

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU063018\  
 Data File : VU025104.D  
 Acq On : 30 Jun 2018 21:39  
 Operator : MD/SY  
 Sample : J3759-17  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 27 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 DUP-0475-180626

Quant Time: Jul 02 10:02:45 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\82U061318W.M  
 Quant Title : SW846 8260  
 QLast Update : Wed Jun 13 13:55:26 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 4.99  | 168  | 217402   | 50.00 | ug/l  | 0.00     |
| 34) 1,4-Difluorobenzene    | 5.89  | 114  | 323855   | 50.00 | ug/l  | 0.00     |
| 63) Chlorobenzene-d5       | 9.09  | 117  | 305015   | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 11.49 | 152  | 157177   | 50.00 | ug/l  | 0.00     |

| System Monitoring Compounds | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-----------------------------|-------|------|----------|-------|--------|----------|
| 33) 1,2-Dichloroethane-d4   | 5.31  | 65   | 165669   | 46.68 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 93.36% |          |
| 35) Dibromofluoromethane    | 4.89  | 113  | 128596   | 47.85 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 95.70% |          |
| 50) Toluene-d8              | 7.57  | 98   | 471673   | 48.11 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 96.22% |          |
| 62) 4-Bromofluorobenzene    | 10.31 | 95   | 174809   | 44.91 | ug/l   | 0.00     |
| Spiked Amount               |       |      | Recovery | =     | 89.82% |          |

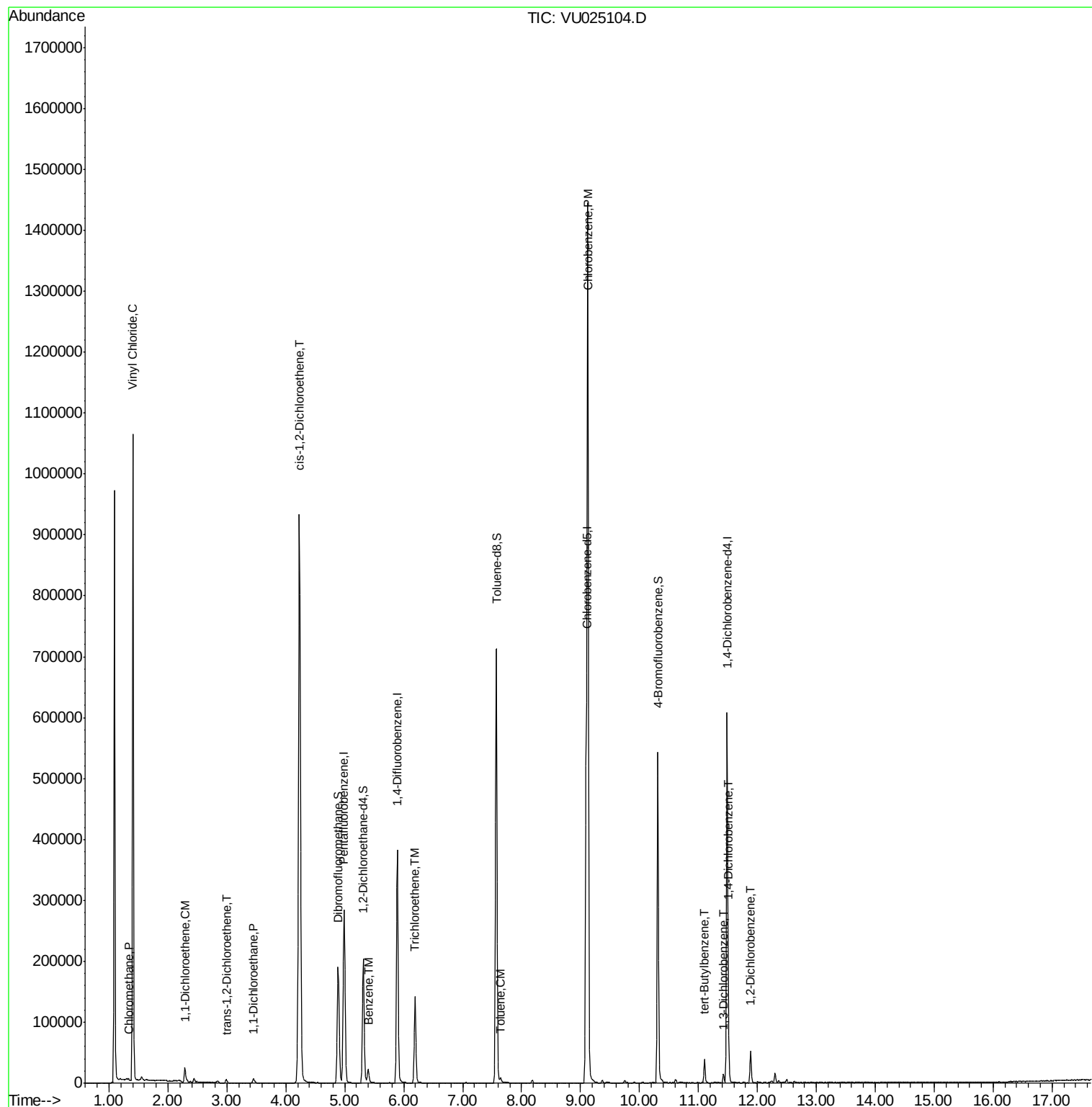
| Target Compounds             | R.T.  | QIon | Response | Conc   | Units | Qvalue |
|------------------------------|-------|------|----------|--------|-------|--------|
| 3) Chloromethane             | 1.33  | 50   | 1827     | 0.66   | ug/l  | 91     |
| 4) Vinyl Chloride            | 1.40  | 62   | 665838   | 232.24 | ug/l  | 98     |
| 12) 1,1-Dichloroethene       | 2.29  | 96   | 8279     | 3.34   | ug/l  | 93     |
| 21) trans-1,2-Dichloroethene | 2.99  | 96   | 2350     | 0.86   | ug/l  | 98     |
| 24) 1,1-Dichloroethane       | 3.45  | 63   | 7972     | 1.52   | ug/l  | 99     |
| 27) cis-1,2-Dichloroethene   | 4.23  | 96   | 520081   | 165.92 | ug/l  | 89     |
| 40) Benzene                  | 5.40  | 78   | 19596    | 1.81   | ug/l  | 99     |
| 44) Trichloroethene          | 6.19  | 130  | 49445    | 16.02  | ug/l  | 98     |
| 52) Toluene                  | 7.64  | 92   | 3249     | 0.47   | ug/l  | 97     |
| 65) Chlorobenzene            | 9.12  | 112  | 756194   | 97.05  | ug/l  | 99     |
| 83) tert-Butylbenzene        | 11.10 | 119  | 18219    | 1.81   | ug/l  | 90     |
| 87) 1,3-Dichlorobenzene      | 11.42 | 146  | 6280     | 1.11   | ug/l  | 93     |
| 88) 1,4-Dichlorobenzene      | 11.51 | 146  | 13148    | 2.31   | ug/l  | 88     |
| 91) 1,2-Dichlorobenzene      | 11.89 | 146  | 21768    | 3.85   | ug/l  | 96     |

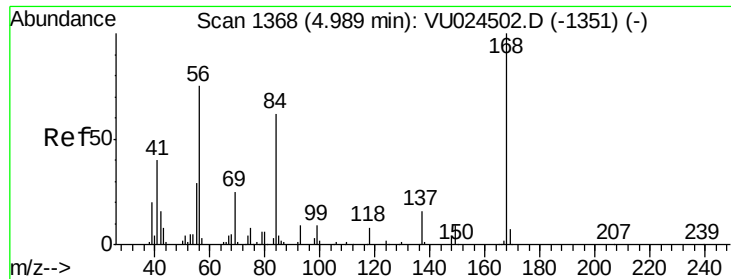
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Jul 02 10:02:45 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA\_U\METHOD\82U061318W.M  
Quant Title : SW846 8260  
QLast Update : Wed Jun 13 13:55:26 2018  
Response via : Initial Calibration





#1

Pentafluorobenzene

Concen: 50.00 ug/l

RT: 4.99 min Scan# 1368

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

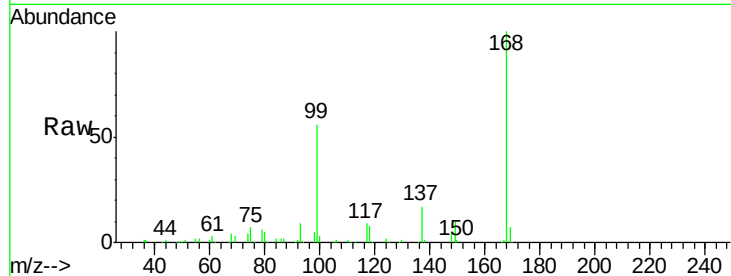
DUP-0475-180626

Tot Ion:168 Resp: 217402

Ion Ratio Lower Upper

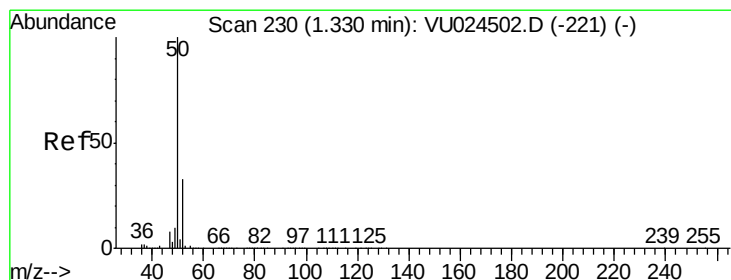
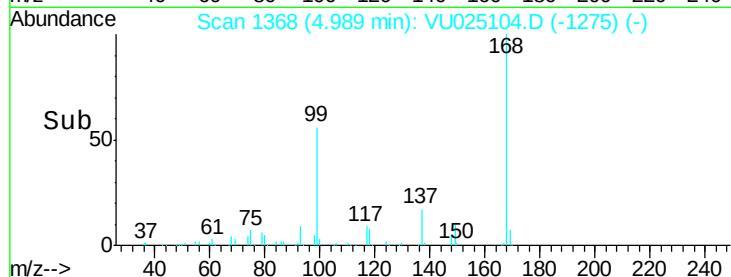
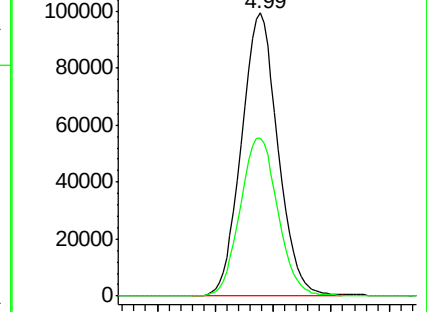
168 100

99 56.0 43.2 64.8



Abundance Ion 167.90 (167.60 to 168.60): VU024502.D

Ion 98.90 (98.60 to 99.60): VU024502.D



#3

Chloromethane

Concen: 0.66 ug/l

RT: 1.33 min Scan# 230

Delta R.T. -0.00 min

Lab File: VU025104.D

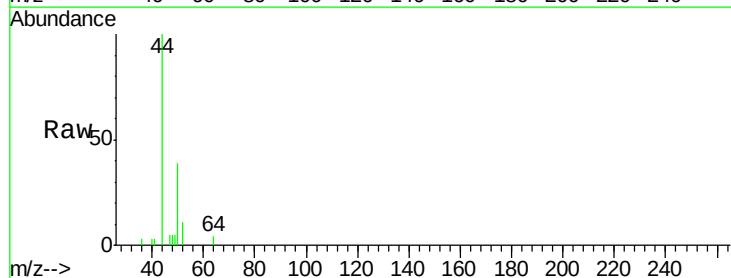
Acq: 30 Jun 2018 21:39

Tgt Ion: 50 Resp: 1827

Ion Ratio Lower Upper

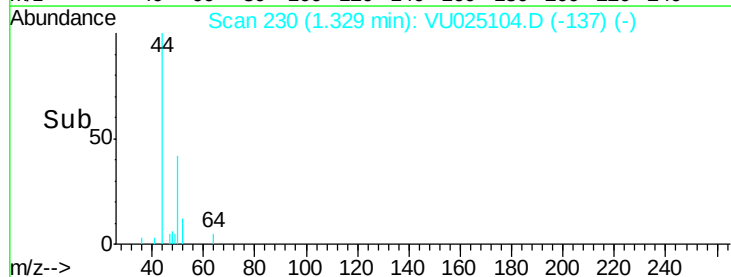
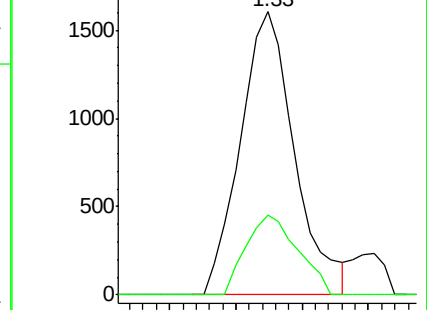
50 100

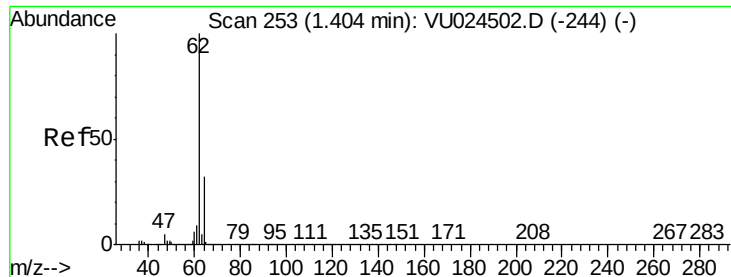
52 28.1 26.4 39.6



Abundance Ion 49.90 (49.60 to 50.60): VU024502.D

Ion 51.90 (51.60 to 52.60): VU024502.D





#4

Vinyl Chloride

Concen: 232.24 ug/l

RT: 1.40 min Scan# 253

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

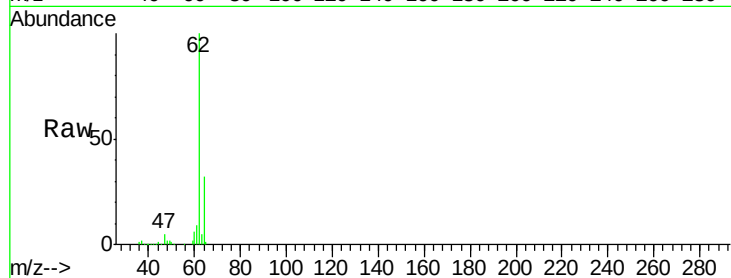
DUP-0475-180626

Tot Ion: 62 Resp: 665838

Ion Ratio Lower Upper

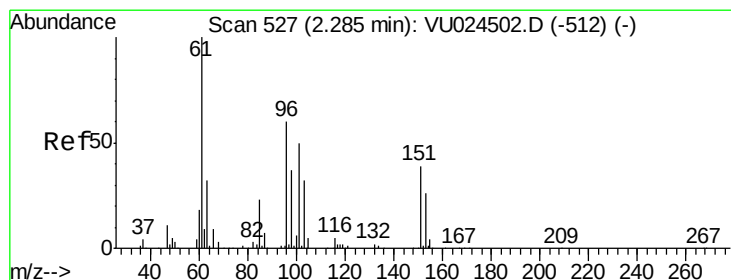
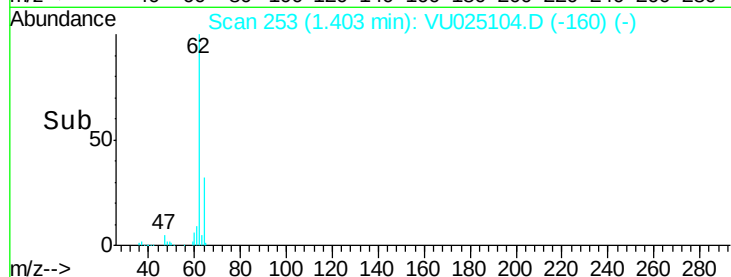
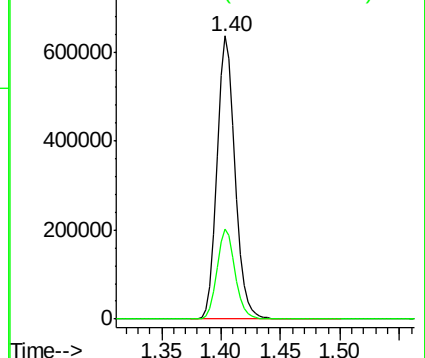
62 100

64 31.9 24.8 37.2



Abundance Ion 61.90 (61.60 to 62.60): VU0

Ion 63.90 (63.60 to 64.60): VU0



#12

1,1-Dichloroethene

Concen: 3.34 ug/l

RT: 2.29 min Scan# 528

Delta R.T. 0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

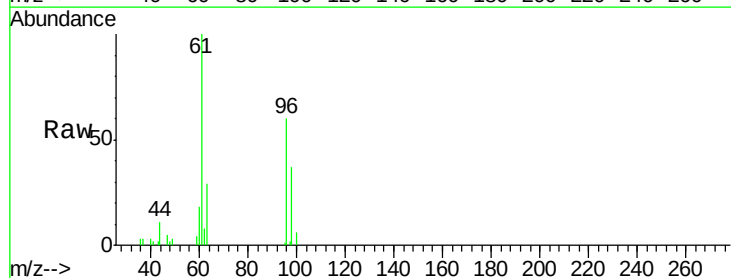
Tgt Ion: 96 Resp: 8279

Ion Ratio Lower Upper

96 100

61 165.6 141.7 212.5

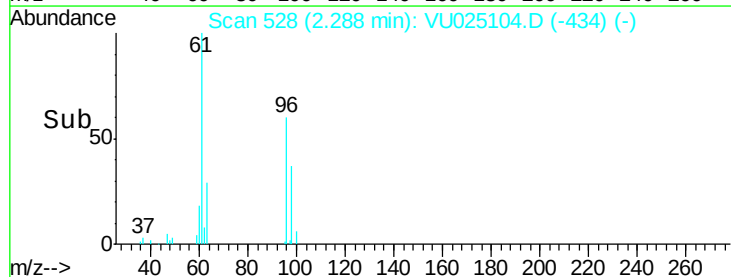
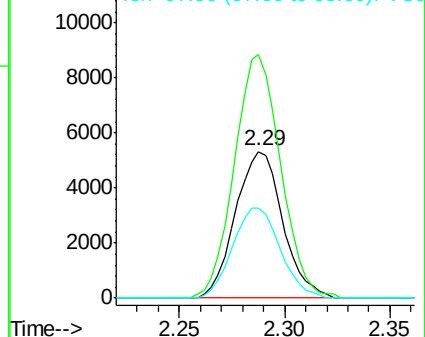
98 61.6 51.6 77.4

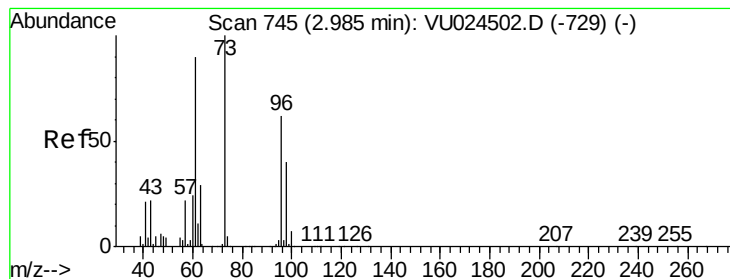


Abundance Ion 95.90 (95.60 to 96.60): VU0

Ion 60.90 (60.60 to 61.60): VU0

Ion 97.90 (97.60 to 98.60): VU0





#21

trans-1,2-Dichloroethene

Concen: 0.86 ug/l

RT: 2.99 min Scan# 745

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

DUP-0475-180626

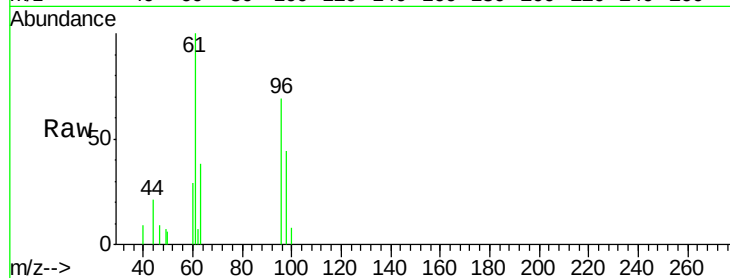
Tot Ion: 96 Resp: 2350

Ion Ratio Lower Upper

96 100

61 145.4 119.4 179.0

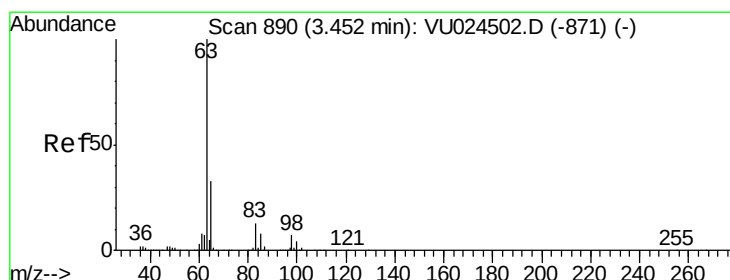
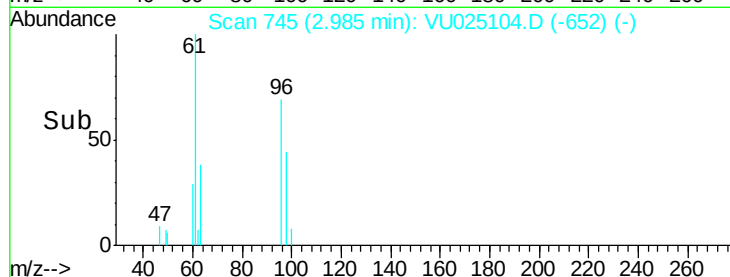
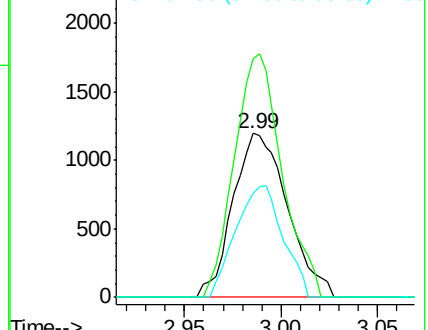
98 63.3 51.1 76.7



Abundance Ion 95.90 (95.60 to 96.60): VU0

Ion 60.90 (60.60 to 61.60): VU0

Ion 97.90 (97.60 to 98.60): VU0



#24

1,1-Dichloroethane

Concen: 1.52 ug/l

RT: 3.45 min Scan# 890

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

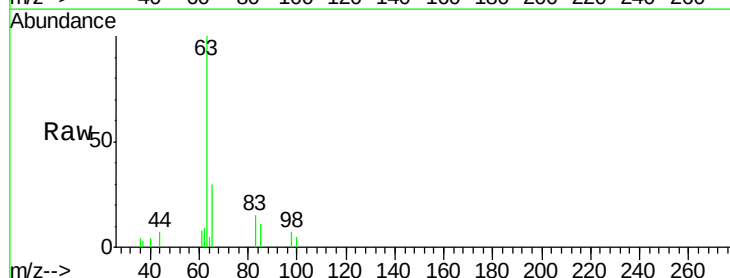
Tgt Ion: 63 Resp: 7972

Ion Ratio Lower Upper

63 100

98 6.9 3.5 10.4

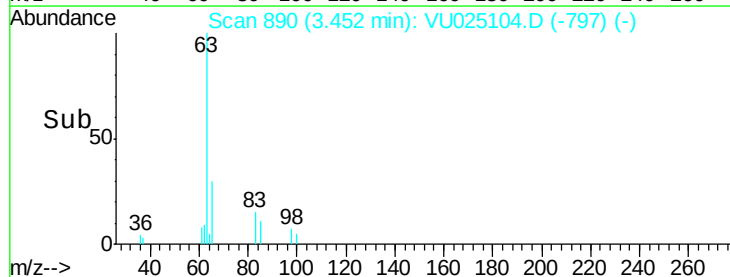
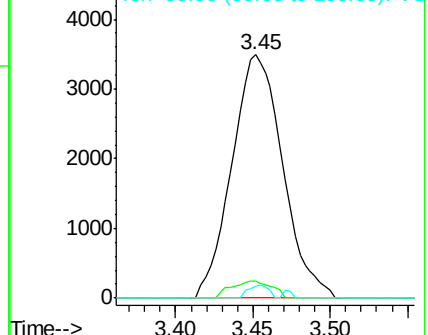
100 5.0 1.8 5.5

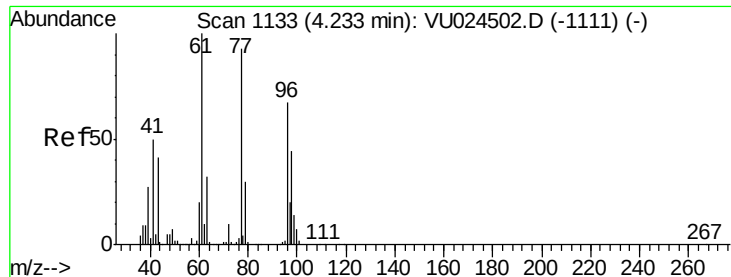


Abundance Ion 62.90 (62.60 to 63.60): VU0

Ion 97.90 (97.60 to 98.60): VU0

Ion 99.90 (99.60 to 100.60): VU0





#27

cis-1,2-Dichloroethene

Concen: 165.92 ug/l

RT: 4.23 min Scan# 1133

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

DUP-0475-180626

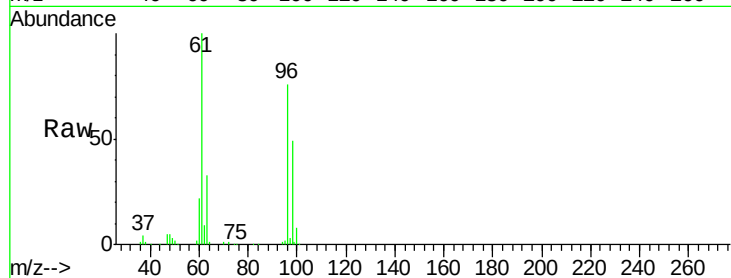
Tot Ion: 96 Resp: 520081

Ion Ratio Lower Upper

96 100

61 133.2 0.0 306.6

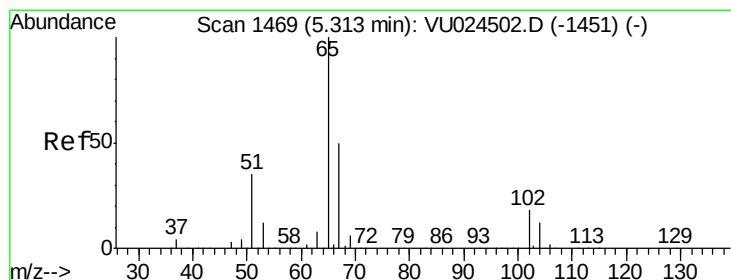
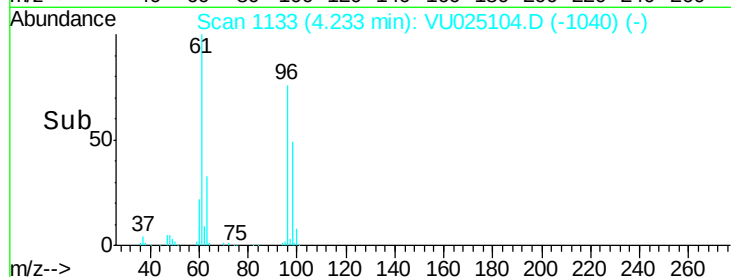
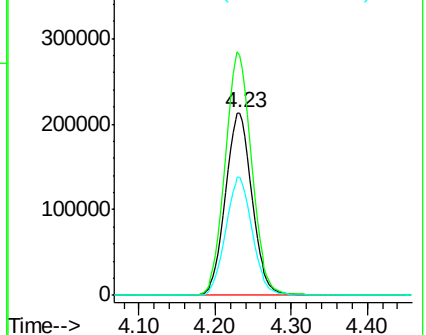
98 64.6 0.0 128.8



Abundance Ion 95.90 (95.60 to 96.60): VU0

Ion 60.90 (60.60 to 61.60): VU0

Ion 97.90 (97.60 to 98.60): VU0



#33

1,2-Dichloroethane-d4

Concen: 46.68 ug/l

RT: 5.31 min Scan# 1469

Delta R.T. -0.00 min

Lab File: VU025104.D

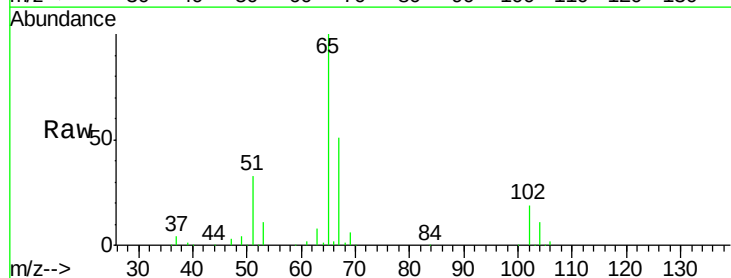
Acq: 30 Jun 2018 21:39

Tgt Ion: 65 Resp: 165669

Ion Ratio Lower Upper

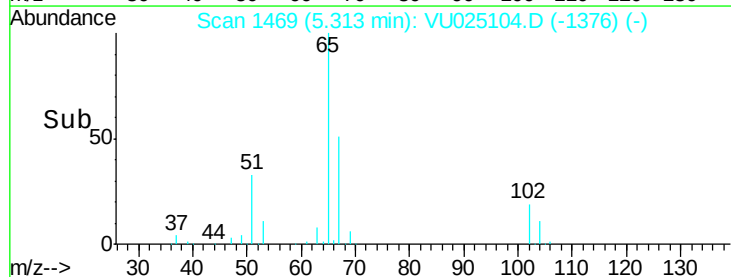
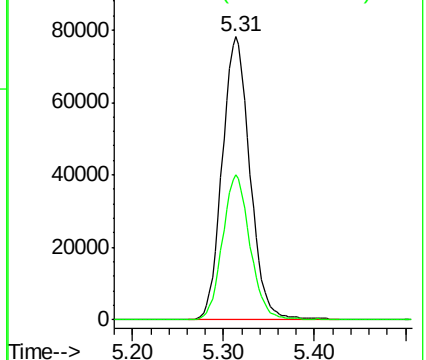
65 100

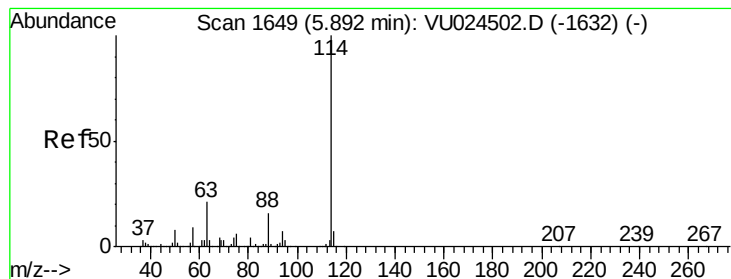
67 50.7 0.0 107.0



Abundance Ion 64.90 (64.60 to 65.60): VU0

Ion 66.90 (66.60 to 67.60): VU0





#34

1,4-Difluorobenzene

Concen: 50.00 ug/l

RT: 5.89 min Scan# 1649

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

DUP-0475-180626

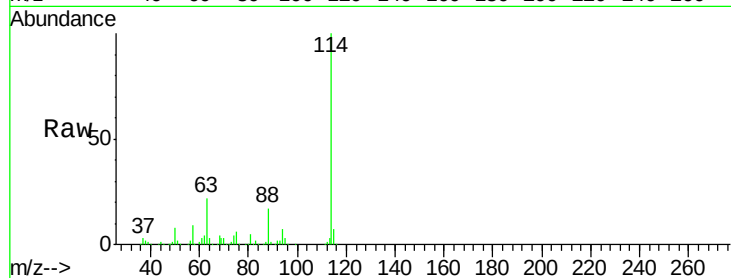
Tot Ion:114 Resp: 323855

Ion Ratio Lower Upper

114 100

63 21.8 0.0 45.4

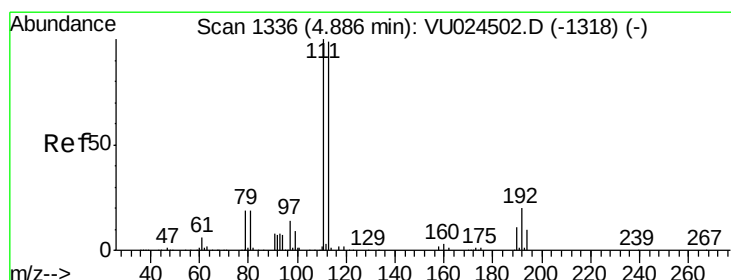
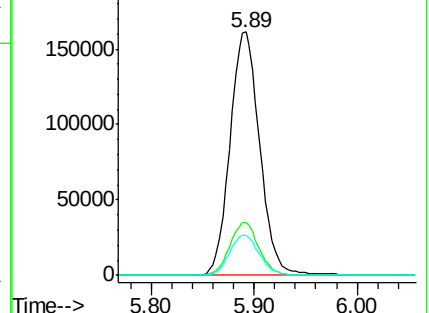
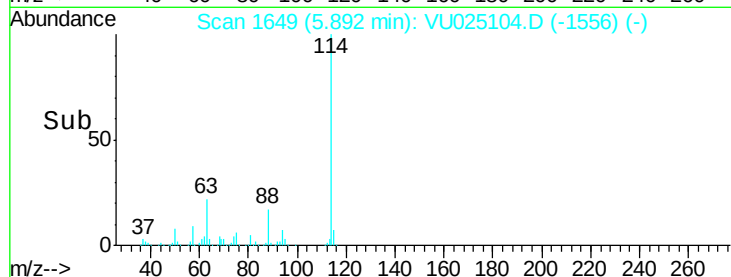
88 16.6 0.0 31.0



Abundance Ion 113.90 (113.60 to 114.60): V

Ion 63.00 (62.70 to 63.70): VU0

Ion 87.90 (87.60 to 88.60): VU0



#35

Dibromofluoromethane

Concen: 47.85 ug/l

RT: 4.89 min Scan# 1337

Delta R.T. 0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

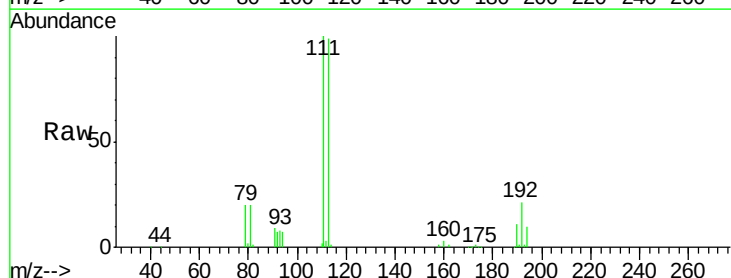
Tgt Ion:113 Resp: 128596

Ion Ratio Lower Upper

113 100

111 102.6 82.2 123.4

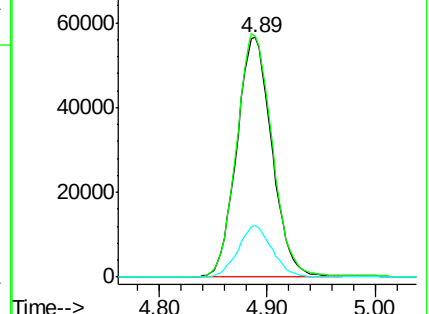
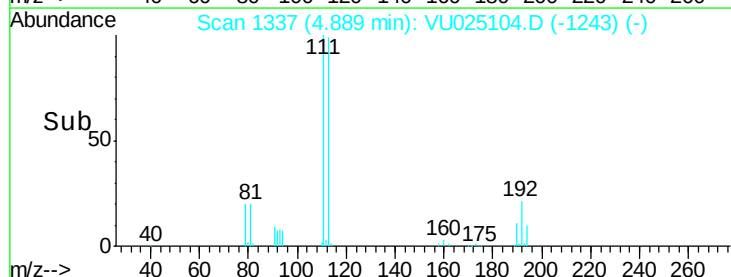
192 20.8 16.2 24.4

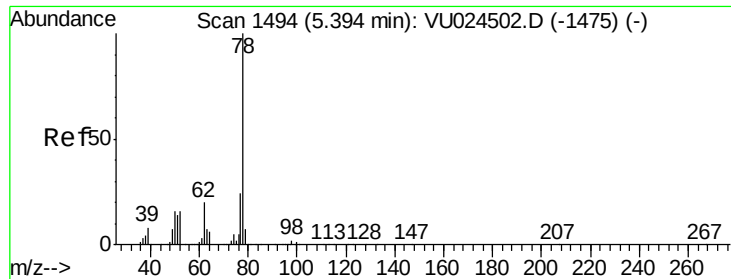


Abundance Ion 112.80 (112.50 to 113.50): V

Ion 110.80 (110.50 to 111.50): V

Ion 191.70 (191.40 to 192.40): V





#40

Benzene

Concen: 1.81 ug/l

RT: 5.40 min Scan# 1495

Delta R.T. 0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

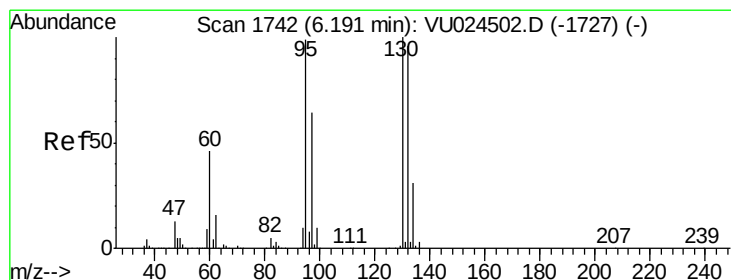
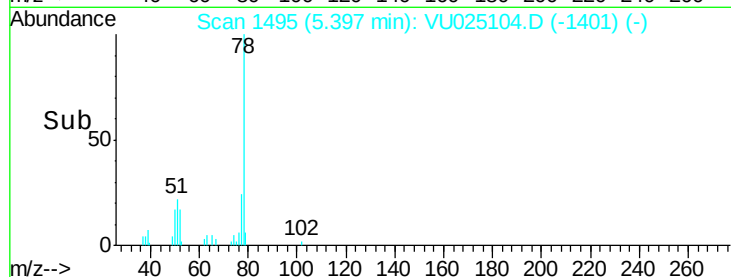
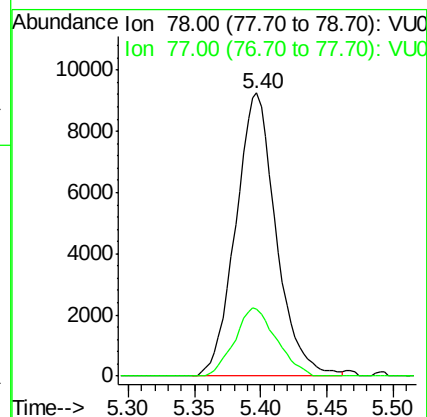
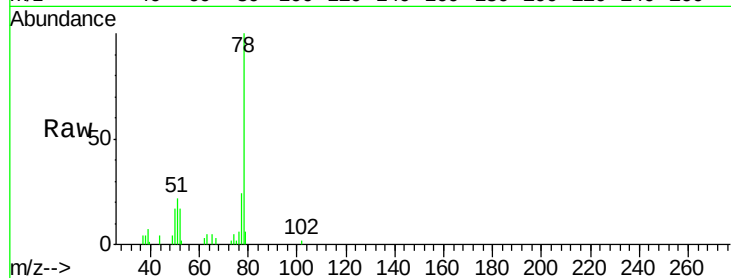
DUP-0475-180626

Tot Ion: 78 Resp: 19596

Ion Ratio Lower Upper

78 100

77 23.6 19.2 28.8



#44

Trichloroethene

Concen: 16.02 ug/l

RT: 6.19 min Scan# 1742

Delta R.T. -0.00 min

Lab File: VU025104.D

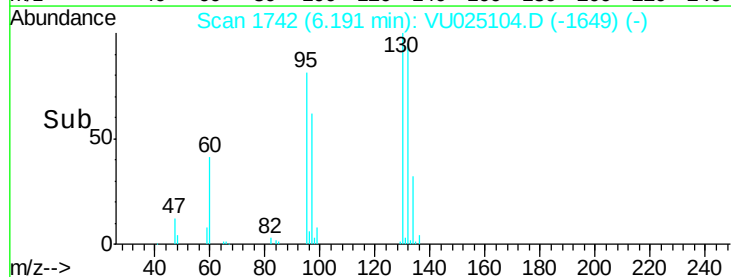
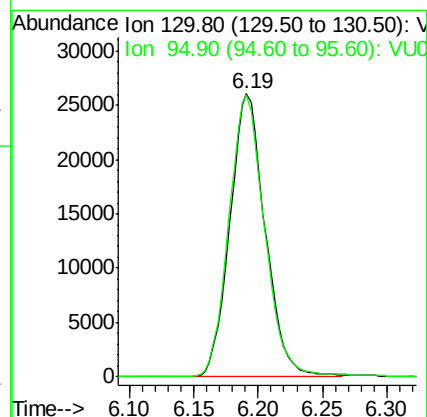
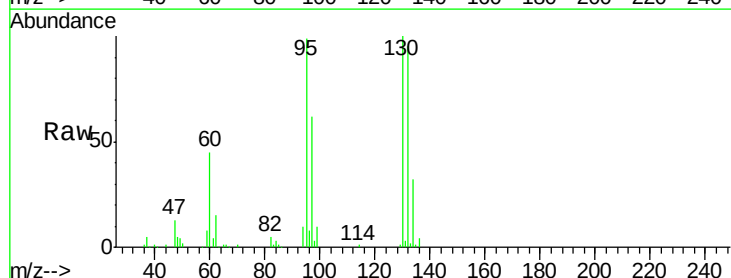
Acq: 30 Jun 2018 21:39

Tgt Ion: 130 Resp: 49445

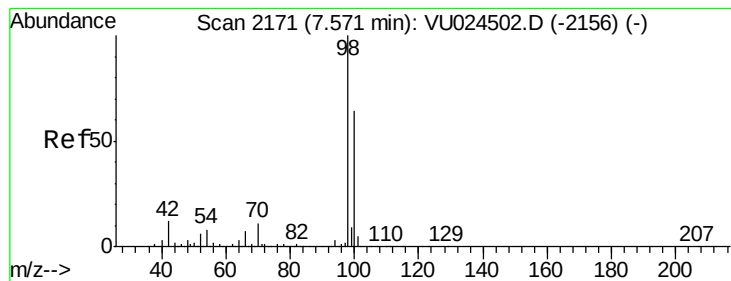
Ion Ratio Lower Upper

130 100

95 99.5 0.0 202.4







#50

Toluene-d8

Concen: 48.11 ug/l

RT: 7.57 min Scan# 2171

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

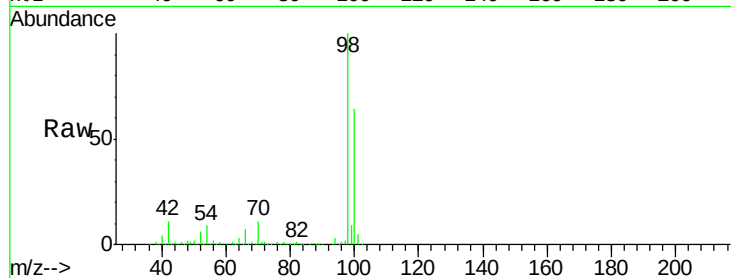
DUP-0475-180626

Tot Ion: 98 Resp: 471673

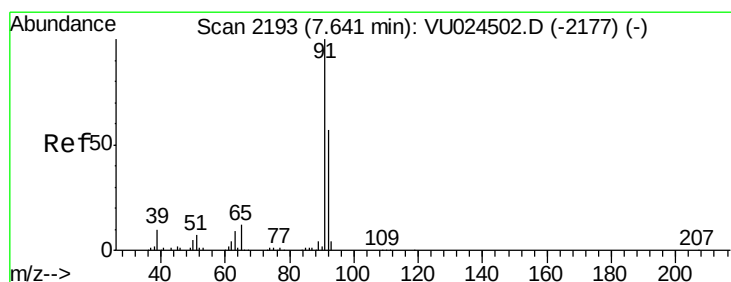
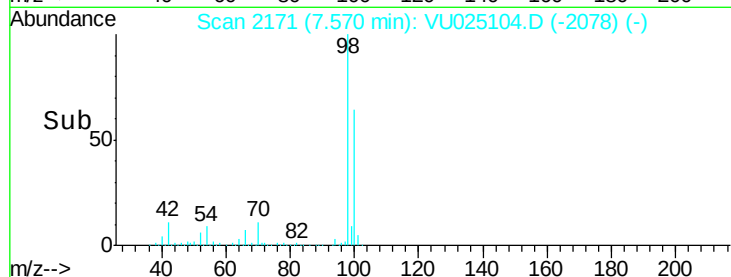
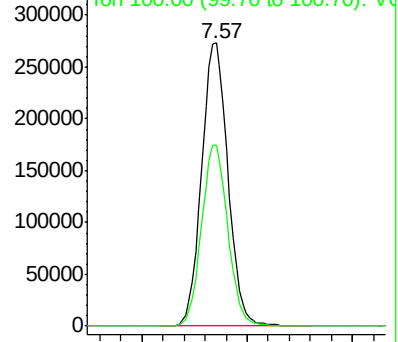
Ion Ratio Lower Upper

98 100

100 63.9 51.1 76.7



Abundance Ion 98.00 (97.70 to 98.70): VU024502.D (-2156) (-)



#52

Toluene

Concen: 0.47 ug/l

RT: 7.64 min Scan# 2194

Delta R.T. 0.00 min

Lab File: VU025104.D

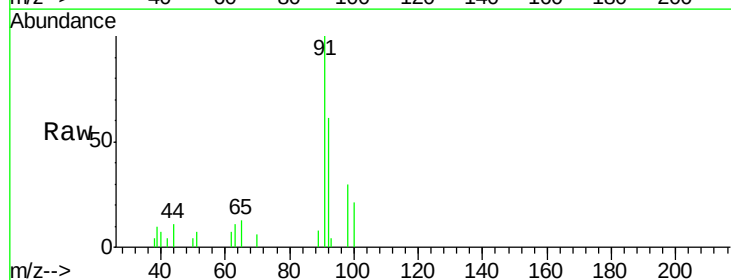
Acq: 30 Jun 2018 21:39

Tgt Ion: 92 Resp: 3249

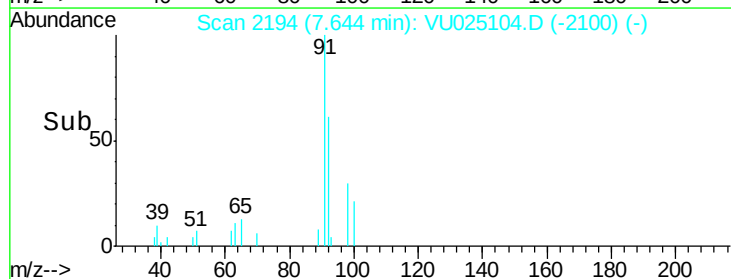
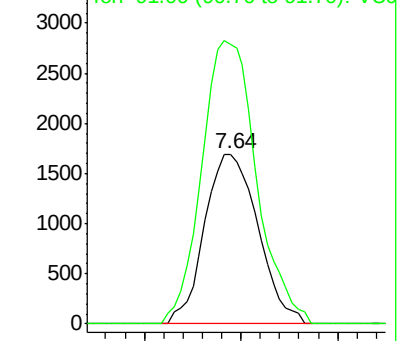
Ion Ratio Lower Upper

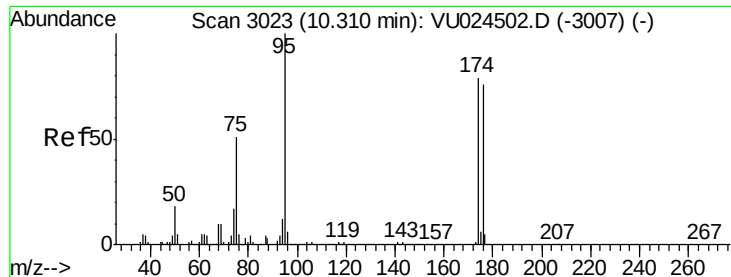
92 100

91 171.5 140.5 210.7



Abundance Ion 92.00 (91.70 to 92.70): VU024502.D (-2177) (-)





#62

4-Bromofluorobenzene

Concen: 44.91 ug/l

RT: 10.31 min Scan# 3023

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

DUP-0475-180626

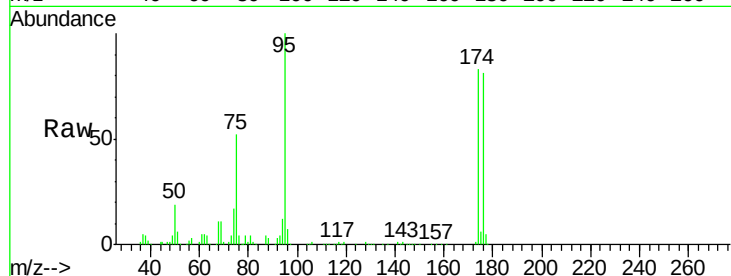
Tot Ion: 95 Resp: 174809

Ion Ratio Lower Upper

95 100

174 84.9 0.0 165.8

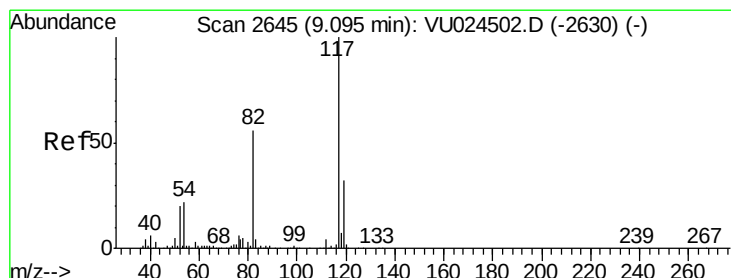
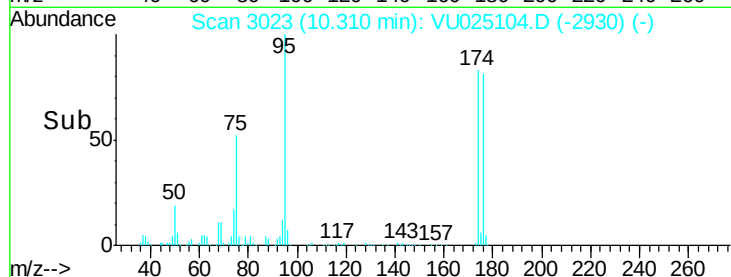
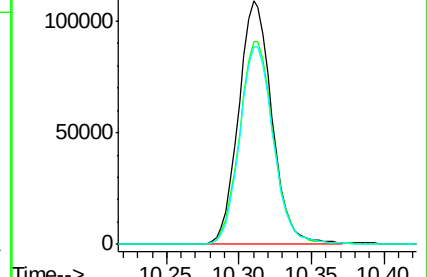
176 81.8 0.0 159.4



Abundance Ion 94.90 (94.60 to 95.60): VU025104.D (-2930) (-)

Ion 173.80 (173.50 to 174.50): VU025104.D (-2930) (-)

Ion 175.80 (175.50 to 176.50): VU025104.D (-2930) (-)



#63

Chlorobenzene-d5

Concen: 50.00 ug/l

RT: 9.09 min Scan# 2645

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

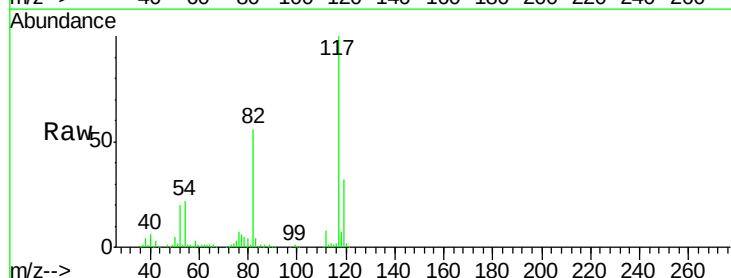
Tgt Ion: 117 Resp: 305015

Ion Ratio Lower Upper

117 100

82 56.0 44.3 66.5

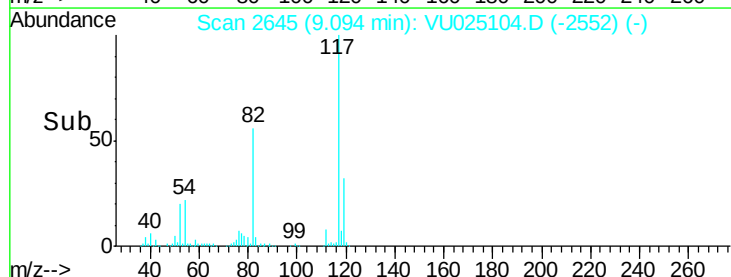
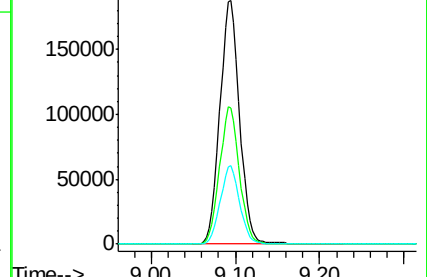
119 32.0 25.4 38.2

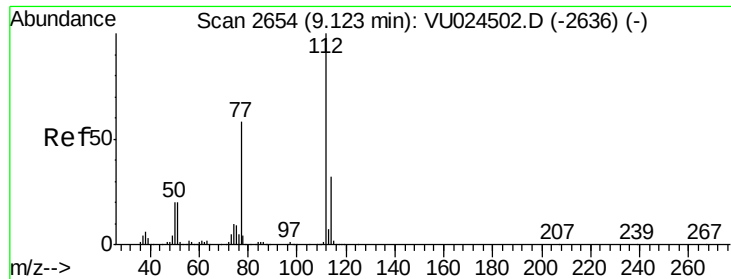


Abundance Ion 116.90 (116.60 to 117.60): VU025104.D (-2552) (-)

Ion 82.00 (81.70 to 82.70): VU025104.D (-2552) (-)

Ion 118.90 (118.60 to 119.60): VU025104.D (-2552) (-)





#65

Chlorobenzene

Concen: 97.05 ug/l

RT: 9.12 min Scan# 2654

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

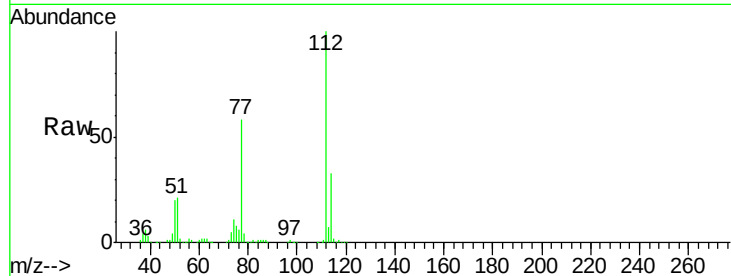
DUP-0475-180626

Tot Ion:112 Resp: 756194

Ion Ratio Lower Upper

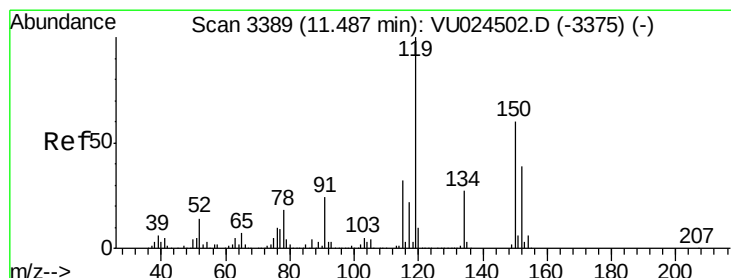
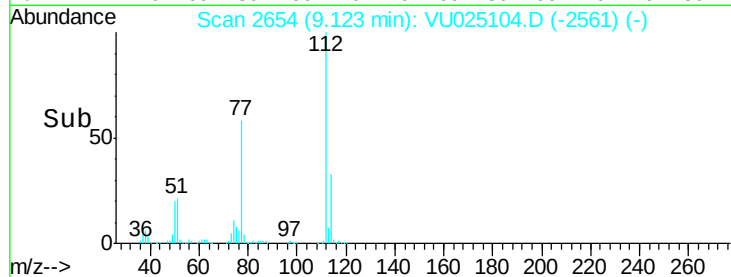
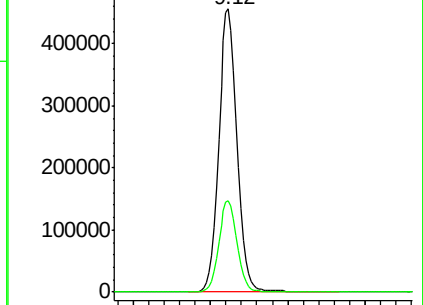
112 100

114 32.5 25.6 38.4



Abundance Ion 111.90 (111.60 to 112.60): V

Ion 113.90 (113.60 to 114.60): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.00 ug/l

RT: 11.49 min Scan# 3389

Delta R.T. -0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

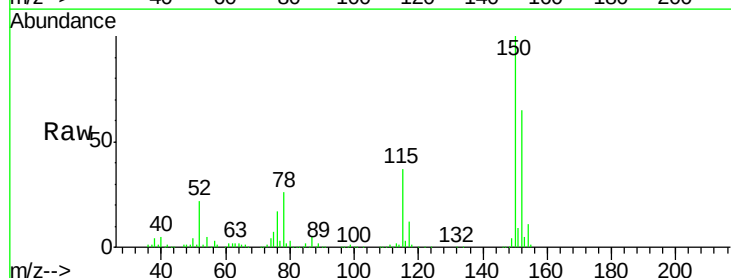
Tgt Ion:152 Resp: 157177

Ion Ratio Lower Upper

152 100

115 58.2 43.0 129.0

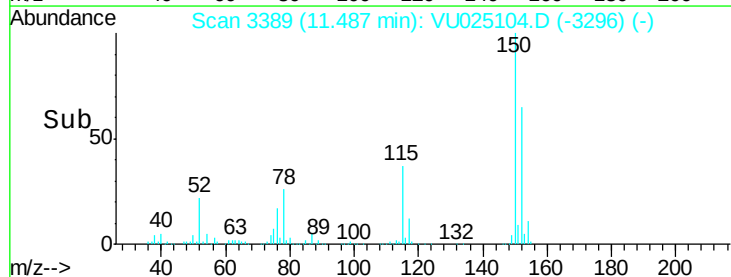
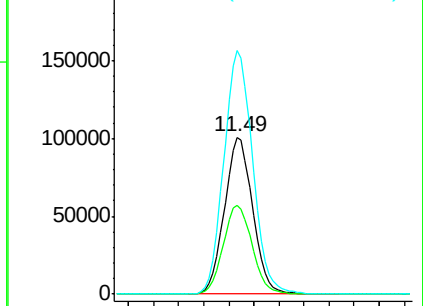
150 158.6 0.0 354.0

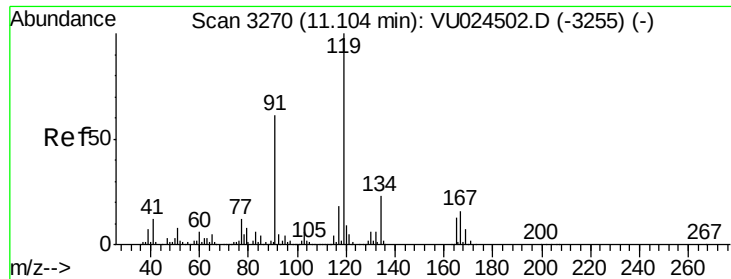


Abundance Ion 151.90 (151.60 to 152.60): V

Ion 114.90 (114.60 to 115.60): V

Ion 149.90 (149.60 to 150.60): V

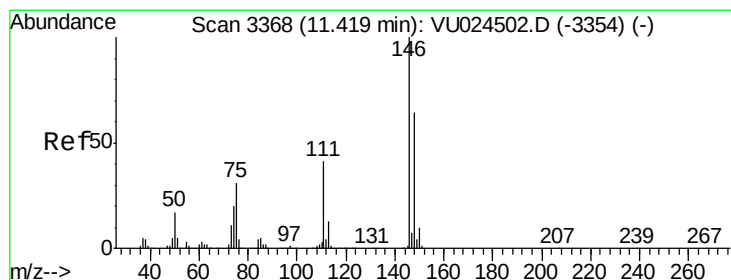
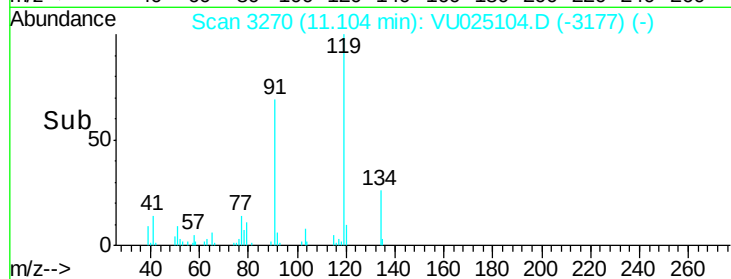
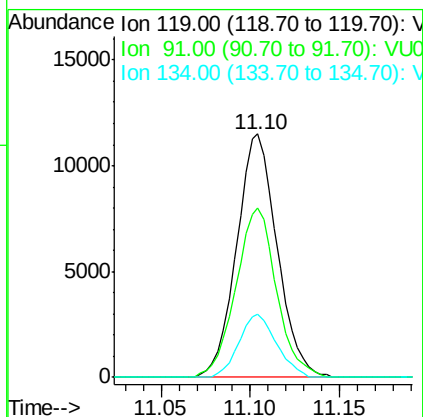
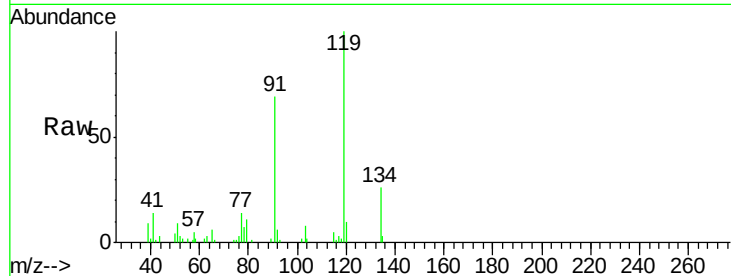




#83  
 tert-Butylbenzene  
 Concen: 1.81 ug/l  
 RT: 11.10 min Scan# 3270  
 Delta R.T. -0.00 min  
 Lab File: VU025104.D  
 Acq: 30 Jun 2018 21:39

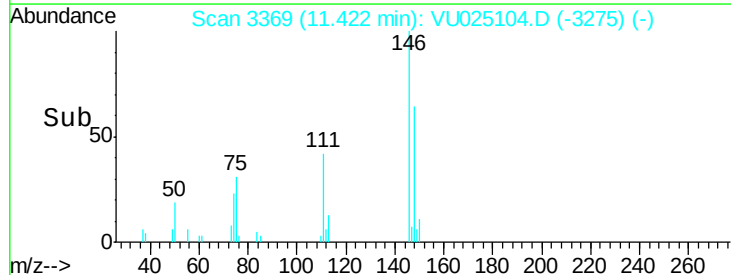
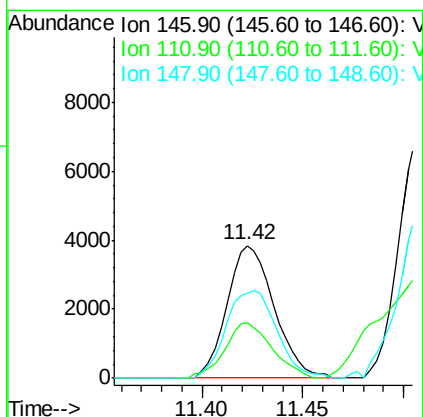
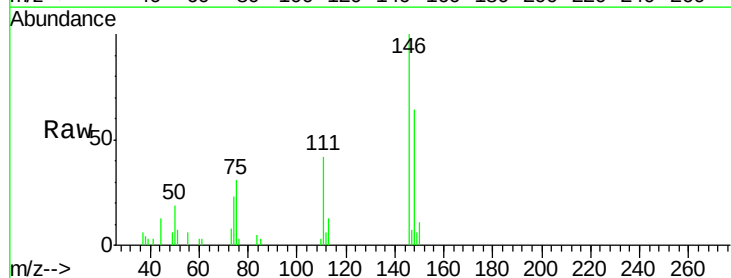
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 DUP-0475-180626

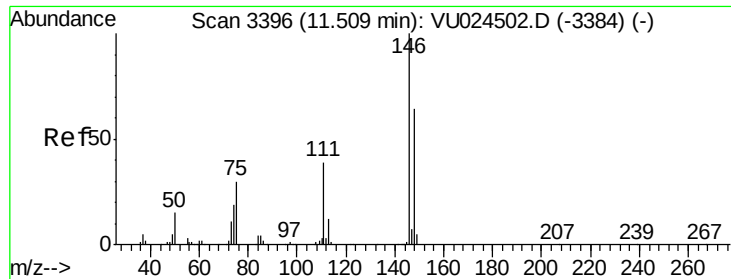
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 119     | 100   |       |       |
| 91      | 69.8  | 29.7  | 89.1  |
| 134     | 24.0  | 11.6  | 34.7  |



#87  
 1,3-Dichlorobenzene  
 Concen: 1.11 ug/l  
 RT: 11.42 min Scan# 3369  
 Delta R.T. 0.00 min  
 Lab File: VU025104.D  
 Acq: 30 Jun 2018 21:39

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 41.9  | 20.0  | 60.0  |
| 148     | 71.4  | 32.1  | 96.5  |





#88

1,4-Dichlorobenzene

Concen: 2.31 ug/l

RT: 11.51 min Scan# 3397

Delta R.T. 0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

Instrument :

MSVOA\_U

ClientSampleId :

DUP-0475-180626

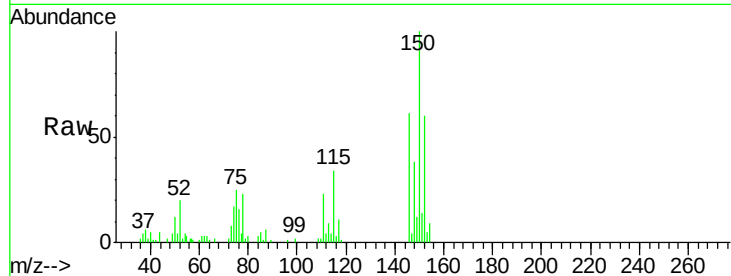
Tot Ion:146 Resp: 13148

Ion Ratio Lower Upper

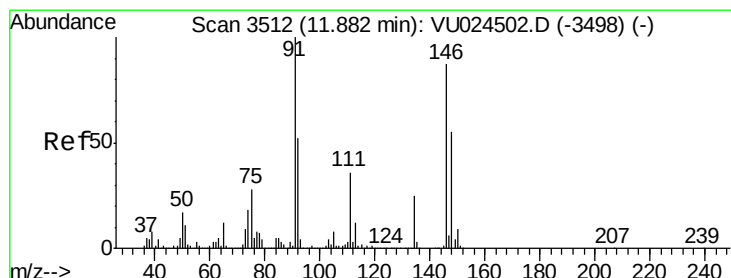
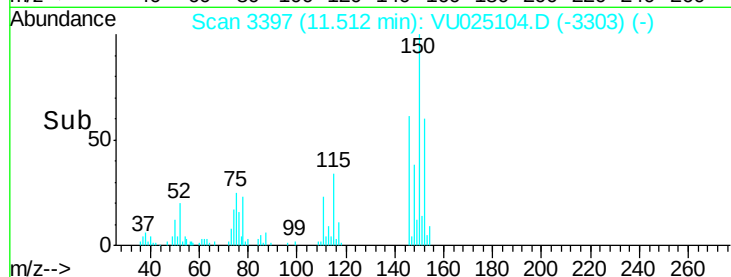
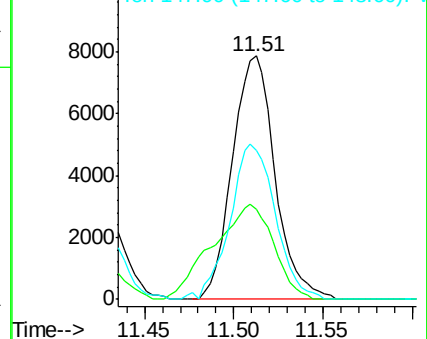
146 100

111 55.2 19.5 58.5

148 67.7 32.4 97.0



Abundance Ion 145.90 (145.60 to 146.60): V  
Ion 110.90 (110.60 to 111.60): V  
Ion 147.90 (147.60 to 148.60): V



#91

1,2-Dichlorobenzene

Concen: 3.85 ug/l

RT: 11.89 min Scan# 3513

Delta R.T. 0.00 min

Lab File: VU025104.D

Acq: 30 Jun 2018 21:39

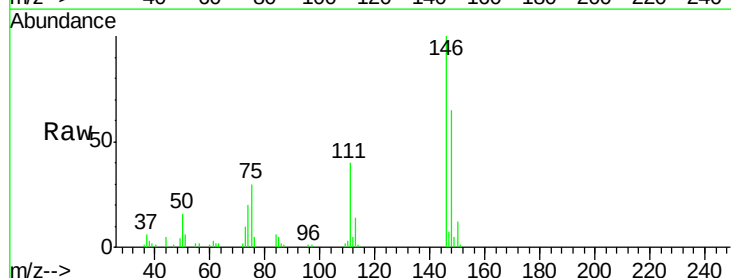
Tgt Ion:146 Resp: 21768

Ion Ratio Lower Upper

146 100

111 43.7 20.5 61.6

148 66.3 31.9 95.7



Abundance Ion 145.90 (145.60 to 146.60): V  
Ion 110.90 (110.60 to 111.60): V  
Ion 147.90 (147.60 to 148.60): V

