

Data Path : Z:\VOASRV\HPCHEM1\MSVOA\_U\DATA\VU080718\  
 Data File : VU025943.D  
 Acq On : 07 Aug 2018 16:35  
 Operator : MD/SY  
 Sample : J4363-03MSD  
 Misc : 5.0mL/MSVOA\_U/WATER  
 ALS Vial : 11 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 A4ZA4MSD

Quant Time: Aug 08 04:22:16 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080718WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Tue Aug 07 12:44:32 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.89  | 114  | 377208   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 354258   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.49 | 152  | 199763   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40    | 65    | 109069   | 52.18    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 104.36% |
| 7) Chloroethane-d5             | 1.68    | 69    | 84444    | 53.87    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 107.74% |
| 11) 1,1-Dichloroethene-d2      | 2.27    | 63    | 200686   | 49.57    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 99.14%  |
| 21) 2-Butanone-d5              | 4.18    | 46    | 162610   | 113.06   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 113.06% |
| 24) Chloroform-d               | 4.65    | 84    | 211760   | 52.33    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 104.66% |
| 26) 1,2-Dichloroethane-d4      | 5.31    | 65    | 142345   | 53.29    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 106.58% |
| 32) Benzene-d6                 | 5.35    | 84    | 428677   | 54.90    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 109.80% |
| 36) 1,2-Dichloropropane-d6     | 6.34    | 67    | 133827   | 55.12    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 110.24% |
| 41) Toluene-d8                 | 7.57    | 98    | 405208   | 53.48    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 106.96% |
| 43) trans-1,3-Dichloropropene- | 7.85    | 79    | 69952    | 54.95    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 109.90% |
| 47) 2-Hexanone-d5              | 8.31    | 63    | 115002   | 113.83   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 113.83% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.44   | 84    | 182360   | 54.22    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 108.44% |
| 64) 1,2-Dichlorobenzene-d4     | 11.87   | 152   | 181363   | 54.96    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 109.92% |

## Target Compounds

|                                |       |     |         |               | Qvalue |
|--------------------------------|-------|-----|---------|---------------|--------|
| 12) 1,1-Dichloroethene         | 2.28  | 96  | 85286   | 44.793 ug/L   | 91     |
| 13) Acetone                    | 2.32  | 43  | 111452  | 65.461 ug/L   | 97     |
| 22) 2-Butanone                 | 4.27  | 43  | 139051  | 65.324 ug/L   | 100    |
| 27) 1,2-Dichloroethane         | 5.40  | 62  | 8851    | 2.461 ug/L #  | 91     |
| 33) Benzene                    | 5.39  | 78  | 441076  | 47.632 ug/L   | 100    |
| 34) Trichloroethene            | 6.19  | 95  | 116888  | 45.359 ug/L   | 99     |
| 37) 1,2-Dichloropropane        | 6.34  | 63  | 15050   | 6.083 ug/L #  | 88     |
| 40) 4-Methyl-2-pentanone       | 7.46  | 43  | 10252   | 3.039 ug/L    | 98     |
| 42) Toluene                    | 7.64  | 91  | 547847  | 54.213 ug/L   | 100    |
| 51) Chlorobenzene              | 9.13  | 112 | 8952132 | 1293.706 ug/L | 99     |
| 52) Ethylbenzene               | 9.25  | 91  | 18405   | 1.601 ug/L    | 99     |
| 62) 1,3-Dichlorobenzene        | 11.42 | 146 | 603754  | 101.020 ug/L  | 99     |
| 63) 1,4-Dichlorobenzene        | 11.51 | 146 | 6404155 | 1051.774 ug/L | 99     |
| 65) 1,2-Dichlorobenzene        | 11.89 | 146 | 6527399 | 1089.232 ug/L | 99     |
| 66) 1,2-Dibromo-3-chloropropan | 12.63 | 75  | 11860   | 13.023 ug/L # | 3      |
| 67) 1,3,5-Trichlorobenzene     | 13.51 | 180 | 4325183 | 982.120 ug/L  | 99     |
| 68) 1,2,4-trichlorobenzene     | 13.51 | 180 | 4325183 | 1131.619 ug/L | 98     |

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ALS Vial : 11 Sample Multiplier: 1

Instrument :  
MSVOA\_U  
ClientSampleId :  
A4ZA4MSD

Quant Time: Aug 08 04:22:16 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM080718WMA.M  
Quant Title : VOC Analysis  
QLast Update : Tue Aug 07 12:44:32 2018  
Response via : Initial Calibration

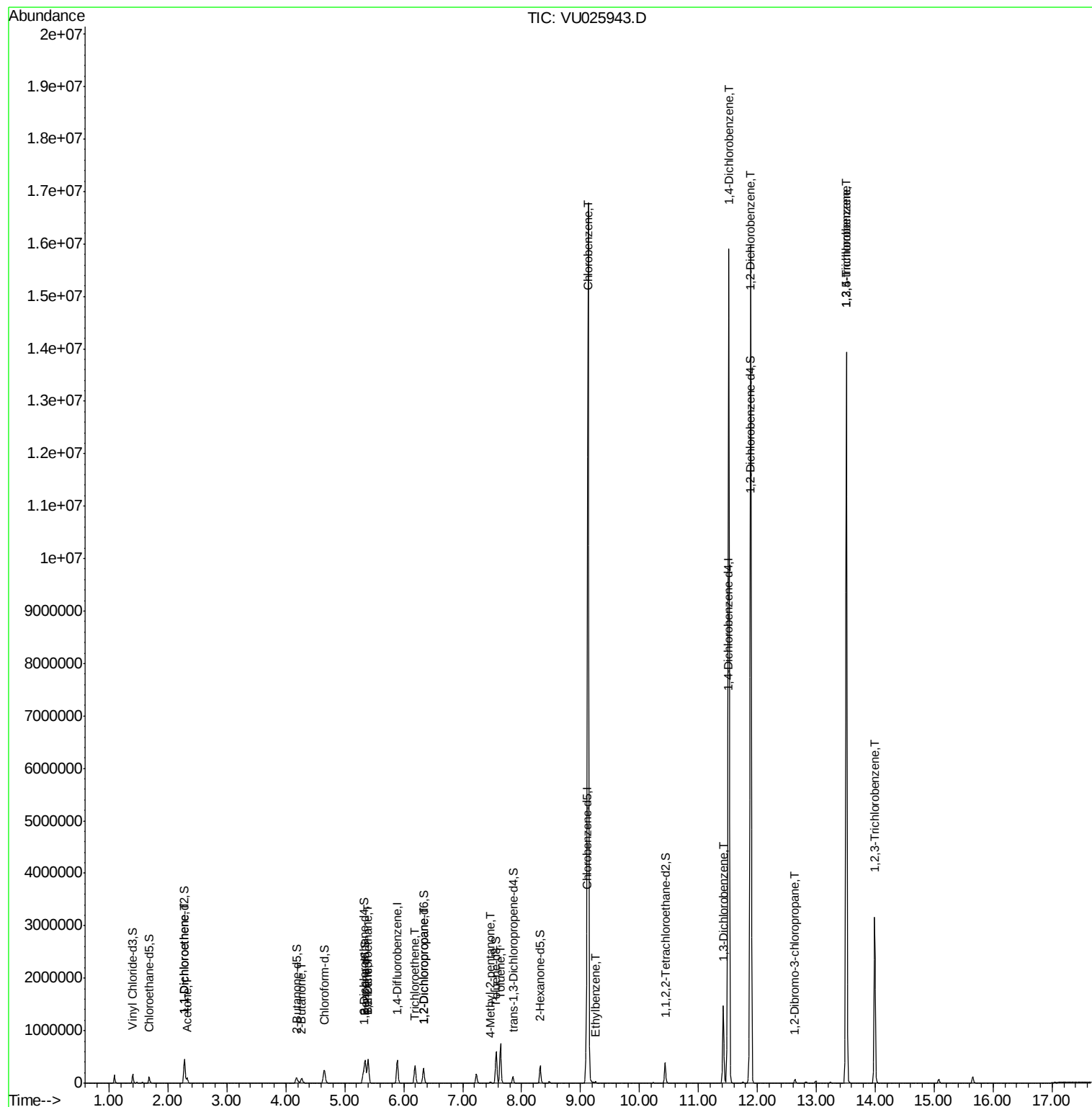
| Internal Standards         | R.T.  | QIon | Response | Conc    | Units | Dev(Min) |
|----------------------------|-------|------|----------|---------|-------|----------|
| 70) 1,2,3-Trichlorobenzene | 13.99 | 180  | 988139   | 252.335 | ug/L  | 100      |

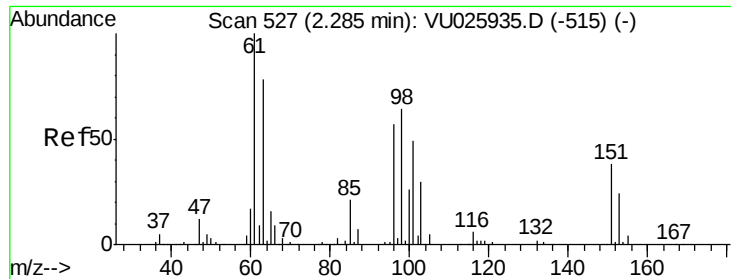
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Aug 08 04:22:16 2018  
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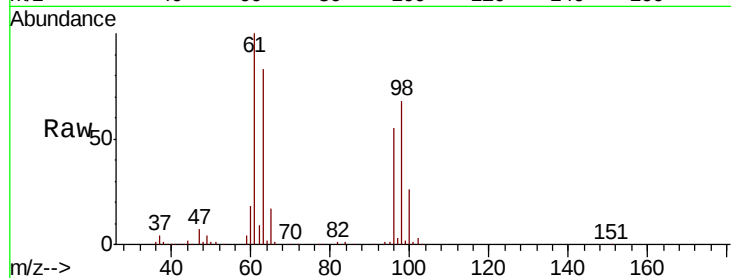




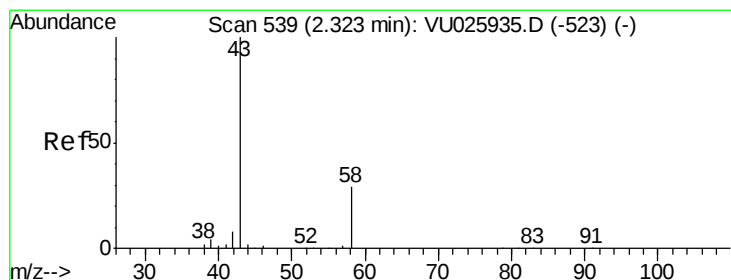
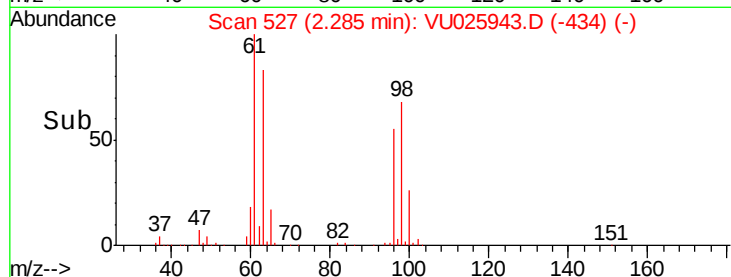
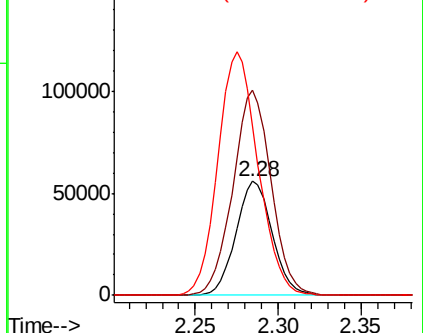
#12  
 1,1-Dichloroethene  
 Concen: 44.793 ug/L  
 RT: 2.28 min Scan# 527  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 A4ZA4MSD

Tgt Ion: 96 Resp: 85286  
 Ion Ratio Lower Upper  
 96 100  
 61 180.4 122.5 227.5  
 63 149.3 90.9 168.9

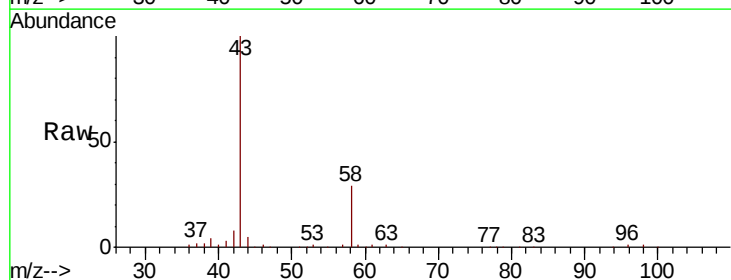


Abundance Ion 96.00 (95.70 to 96.70): VU0  
 Ion 61.00 (60.70 to 61.70): VU0  
 Ion 63.00 (62.70 to 63.70): VU0

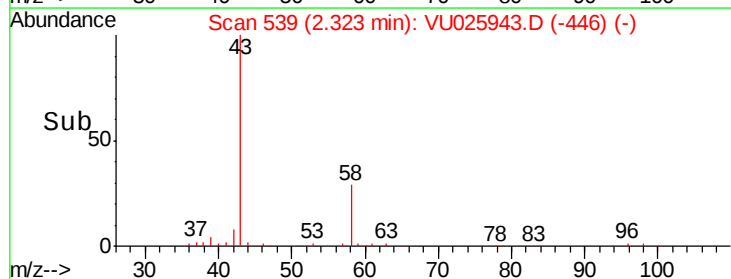
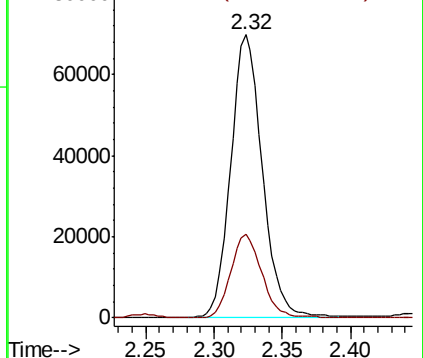


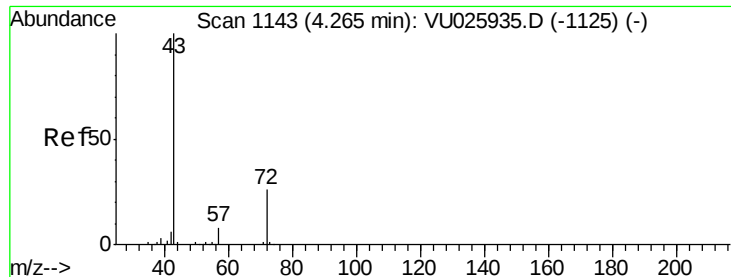
#13  
 Acetone  
 Concen: 65.461 ug/L  
 RT: 2.32 min Scan# 539  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Tgt Ion: 43 Resp: 111452  
 Ion Ratio Lower Upper  
 43 100  
 58 29.0 0.0 61.2



Abundance Ion 43.00 (42.70 to 43.70): VU0  
 Ion 58.00 (57.70 to 58.70): VU0





#22

2-Butanone

Concen: 65.324 ug/L

RT: 4.27 min Scan# 1143

Delta R.T. 0.00 min

Lab File: VU025943.D

Acq: 07 Aug 2018 16:35

Instrument :

MSVOA\_U

ClientSampleId :

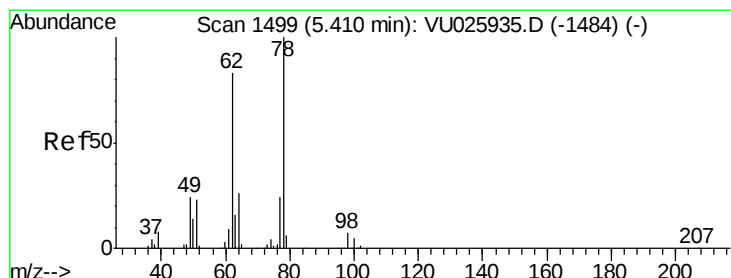
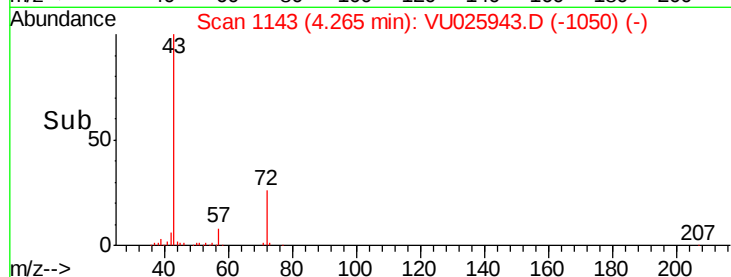
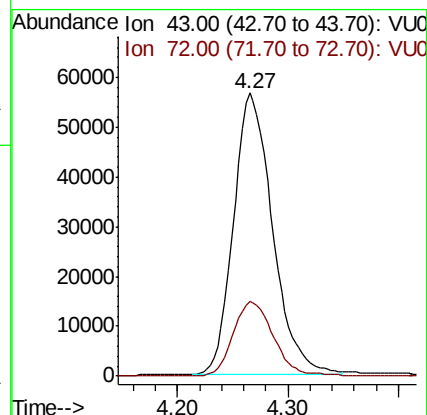
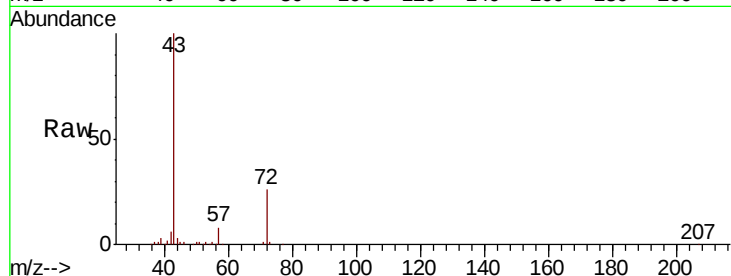
A4ZA4MSD

Tgt Ion: 43 Resp: 139051

Ion Ratio Lower Upper

43 100

72 27.3 13.6 40.8



#27

1,2-Dichloroethane

Concen: 2.461 ug/L

RT: 5.40 min Scan# 1497

Delta R.T. -0.01 min

Lab File: VU025943.D

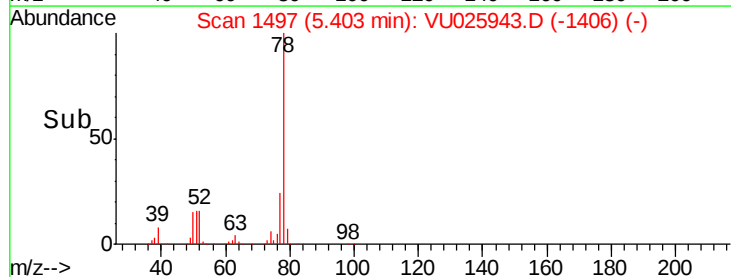
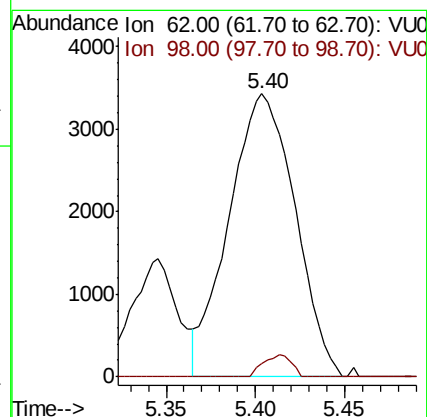
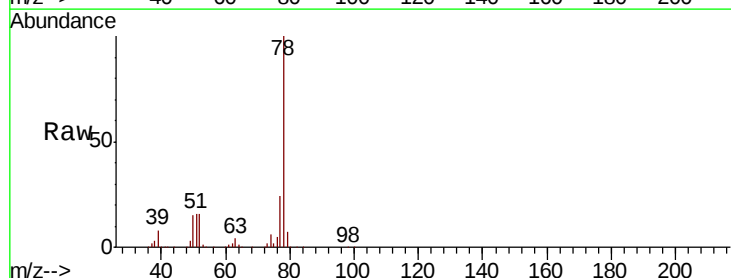
Acq: 07 Aug 2018 16:35

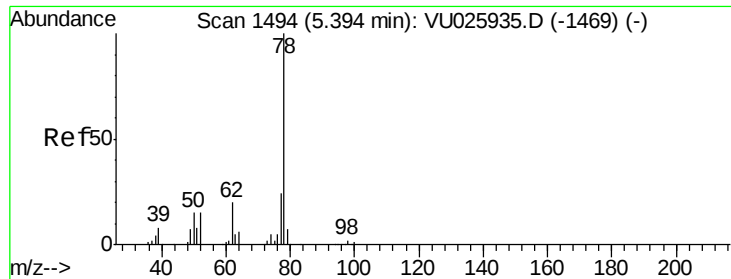
Tgt Ion: 62 Resp: 8851

Ion Ratio Lower Upper

62 100

98 4.8 6.5 9.7#

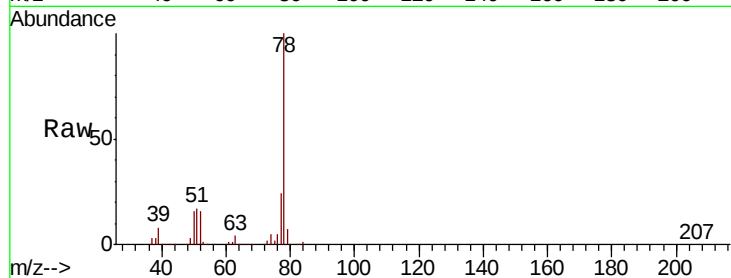




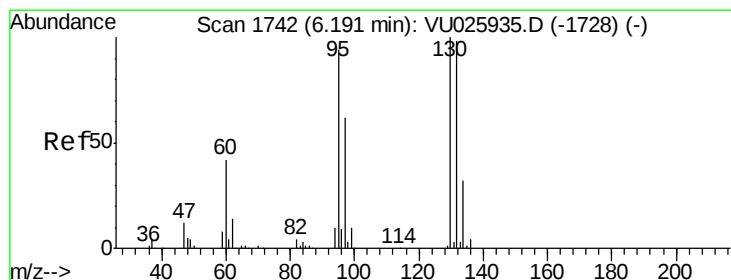
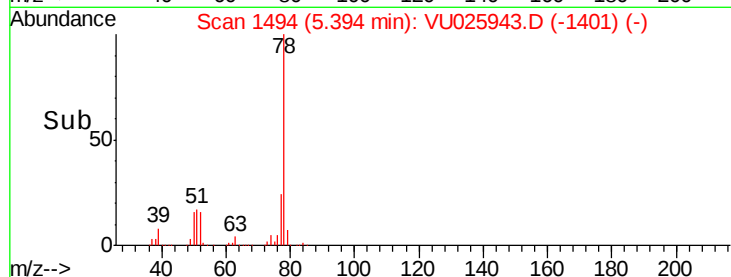
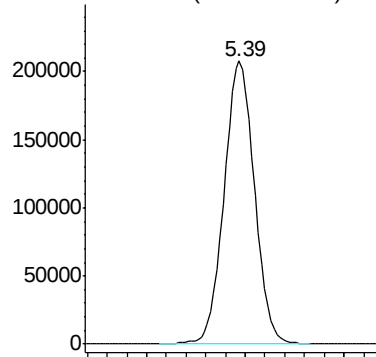
#33  
Benzene  
Concen: 47.632 ug/L  
RT: 5.39 min Scan# 1494  
Delta R.T. 0.00 min  
Lab File: VU025943.D  
Acq: 07 Aug 2018 16:35

Instrument :  
MSVOA\_U  
ClientSampleId :  
A4ZA4MSD

Tgt Ion: 78 Resp: 441076



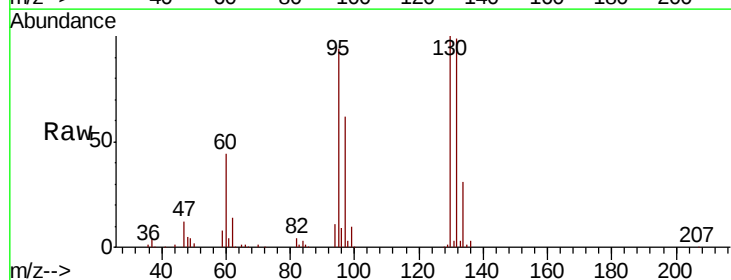
Abundance Ion 78.00 (77.70 to 78.70): VU0



#34  
Trichloroethene  
Concen: 45.359 ug/L  
RT: 6.19 min Scan# 1741  
Delta R.T. -0.00 min  
Lab File: VU025943.D  
Acq: 07 Aug 2018 16:35

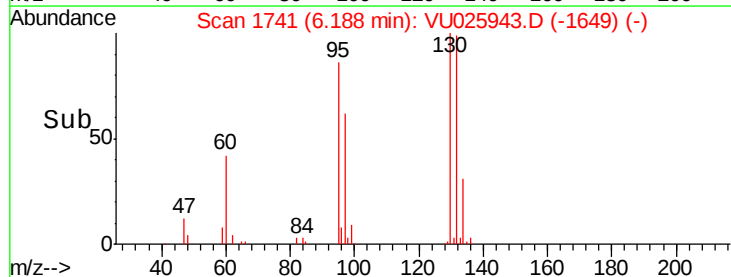
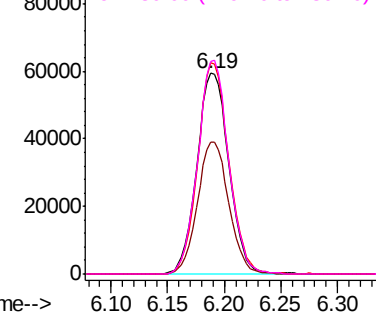
Tgt Ion: 95 Resp: 116888

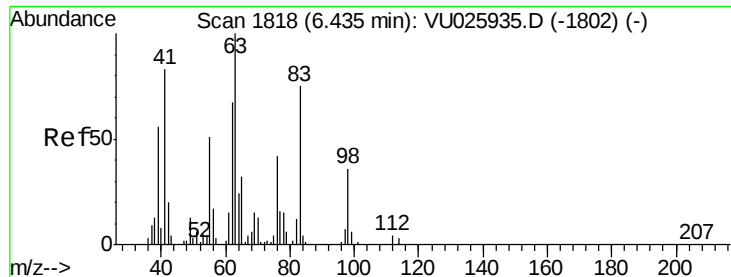
| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 95  | 100   |       |       |
| 97  | 65.7  | 45.9  | 85.3  |
| 132 | 105.3 | 72.2  | 134.2 |
| 130 | 106.4 | 74.9  | 139.1 |



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





#37

1,2-Dichloropropane

Concen: 6.083 ug/L

RT: 6.34 min Scan# 1787

Delta R.T. -0.10 min

Lab File: VU025943.D

Acq: 07 Aug 2018 16:35

Instrument :

MSVOA\_U

ClientSampleId :

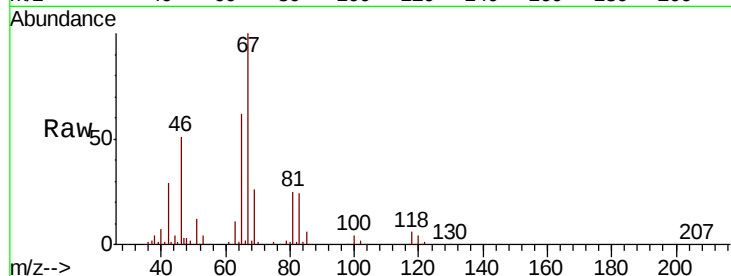
A4ZA4MSD

Tgt Ion: 63 Resp: 15050

Ion Ratio Lower Upper

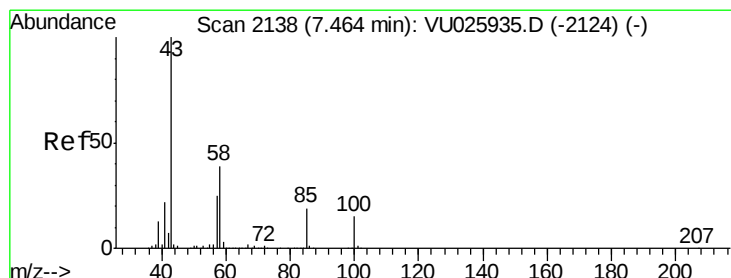
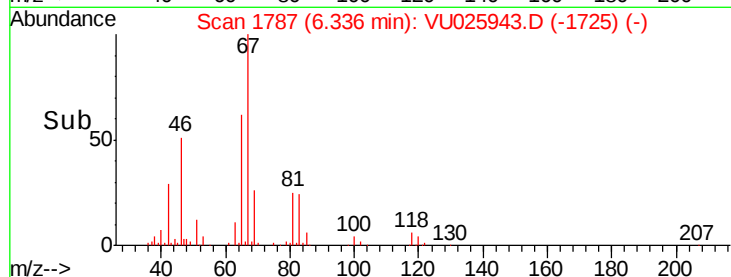
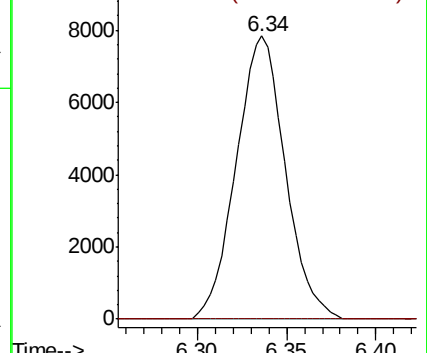
63 100

112 0.0 3.3 4.9#



Abundance Ion 63.00 (62.70 to 63.70): VU0

Ion 112.00 (111.70 to 112.70): V



#40

4-Methyl-2-pentanone

Concen: 3.039 ug/L

RT: 7.46 min Scan# 2138

Delta R.T. 0.00 min

Lab File: VU025943.D

Acq: 07 Aug 2018 16:35

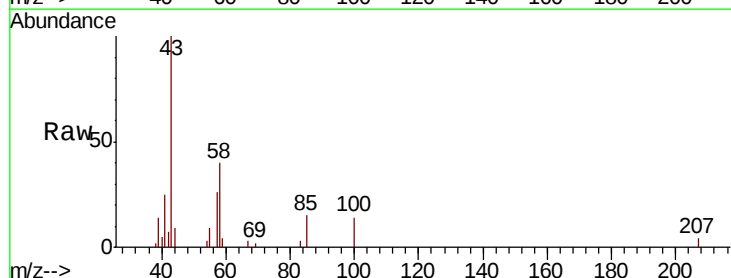
Tgt Ion: 43 Resp: 10252

Ion Ratio Lower Upper

43 100

58 38.9 30.8 46.2

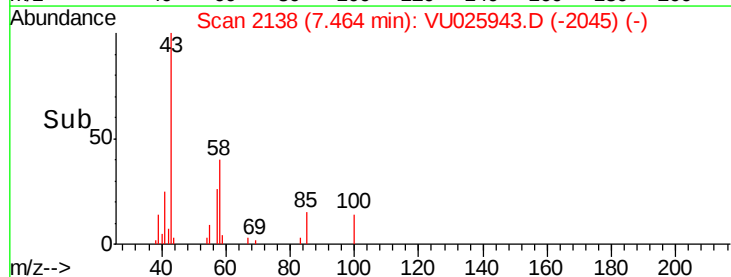
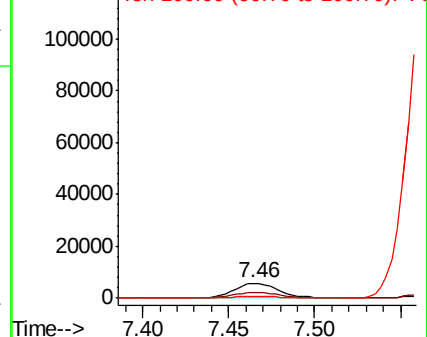
100 12.3 12.1 18.1

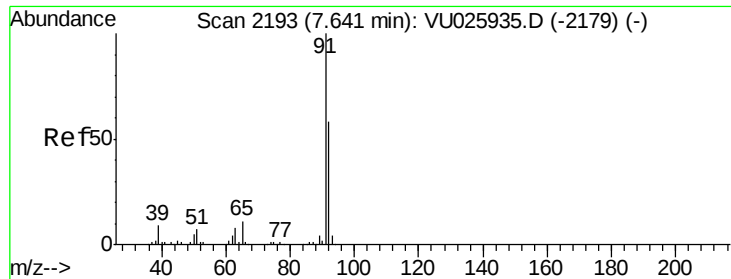


Abundance Ion 43.00 (42.70 to 43.70): VU0

Ion 58.00 (57.70 to 58.70): VU0

Ion 100.00 (99.70 to 100.70): VU0





#42

Toluene

Concen: 54.213 ug/L

RT: 7.64 min Scan# 2193

Delta R.T. 0.00 min

Lab File: VU025943.D

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MSVOA\_U

ClientSampleId :

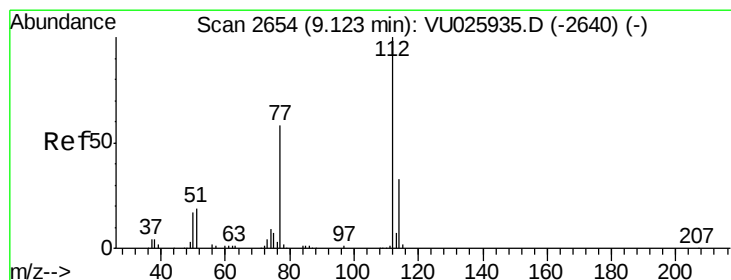
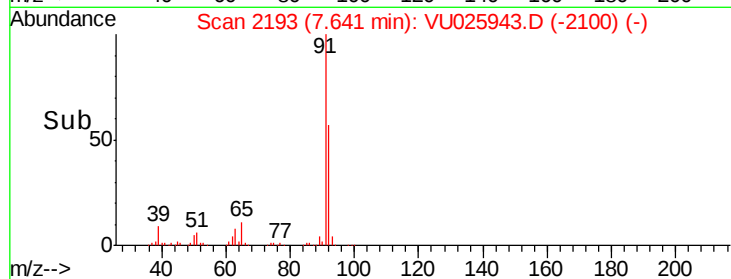
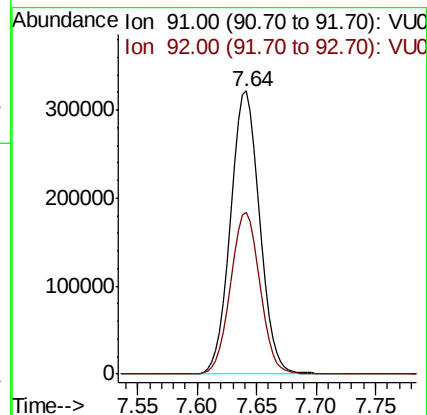
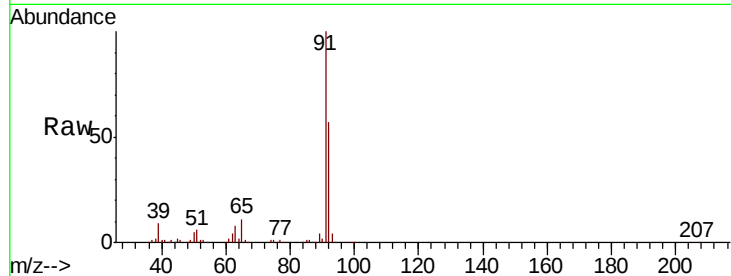
A4ZA4MSD

Tgt Ion: 91 Resp: 547847

Ion Ratio Lower Upper

91 100

92 57.3 40.0 74.2



#51

Chlorobenzene

Concen: 1293.706 ug/L

RT: 9.13 min Scan# 2655

Delta R.T. 0.00 min

Lab File: VU025943.D

Acq: 07 Aug 2018 16:35

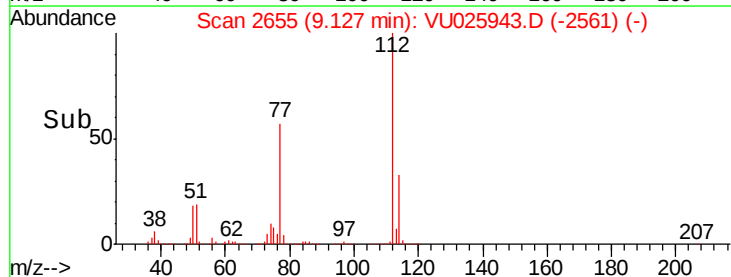
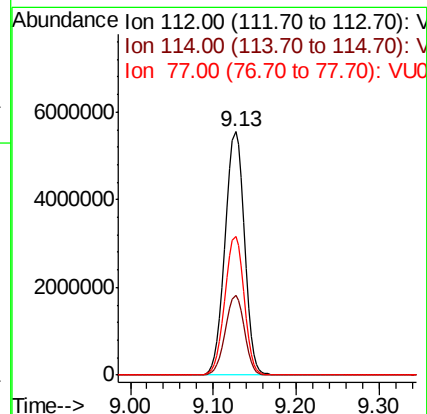
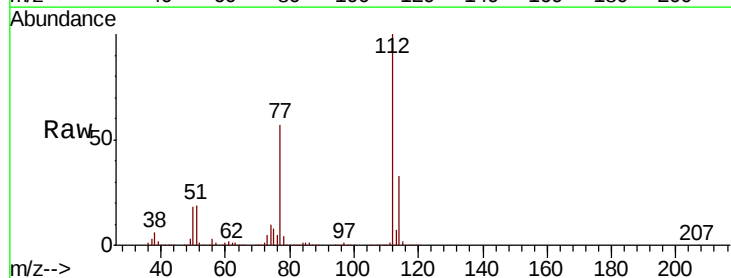
Tgt Ion: 112 Resp: 8952132

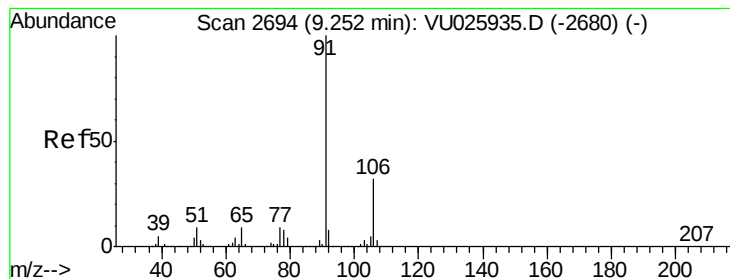
Ion Ratio Lower Upper

112 100

114 32.5 22.5 41.9

77 56.9 45.8 68.8





#52

Ethylbenzene

Concen: 1.601 ug/L

RT: 9.25 min Scan# 2694

Delta R.T. 0.00 min

Lab File: VU025943.D

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Instrument :

MSVOA\_U

ClientSampleId :

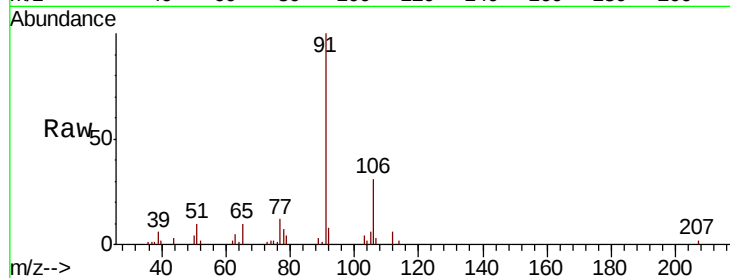
A4ZA4MSD

Tgt Ion: 91 Resp: 18405

Ion Ratio Lower Upper

91 100

106 31.3 22.3 41.5



Abundance Ion 91.00 (90.70 to 91.70): VU025935.D (-2680) (-)

Ion 106.00 (105.70 to 106.70): VU025935.D (-2680) (-)

9.25

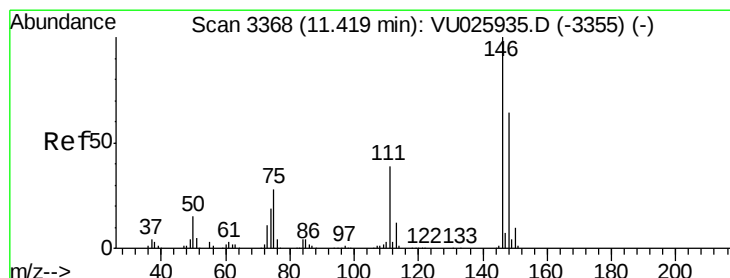
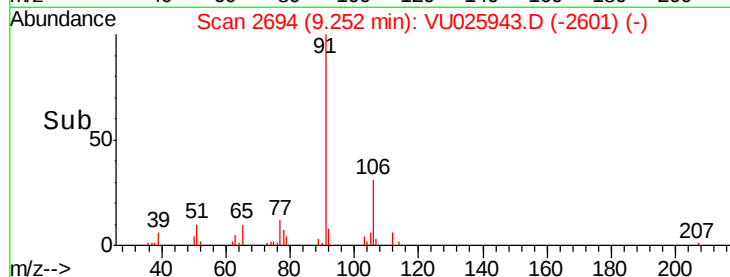
10000

5000

0

Time-->

9.20 9.25 9.30



#62

1,3-Dichlorobenzene

Concen: 101.020 ug/L

RT: 11.42 min Scan# 3368

Delta R.T. 0.00 min

Lab File: VU025943.D

Acq: 07 Aug 2018 16:35

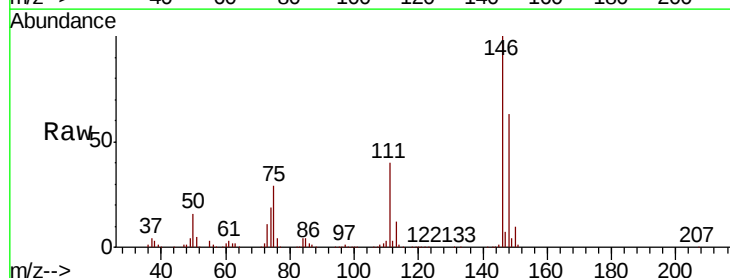
Tgt Ion: 146 Resp: 603754

Ion Ratio Lower Upper

146 100

111 39.5 27.7 51.5

148 63.4 45.5 84.5



Abundance Ion 146.00 (145.70 to 146.70): VU025935.D (-3355) (-)

Ion 111.00 (110.70 to 111.70): VU025935.D (-3355) (-)

Ion 148.00 (147.70 to 148.70): VU025935.D (-3355) (-)

5000000

4000000

3000000

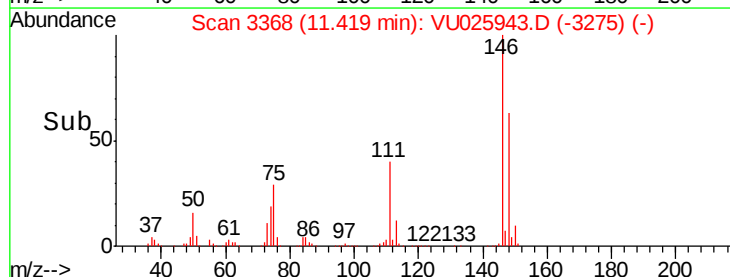
2000000

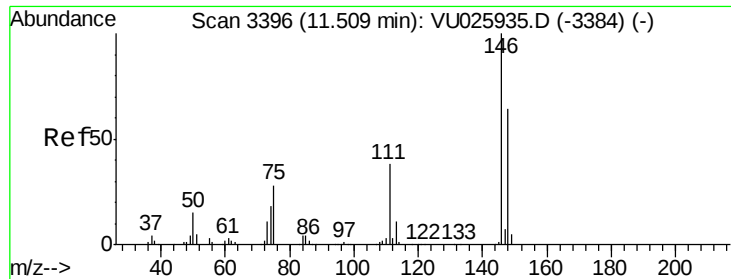
1000000

0

Time-->

11.35 11.40 11.45

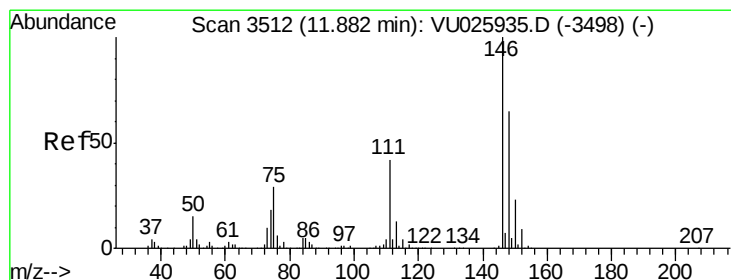
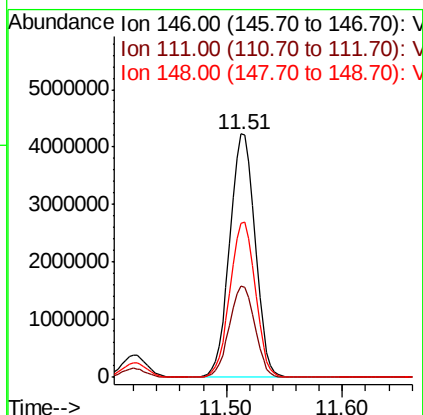
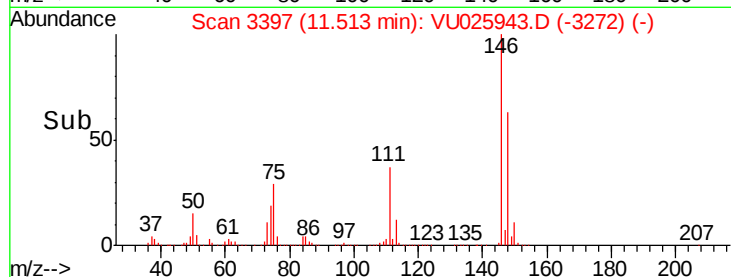
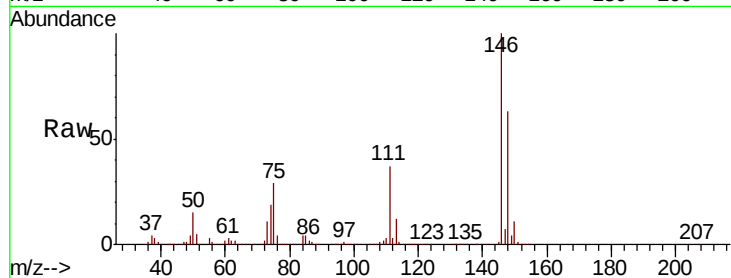




#63  
 1,4-Dichlorobenzene  
 Concen: 1051.774 ug/L  
 RT: 11.51 min Scan# 3397  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

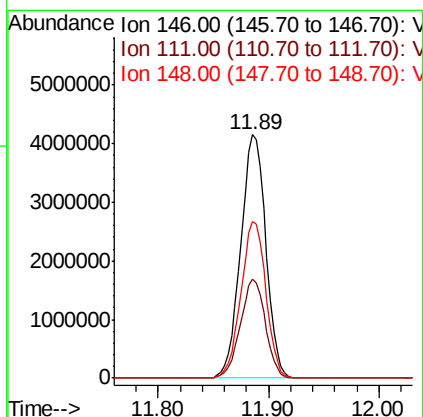
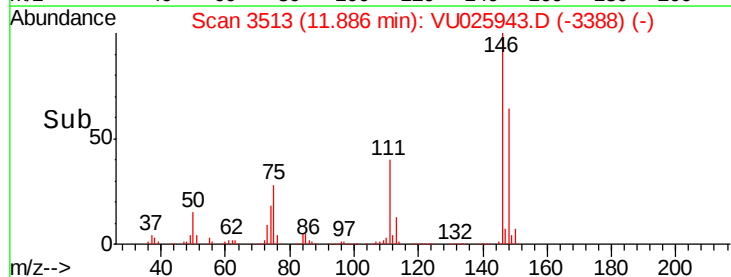
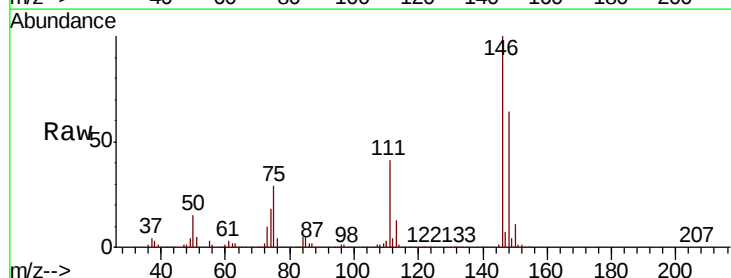
Instrument :  
 MSVOA\_U  
 ClientSampled :  
 A4ZA4MSD

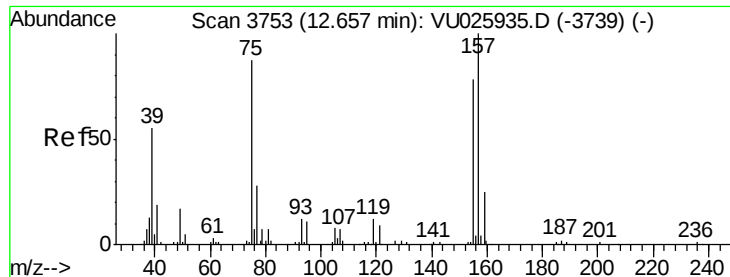
Tgt Ion:146 Resp: 6404155  
 Ion Ratio Lower Upper  
 146 100  
 111 37.5 26.9 49.9  
 148 63.3 44.6 82.8



#65  
 1,2-Dichlorobenzene  
 Concen: 1089.232 ug/L  
 RT: 11.89 min Scan# 3513  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Tgt Ion:146 Resp: 6527399  
 Ion Ratio Lower Upper  
 146 100  
 111 40.5 32.4 48.6  
 148 64.5 50.7 76.1

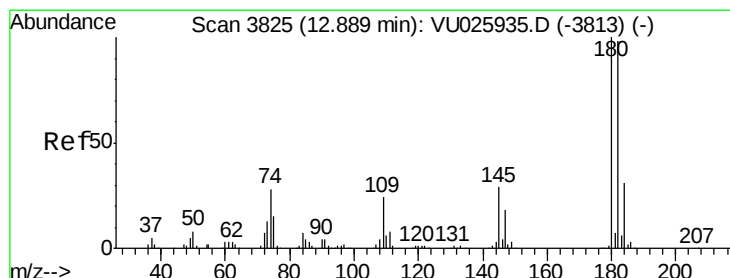
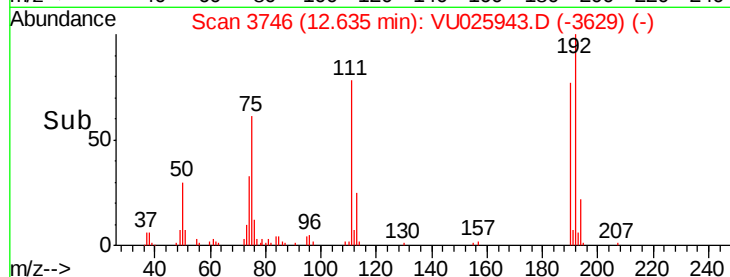
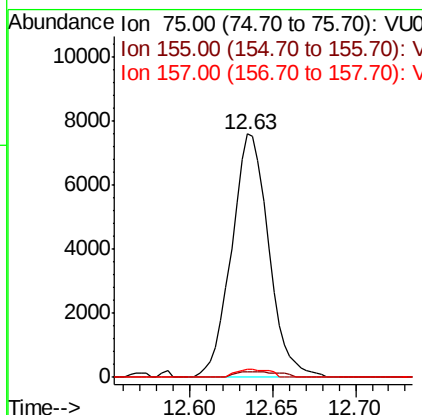
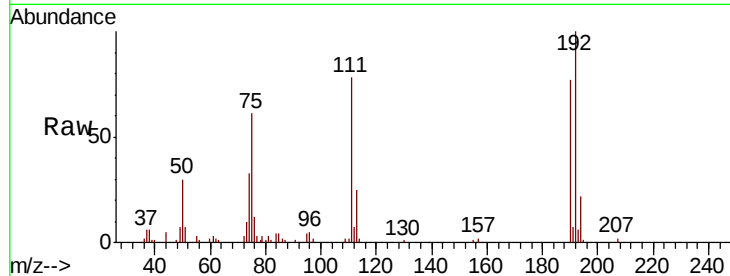




#66  
 1,2-Dibromo-3-chloropropane  
 Concen: 13.023 ug/L  
 RT: 12.63 min Scan# 3746  
 Delta R.T. -0.02 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

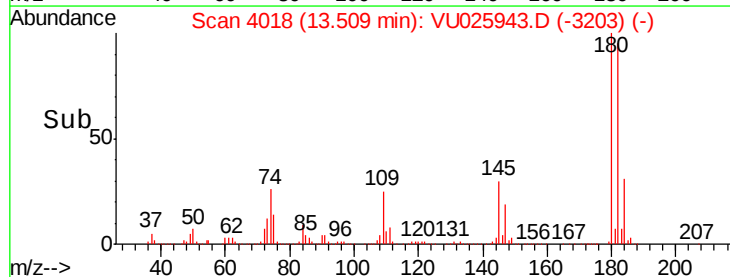
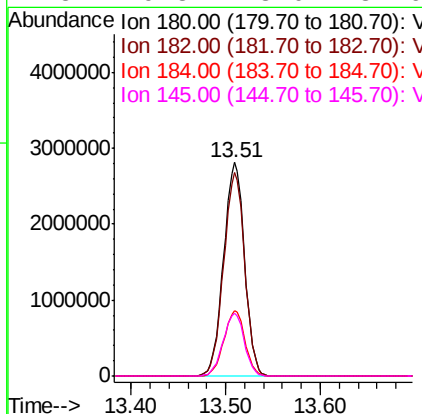
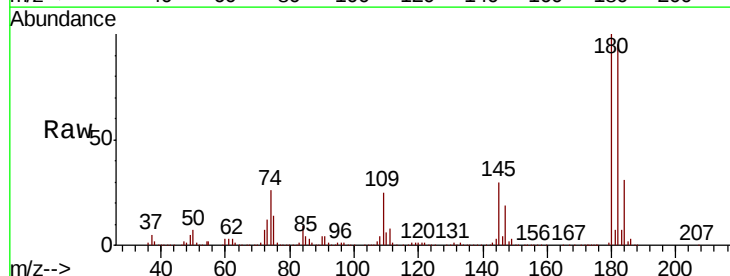
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 A4ZA4MSD

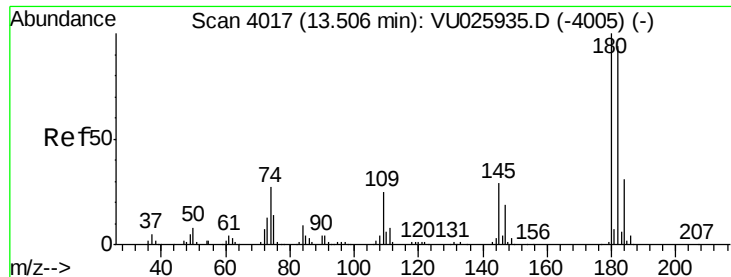
Tgt Ion: 75 Resp: 11860  
 Ion Ratio Lower Upper  
 75 100  
 155 2.3 66.3 99.5#  
 157 3.4 91.5 137.3#



#67  
 1,3,5-Trichlorobenzene  
 Concen: 982.120 ug/L  
 RT: 13.51 min Scan# 4018  
 Delta R.T. 0.62 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Tgt Ion: 180 Resp: 4325183  
 Ion Ratio Lower Upper  
 180 100  
 182 95.4 77.3 115.9  
 184 30.7 24.6 36.8  
 145 29.8 23.0 34.6

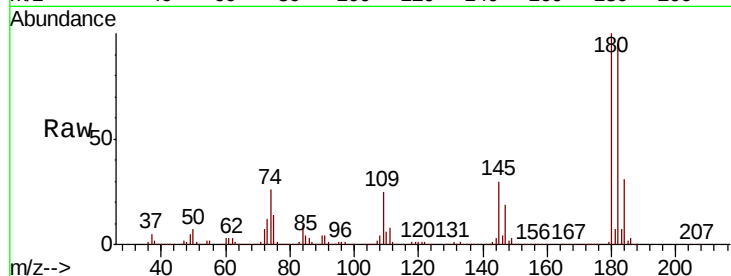




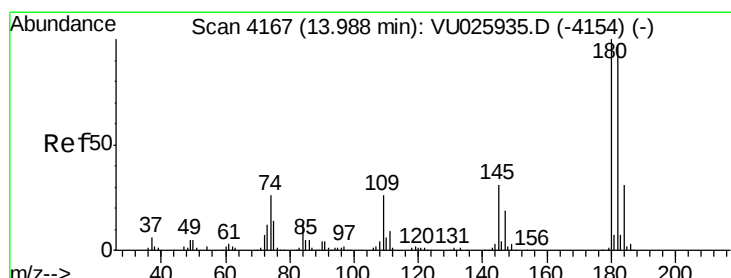
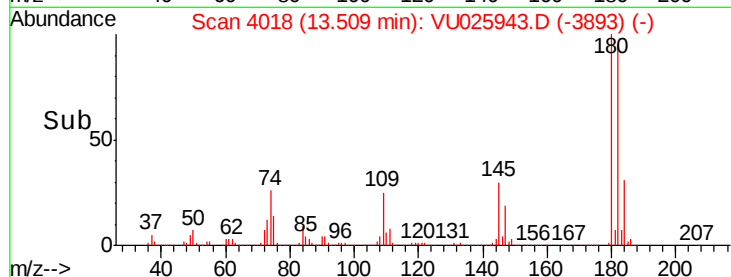
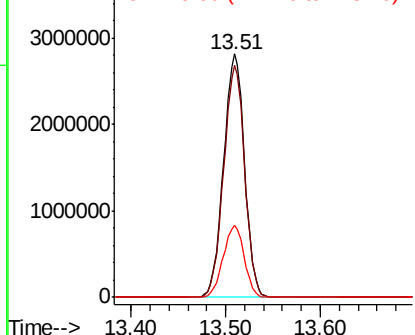
#68  
 1,2,4-trichlorobenzene  
 Concen: 1131.619 ug/L  
 RT: 13.51 min Scan# 4018  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 A4ZA4MSD

Tgt Ion:180 Resp: 4325183  
 Ion Ratio Lower Upper  
 180 100  
 182 95.4 78.1 117.1  
 145 29.8 23.4 35.2

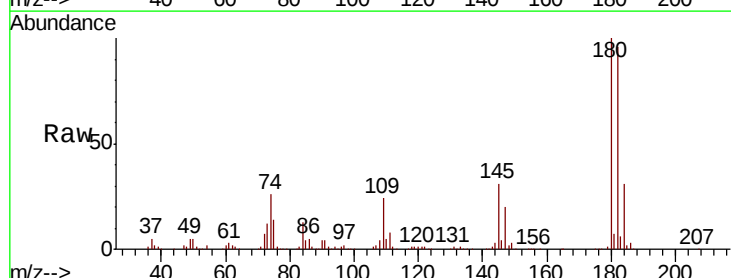


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 145.00 (144.70 to 145.70): V



#70  
 1,2,3-Trichlorobenzene  
 Concen: 252.335 ug/L  
 RT: 13.99 min Scan# 4168  
 Delta R.T. 0.00 min  
 Lab File: VU025943.D  
 Acq: 07 Aug 2018 16:35

Tgt Ion:180 Resp: 988139  
 Ion Ratio Lower Upper  
 180 100  
 182 96.1 76.6 114.8  
 145 31.6 25.4 38.2



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

