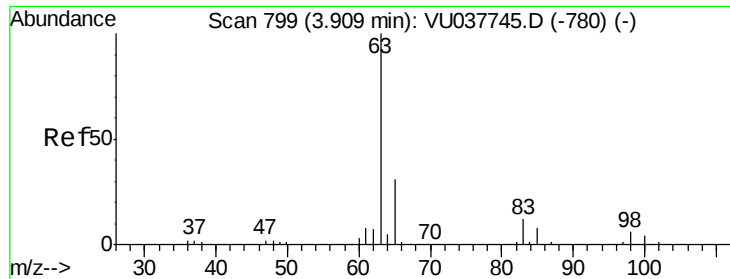


#18

trans-1,2-Dichloroethene  
 Concen: 0.152 ug/L  
 RT: 3.38 min Scan# 636  
 Delta R.T. -0.00 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

Tgt Ion: 96 Resp: 3510  
 Ion Ratio Lower Upper  
 96 100  
 61 160.2 106.7 198.3  
 98 60.8 44.3 82.3





#19

1,1-Dichloroethane

Concen: 2.544 ug/L

RT: 3.91 min Scan# 799

Delta R.T. 0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

Instrument :

MSVOA\_U

ClientSampleId :

BFS91

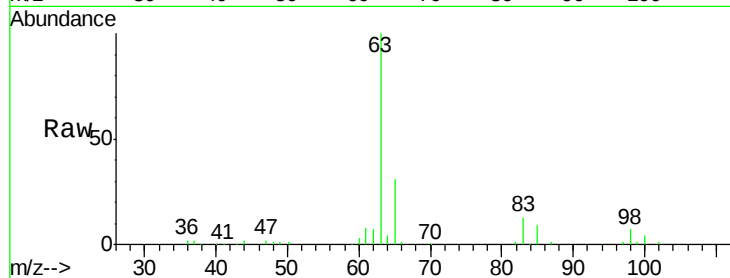
Tot Ion: 63 Resp: 113922

Ion Ratio Lower Upper

63 100

65 31.2 21.6 40.2

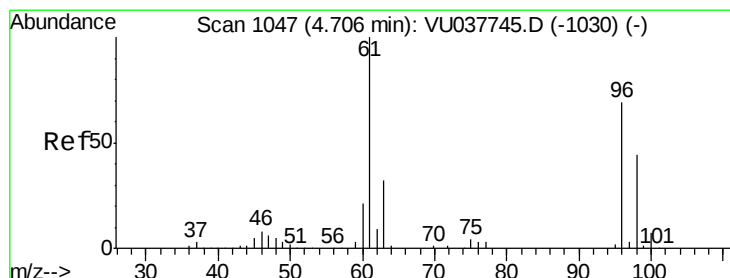
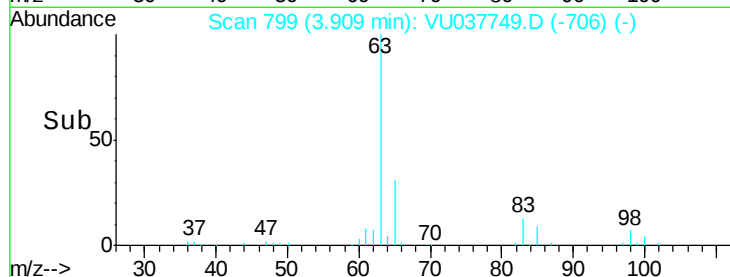
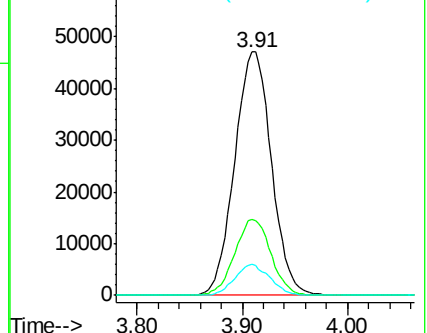
83 12.8 8.6 16.0



Abundance Ion 63.10 (62.80 to 63.80): VU037749.D (-780) (-)

Ion 65.10 (64.80 to 65.80): VU037749.D (-780) (-)

Ion 83.05 (82.75 to 83.75): VU037749.D (-780) (-)



#22

cis-1,2-Dichloroethene

Concen: 3.875 ug/L

RT: 4.71 min Scan# 1047

Delta R.T. -0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

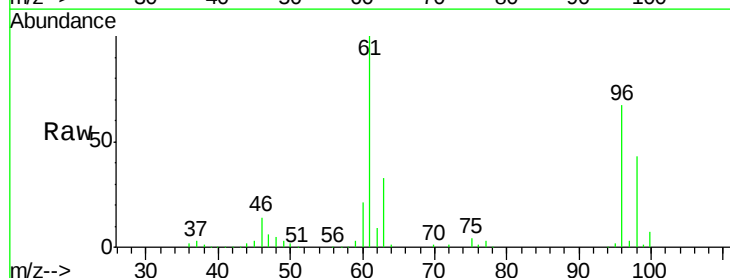
Tgt Ion: 96 Resp: 96945

Ion Ratio Lower Upper

96 100

61 148.2 97.0 180.2

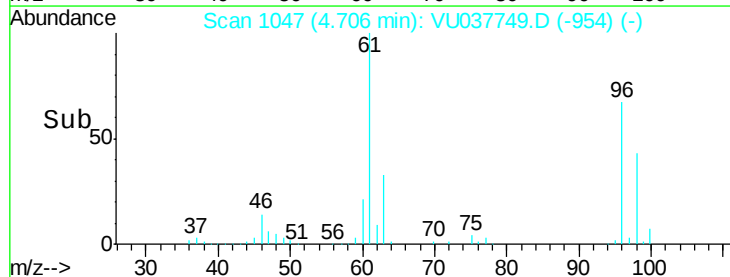
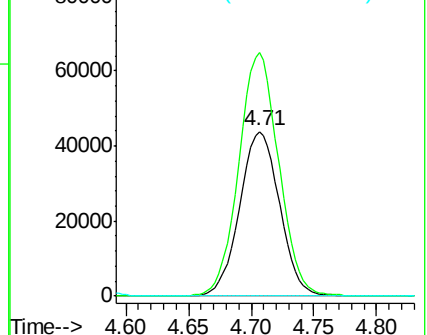
68 0.0 0.0 0.0

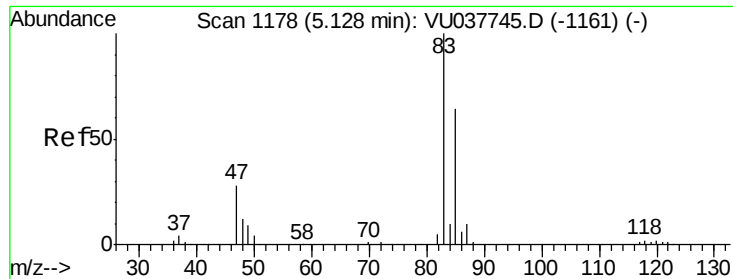


Abundance Ion 96.00 (95.70 to 96.70): VU037749.D (-954) (-)

Ion 61.05 (60.75 to 61.75): VU037749.D (-954) (-)

Ion 68.15 (67.85 to 68.85): VU037749.D (-954) (-)

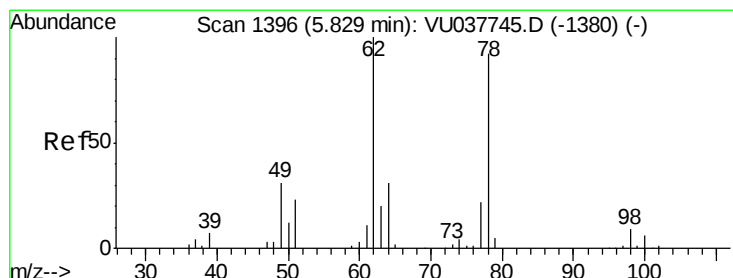
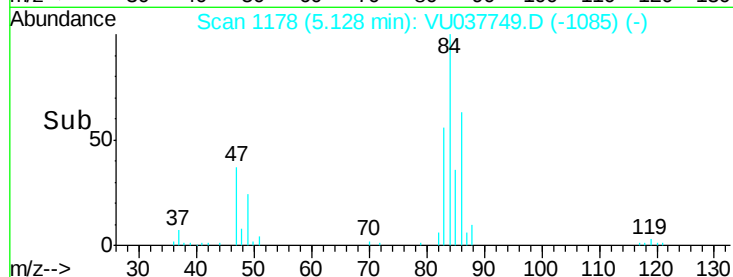
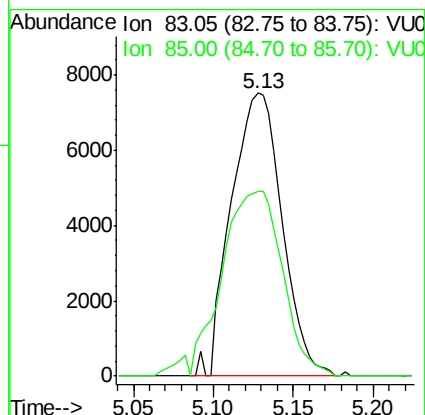
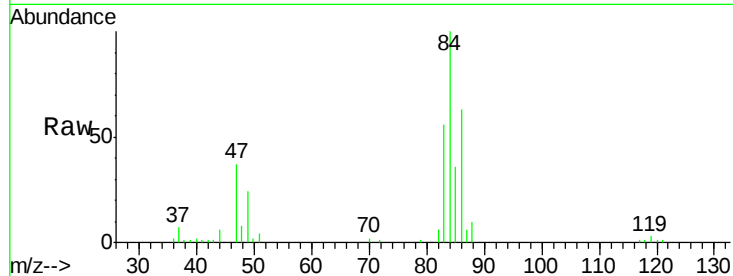




#25  
Chloroform  
Concen: 0.383 ug/L  
RT: 5.13 min Scan# 1178  
Delta R.T. 0.00 min  
Lab File: VU037749.D  
Acq: 16 Apr 2020 12:57

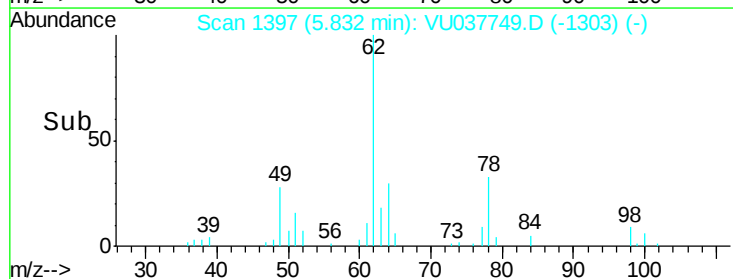
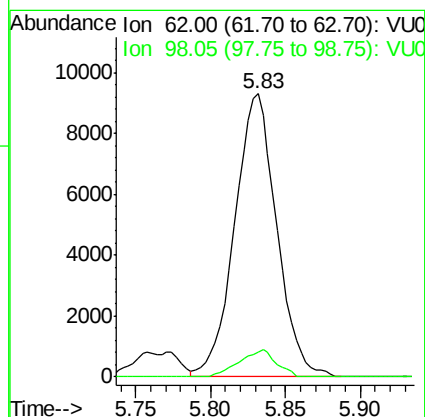
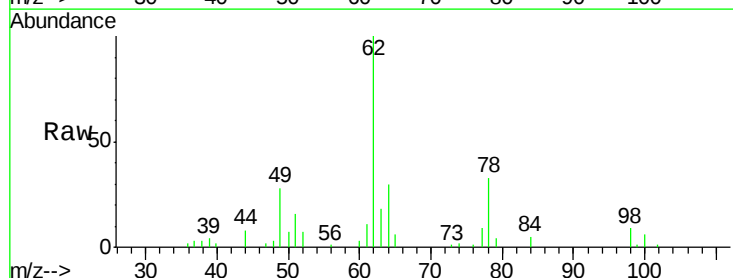
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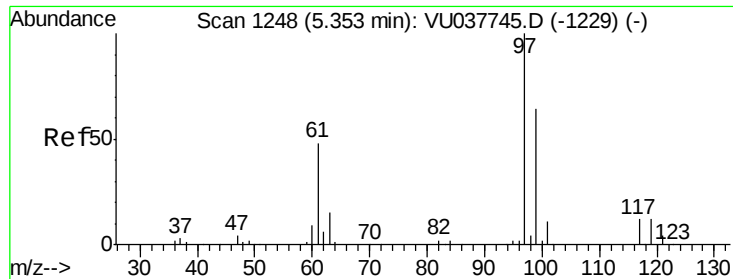
Tot Ion: 83 Resp: 16311  
Ion Ratio Lower Upper  
83 100  
85 65.2 44.9 83.3



#27  
1,2-Dichloroethane  
Concen: 0.632 ug/L  
RT: 5.83 min Scan# 1397  
Delta R.T. 0.00 min  
Lab File: VU037749.D  
Acq: 16 Apr 2020 12:57

Tgt Ion: 62 Resp: 18169  
Ion Ratio Lower Upper  
62 100  
98 8.8 7.6 11.4

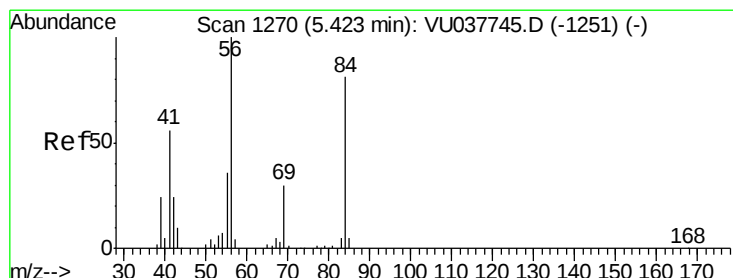
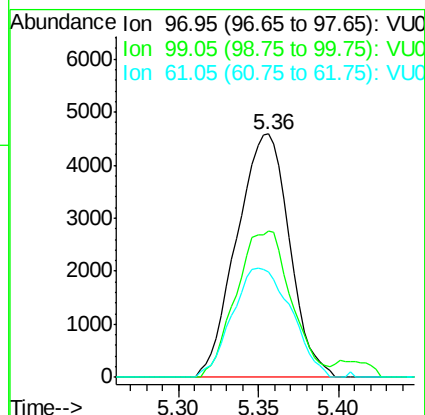
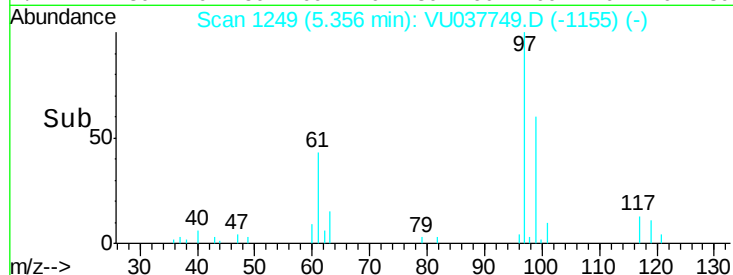
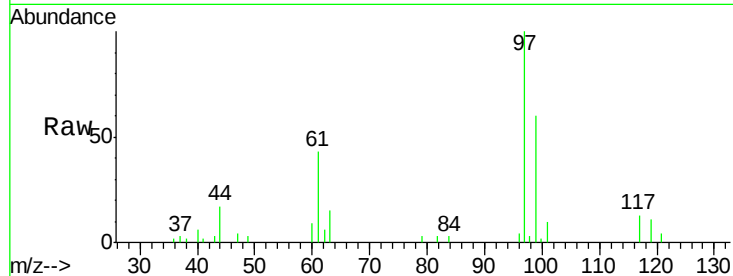




#29  
 1,1,1-Trichloroethane  
 Concen: 0.284 ug/L  
 RT: 5.36 min Scan# 1249  
 Delta R.T. 0.00 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

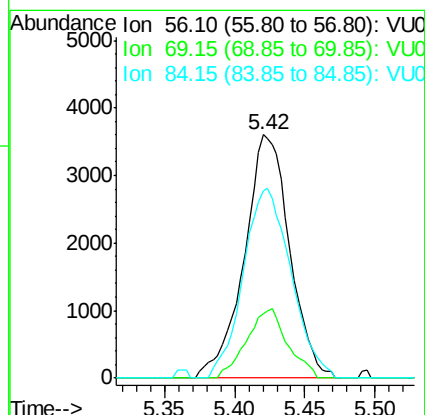
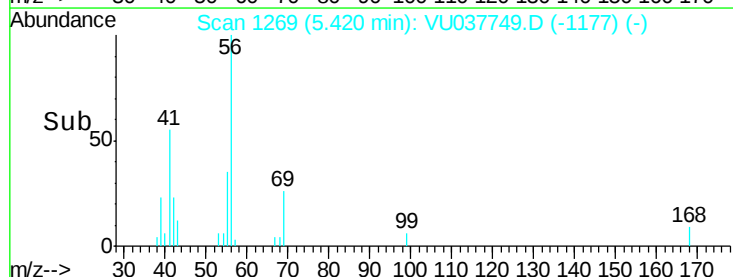
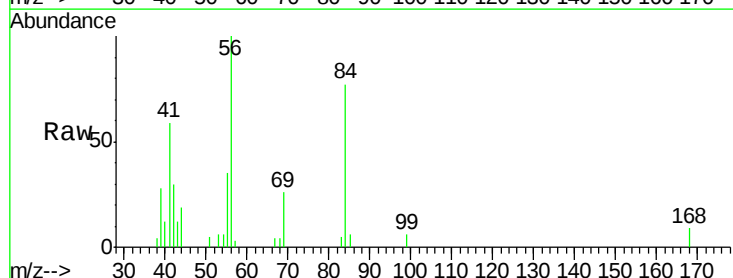
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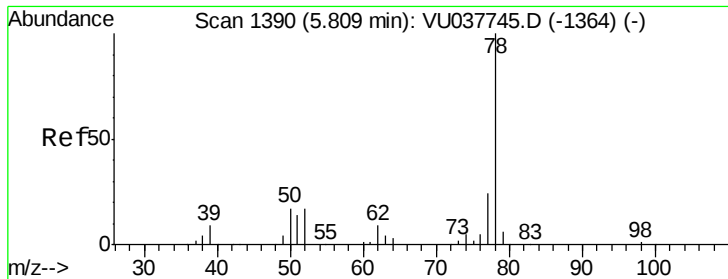
Tot Ion: 97 Resp: 10330  
 Ion Ratio Lower Upper  
 97 100  
 99 63.2 52.0 78.0  
 61 50.1 37.8 56.8



#30  
 Cyclohexane  
 Concen: 0.180 ug/L  
 RT: 5.42 min Scan# 1269  
 Delta R.T. -0.00 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

Tgt Ion: 56 Resp: 8118  
 Ion Ratio Lower Upper  
 56 100  
 69 25.4 23.9 35.9  
 84 82.0 65.6 98.4





#33

Benzene

Concen: 0.293 ug/L

RT: 5.81 min Scan# 1390

Delta R.T. -0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

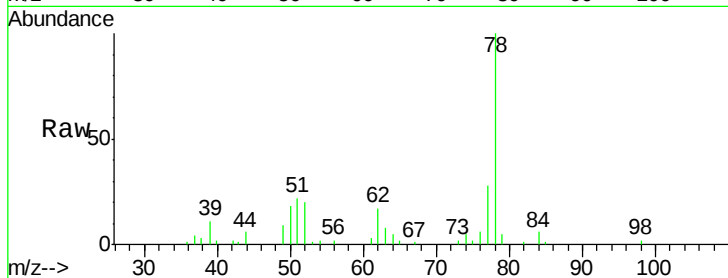
Instrument :

MSVOA\_U

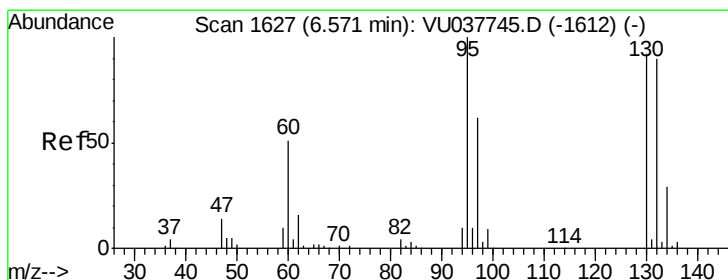
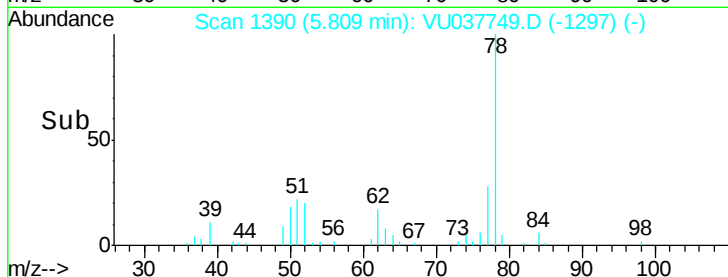
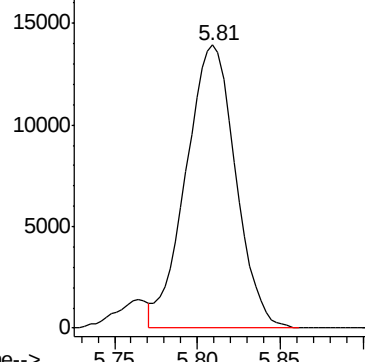
ClientSampled :

BFS91

Tgt Ion: 78 Resp: 28971



Abundance Ion 78.10 (77.80 to 78.80): VU0



#34

Trichloroethene

Concen: 0.163 ug/L

RT: 6.57 min Scan# 1626

Delta R.T. -0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

Tgt Ion: 95 Resp: 3954

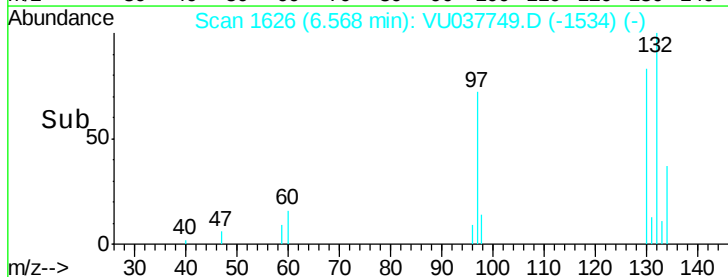
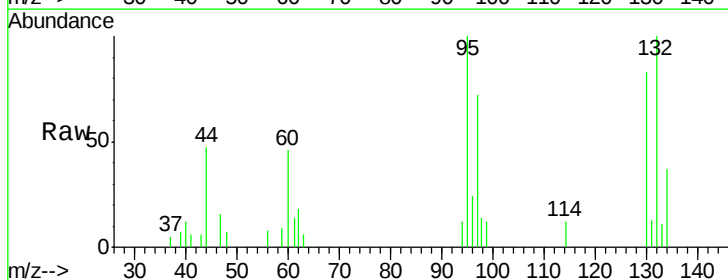
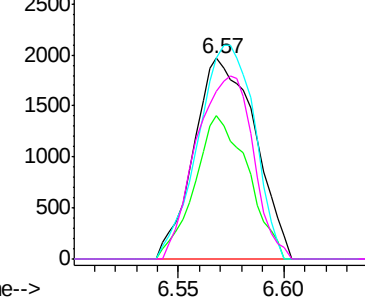
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 95  | 100   |       |       |
| 97  | 71.7  | 45.4  | 84.2  |
| 132 | 100.3 | 63.7  | 118.3 |
| 130 | 83.7  | 68.7  | 127.5 |

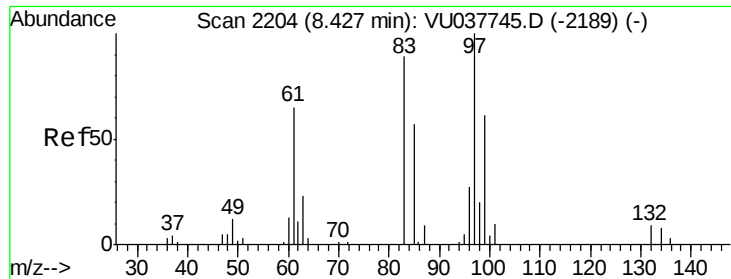
Abundance Ion 95.00 (94.70 to 95.70): VU0

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

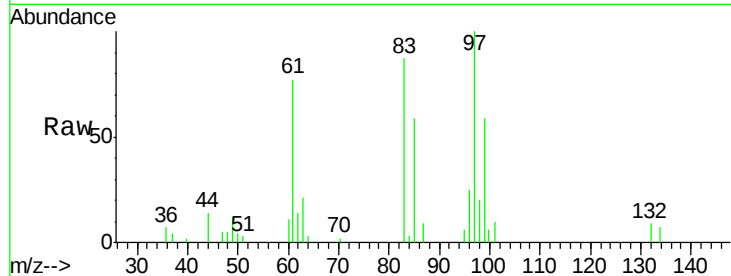




#45  
 1,1,2-Trichloroethane  
 Concen: 0.475 ug/L  
 RT: 8.42 min Scan# 2203  
 Delta R.T. -0.00 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 BFS91

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 97    | Resp: | 8401  |
| Ion      | Ratio | Lower | Upper |
| 97       | 100   |       |       |
| 99       | 59.4  | 43.1  | 80.1  |
| 83       | 87.1  | 62.4  | 116.0 |
| 85       | 58.8  | 39.6  | 73.6  |

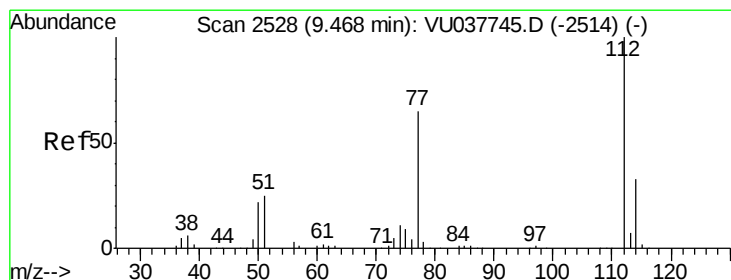
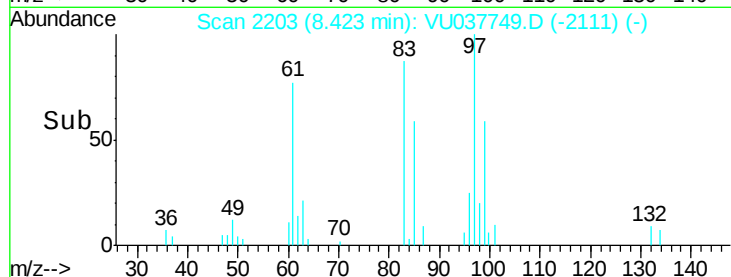
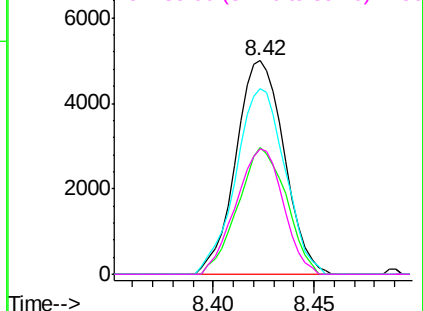


Abundance Ion 96.95 (96.65 to 97.65): VU037749.D (-2111) (-)

Ion 99.05 (98.75 to 99.75): VU037749.D (-2111) (-)

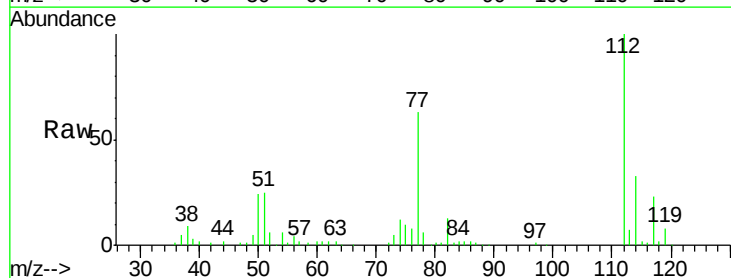
Ion 82.95 (82.65 to 83.65): VU037749.D (-2111) (-)

Ion 85.00 (84.70 to 85.70): VU037749.D (-2111) (-)



#51  
 Chlorobenzene  
 Concen: 0.920 ug/L  
 RT: 9.47 min Scan# 2527  
 Delta R.T. -0.00 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

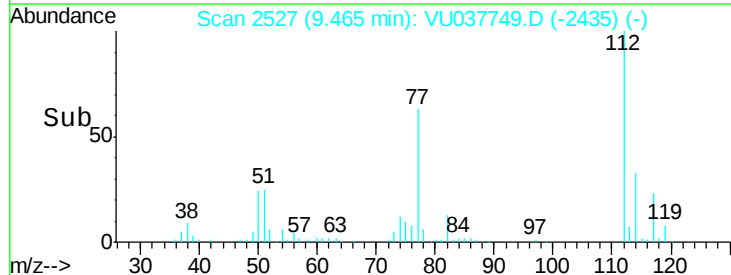
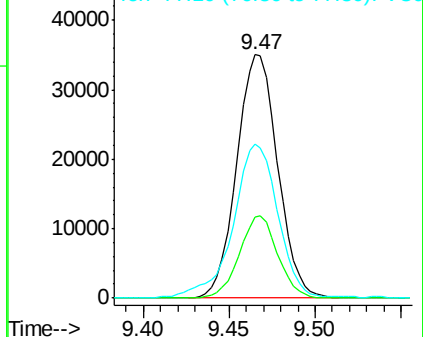
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 112   | Resp: | 58179 |
| Ion      | Ratio | Lower | Upper |
| 112      | 100   |       |       |
| 114      | 33.1  | 22.6  | 42.0  |
| 77       | 63.4  | 50.2  | 75.4  |

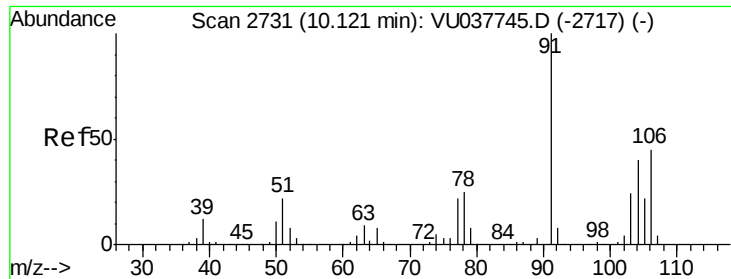


Abundance Ion 112.10 (111.80 to 112.80): VU037749.D (-2435) (-)

Ion 114.05 (113.75 to 114.75): VU037749.D (-2435) (-)

Ion 77.10 (76.80 to 77.80): VU037749.D (-2435) (-)

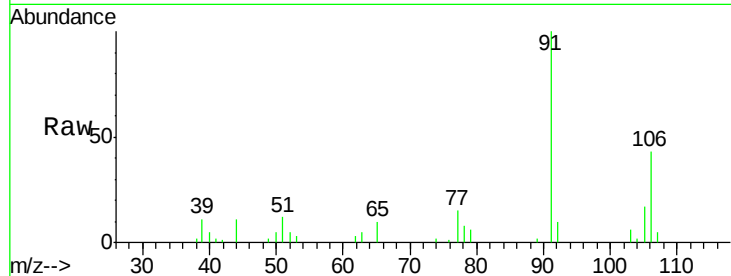




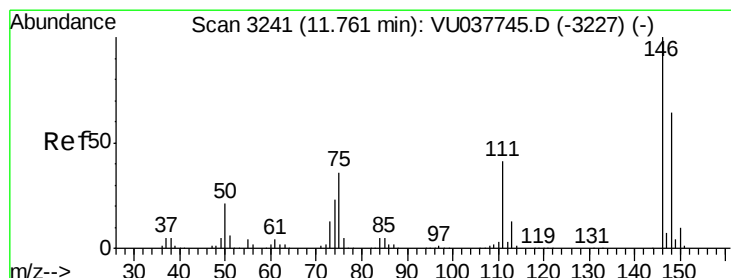
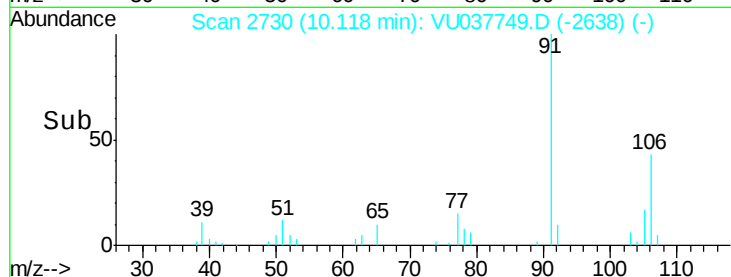
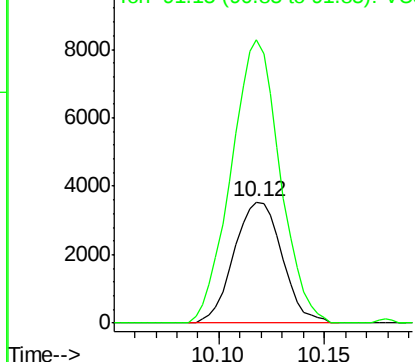
#54  
o-Xylene  
Concen: 0.130 ug/L  
RT: 10.12 min Scan# 2730  
Delta R.T. -0.00 min  
Lab File: VU037749.D  
Acq: 16 Apr 2020 12:57

Instrument :  
MSVOA\_U  
ClientSampleId :  
BFS91

Tot Ion:106 Resp: 5593  
Ion Ratio Lower Upper  
106 100  
91 233.8 151.1 280.7

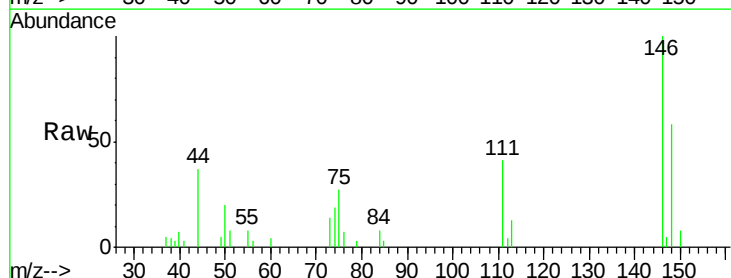


Abundance Ion 106.15 (105.85 to 106.85): V  
Ion 91.15 (90.85 to 91.85): VU0

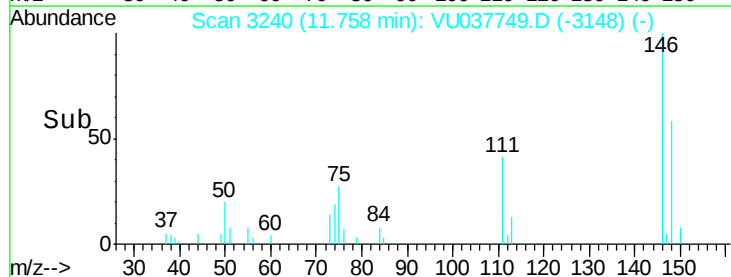
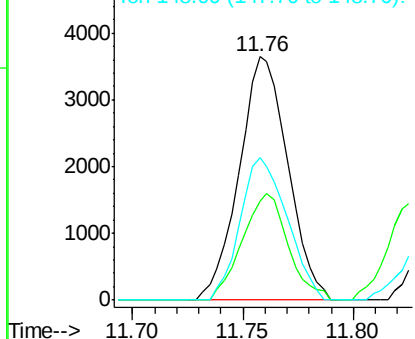


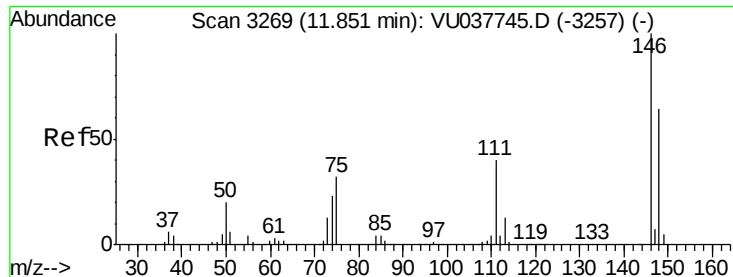
#62  
1,3-Dichlorobenzene  
Concen: 0.110 ug/L  
RT: 11.76 min Scan# 3240  
Delta R.T. -0.00 min  
Lab File: VU037749.D  
Acq: 16 Apr 2020 12:57

Tgt Ion:146 Resp: 5575  
Ion Ratio Lower Upper  
146 100  
111 40.6 29.8 55.3  
148 58.4 44.5 82.7



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: 0.177 ug/L

RT: 11.85 min Scan# 3269

Delta R.T. 0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

Instrument :

MSVOA\_U

ClientSampleId :

BFS91

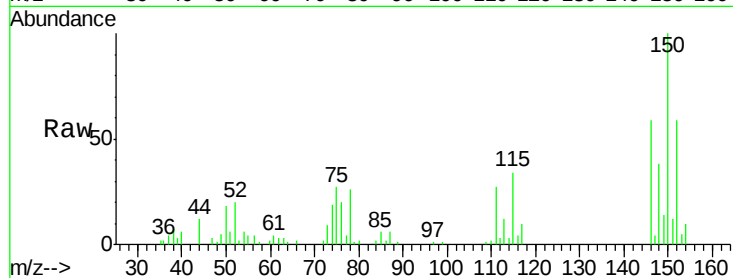
Tot Ion:146 Resp: 9016

Ion Ratio Lower Upper

146 100

111 46.2 28.4 52.8

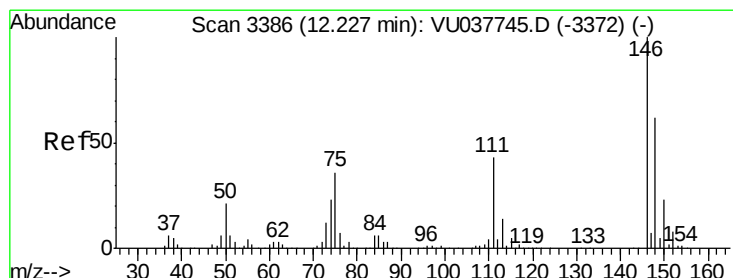
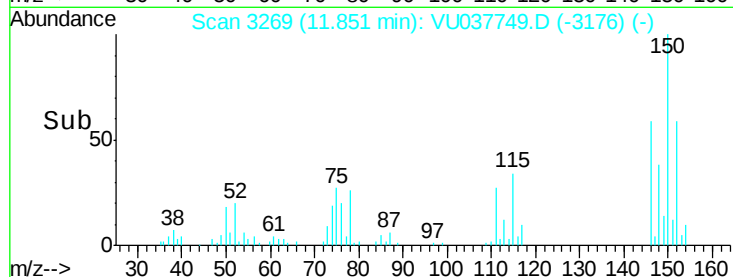
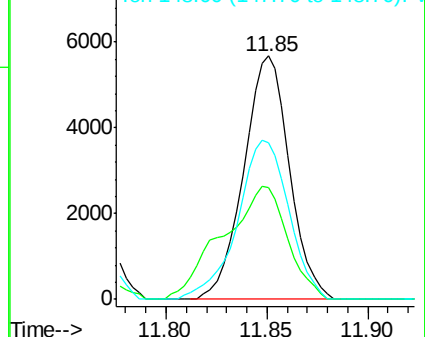
148 64.4 44.9 83.3



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



#65

1,2-Dichlorobenzene

Concen: 0.089 ug/L

RT: 12.22 min Scan# 3385

Delta R.T. -0.00 min

Lab File: VU037749.D

Acq: 16 Apr 2020 12:57

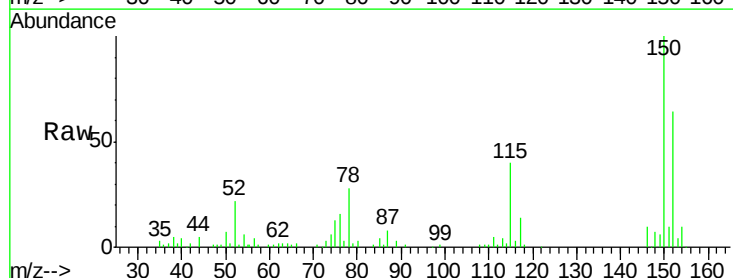
Tgt Ion:146 Resp: 4236

Ion Ratio Lower Upper

146 100

111 52.3 35.0 52.6

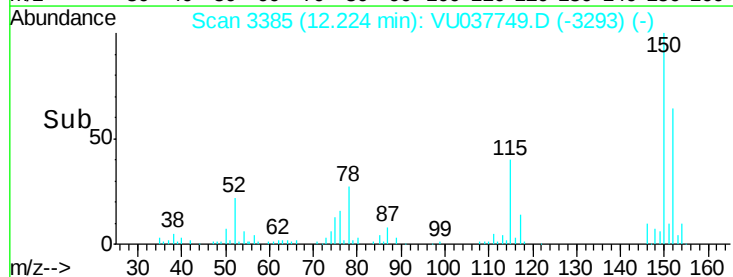
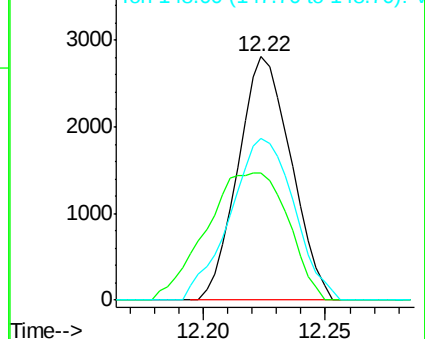
148 66.3 51.5 77.3

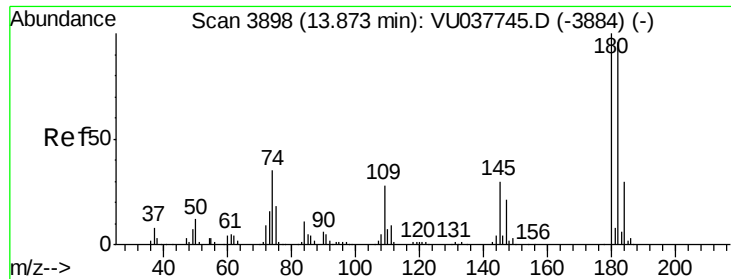


Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V

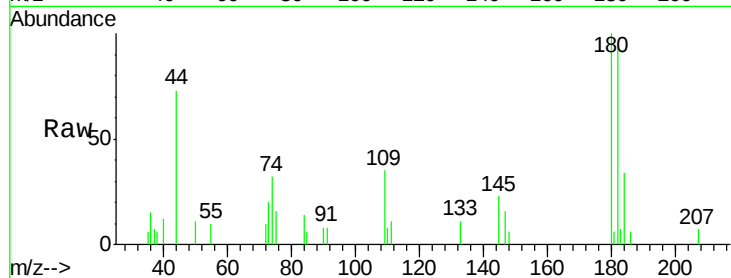




#68  
 1,2,4-trichlorobenzene  
 Concen: 0.085 ug/L  
 RT: 13.87 min Scan# 3896  
 Delta R.T. -0.01 min  
 Lab File: VU037749.D  
 Acq: 16 Apr 2020 12:57

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 BFS91

Tot Ion:180 Resp: 2894  
 Ion Ratio Lower Upper  
 180 100  
 182 100.0 76.4 114.6  
 145 24.4 25.1 37.7#



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

