

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU080818\  
 Data File : VU025976.D  
 Acq On : 08 Aug 2018 16:38  
 Operator : MD/SY  
 Sample : VSTDCCC050EC  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Aug 09 01:20:53 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080718WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Thu Aug 09 01:19:52 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.89  | 114  | 303984   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 291801   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.49 | 152  | 148640   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40    | 65    | 72663    | 43.14    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 86.28%  |
| 7) Chloroethane-d5             | 1.67    | 69    | 60530    | 47.91    | ug/L | 0.03    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 95.82%  |
| 11) 1,1-Dichloroethene-d2      | 2.27    | 63    | 158131   | 48.47    | ug/L | 0.02    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 96.94%  |
| 21) 2-Butanone-d5              | 4.18    | 46    | 126982   | 109.55   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 109.55% |
| 24) Chloroform-d               | 4.65    | 84    | 171090   | 52.47    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 104.94% |
| 26) 1,2-Dichloroethane-d4      | 5.31    | 65    | 111358   | 51.73    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 103.46% |
| 32) Benzene-d6                 | 5.35    | 84    | 315139   | 48.99    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 97.98%  |
| 36) 1,2-Dichloropropane-d6     | 6.33    | 67    | 103973   | 51.99    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 103.98% |
| 41) Toluene-d8                 | 7.57    | 98    | 300747   | 48.19    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 96.38%  |
| 43) trans-1,3-Dichloropropene- | 7.85    | 79    | 50750    | 48.40    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 96.80%  |
| 47) 2-Hexanone-d5              | 8.31    | 63    | 84362    | 101.37   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 101.37% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.44   | 84    | 147658   | 53.30    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 106.60% |
| 64) 1,2-Dichlorobenzene-d4     | 11.86   | 152   | 127667   | 51.99    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 103.98% |

## Target Compounds

|                                |      |     |        |         | Ovalue   |
|--------------------------------|------|-----|--------|---------|----------|
| 2) Dichlorodifluoromethane     | 1.20 | 85  | 125517 | 54.281  | ug/L 100 |
| 3) Chloromethane               | 1.33 | 50  | 113551 | 58.365  | ug/L 99  |
| 5) Vinyl chloride              | 1.40 | 62  | 110206 | 52.522  | ug/L 99  |
| 6) Bromomethane                | 1.62 | 94  | 63843  | 68.703  | ug/L 100 |
| 8) Chloroethane                | 1.69 | 64  | 66976  | 55.124  | ug/L 100 |
| 9) Trichlorofluoromethane      | 1.88 | 101 | 162458 | 53.743  | ug/L 98  |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.28 | 101 | 94138  | 56.341  | ug/L 100 |
| 12) 1,1-Dichloroethene         | 2.28 | 96  | 83279  | 54.275  | ug/L 88  |
| 13) Acetone                    | 2.32 | 43  | 141214 | 102.921 | ug/L 100 |
| 14) Carbon disulfide           | 2.48 | 76  | 277648 | 50.788  | ug/L 100 |
| 15) Methyl Acetate             | 2.62 | 43  | 114803 | 54.795  | ug/L 98  |
| 16) Methylene chloride         | 2.70 | 84  | 107984 | 54.003  | ug/L 99  |
| 17) trans-1,2-Dichloroethene   | 2.98 | 96  | 97089  | 51.315  | ug/L 97  |
| 18) Methyl tert-butyl Ether    | 3.00 | 73  | 318563 | 52.959  | ug/L 99  |
| 19) 1,1-Dichloroethane         | 3.45 | 63  | 186341 | 54.303  | ug/L 99  |
| 20) cis-1,2-Dichloroethene     | 4.23 | 96  | 110424 | 52.239  | ug/L 98  |
| 22) 2-Butanone                 | 4.27 | 43  | 177771 | 103.632 | ug/L 98  |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU080818\  
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 Acq On : 08 Aug 2018 16:38  
 Operator : MD/SY  
 Sample : VSTDCCC050EC  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 7 Sample Multiplier: 1

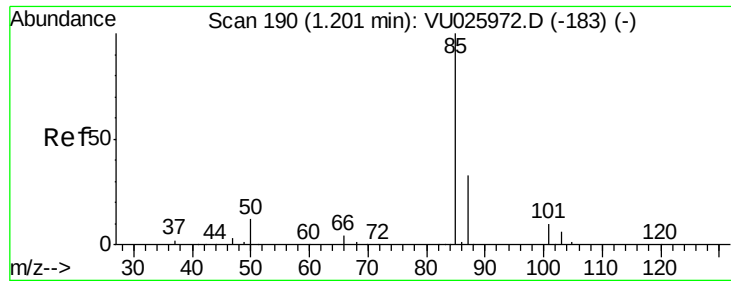
Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Aug 09 01:20:53 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080718WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Thu Aug 09 01:19:52 2018  
 Response via : Initial Calibration

| Internal Standards              | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|---------------------------------|-------|------|----------|---------|-------|----------|
| 23) Bromochloromethane          | 4.55  | 128  | 59386    | 53.509  | ug/L  | 92       |
| 25) Chloroform                  | 4.68  | 83   | 193568   | 53.247  | ug/L  | 100      |
| 27) 1,2-Dichloroethane          | 5.41  | 62   | 160828   | 55.480  | ug/L  | 100      |
| 29) Cyclohexane                 | 5.00  | 56   | 160465   | 52.182  | ug/L  | 98       |
| 30) 1,1,1-Trichloroethane       | 4.92  | 97   | 177552   | 53.455  | ug/L  | 99       |
| 31) Carbon tetrachloride        | 5.14  | 117  | 159892   | 53.832  | ug/L  | 99       |
| 33) Benzene                     | 5.39  | 78   | 406495   | 53.294  | ug/L  | 100      |
| 34) Trichloroethene             | 6.19  | 95   | 106616   | 50.229  | ug/L  | 97       |
| 35) Methylcyclohexane           | 6.42  | 83   | 169500   | 52.758  | ug/L  | 97       |
| 37) 1,2-Dichloropropane         | 6.44  | 63   | 111984   | 54.953  | ug/L  | 100      |
| 38) Bromodichloromethane        | 6.76  | 83   | 151519   | 54.699  | ug/L  | 99       |
| 39) cis-1,3-Dichloropropene     | 7.27  | 75   | 167245   | 50.388  | ug/L  | 99       |
| 40) 4-Methyl-2-pentanone        | 7.46  | 43   | 297612   | 107.106 | ug/L  | 100      |
| 42) Toluene                     | 7.64  | 91   | 439115   | 52.754  | ug/L  | 99       |
| 44) trans-1,3-Dichloropropene   | 7.88  | 75   | 165919   | 52.887  | ug/L  | 97       |
| 45) 1,1,2-Trichloroethane       | 8.07  | 97   | 105281   | 54.088  | ug/L  | 99       |
| 46) Tetrachloroethene           | 8.23  | 164  | 91532    | 50.172  | ug/L  | 97       |
| 48) 2-Hexanone                  | 8.36  | 43   | 236054   | 105.300 | ug/L  | 99       |
| 49) Dibromochloromethane        | 8.48  | 129  | 128563   | 53.772  | ug/L  | 100      |
| 50) 1,2-Dibromoethane           | 8.59  | 107  | 115756   | 53.015  | ug/L  | 99       |
| 51) Chlorobenzene               | 9.12  | 112  | 295627   | 51.866  | ug/L  | 97       |
| 52) Ethylbenzene                | 9.25  | 91   | 485005   | 51.215  | ug/L  | 100      |
| 53) m,p-Xylene                  | 9.38  | 106  | 189338   | 50.966  | ug/L  | 100      |
| 54) o-xylene                    | 9.78  | 106  | 188908   | 53.402  | ug/L  | 100      |
| 55) Styrene                     | 9.80  | 104  | 314185   | 52.711  | ug/L  | 99       |
| 56) Isopropylbenzene            | 10.17 | 105  | 488831   | 51.993  | ug/L  | 99       |
| 58) 1,1,1,2,2-Tetrachloroethane | 10.46 | 83   | 180250   | 55.080  | ug/L  | 100      |
| 59) 1,2,3-Trichloropropane      | 10.50 | 75   | 141677   | 54.626  | ug/L  | 99       |
| 61) Bromoform                   | 9.96  | 173  | 95506    | 56.266  | ug/L  | 99       |
| 62) 1,3-Dichlorobenzene         | 11.42 | 146  | 229063   | 51.509  | ug/L  | 98       |
| 63) 1,4-Dichlorobenzene         | 11.51 | 146  | 231633   | 51.126  | ug/L  | 99       |
| 65) 1,2-Dichlorobenzene         | 11.88 | 146  | 241314   | 54.118  | ug/L  | 99       |
| 66) 1,2-Dibromo-3-chloropropan  | 12.66 | 75   | 38830    | 57.302  | ug/L  | 99       |
| 67) 1,3,5-Trichlorobenzene      | 12.89 | 180  | 173892   | 53.066  | ug/L  | 99       |
| 68) 1,2,4-trichlorobenzene      | 13.51 | 180  | 138155   | 48.578  | ug/L  | 98       |
| 69) Naphthalene                 | 13.75 | 128  | 413691   | 49.498  | ug/L  | 99       |
| 70) 1,2,3-Trichlorobenzene      | 13.99 | 180  | 149048   | 51.152  | ug/L  | 98       |

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





#2

Dichlorodifluoromethane

Concen: 54.281 ug/L

RT: 1.20 min Scan# 191

Delta R.T. 0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

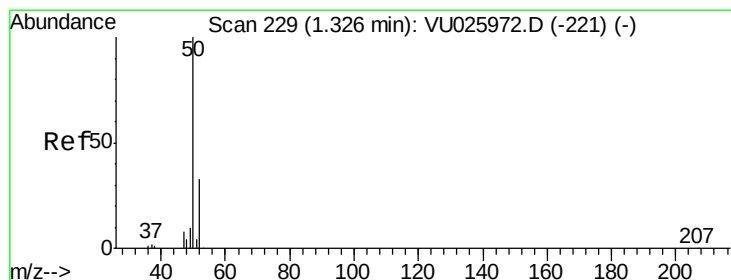
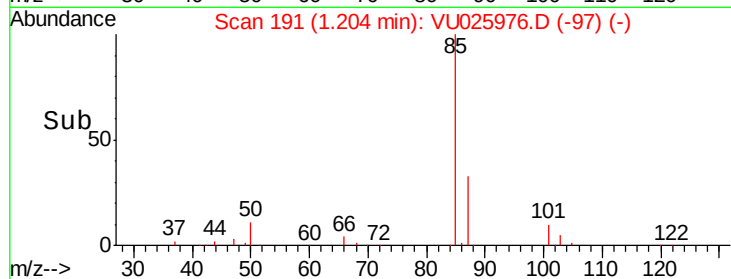
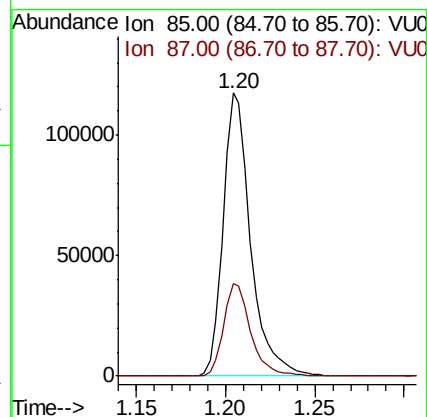
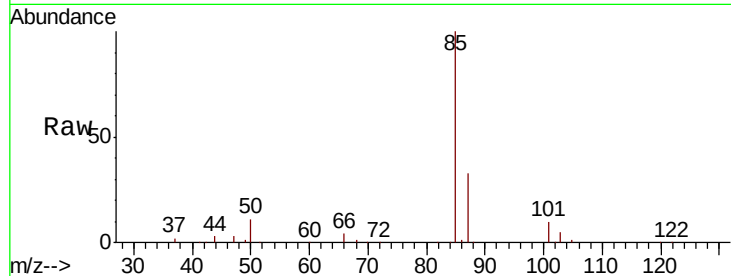
ClientSampleId :

Tot Ion: 85 Resp: 125517

Ion Ratio Lower Upper

85 100

87 32.5 26.0 39.0



#3

Chloromethane

Concen: 58.365 ug/L

RT: 1.33 min Scan# 231

Delta R.T. 0.01 min

Lab File: VU025976.D

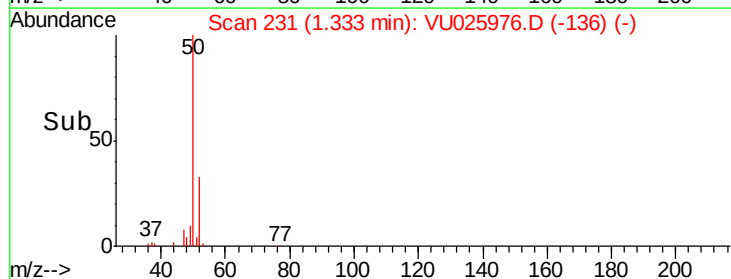
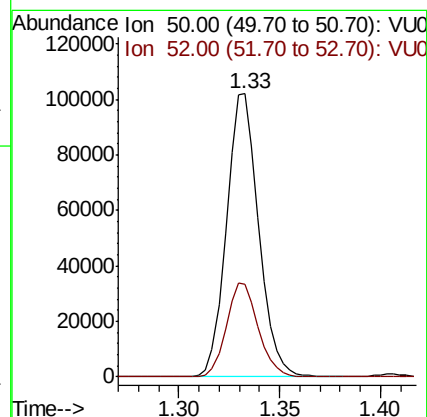
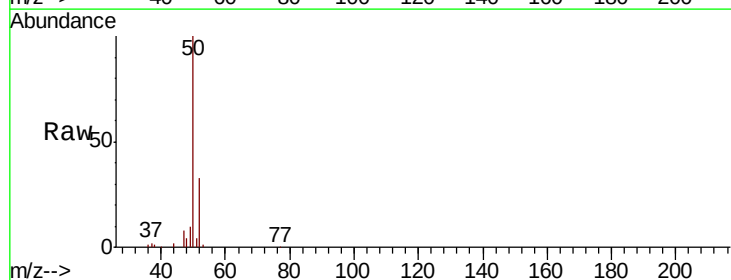
Acq: 08 Aug 2018 16:38

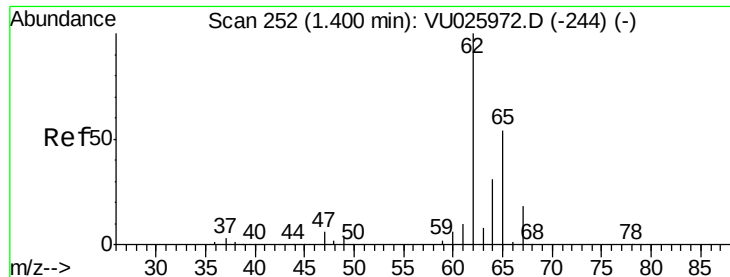
Tgt Ion: 50 Resp: 113551

Ion Ratio Lower Upper

50 100

52 32.6 23.1 42.9





#5

Vinyl chloride

Concen: 52.522 ug/L

RT: 1.40 min Scan# 253

Delta R.T. 0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

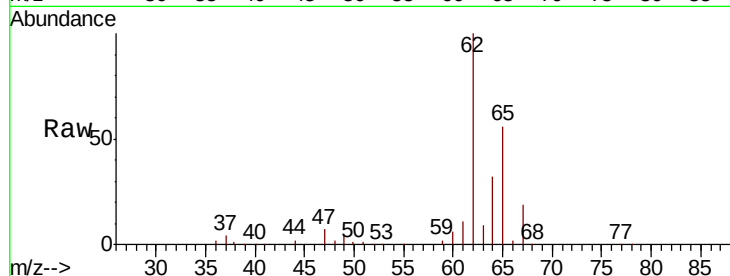
Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion: 62 Resp: 110206

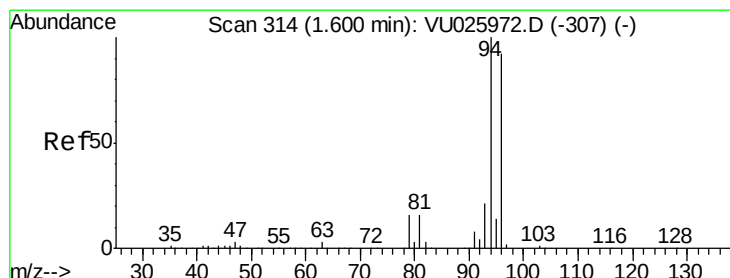
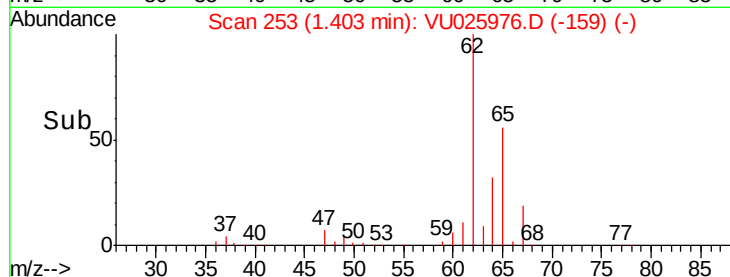
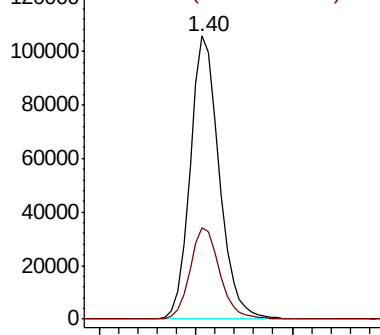
Ion Ratio Lower Upper

62 100

64 32.3 23.1 42.9



Abundance Ion 62.00 (61.70 to 62.70): VU0  
Ion 64.00 (63.70 to 64.70): VU0



#6

Bromomethane

Concen: 68.703 ug/L

RT: 1.62 min Scan# 319

Delta R.T. 0.02 min

Lab File: VU025976.D

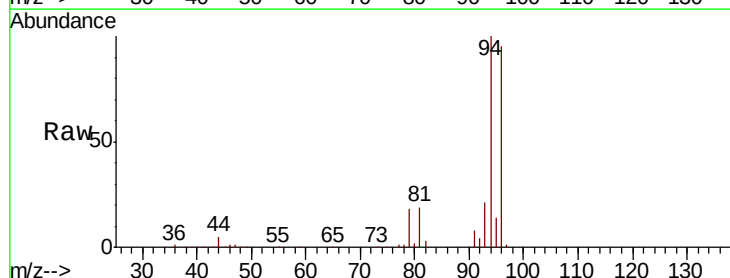
Acq: 08 Aug 2018 16:38

Tgt Ion: 94 Resp: 63843

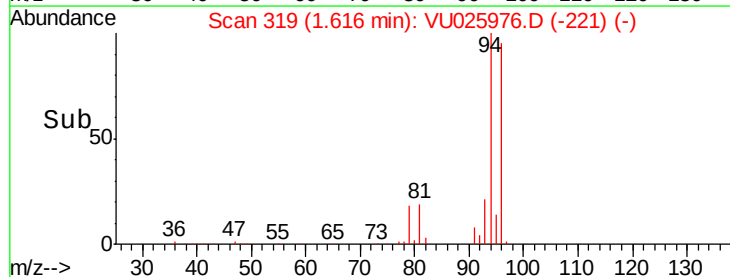
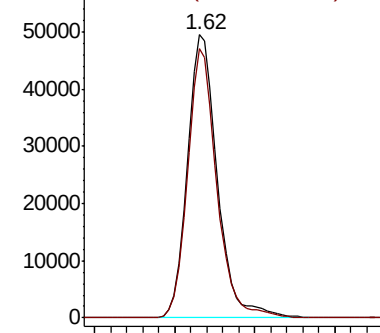
Ion Ratio Lower Upper

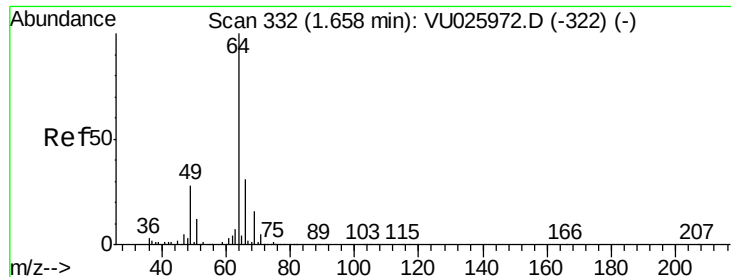
94 100

96 95.0 66.6 123.6



Abundance Ion 94.00 (93.70 to 94.70): VU0  
Ion 96.00 (95.70 to 96.70): VU0





#8

Chloroethane

Concen: 55.124 ug/L

RT: 1.69 min Scan# 343

Delta R.T. 0.04 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

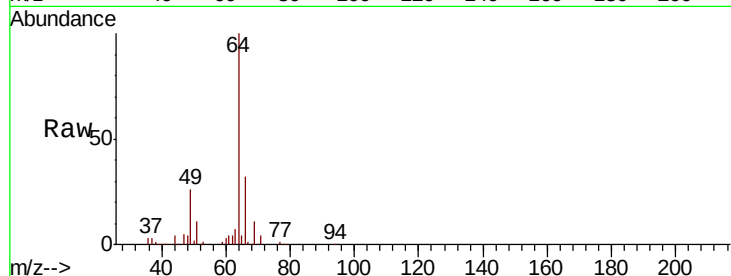
ClientSampleId :

Tot Ion: 64 Resp: 66976

Ion Ratio Lower Upper

64 100

66 31.7 22.3 41.5



Abundance Ion 64.00 (63.70 to 64.70): VU0

Ion 66.00 (65.70 to 66.70): VU0

1.69

60000

50000

40000

30000

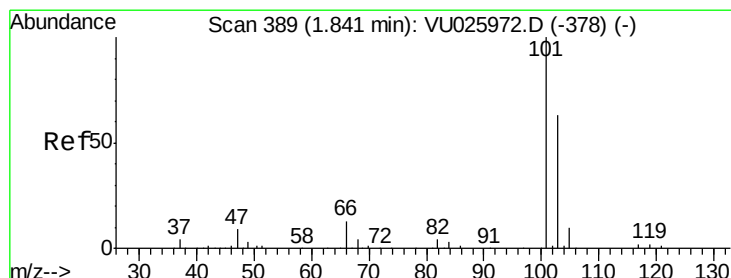
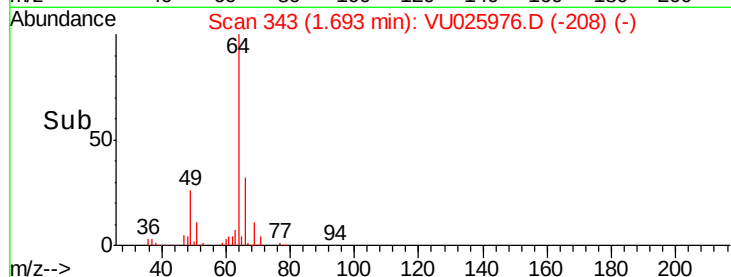
20000

10000

0

Time-->

1.65 1.70 1.75



#9

Trichlorofluoromethane

Concen: 53.743 ug/L

RT: 1.88 min Scan# 402

Delta R.T. 0.04 min

Lab File: VU025976.D

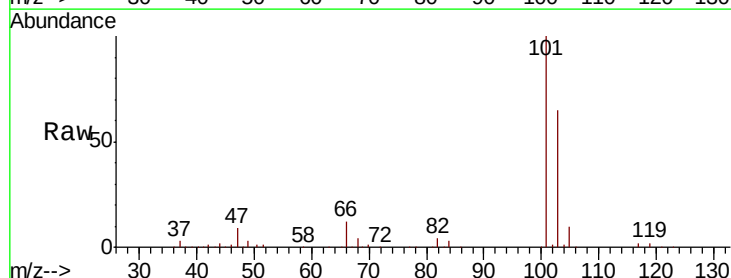
Acq: 08 Aug 2018 16:38

Tgt Ion:101 Resp: 162458

Ion Ratio Lower Upper

101 100

103 65.7 51.6 77.4



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V

1.88

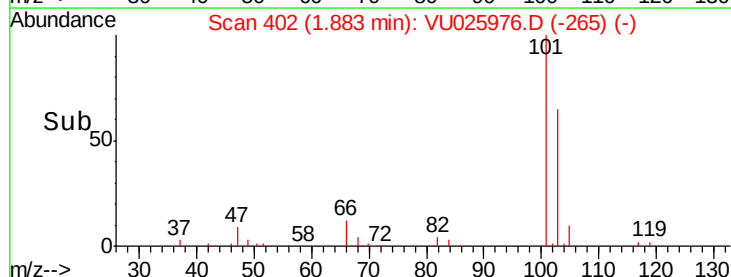
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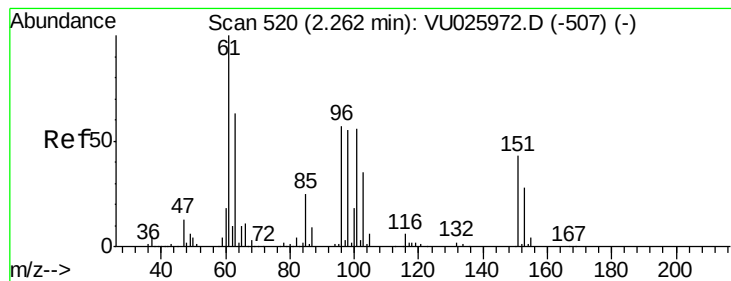
50000

0

Time-->

1.85 1.90 1.95





#10

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

Concen: 56.341 ug/L

RT: 2.28 min Scan# 527

Delta R.T. 0.02 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampleId :

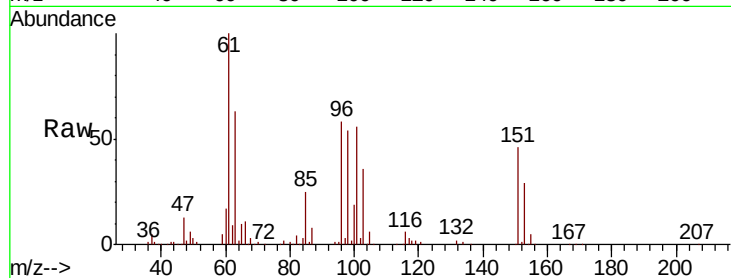
Tot Ion:101 Resp: 94138

Ion Ratio Lower Upper

101 100

85 43.8 34.6 51.8

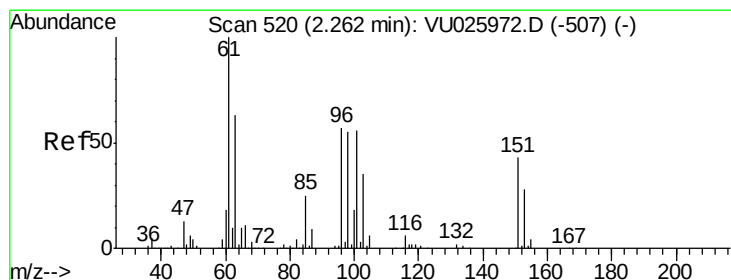
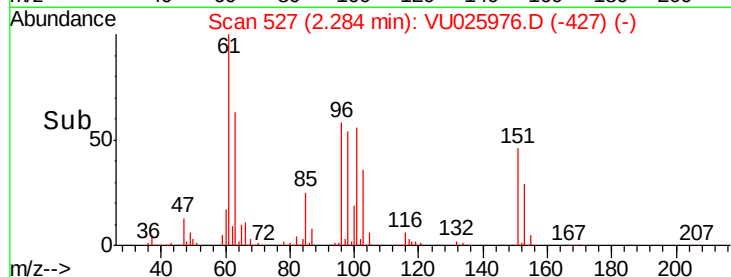
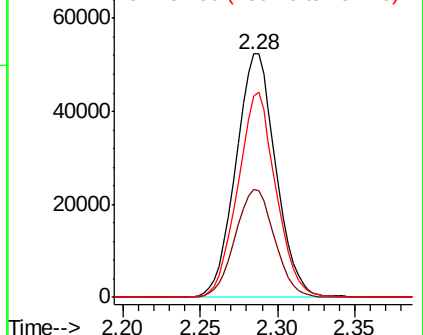
151 80.6 64.3 96.5



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: 54.275 ug/L

RT: 2.28 min Scan# 527

Delta R.T. 0.02 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

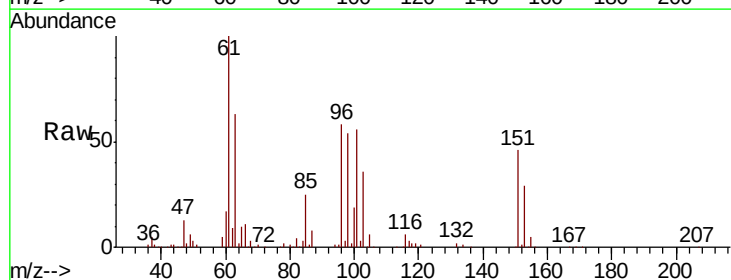
Tgt Ion: 96 Resp: 83279

Ion Ratio Lower Upper

96 100

61 172.8 123.0 228.4

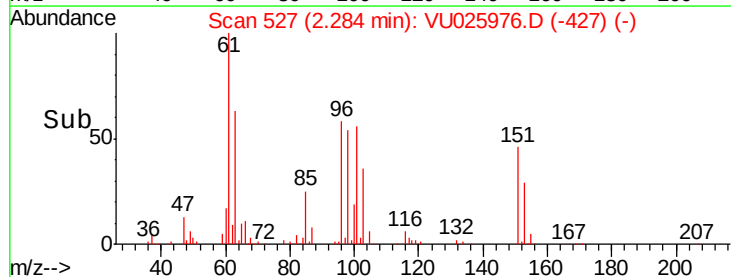
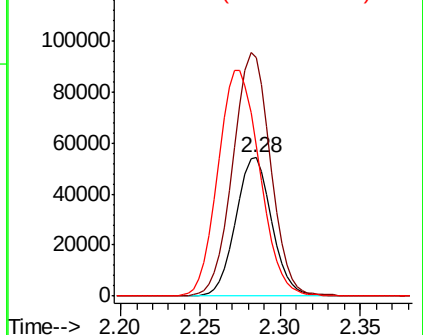
63 108.3 97.2 180.4

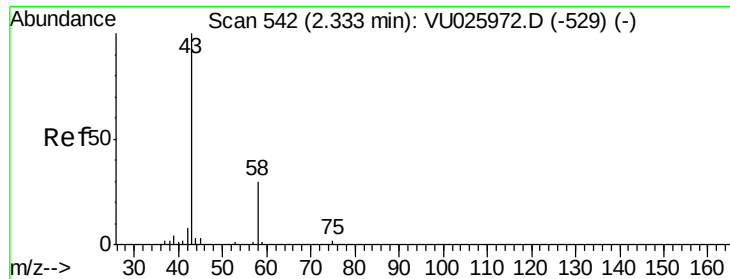


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.00 (60.70 to 61.70): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 102.921 ug/L

RT: 2.32 min Scan# 539

Delta R.T. -0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

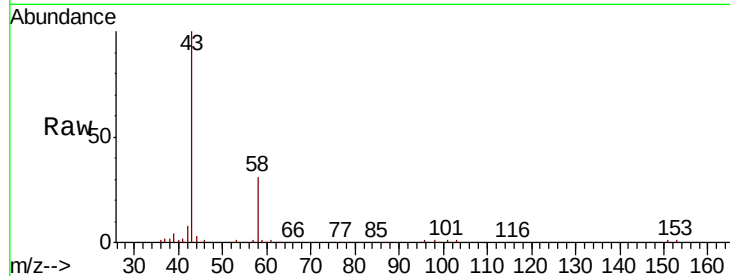
ClientSampleId :

Tot Ion: 43 Resp: 141214

Ion Ratio Lower Upper

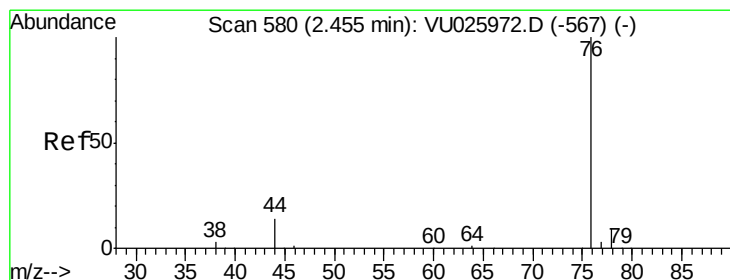
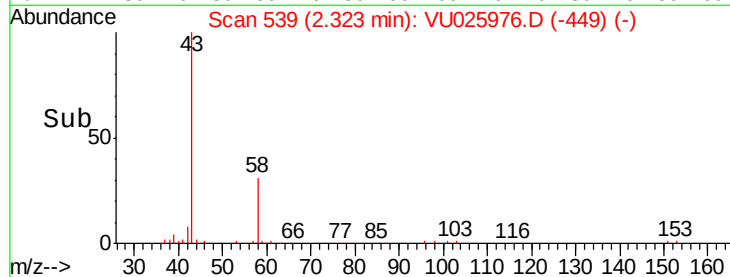
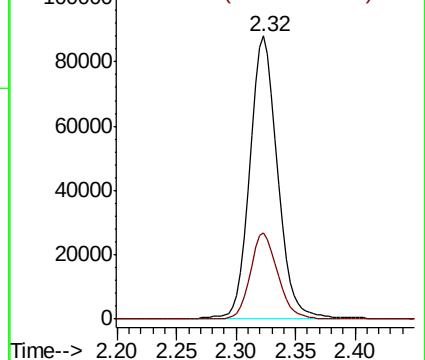
43 100

58 30.3 0.0 60.2



Abundance Ion 43.00 (42.70 to 43.70): VU0

Ion 58.00 (57.70 to 58.70): VU0



#14

Carbon disulfide

Concen: 50.788 ug/L

RT: 2.48 min Scan# 587

Delta R.T. 0.02 min

Lab File: VU025976.D

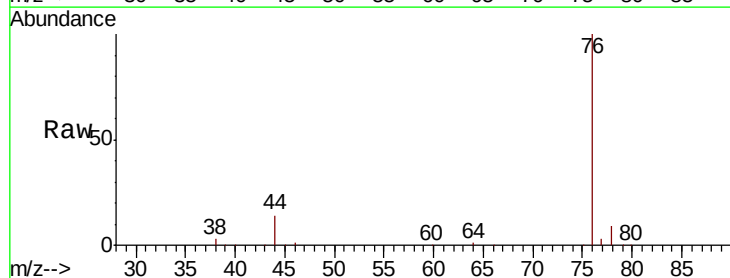
Acq: 08 Aug 2018 16:38

Tgt Ion: 76 Resp: 277648

Ion Ratio Lower Upper

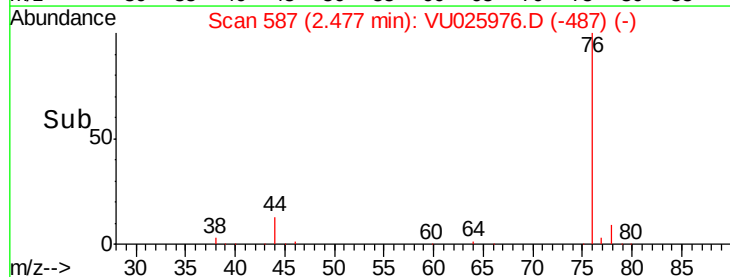
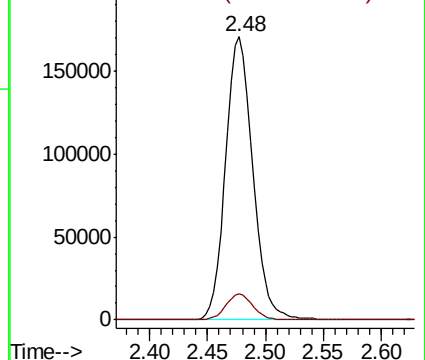
76 100

78 9.1 7.2 10.8

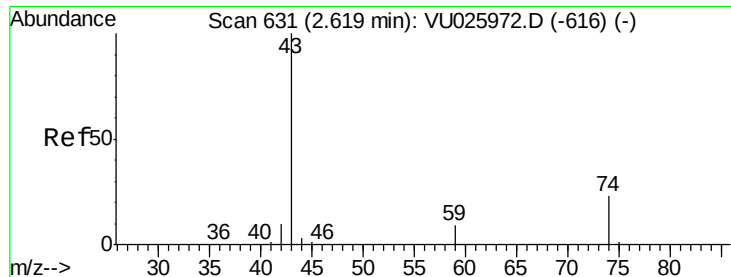


Abundance Ion 76.00 (75.70 to 76.70): VU0

Ion 78.00 (77.70 to 78.70): VU0



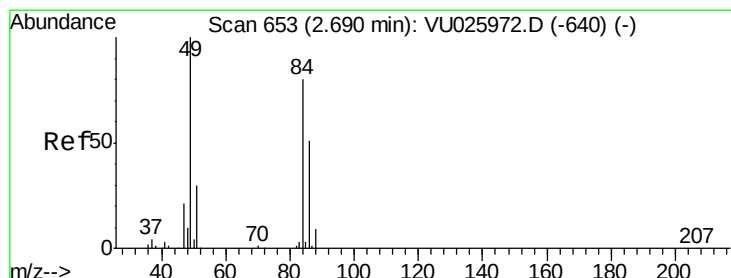
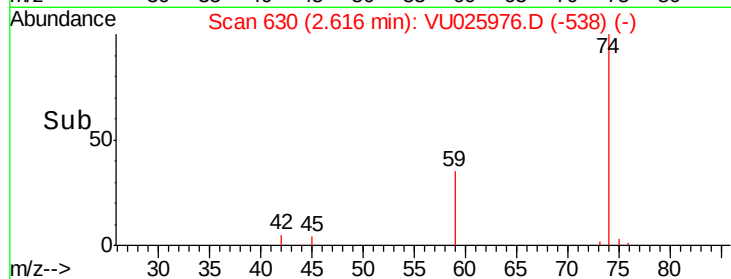
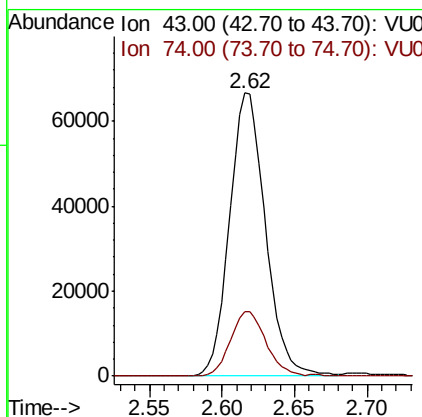
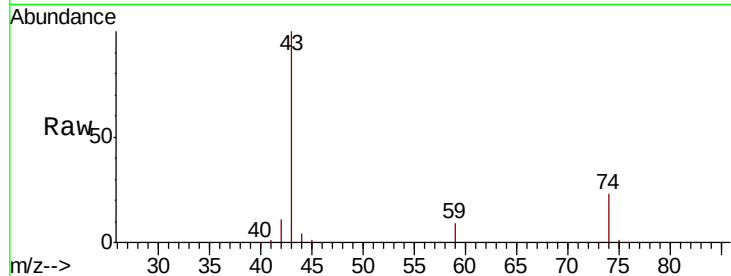




#15  
Methvl Acetate  
Concen: 54.795 ug/L  
RT: 2.62 min Scan# 630  
Delta R.T. -0.00 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

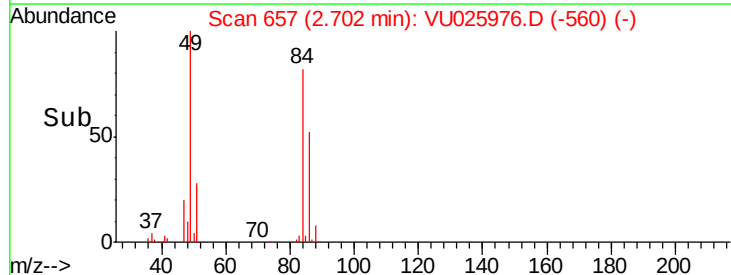
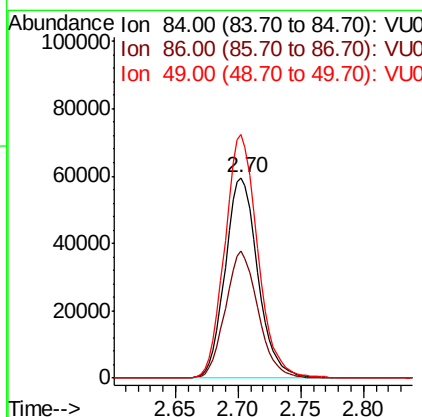
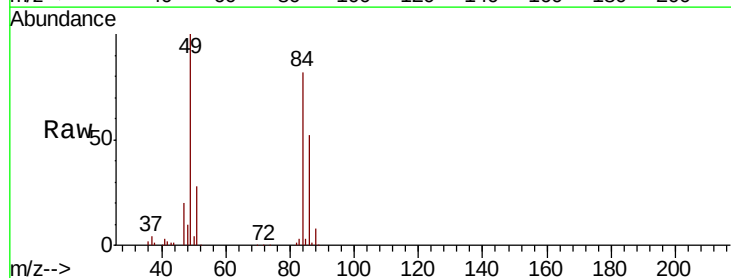
Instrument :  
MSVOA\_U  
ClientSampleId :

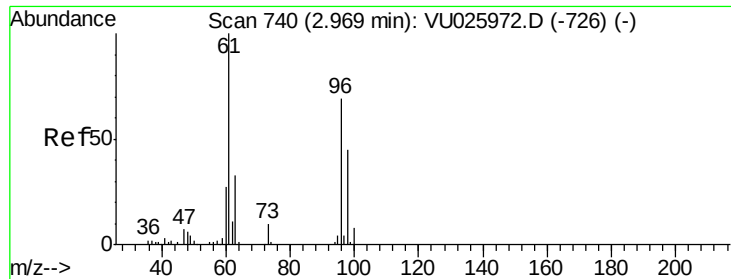
Tot Ion: 43 Resp: 114803  
Ion Ratio Lower Upper  
43 100  
74 22.6 18.8 28.2



#16  
Methylene chloride  
Concen: 54.003 ug/L  
RT: 2.70 min Scan# 657  
Delta R.T. 0.01 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Tgt Ion: 84 Resp: 107984  
Ion Ratio Lower Upper  
84 100  
86 63.2 45.2 84.0  
49 121.4 84.4 156.7





#17

trans-1,2-Dichloroethene

Concen: 51.315 ug/L

RT: 2.98 min Scan# 744

Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :  
MSVOA\_U  
ClientSampleId :

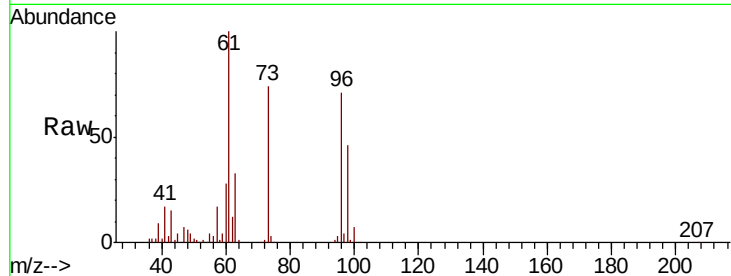
Tot Ion: 96 Resp: 97089

Ion Ratio Lower Upper

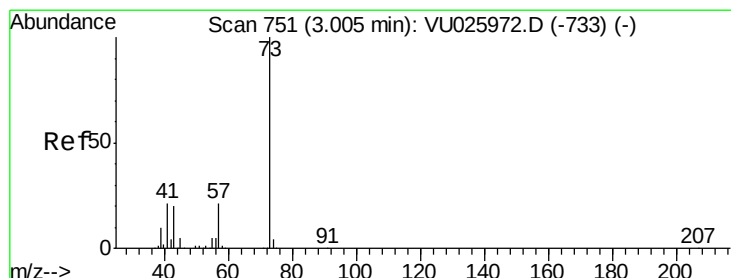
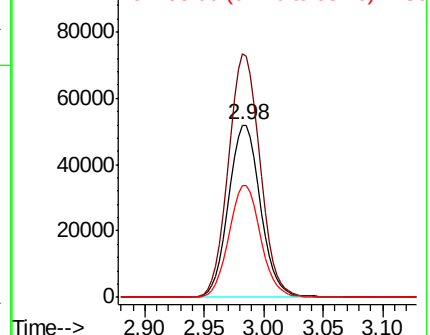
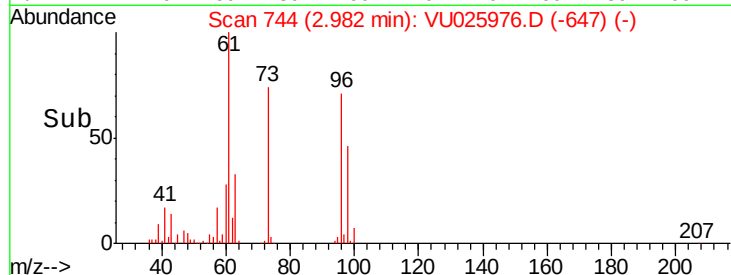
96 100

61 141.5 96.2 178.6

98 64.6 44.0 81.8



Abundance Ion 96.00 (95.70 to 96.70): VU0  
Ion 61.00 (60.70 to 61.70): VU0  
Ion 98.00 (97.70 to 98.70): VU0



#18

Methyl tert-butyl Ether

Concen: 52.959 ug/L

RT: 3.00 min Scan# 750

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

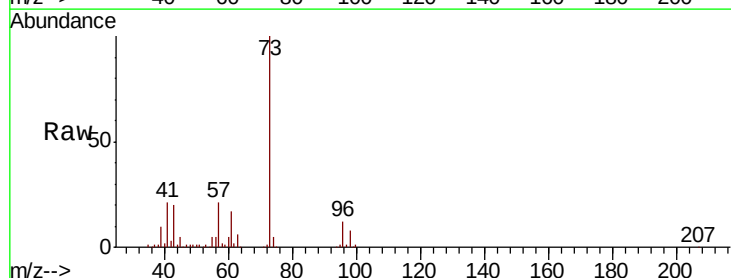
Tgt Ion: 73 Resp: 318563

Ion Ratio Lower Upper

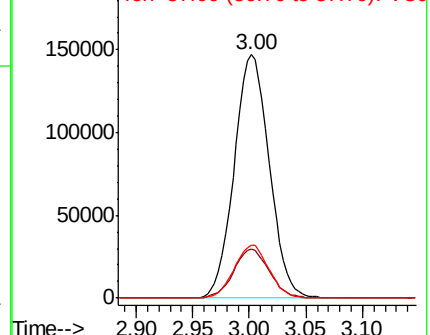
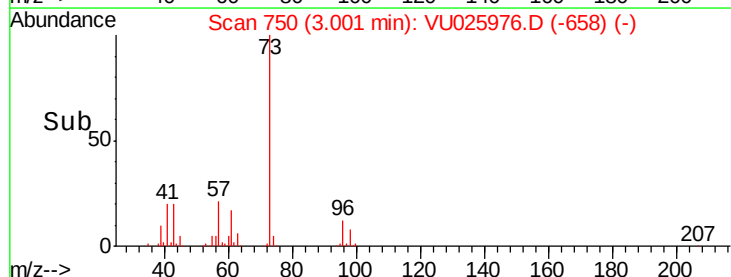
73 100

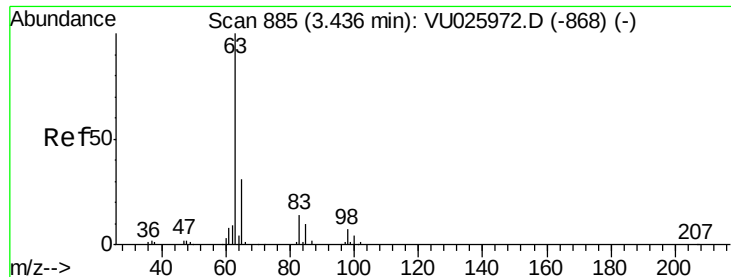
43 20.5 15.9 23.9

57 21.5 17.5 26.3



Abundance Ion 73.00 (72.70 to 73.70): VU0  
Ion 43.00 (42.70 to 43.70): VU0  
Ion 57.00 (56.70 to 57.70): VU0





#19

1,1-Dichloroethane

Concen: 54.303 ug/L

RT: 3.45 min Scan# 889

Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampled :

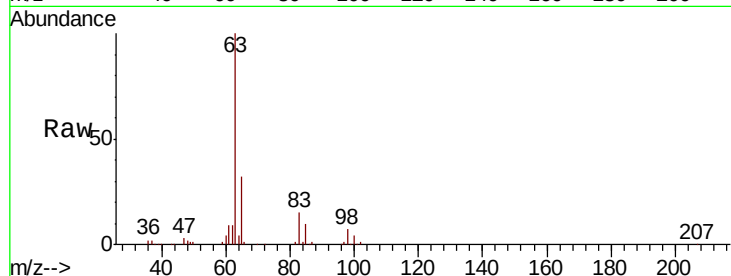
Tot Ion: 63 Resp: 186341

Ion Ratio Lower Upper

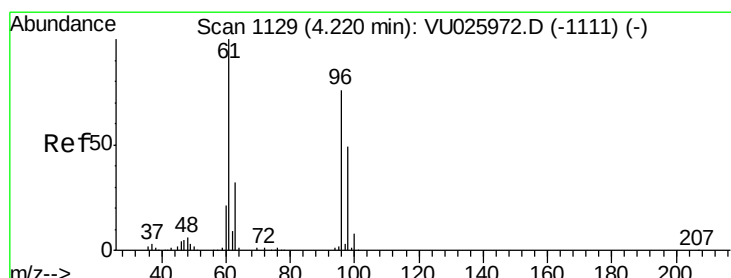
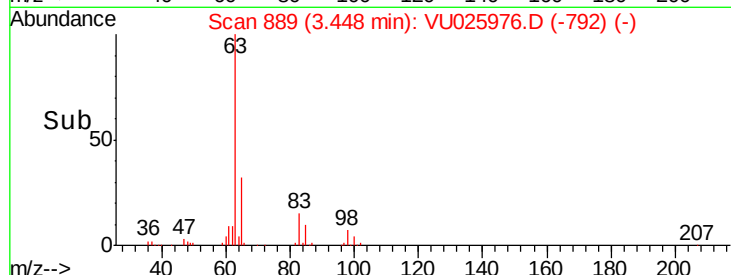
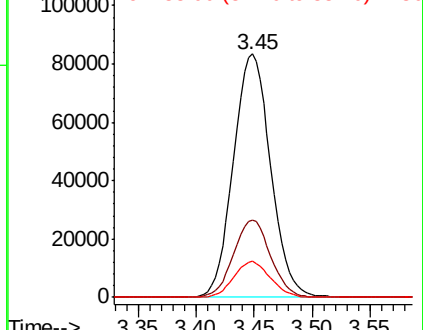
63 100

65 31.8 22.7 42.3

83 14.6 9.7 18.1



Abundance Ion 63.00 (62.70 to 63.70): VU0  
Ion 65.00 (64.70 to 65.70): VU0  
Ion 83.00 (82.70 to 83.70): VU0



#20

cis-1,2-Dichloroethene

Concen: 52.239 ug/L

RT: 4.23 min Scan# 1132

Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

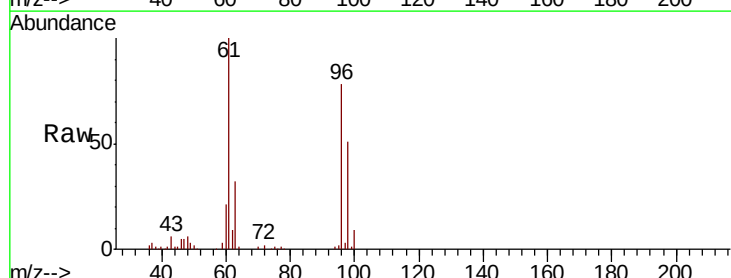
Tgt Ion: 96 Resp: 110424

Ion Ratio Lower Upper

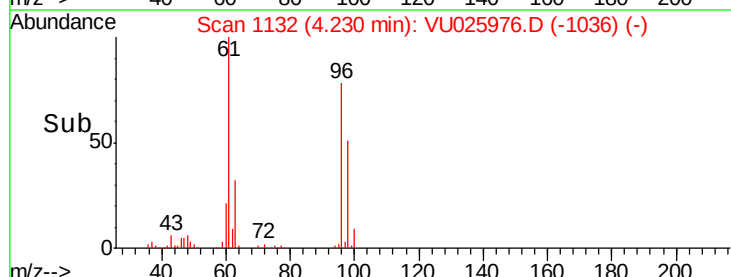
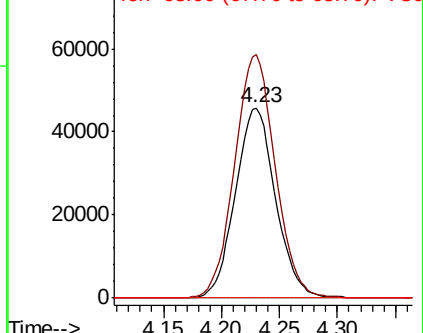
96 100

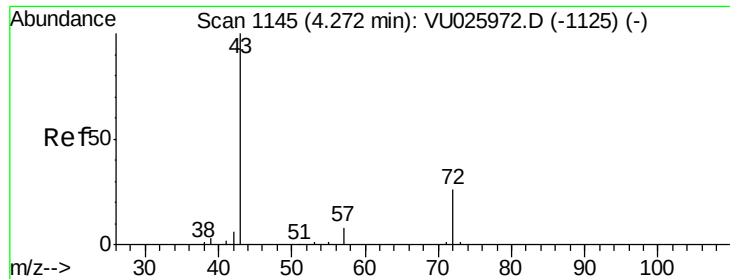
61 128.0 87.7 162.9

68 0.0 0.0 0.0



Abundance Ion 96.00 (95.70 to 96.70): VU0  
Ion 61.00 (60.70 to 61.70): VU0  
Ion 68.00 (67.70 to 68.70): VU0





#22

2-Butanone

Concen: 103.632 ug/L

RT: 4.27 min Scan# 1143

Delta R.T. -0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

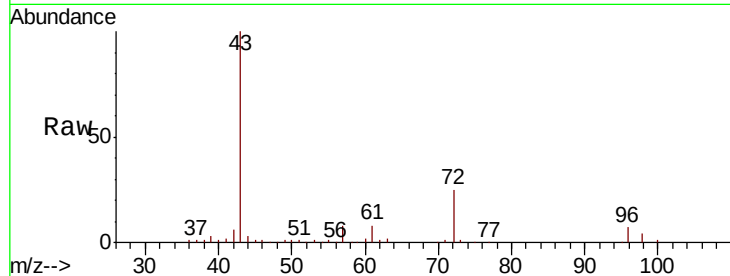
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 43 Resp: 177771

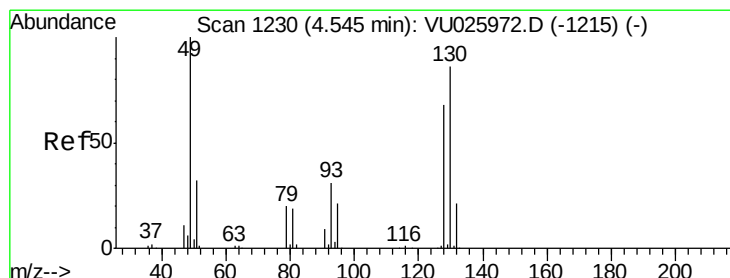
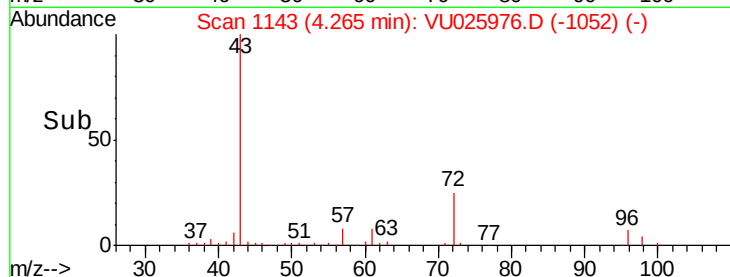
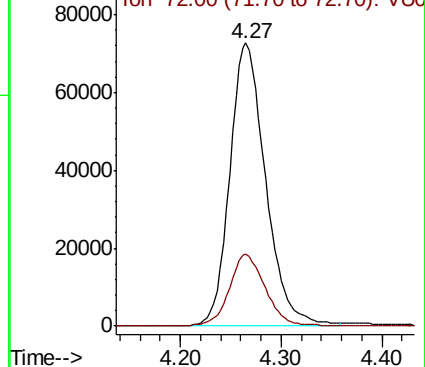
Ion Ratio Lower Upper

43 100

72 25.8 13.4 40.2



Abundance Ion 43.00 (42.70 to 43.70): VU0  
Ion 72.00 (71.70 to 72.70): VU0



#23

Bromochloromethane

Concen: 53.509 ug/L

RT: 4.55 min Scan# 1232

Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Tgt Ion:128 Resp: 59386

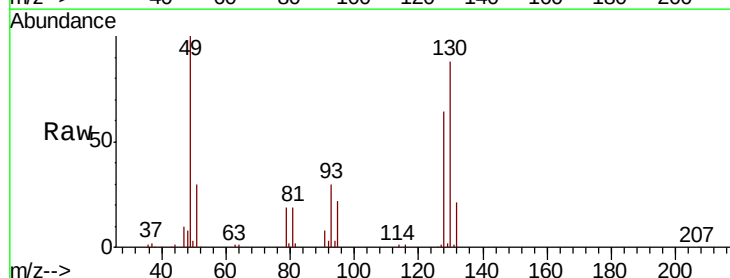
Ion Ratio Lower Upper

128 100

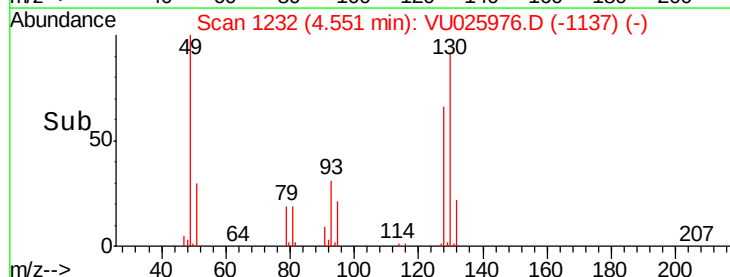
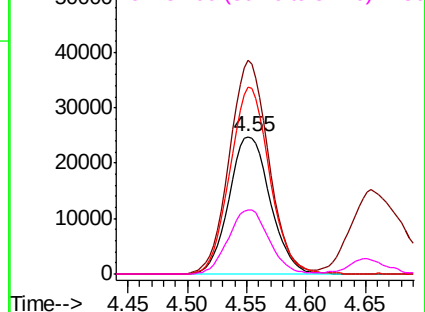
49 155.5 100.9 187.5

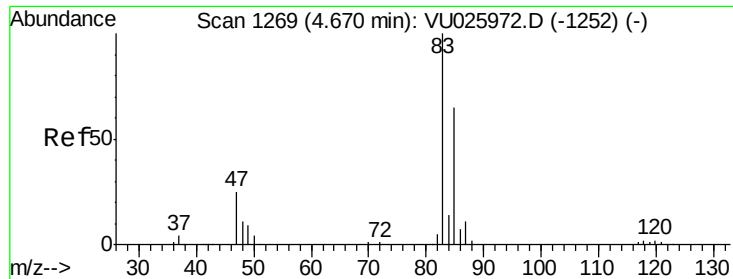
130 136.4 88.6 164.6

51 46.9 35.9 53.9



Abundance Ion 128.00 (127.70 to 128.70): V  
Ion 49.00 (48.70 to 49.70): VU0  
Ion 130.00 (129.70 to 130.70): V  
Ion 51.00 (50.70 to 51.70): VU0

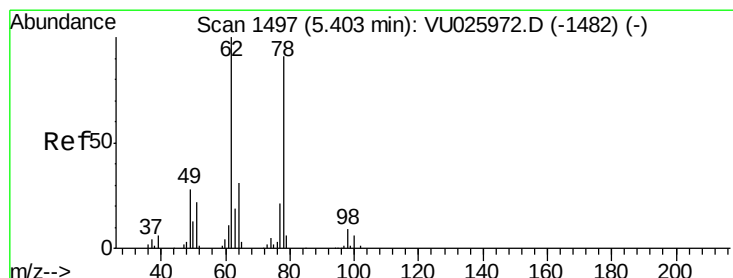
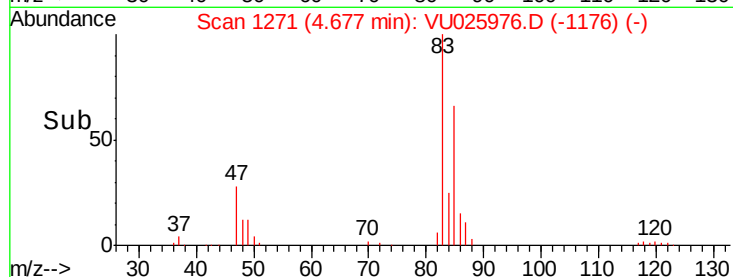
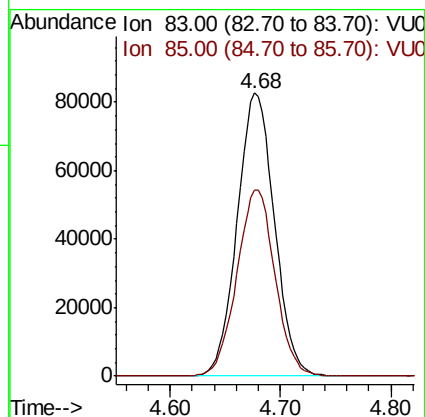
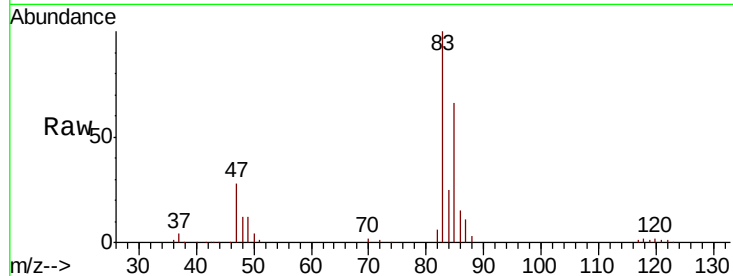




#25  
Chloroform  
Concen: 53.247 ug/L  
RT: 4.68 min Scan# 1271  
Delta R.T. 0.01 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

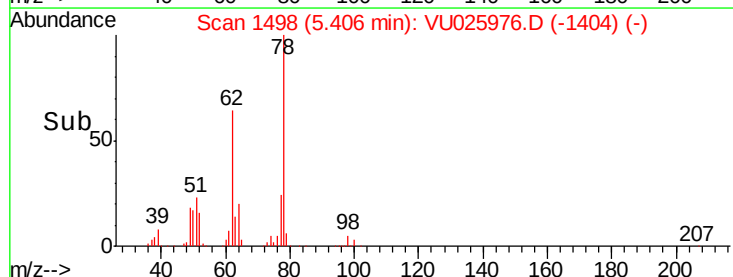
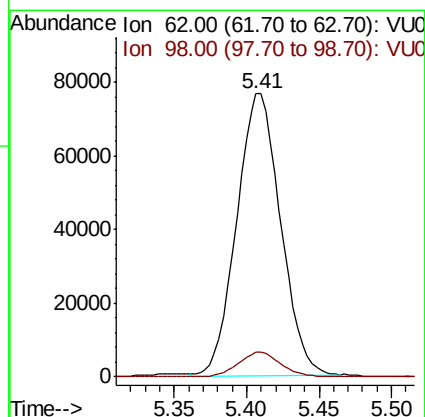
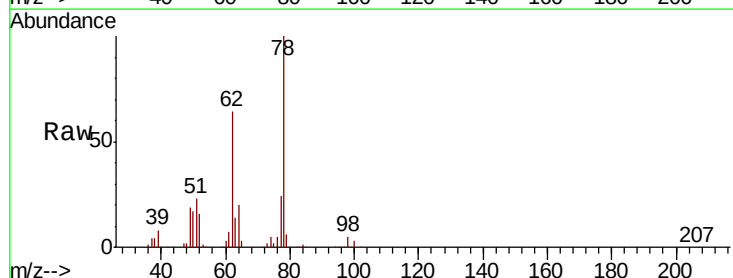
Instrument :  
MSVOA\_U  
ClientSampleId :

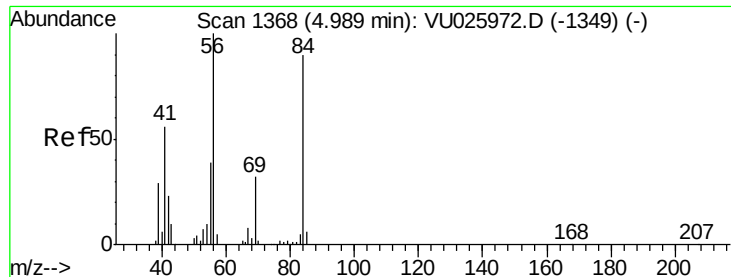
Tot Ion: 83 Resp: 193568  
Ion Ratio Lower Upper  
83 100  
85 65.7 45.7 84.9



#27  
1,2-Dichloroethane  
Concen: 55.480 ug/L  
RT: 5.41 min Scan# 1498  
Delta R.T. 0.00 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Tgt Ion: 62 Resp: 160828  
Ion Ratio Lower Upper  
62 100  
98 8.6 6.8 10.2

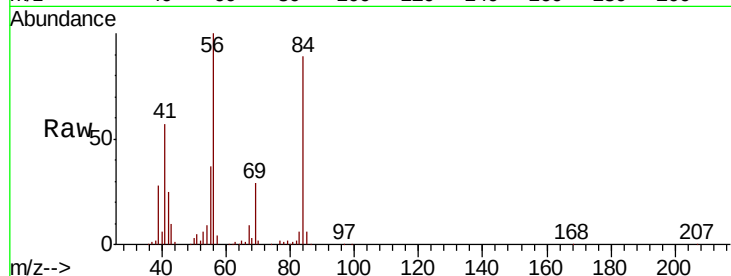




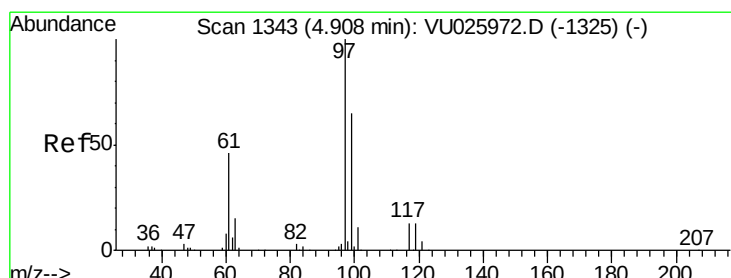
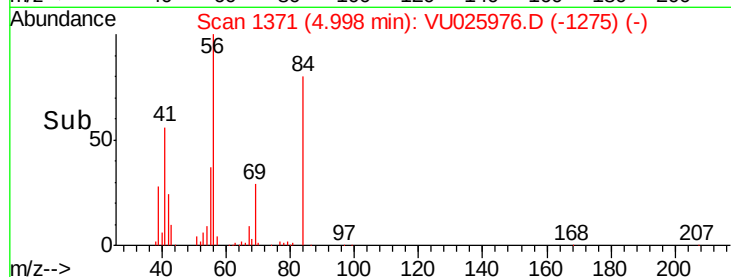
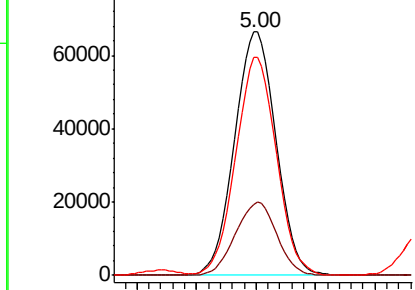
#29  
Cyclohexane  
Concen: 52.182 ug/L  
RT: 5.00 min Scan# 1371  
Delta R.T. 0.01 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 56 Resp: 160465  
Ion Ratio Lower Upper  
56 100  
69 29.9 24.6 36.8  
84 87.8 71.4 107.2

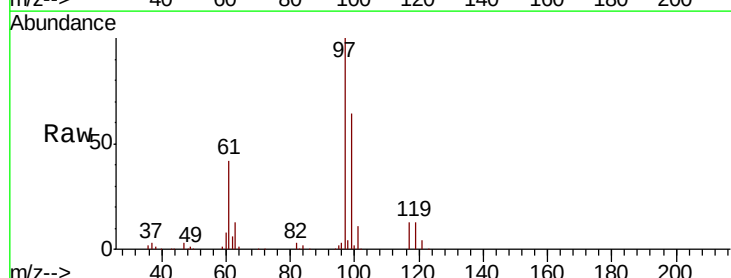


Abundance Ion 56.00 (55.70 to 56.70): VU0  
Ion 69.00 (68.70 to 69.70): VU0  
Ion 84.00 (83.70 to 84.70): VU0

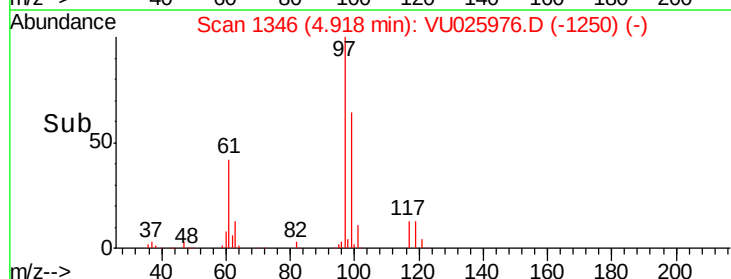
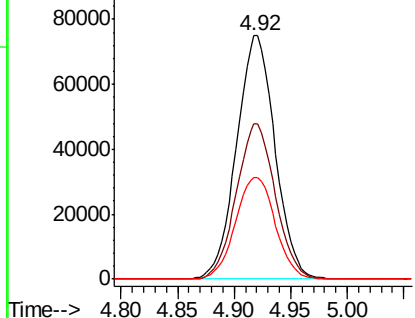


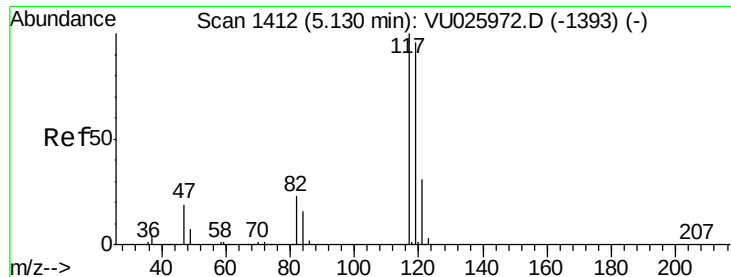
#30  
1,1,1-Trichloroethane  
Concen: 53.455 ug/L  
RT: 4.92 min Scan# 1346  
Delta R.T. 0.01 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Tgt Ion: 97 Resp: 177552  
Ion Ratio Lower Upper  
97 100  
99 64.4 52.3 78.5  
61 43.2 33.8 50.6



Abundance Ion 97.00 (96.70 to 97.70): VU0  
Ion 99.00 (98.70 to 99.70): VU0  
Ion 61.05 (60.75 to 61.75): VU0





#31

Carbon tetrachloride

Concen: 53.832 ug/L

RT: 5.14 min Scan# 1415

Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

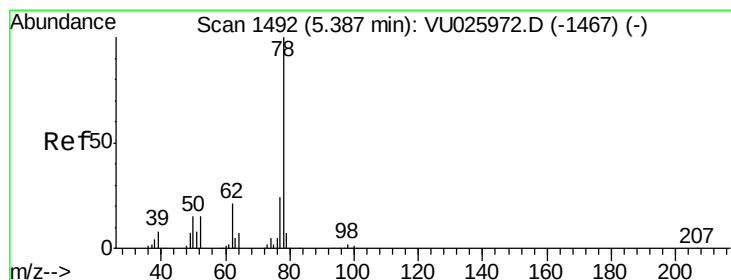
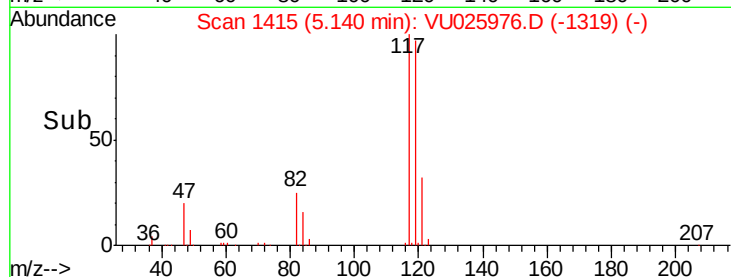
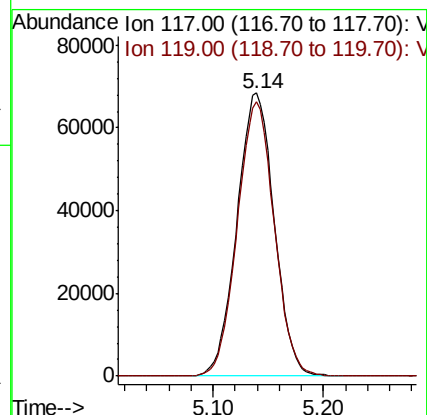
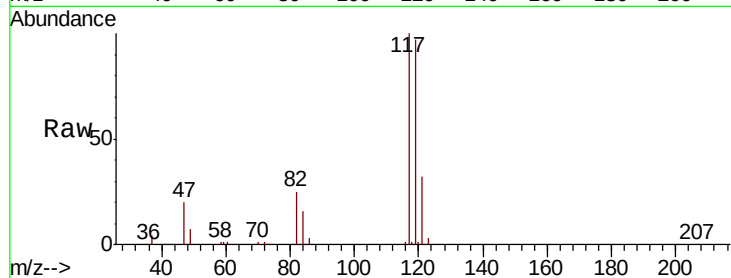
ClientSampleId :

Tot Ion:117 Resp: 159892

Ion Ratio Lower Upper

117 100

119 96.0 77.8 116.8



#33

Benzene

Concen: 53.294 ug/L

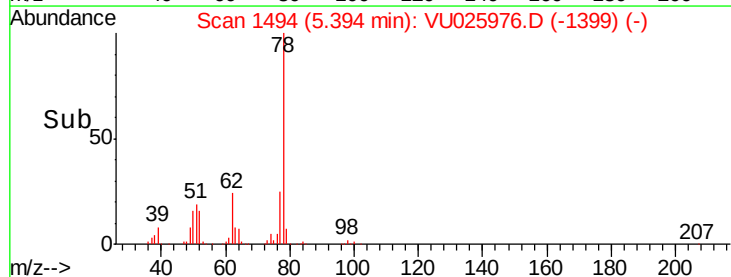
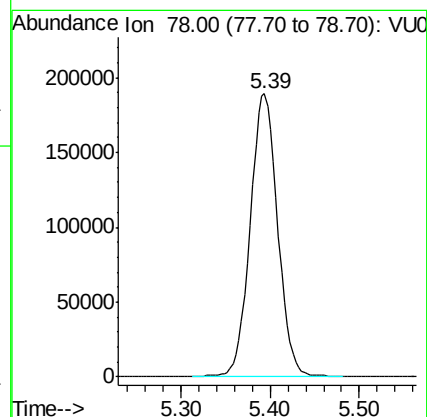
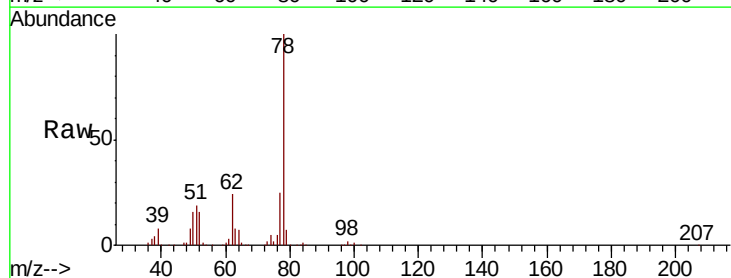
RT: 5.39 min Scan# 1494

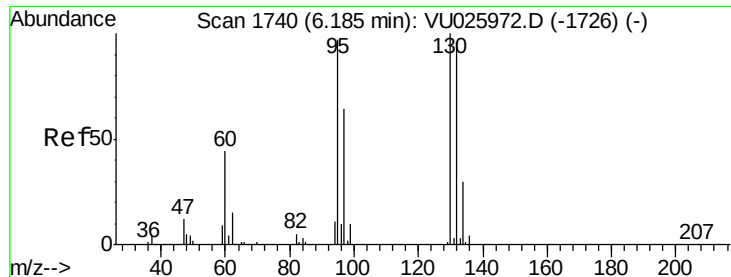
Delta R.T. 0.01 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Tgt Ion: 78 Resp: 406495

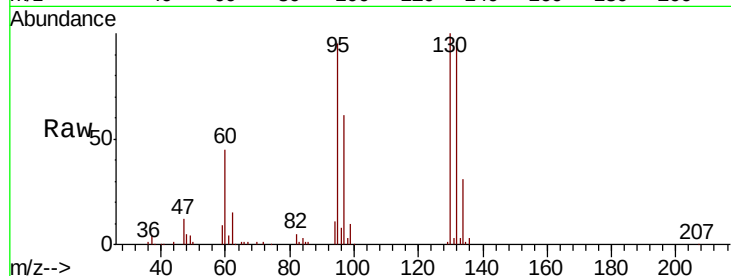




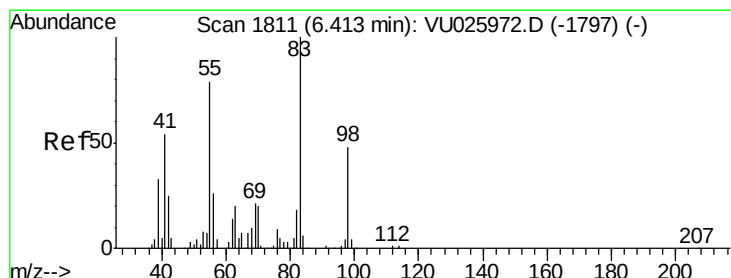
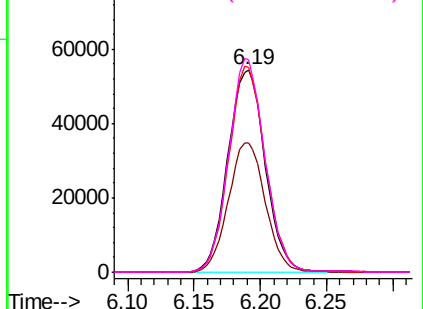
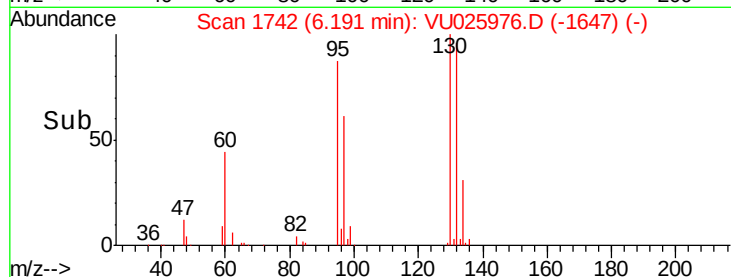
#34  
 Trichloroethene  
 Concen: 50.229 ug/L  
 RT: 6.19 min Scan# 1742  
 Delta R.T. 0.01 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

Instrument :  
 MSVOA\_U  
 ClientSampled :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 95    | Resp: | 106616 |
| Ion      | Ratio | Lower | Upper  |
| 95       | 100   |       |        |
| 97       | 63.8  | 46.6  | 86.6   |
| 132      | 101.1 | 73.3  | 136.1  |
| 130      | 104.8 | 74.8  | 138.8  |

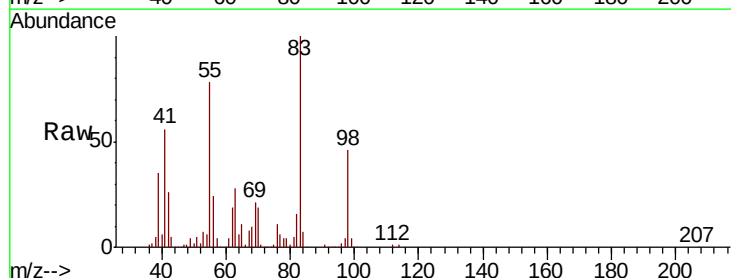


Abundance Ion 95.00 (94.70 to 95.70): VU0  
 Ion 97.00 (96.70 to 97.70): VU0  
 Ion 132.00 (131.70 to 132.70): V  
 Ion 130.00 (129.70 to 130.70): V

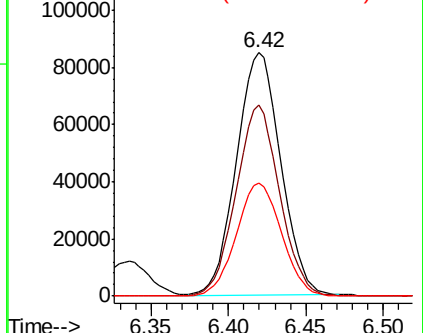
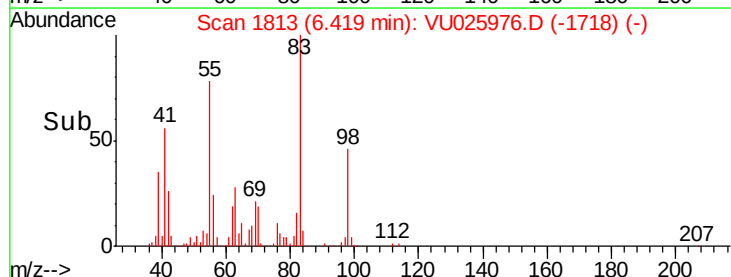


#35  
 Methylcyclohexane  
 Concen: 52.758 ug/L  
 RT: 6.42 min Scan# 1813  
 Delta R.T. 0.01 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

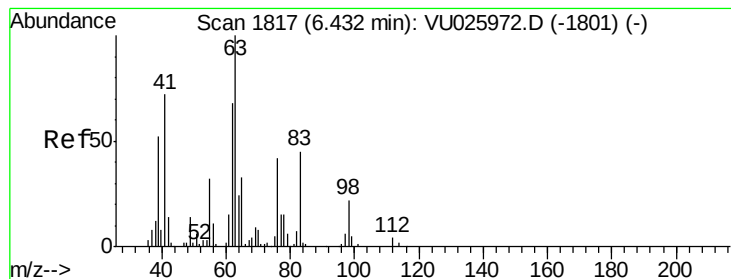
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 83    | Resp: | 169500 |
| Ion      | Ratio | Lower | Upper  |
| 83       | 100   |       |        |
| 55       | 77.2  | 58.3  | 87.5   |
| 98       | 47.4  | 37.8  | 56.6   |



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







#37

1,2-Dichloropropane

Concen: 54.953 ug/L

RT: 6.44 min Scan# 1817

Delta R.T. 0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

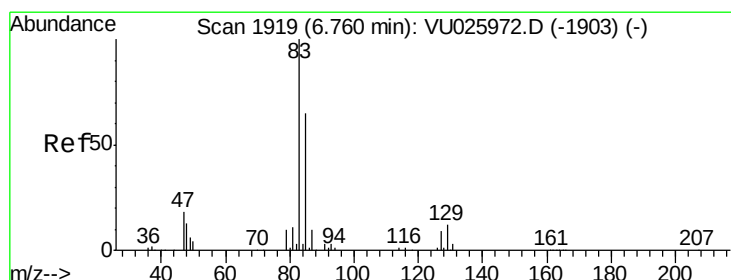
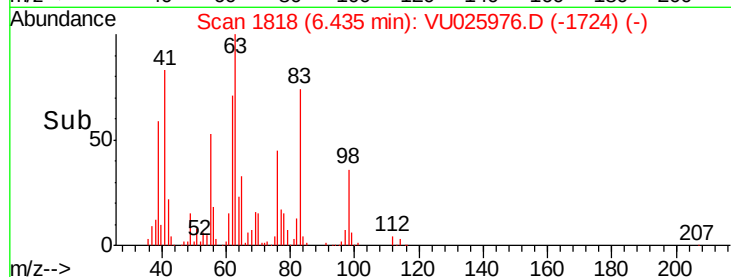
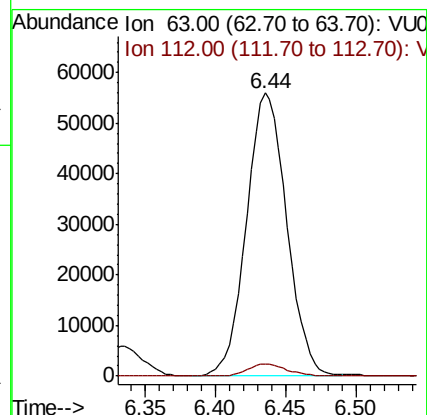
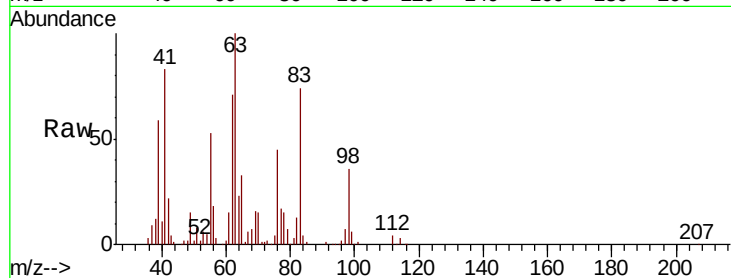
ClientSampleId :

Tot Ion: 63 Resp: 111984

Ion Ratio Lower Upper

63 100

112 4.2 3.3 4.9



#38

Bromodichloromethane

Concen: 54.699 ug/L

RT: 6.76 min Scan# 1919

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

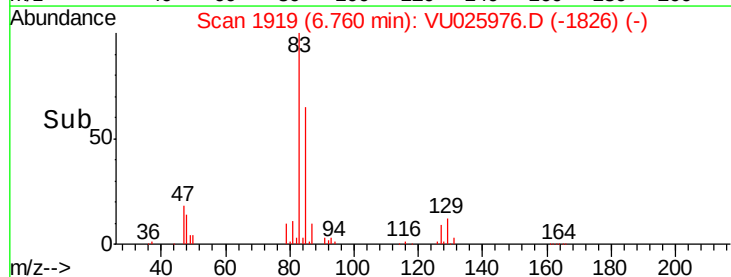
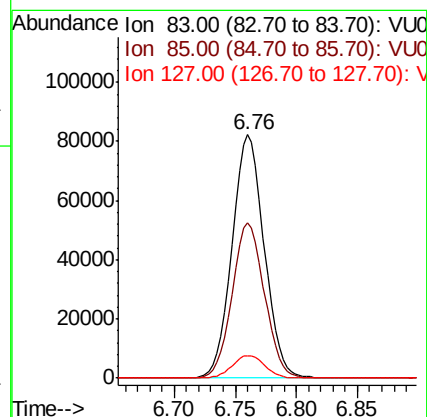
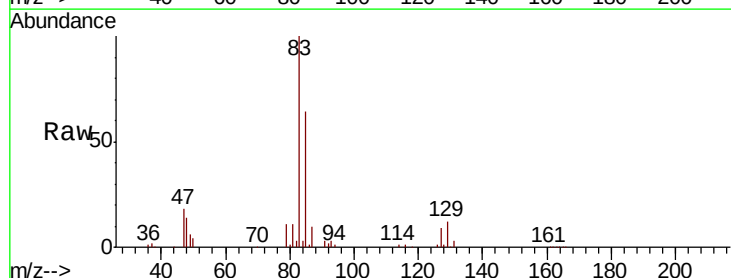
Tgt Ion: 83 Resp: 151519

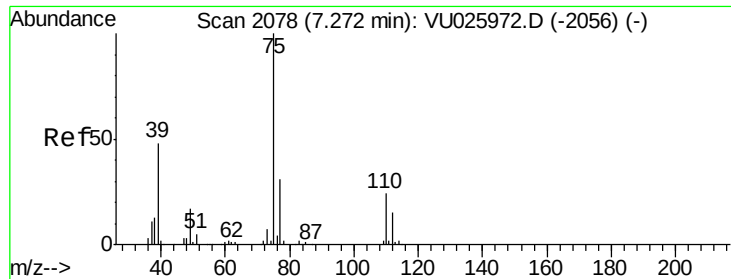
Ion Ratio Lower Upper

83 100

85 63.7 45.2 84.0

127 9.3 7.1 10.7

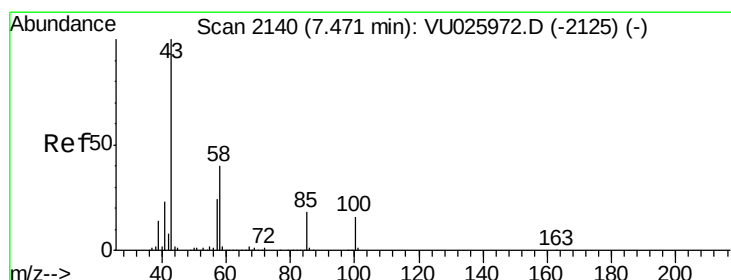
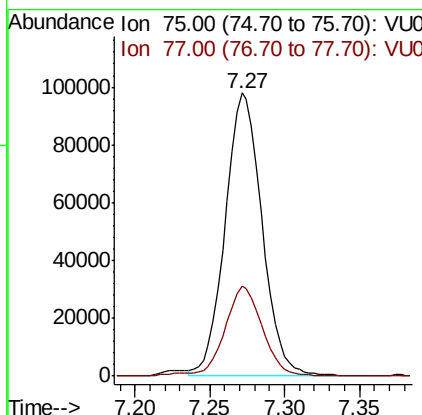
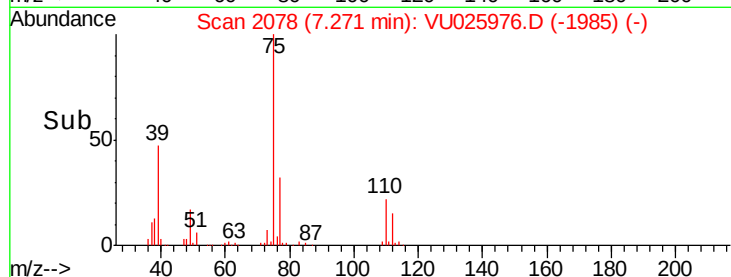
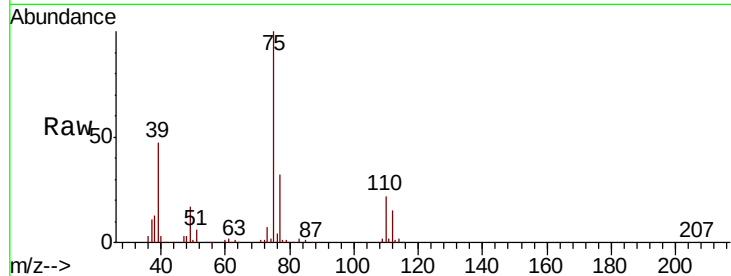




#39  
 cis-1,3-Dichloropropene  
 Concen: 50.388 ug/L  
 RT: 7.27 min Scan# 2078  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

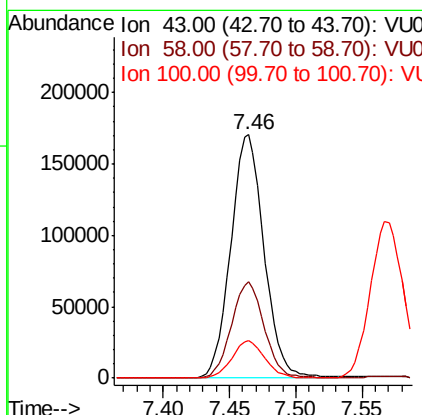
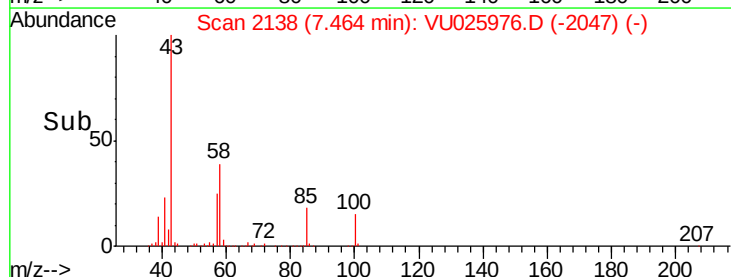
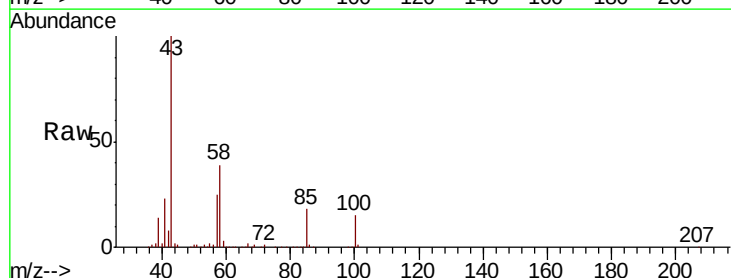
Instrument :  
 MSVOA\_U  
 ClientSampled :

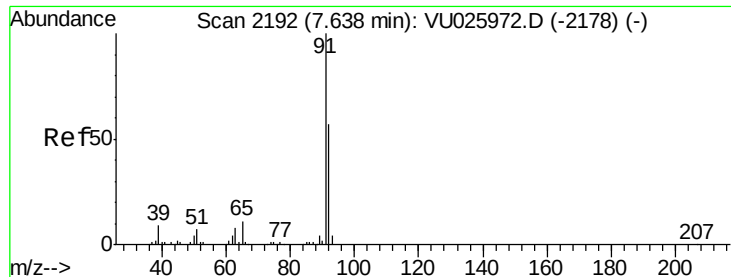
Tot Ion: 75 Resp: 167245  
 Ion Ratio Lower Upper  
 75 100  
 77 31.6 22.5 41.7



#40  
 4-Methyl-2-pentanone  
 Concen: 107.106 ug/L  
 RT: 7.46 min Scan# 2138  
 Delta R.T. -0.01 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

Tgt Ion: 43 Resp: 297612  
 Ion Ratio Lower Upper  
 43 100  
 58 38.9 31.0 46.4  
 100 15.2 12.4 18.6





#42

Toluene

Concen: 52.754 ug/L

RT: 7.64 min Scan# 2193

Delta R.T. 0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

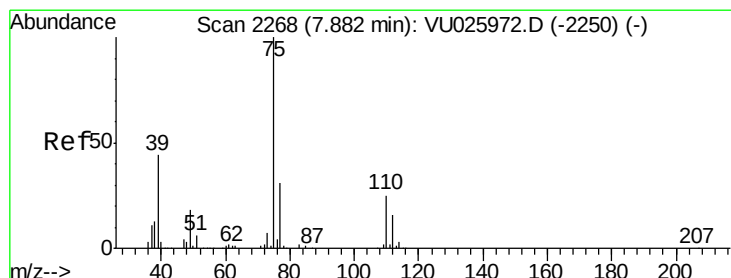
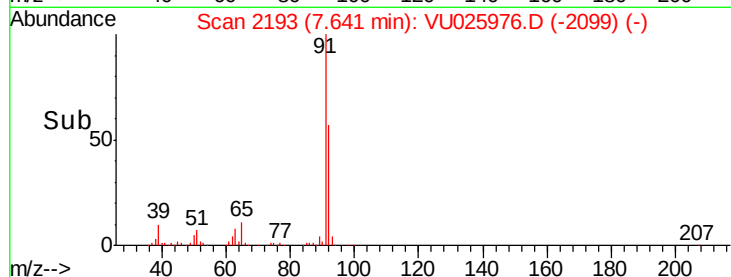
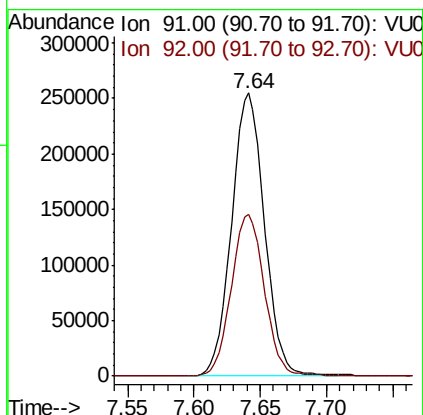
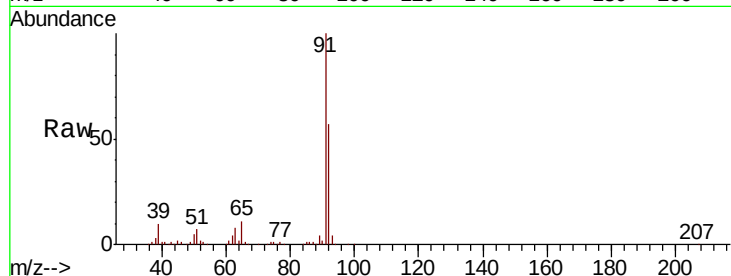
ClientSampleId :

Tot Ion: 91 Resp: 439115

Ion Ratio Lower Upper

91 100

92 57.4 40.9 75.9



#44

trans-1,3-Dichloropropene

Concen: 52.887 ug/L

RT: 7.88 min Scan# 2268

Delta R.T. -0.00 min

Lab File: VU025976.D

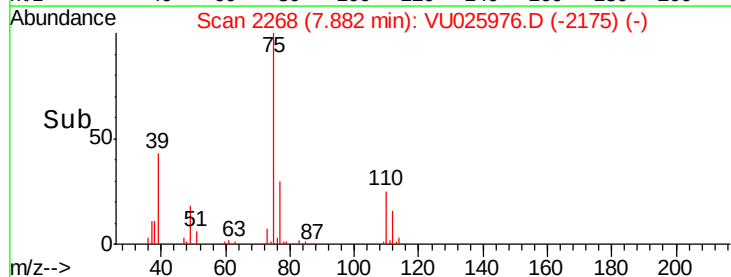
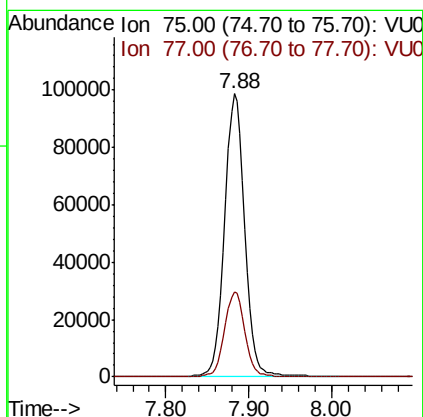
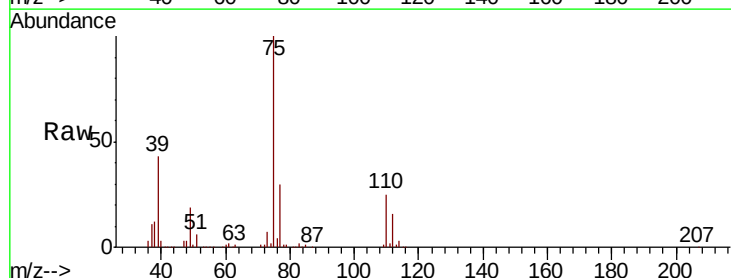
Acq: 08 Aug 2018 16:38

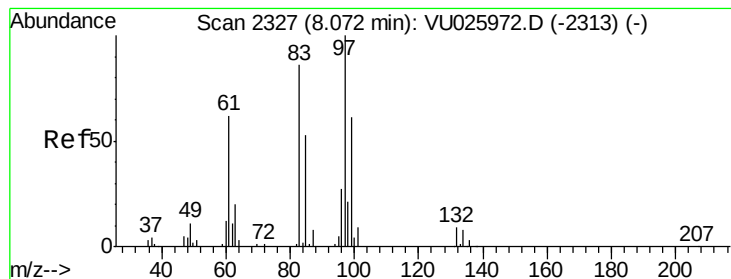
Tgt Ion: 75 Resp: 165919

Ion Ratio Lower Upper

75 100

77 30.2 22.3 41.3





#45

1,1,2-Trichloroethane

Concen: 54.088 ug/L

RT: 8.07 min Scan# 2326

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampleId :

Tot Ion: 97 Resp: 105281

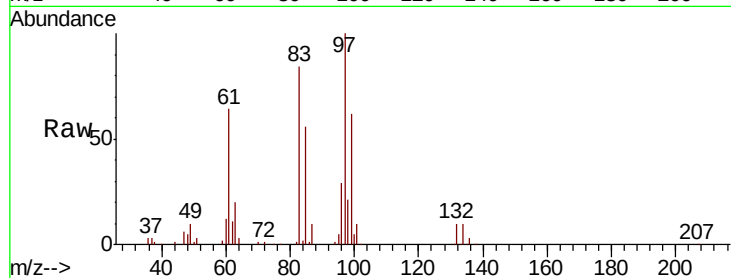
Ion Ratio Lower Upper

97 100

99 62.5 42.6 79.0

83 84.0 59.6 110.6

85 56.0 38.9 72.2

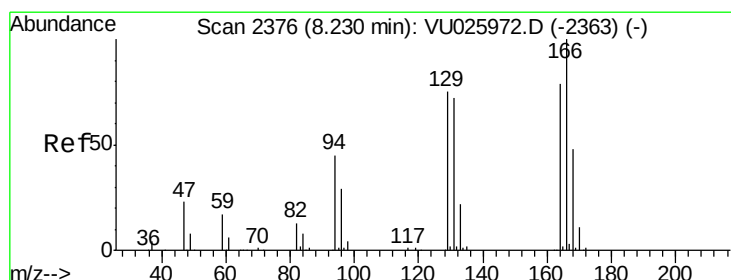
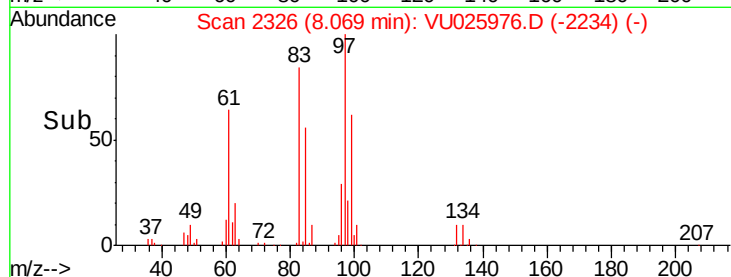
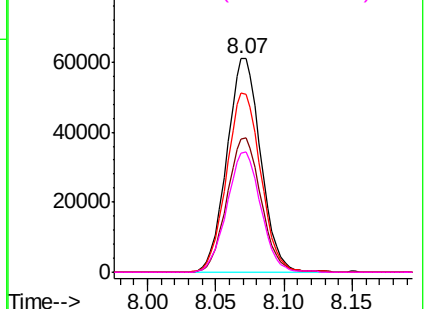


Abundance Ion 97.00 (96.70 to 97.70): VU0

Ion 99.00 (98.70 to 99.70): VU0

Ion 83.00 (82.70 to 83.70): VU0

Ion 85.00 (84.70 to 85.70): VU0



#46

Tetrachloroethene

Concen: 50.172 ug/L

RT: 8.23 min Scan# 2376

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Tgt Ion:164 Resp: 91532

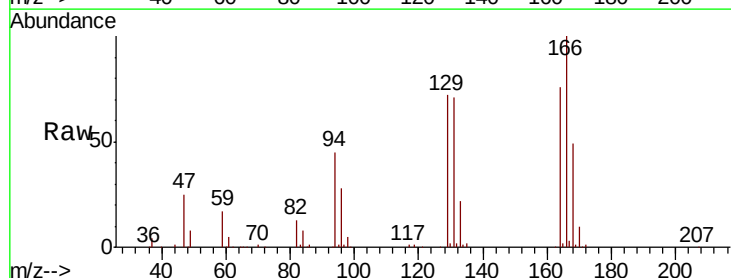
Ion Ratio Lower Upper

164 100

129 94.4 64.8 120.3

131 93.5 63.1 117.3

166 131.4 89.5 166.3

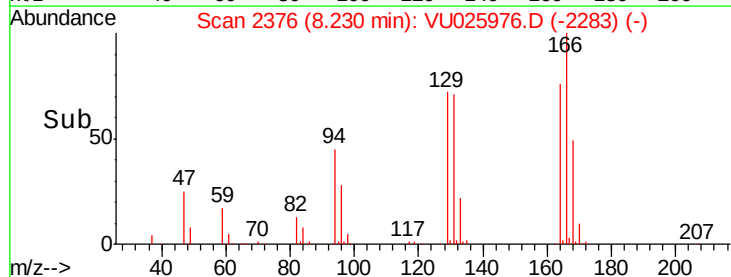
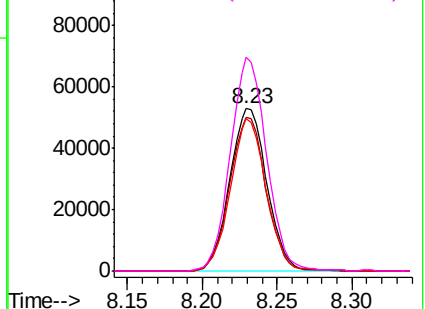


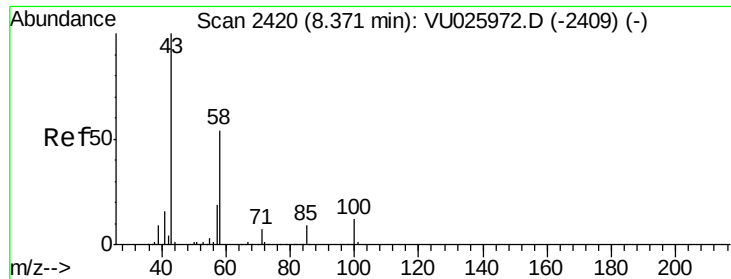
Abundance Ion 164.00 (163.70 to 164.70): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V

Ion 166.00 (165.70 to 166.70): V

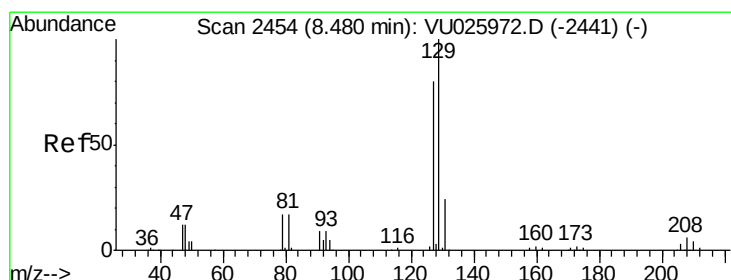
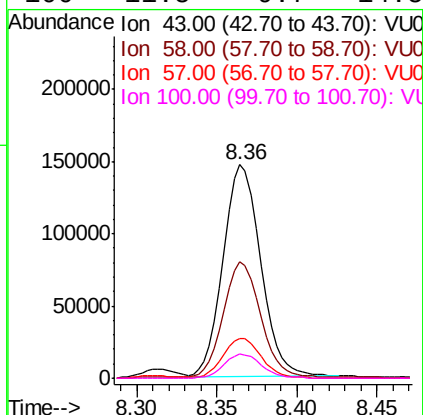
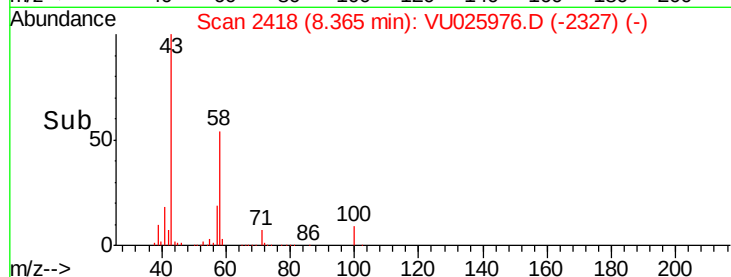
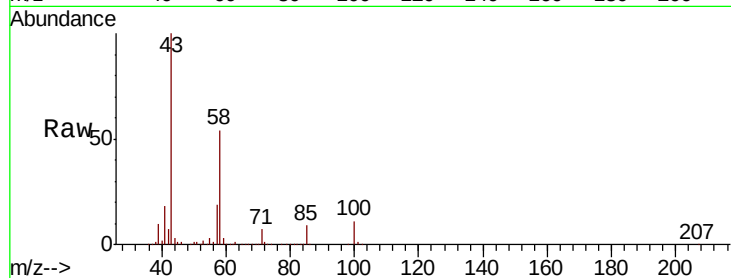




#48  
2-Hexanone  
Concen: 105.300 ug/L  
RT: 8.36 min Scan# 2418  
Delta R.T. -0.01 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

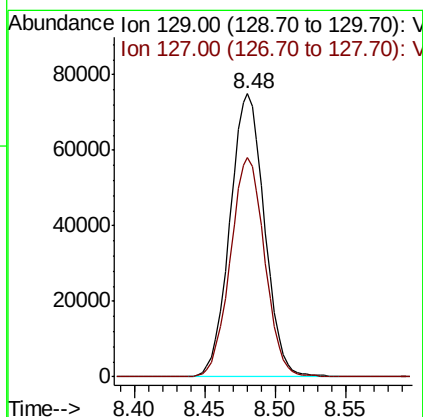
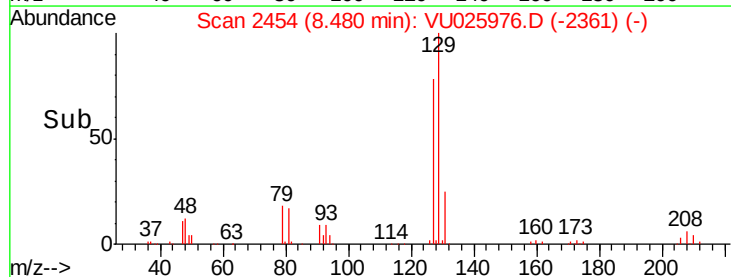
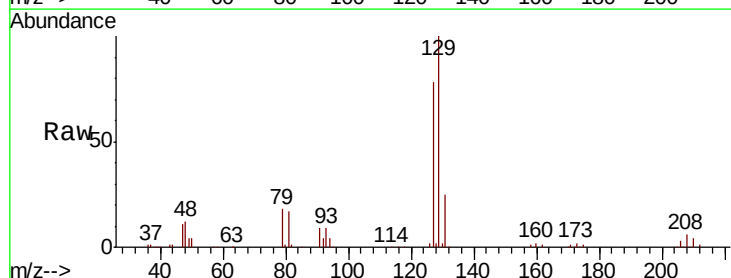
Instrument :  
MSVOA\_U  
ClientSampleId :

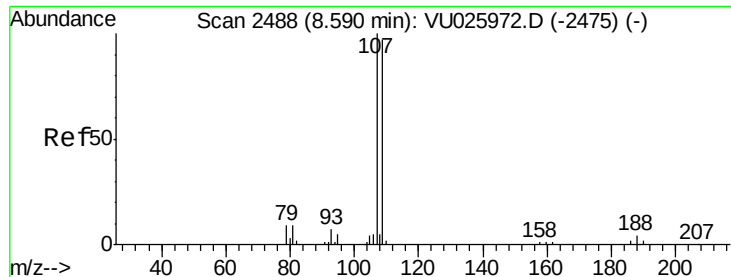
Tot Ion: 43 Resp: 236054  
Ion Ratio Lower Upper  
43 100  
58 53.8 43.3 64.9  
57 18.7 15.0 22.6  
100 11.5 9.7 14.5



#49  
Dibromochloromethane  
Concen: 53.772 ug/L  
RT: 8.48 min Scan# 2454  
Delta R.T. -0.00 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Tgt Ion: 129 Resp: 128563  
Ion Ratio Lower Upper  
129 100  
127 77.5 54.3 100.8

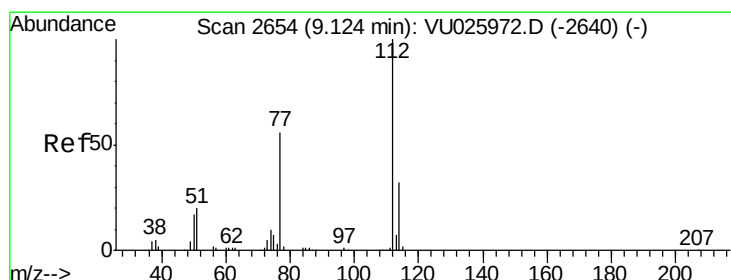
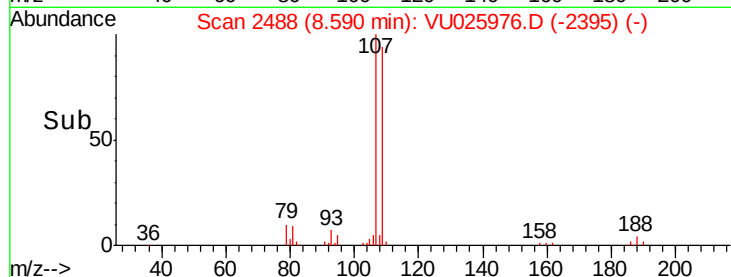
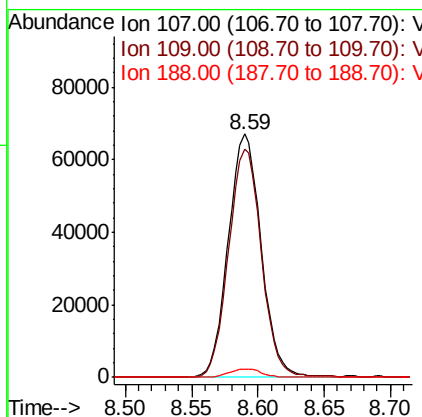
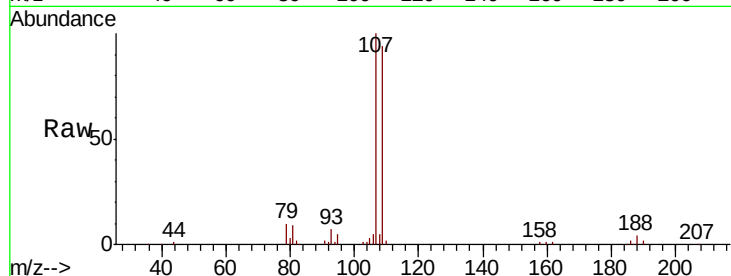




#50  
 1,2-Dibromoethane  
 Concen: 53.015 ug/L  
 RT: 8.59 min Scan# 2488  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

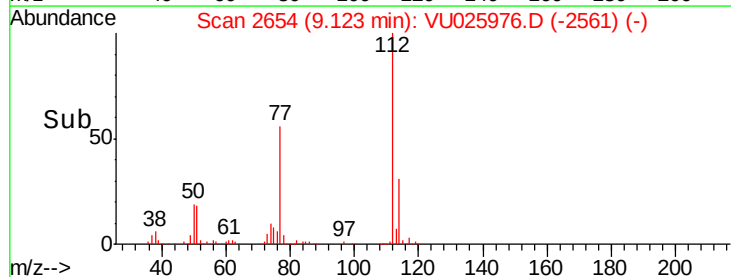
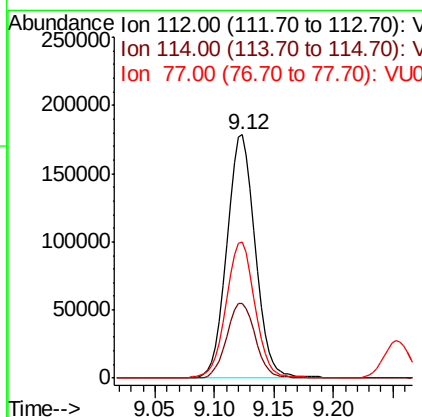
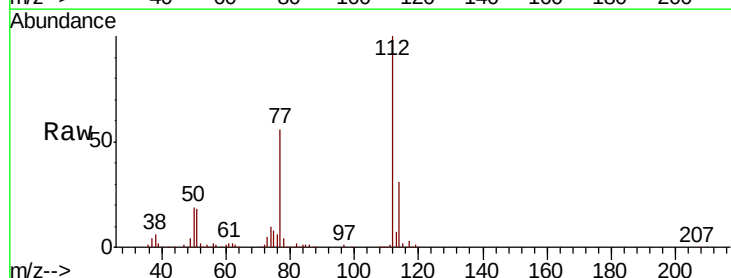
Instrument :  
 MSVOA\_U  
 ClientSampleId :

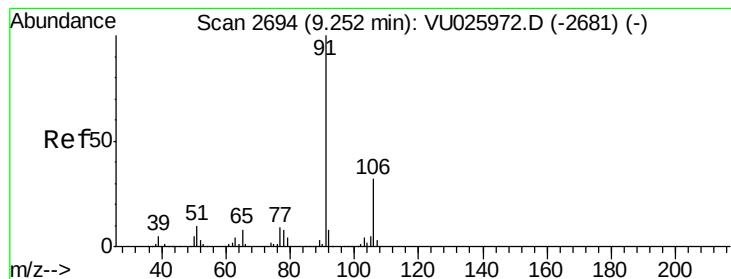
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 107     | 100   |       |       |
| 109     | 93.8  | 65.1  | 120.9 |
| 188     | 3.5   | 3.4   | 5.2   |



#51  
 Chlorobenzene  
 Concen: 51.866 ug/L  
 RT: 9.12 min Scan# 2654  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 114     | 30.7  | 22.9  | 42.5  |
| 77      | 56.1  | 46.6  | 70.0  |





#52

Ethylbenzene

Concen: 51.215 ug/L

RT: 9.25 min Scan# 2694

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

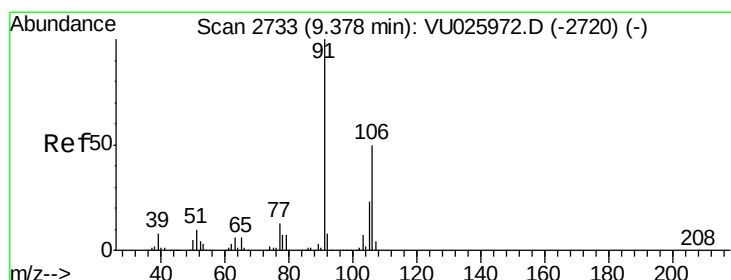
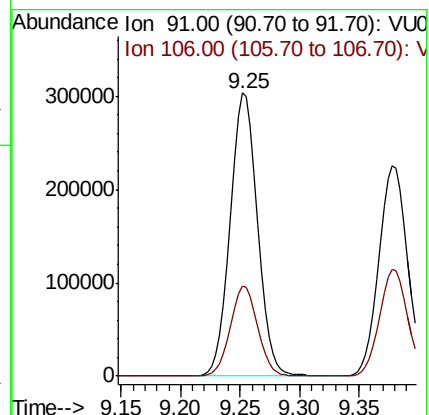
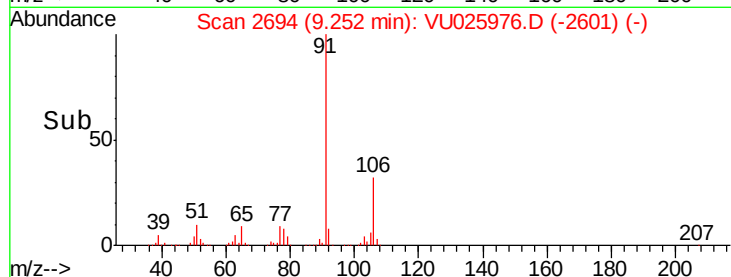
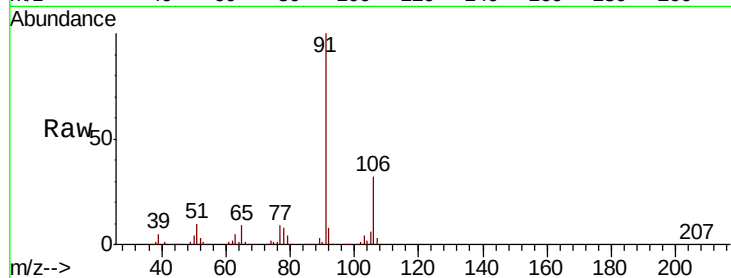
ClientSampleId :

Tot Ion: 91 Resp: 485005

Ion Ratio Lower Upper

91 100

106 31.7 22.1 41.1



#53

m,p-Xylene

Concen: 50.966 ug/L

RT: 9.38 min Scan# 2733

Delta R.T. -0.00 min

Lab File: VU025976.D

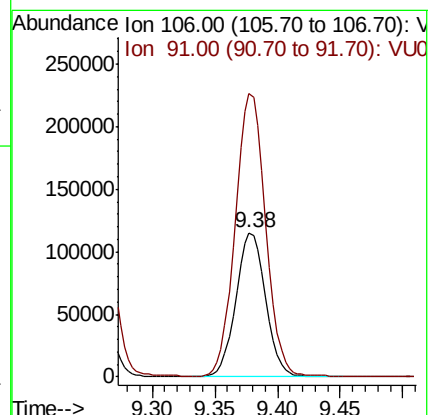
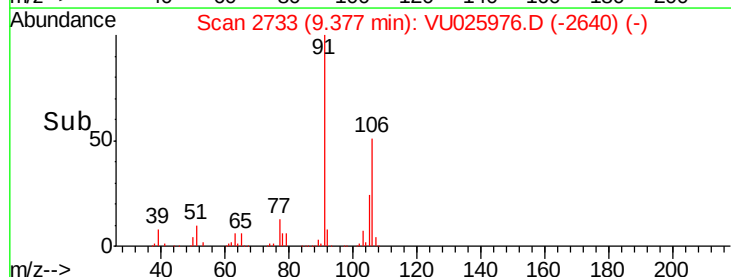
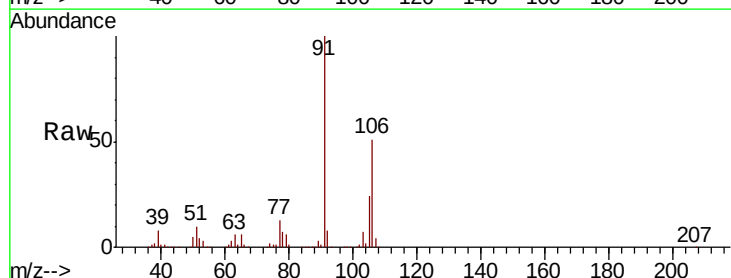
Acq: 08 Aug 2018 16:38

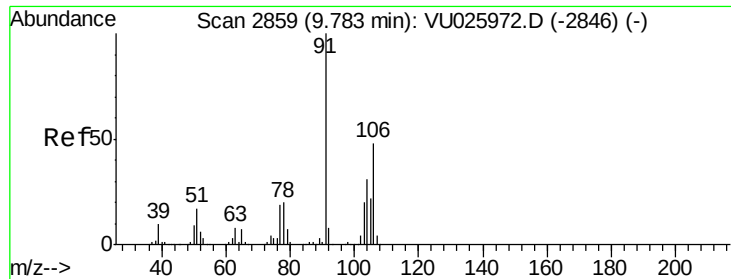
Tgt Ion: 106 Resp: 189338

Ion Ratio Lower Upper

106 100

91 196.6 137.8 255.8

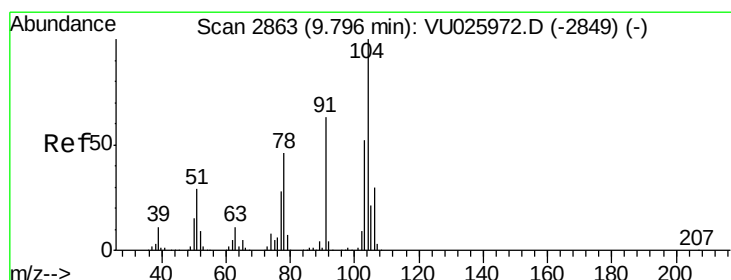
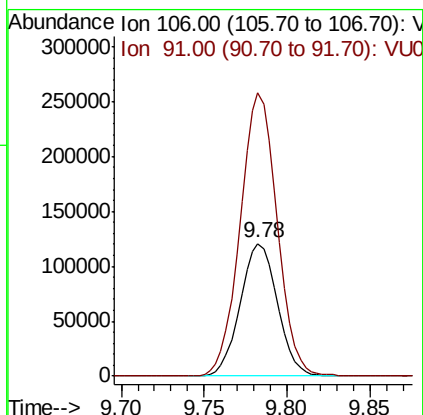
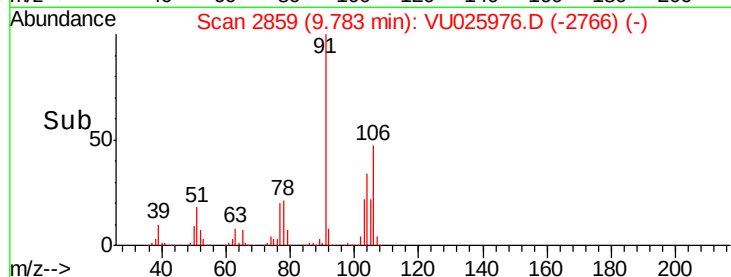
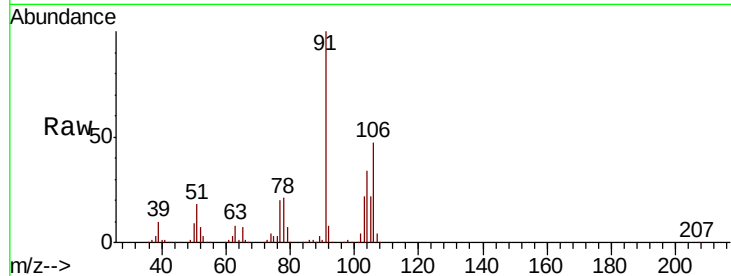




#54  
o-xylene  
Concen: 53.402 ug/L  
RT: 9.78 min Scan# 2859  
Delta R.T. -0.00 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

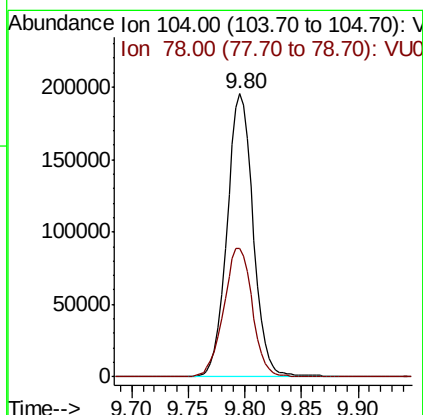
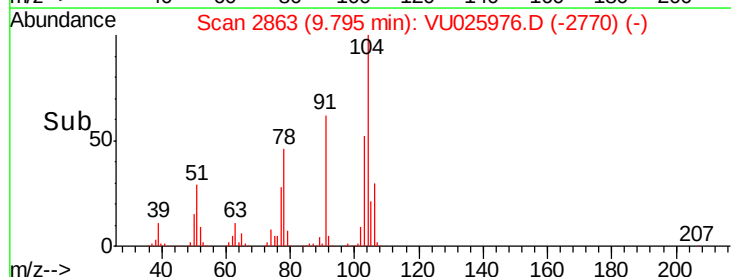
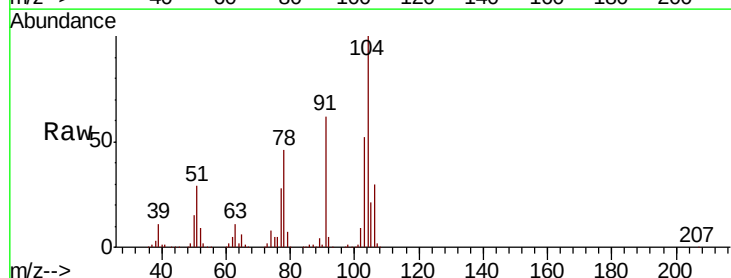
Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion:106 Resp: 188908  
Ion Ratio Lower Upper  
106 100  
91 213.8 150.1 278.9

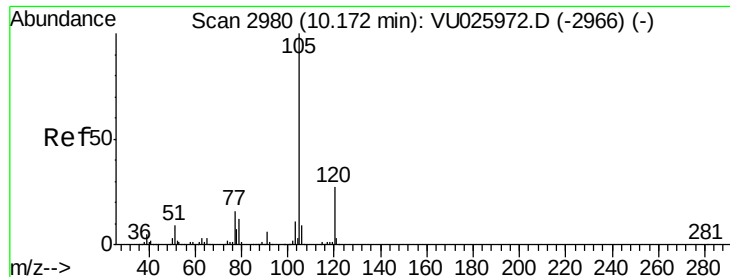


#55  
Styrene  
Concen: 52.711 ug/L  
RT: 9.80 min Scan# 2863  
Delta R.T. -0.00 min  
Lab File: VU025976.D  
Acq: 08 Aug 2018 16:38

Tgt Ion:104 Resp: 314185  
Ion Ratio Lower Upper  
104 100  
78 45.6 32.3 59.9







#56

Isopropylbenzene

Concen: 51.993 ug/L

RT: 10.17 min Scan# 2979

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampleId :

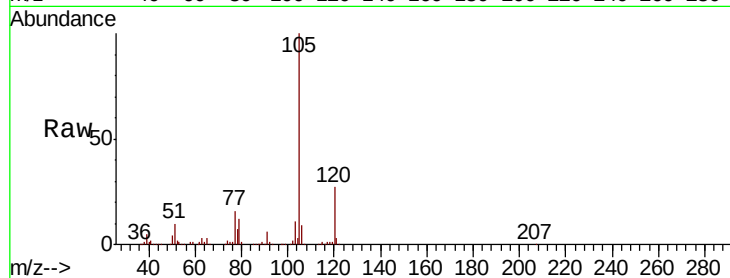
Tot Ion:105 Resp: 488831

Ion Ratio Lower Upper

105 100

120 27.1 21.7 32.5

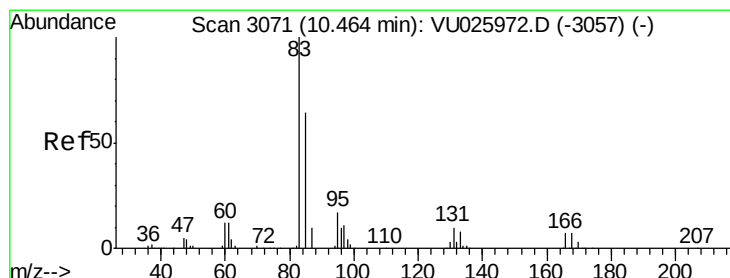
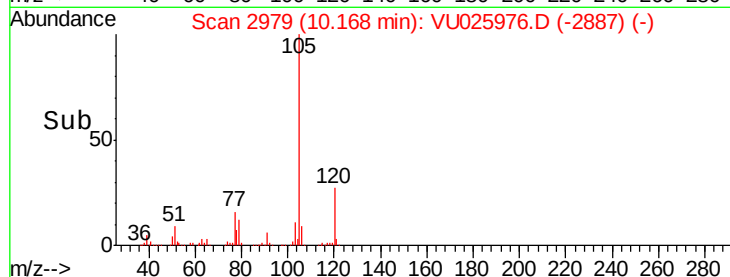
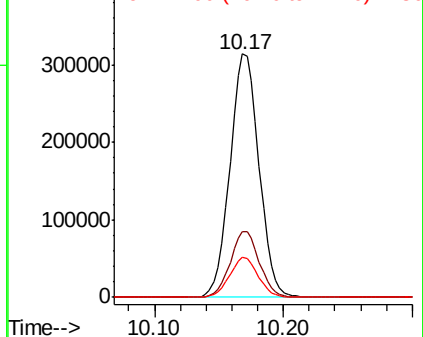
77 16.0 12.1 18.1



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

Ion 77.00 (76.70 to 77.70): V



#58

1,1,2,2-Tetrachloroethane

Concen: 55.080 ug/L

RT: 10.46 min Scan# 3070

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

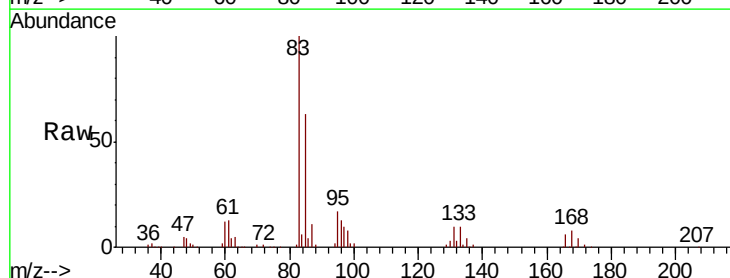
Tgt Ion: 83 Resp: 180250

Ion Ratio Lower Upper

83 100

85 63.4 44.5 82.7

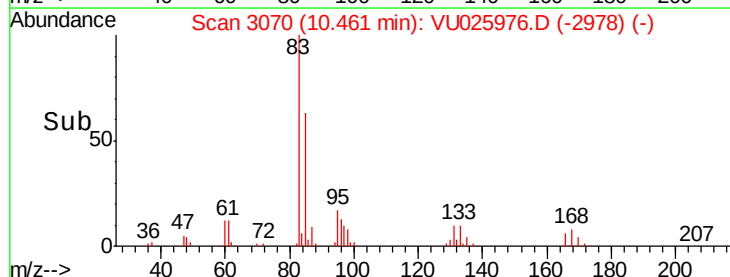
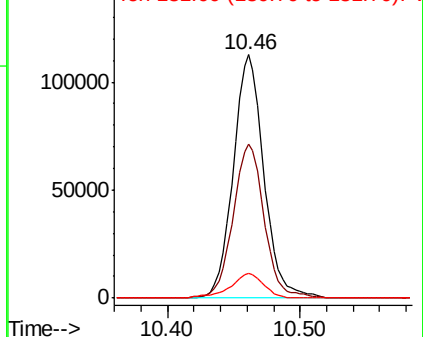
131 10.1 8.6 12.8

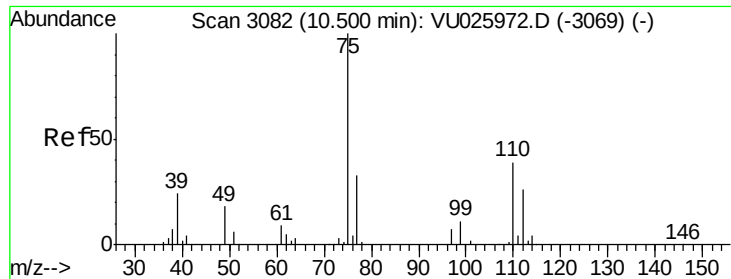


Abundance Ion 83.00 (82.70 to 83.70): V

Ion 85.00 (84.70 to 85.70): V

Ion 131.00 (130.70 to 131.70): V

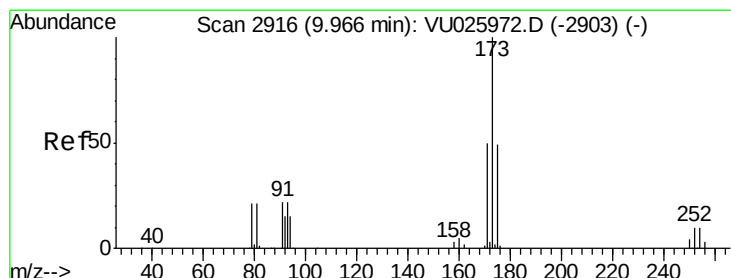
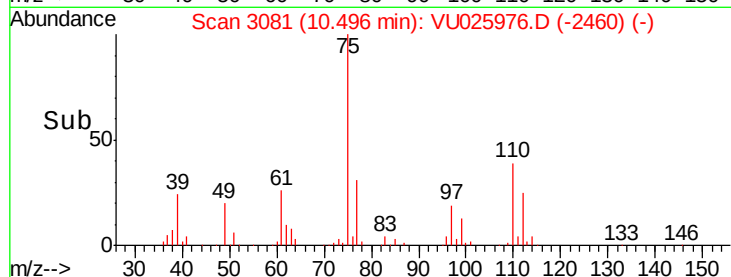
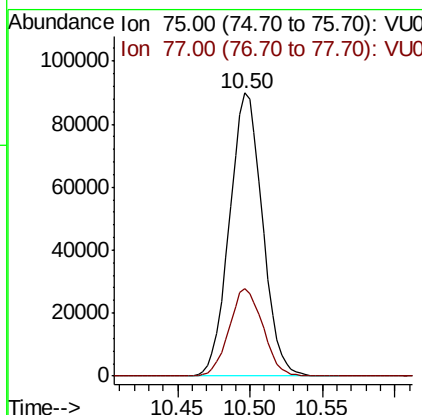
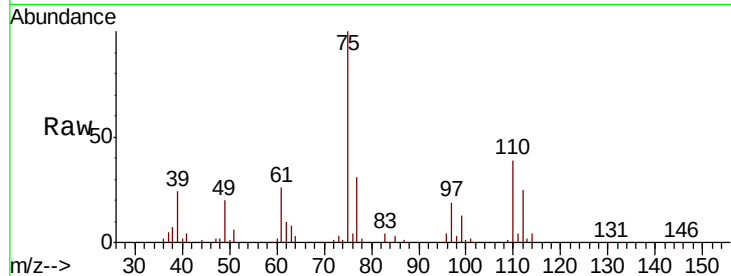




#59  
 1,2,3-Trichloropropane  
 Concen: 54.626 ug/L  
 RT: 10.50 min Scan# 3081  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

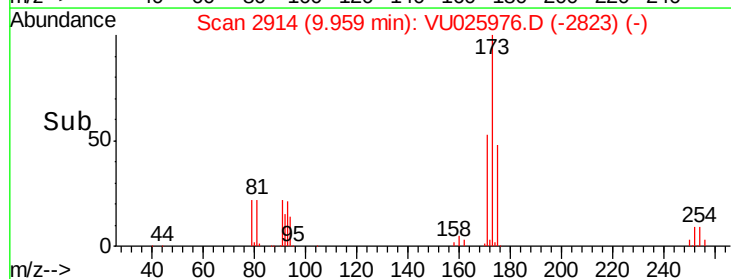
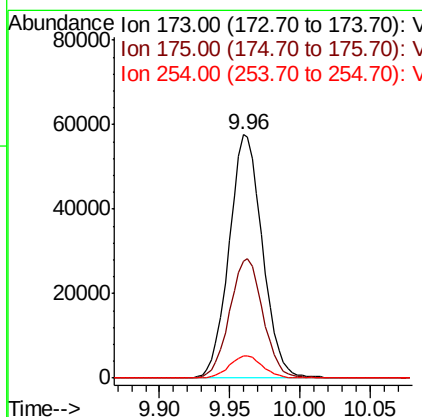
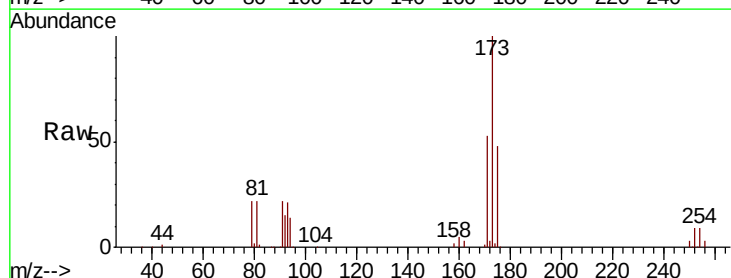
Instrument :  
 MSVOA\_U  
 ClientSampled :

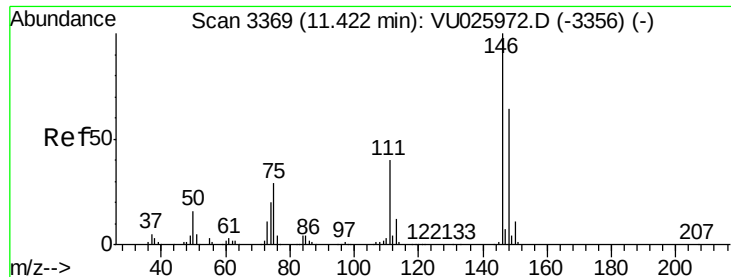
Tot Ion: 75 Resp: 141677  
 Ion Ratio Lower Upper  
 75 100  
 77 31.6 25.5 38.3



#61  
 Bromoform  
 Concen: 56.266 ug/L  
 RT: 9.96 min Scan# 2914  
 Delta R.T. -0.01 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

Tgt Ion:173 Resp: 95506  
 Ion Ratio Lower Upper  
 173 100  
 175 49.1 38.8 58.2  
 254 9.1 8.0 12.0





#62

1,3-Dichlorobenzene

Concen: 51.509 ug/L

RT: 11.42 min Scan# 3368

Delta R.T. -0.00 min

Lab File: VU025976.D

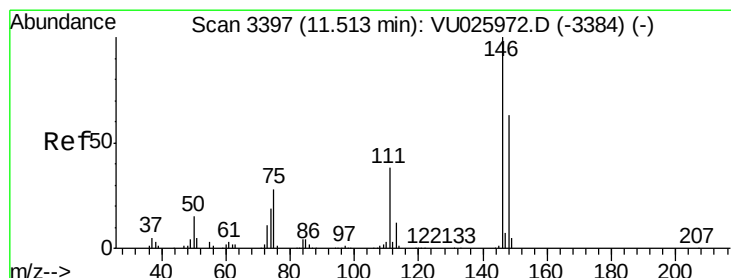
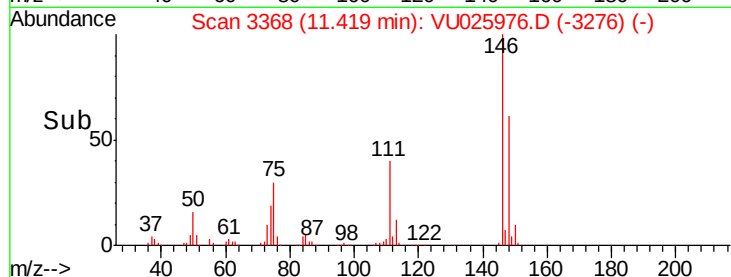
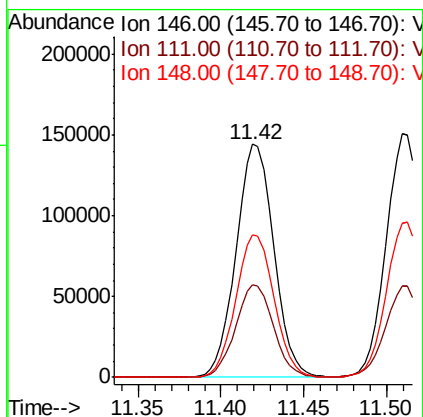
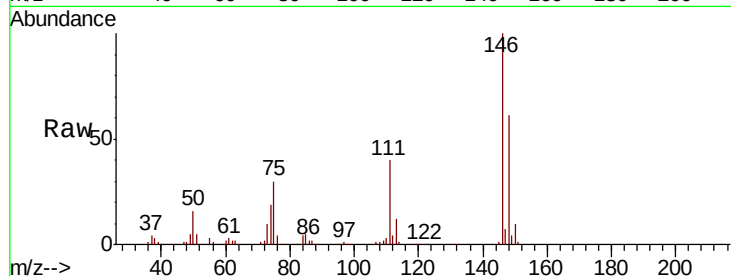
Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampleId :

|             |       |        |      |
|-------------|-------|--------|------|
| Tot Ion:146 | Resp: | 229063 |      |
| Ion Ratio   | Lower | Upper  |      |
| 146         | 100   |        |      |
| 111         | 39.8  | 27.5   | 51.1 |
| 148         | 61.4  | 44.6   | 82.8 |



#63

1,4-Dichlorobenzene

Concen: 51.126 ug/L

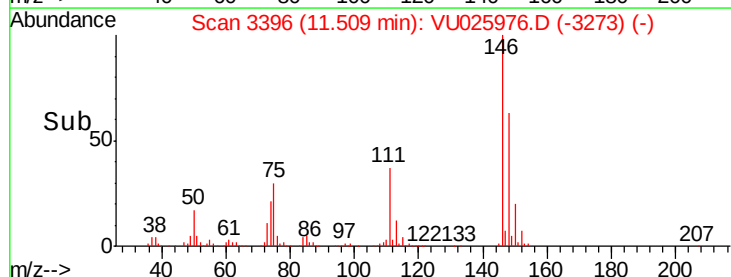
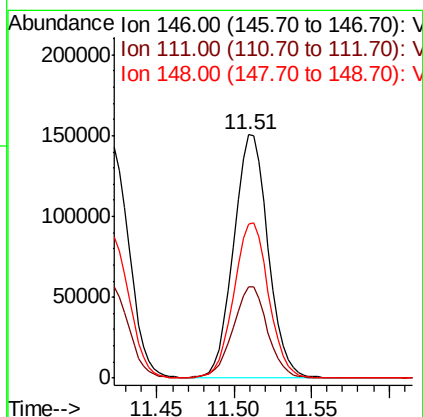
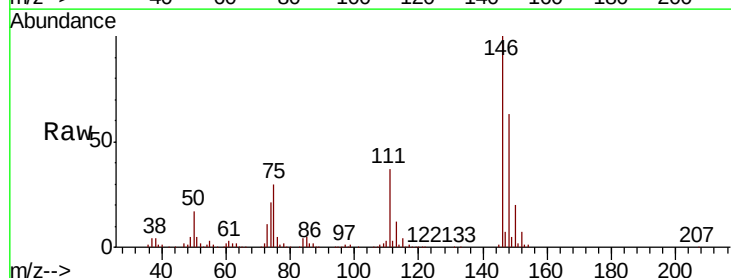
RT: 11.51 min Scan# 3396

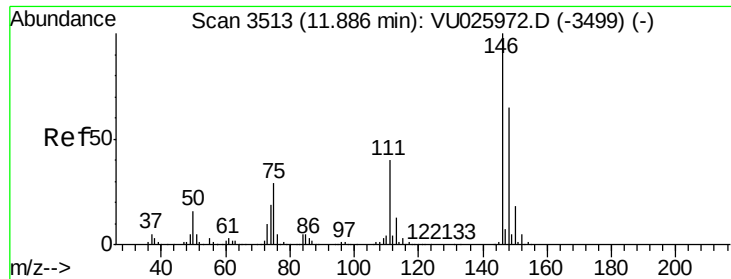
Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

|             |              |
|-------------|--------------|
| Tgt Ion:146 | Resp: 231633 |
| Ion Ratio   | Lower Upper  |
| 146 100     |              |
| 111 37.4    | 26.7 49.7    |
| 148 63.5    | 45.2 84.0    |





#65

1,2-Dichlorobenzene

Concen: 54.118 ug/L

RT: 11.88 min Scan# 3512

Delta R.T. -0.00 min

Lab File: VU025976.D

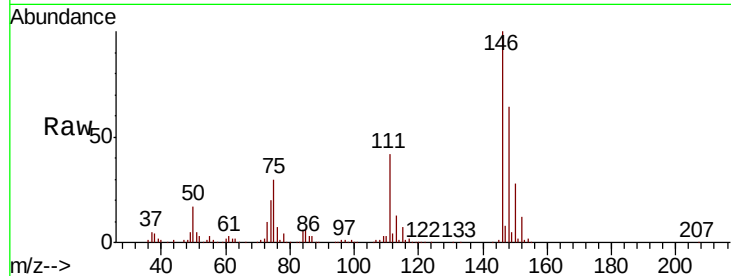
Acq: 08 Aug 2018 16:38

Instrument :

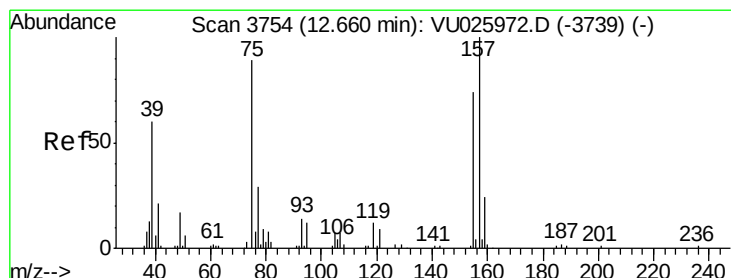
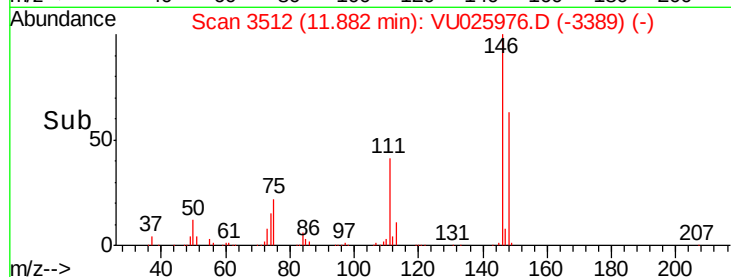
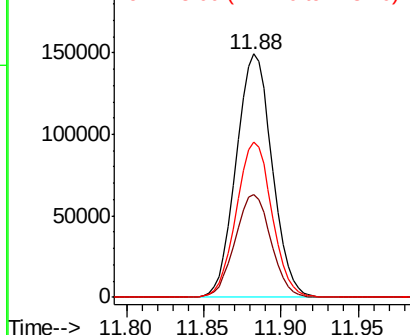
MSVOA\_U

ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 146   | Resp: | 241314 |
| Ion      | Ratio | Lower | Upper  |
| 146      | 100   |       |        |
| 111      | 42.2  | 33.4  | 50.0   |
| 148      | 63.7  | 51.8  | 77.8   |



Abundance Ion 146.00 (145.70 to 146.70): V  
 200000 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V



#66

1,2-Dibromo-3-chloropropane

Concen: 57.302 ug/L

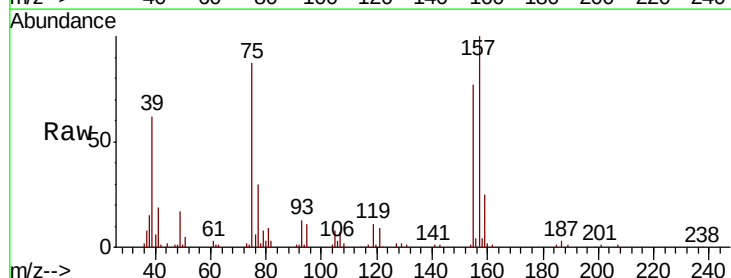
RT: 12.66 min Scan# 3754

Delta R.T. -0.00 min

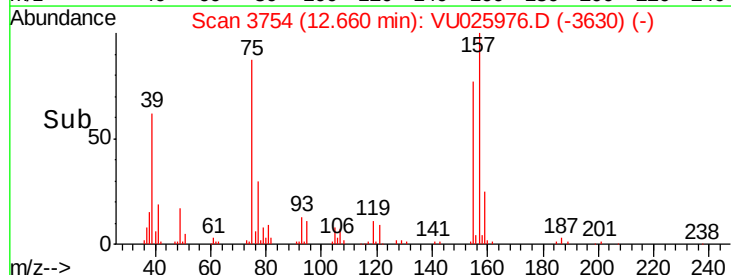
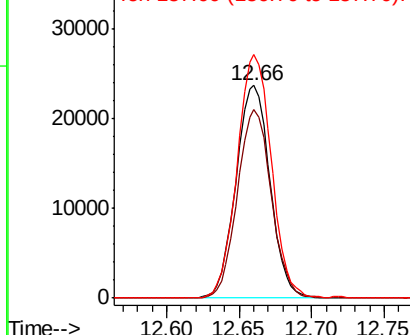
Lab File: VU025976.D

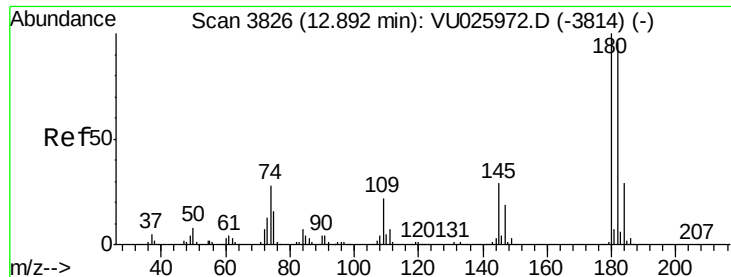
Acq: 08 Aug 2018 16:38

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 75    | Resp: | 38830 |
| Ion      | Ratio | Lower | Upper |
| 75       | 100   |       |       |
| 155      | 88.6  | 71.4  | 107.2 |
| 157      | 114.5 | 92.0  | 138.0 |



Abundance Ion 75.00 (74.70 to 75.70): VU0  
 Ion 155.00 (154.70 to 155.70): V  
 Ion 157.00 (156.70 to 157.70): V

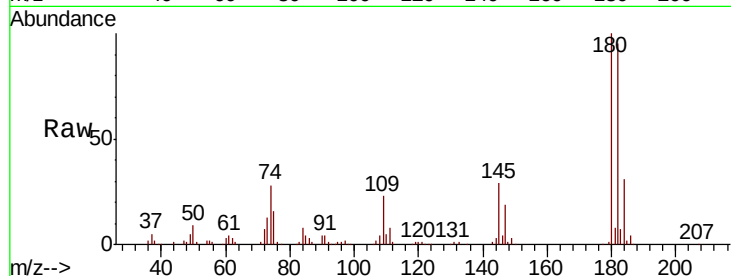




#67  
 1,3,5-Trichlorobenzene  
 Concen: 53.066 ug/L  
 RT: 12.89 min Scan# 3826  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

Instrument :  
 MSVOA\_U  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 96.4  | 77.8  | 116.6 |
| 184     | 30.5  | 24.6  | 37.0  |
| 145     | 28.6  | 23.4  | 35.0  |



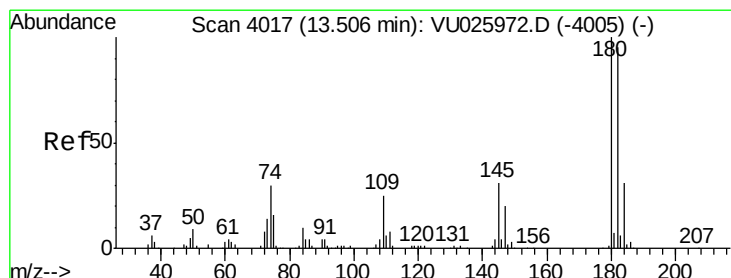
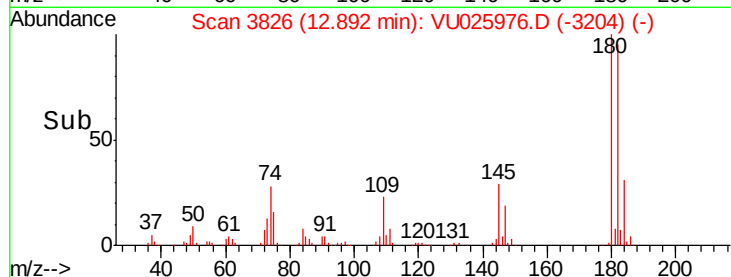
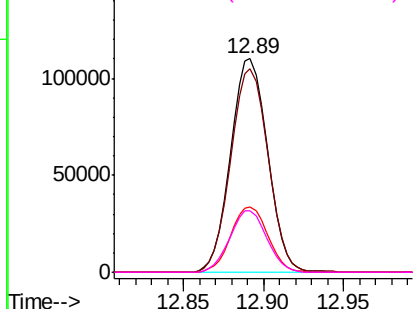
Abundance

Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

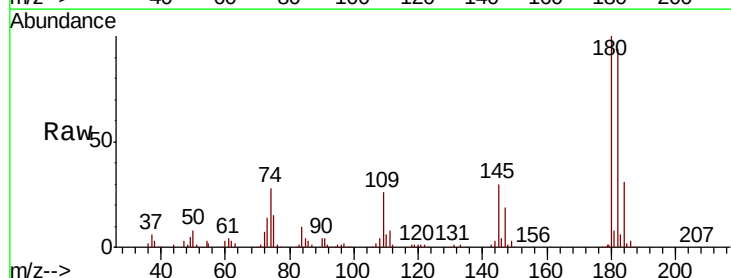
Ion 184.00 (183.70 to 184.70): V

Ion 145.00 (144.70 to 145.70): V



#68  
 1,2,4-trichlorobenzene  
 Concen: 48.578 ug/L  
 RT: 13.51 min Scan# 4017  
 Delta R.T. -0.00 min  
 Lab File: VU025976.D  
 Acq: 08 Aug 2018 16:38

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 95.7  | 75.3  | 112.9 |
| 145     | 29.8  | 23.1  | 34.7  |

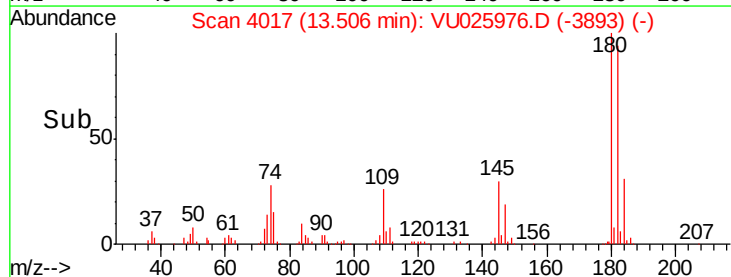
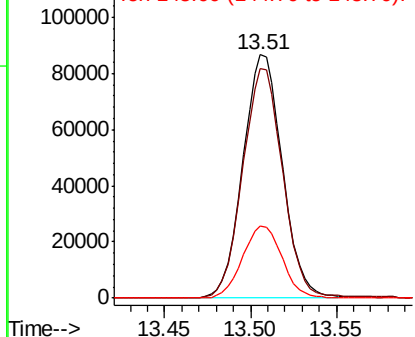


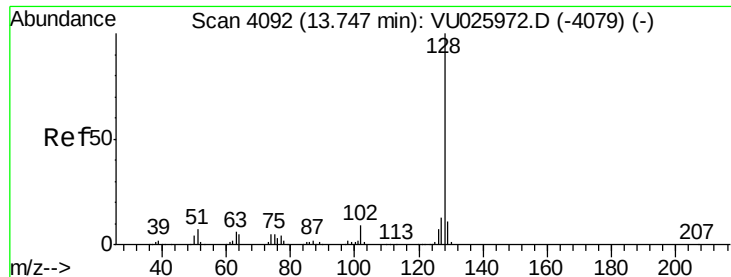
Abundance

Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V





#69

Naphthalene

Concen: 49.498 ug/L

RT: 13.75 min Scan# 4092

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

Instrument :

MSVOA\_U

ClientSampleId :

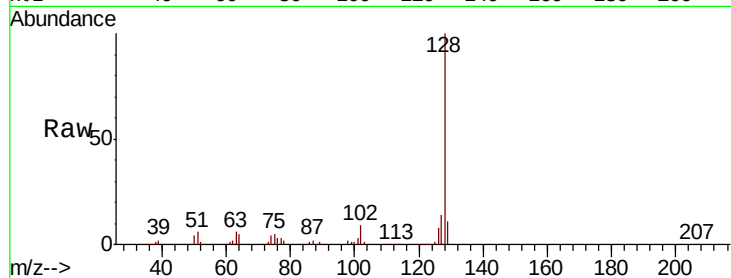
Tot Ion:128 Resp: 413691

Ion Ratio Lower Upper

128 100

127 13.0 9.8 14.8

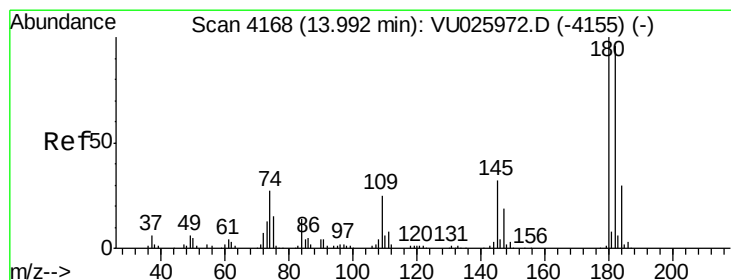
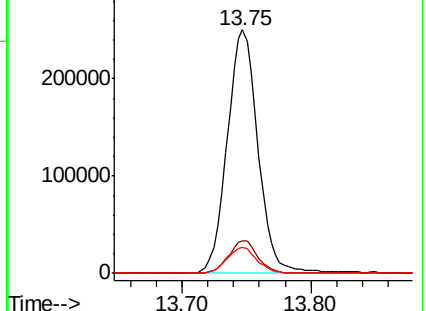
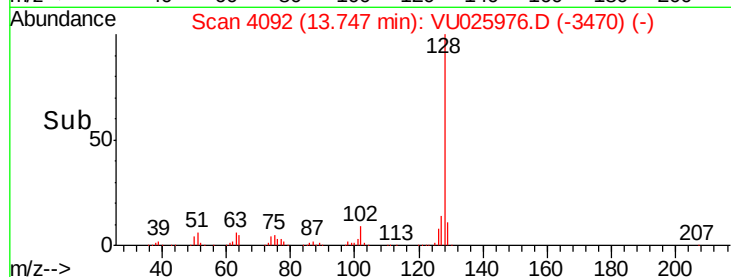
129 10.6 8.5 12.7



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 127.00 (126.70 to 127.70): V

Ion 129.00 (128.70 to 129.70): V



#70

1,2,3-Trichlorobenzene

Concen: 51.152 ug/L

RT: 13.99 min Scan# 4168

Delta R.T. -0.00 min

Lab File: VU025976.D

Acq: 08 Aug 2018 16:38

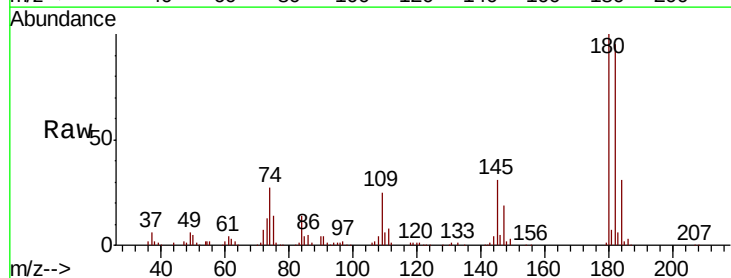
Tgt Ion:180 Resp: 149048

Ion Ratio Lower Upper

180 100

182 94.3 77.6 116.4

145 31.0 25.3 37.9



Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V

