

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU010219\  
 Data File : VU028989.D  
 Acq On : 02 Jan 2019 14:51  
 Operator : MD/SY  
 Sample : VSTDCCC005EC  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 10 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Quant Time: Jan 03 03:52:13 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR122818WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Thu Jan 03 03:47:56 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.88  | 114  | 95587    | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.09  | 117  | 92999    | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.48 | 152  | 45937    | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.40   | 65    | 24371    | 4.76     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 95.20%  |
| 7) Chloroethane-d5             | 1.68   | 69    | 21926    | 4.91     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 98.20%  |
| 11) 1,1-Dichloroethene-d2      | 2.28   | 63    | 50236    | 4.64     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 92.80%  |
| 20) 2-Butanone-d5              | 4.19   | 46    | 74242    | 55.53    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 111.06% |
| 24) Chloroform-d               | 4.65   | 84    | 50951    | 5.12     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 102.40% |
| 26) 1,2-Dichloroethane-d4      | 5.31   | 65    | 24585    | 4.85     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 97.00%  |
| 32) Benzene-d6                 | 5.34   | 84    | 104039   | 4.79     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 95.80%  |
| 36) 1,2-Dichloropropane-d6     | 6.33   | 67    | 34954    | 5.03     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 100.60% |
| 41) Toluene-d8                 | 7.56   | 98    | 92857    | 4.61     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 92.20%  |
| 43) trans-1,3-Dichloropropene- | 7.85   | 79    | 12281    | 4.70     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 94.00%  |
| 46) 2-Hexanone-d5              | 8.31   | 63    | 60702    | 50.95    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 101.90% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.43  | 84    | 29583    | 5.35     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 107.00% |
| 64) 1,2-Dichlorobenzene-d4     | 11.86  | 152   | 36558    | 4.76     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 95.20%  |

## Target Compounds

| Target Compounds               | R.T. | QIon | Response | Conc   | Units | Ovalue |
|--------------------------------|------|------|----------|--------|-------|--------|
| 2) Dichlorodifluoromethane     | 1.21 | 85   | 40401    | 4.826  | ug/L  | 97     |
| 3) Chloromethane               | 1.32 | 50   | 47565    | 5.092  | ug/L  | 96     |
| 5) Vinyl chloride              | 1.40 | 62   | 47381    | 4.964  | ug/L  | 98     |
| 6) Bromomethane                | 1.63 | 94   | 21387    | 4.840  | ug/L  | 98     |
| 8) Chloroethane                | 1.70 | 64   | 27471    | 5.044  | ug/L  | 98     |
| 9) Trichlorofluoromethane      | 1.89 | 101  | 49862    | 4.568  | ug/L  | 99     |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.29 | 101  | 32964    | 4.680  | ug/L  | 97     |
| 12) 1,1-Dichloroethene         | 2.28 | 96   | 32605    | 4.761  | ug/L  | 91     |
| 13) Acetone                    | 2.32 | 43   | 52949    | 49.063 | ug/L  | 99     |
| 14) Carbon disulfide           | 2.48 | 76   | 117142   | 4.895  | ug/L  | 99     |
| 15) Methyl Acetate             | 2.62 | 43   | 15750    | 4.981  | ug/L  | 94     |
| 16) Methylene chloride         | 2.70 | 84   | 38712    | 3.948  | ug/L  | 97     |
| 17) Methyl tert-butyl Ether    | 3.00 | 73   | 76434    | 4.545  | ug/L  | 96     |
| 18) trans-1,2-Dichloroethene   | 2.98 | 96   | 35123    | 4.671  | ug/L  | 99     |
| 19) 1,1-Dichloroethane         | 3.44 | 63   | 64131    | 5.024  | ug/L  | 99     |
| 21) 2-Butanone                 | 4.28 | 43   | 87669    | 54.298 | ug/L  | 98     |
| 22) cis-1,2-Dichloroethene     | 4.22 | 96   | 37508    | 4.822  | ug/L  | 99     |

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU010219\  
 Data File : VU028989.D  
 Acq On : 02 Jan 2019 14:51  
 Operator : MD/SY  
 Sample : VSTDCCC005EC  
 Misc : 25.0mL/MSVOA U/WATER  
 ALS Vial : 10 Sample Multiplier: 1

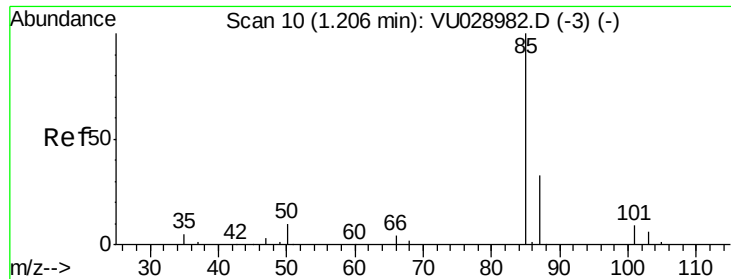
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Quant Time: Jan 03 03:52:13 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMUTR122818WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Thu Jan 03 03:47:56 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|--------------------------------|-------|------|----------|--------|-------|----------|
| 23) Bromochloromethane         | 4.55  | 128  | 16186    | 5.128  | ug/L  | 96       |
| 25) Chloroform                 | 4.67  | 83   | 61311    | 5.055  | ug/L  | 100      |
| 27) 1,2-Dichloroethane         | 5.40  | 62   | 36830    | 5.133  | ug/L  | 100      |
| 29) 1,1,1-Trichloroethane      | 4.91  | 97   | 48982    | 4.796  | ug/L  | 99       |
| 30) Cyclohexane                | 4.99  | 56   | 58236    | 4.759  | ug/L  | 97       |
| 31) Carbon tetrachloride       | 5.13  | 117  | 39390    | 4.843  | ug/L  | 98       |
| 33) Benzene                    | 5.39  | 78   | 144193   | 4.849  | ug/L  | 100      |
| 34) Trichloroethene            | 6.18  | 95   | 35952    | 4.728  | ug/L  | 96       |
| 35) Methylcyclohexane          | 6.41  | 83   | 60180    | 4.608  | ug/L  | 96       |
| 37) 1,2-Dichloropropane        | 6.43  | 63   | 39592    | 5.226  | ug/L  | 100      |
| 38) Bromodichloromethane       | 6.76  | 83   | 42320    | 4.962  | ug/L  | 100      |
| 39) cis-1,3-Dichloropropene    | 7.27  | 75   | 51874    | 4.775  | ug/L  | 97       |
| 40) 4-Methyl-2-pentanone       | 7.46  | 43   | 211419   | 52.446 | ug/L  | 97       |
| 42) Toluene                    | 7.63  | 91   | 151886   | 4.771  | ug/L  | 98       |
| 44) trans-1,3-Dichloropropene  | 7.88  | 75   | 41353    | 4.885  | ug/L  | 98       |
| 45) 1,1,2-Trichloroethane      | 8.07  | 97   | 25564    | 4.958  | ug/L  | 96       |
| 47) Tetrachloroethene          | 8.22  | 164  | 29422    | 4.672  | ug/L  | 96       |
| 48) 2-Hexanone                 | 8.36  | 43   | 151016   | 54.157 | ug/L  | 97       |
| 49) Dibromochloromethane       | 8.48  | 129  | 27893    | 5.096  | ug/L  | 99       |
| 50) 1,2-Dibromoethane          | 8.58  | 107  | 24073    | 4.992  | ug/L  | 98       |
| 51) Chlorobenzene              | 9.12  | 112  | 94837    | 4.750  | ug/L  | 98       |
| 52) Ethylbenzene               | 9.25  | 91   | 157085   | 4.652  | ug/L  | 98       |
| 53) m,p-xylene                 | 9.37  | 106  | 60459    | 4.705  | ug/L  | 99       |
| 54) o-xylene                   | 9.78  | 106  | 58768    | 4.711  | ug/L  | 99       |
| 55) Styrene                    | 9.79  | 104  | 99348    | 4.785  | ug/L  | 99       |
| 56) Isopropylbenzene           | 10.16 | 105  | 149816   | 4.554  | ug/L  | 98       |
| 58) 1,1,2,2-Tetrachloroethane  | 10.46 | 83   | 33290    | 5.274  | ug/L  | 98       |
| 59) 1,2,3-Trichloropropane     | 10.49 | 75   | 22926    | 5.191  | ug/L  | 98       |
| 61) Bromoform                  | 9.96  | 173  | 16584    | 5.291  | ug/L  | 97       |
| 62) 1,3-Dichlorobenzene        | 11.41 | 146  | 72576    | 4.674  | ug/L  | 97       |
| 63) 1,4-Dichlorobenzene        | 11.50 | 146  | 72857    | 4.598  | ug/L  | 98       |
| 65) 1,2-Dichlorobenzene        | 11.88 | 146  | 69499    | 4.730  | ug/L  | 98       |
| 66) 1,2-Dibromo-3-chloropropan | 12.66 | 75   | 4463     | 5.144  | ug/L  | 97       |
| 67) 1,3,5-Trichlorobenzene     | 12.89 | 180  | 57333    | 4.772  | ug/L  | 99       |
| 68) 1,2,4-trichlorobenzene     | 13.50 | 180  | 47501    | 4.744  | ug/L  | 98       |
| 69) Naphthalene                | 13.74 | 128  | 80465    | 4.698  | ug/L  | 100      |
| 70) 1,2,3-Trichlorobenzene     | 13.99 | 180  | 44968    | 4.708  | ug/L  | 99       |

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





#2

Dichlorodifluoromethane

Concen: 4.826 ug/L

RT: 1.21 min Scan# 10

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

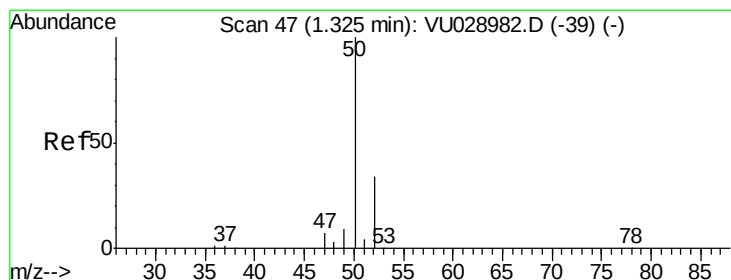
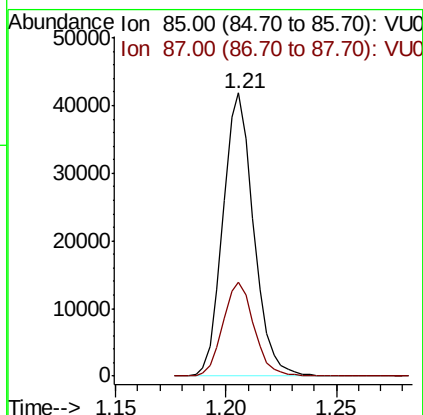
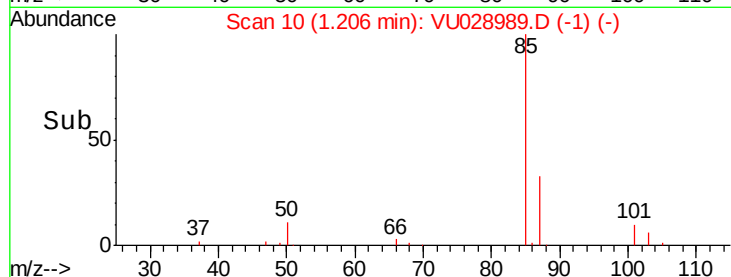
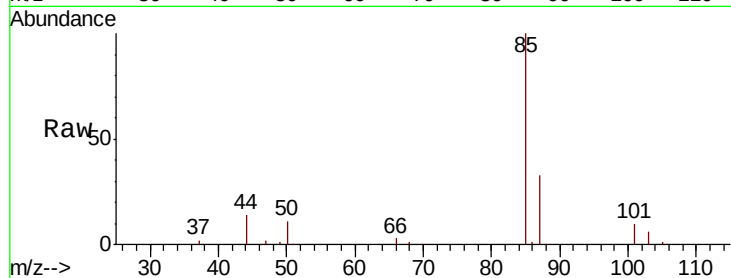
VSTD00552

Tot Ion: 85 Resp: 40401

Ion Ratio Lower Upper

85 100

87 33.4 25.5 38.3



#3

Chloromethane

Concen: 5.092 ug/L

RT: 1.32 min Scan# 47

Delta R.T. 0.00 min

Lab File: VU028989.D

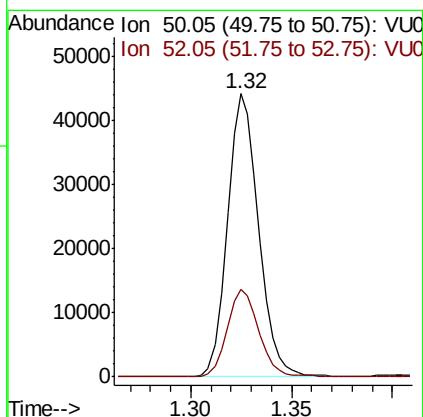
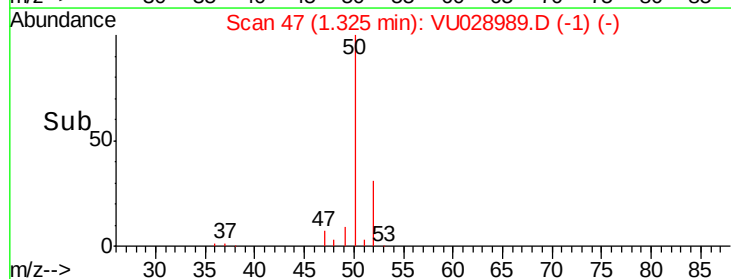
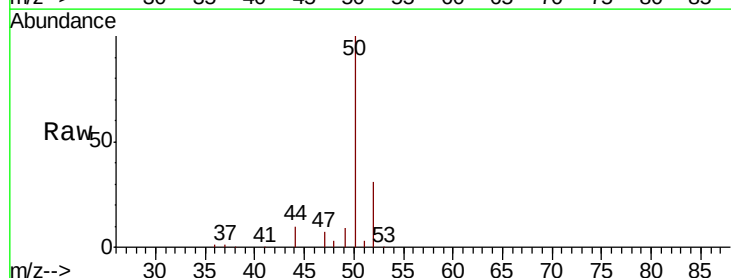
Acq: 02 Jan 2019 14:51

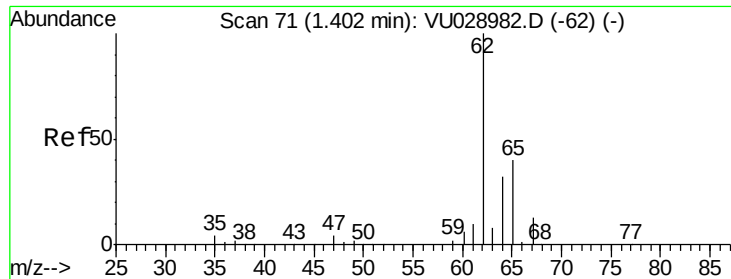
Tgt Ion: 50 Resp: 47565

Ion Ratio Lower Upper

50 100

52 30.9 23.3 43.3





#5

Vinyl chloride

Concen: 4.964 ug/L

RT: 1.40 min Scan# 71

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

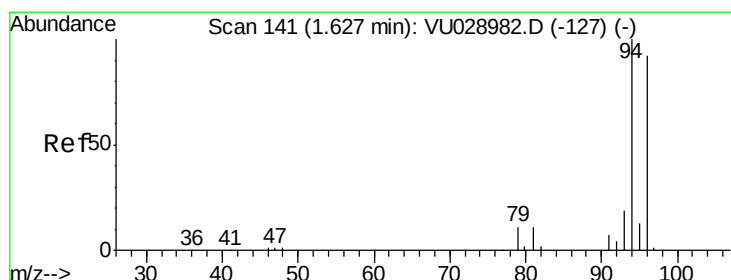
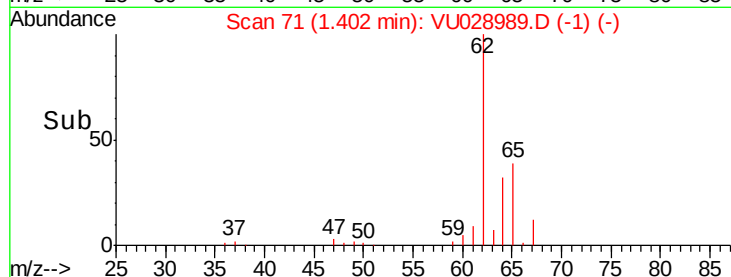
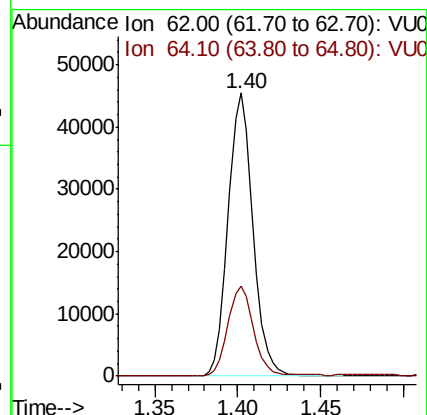
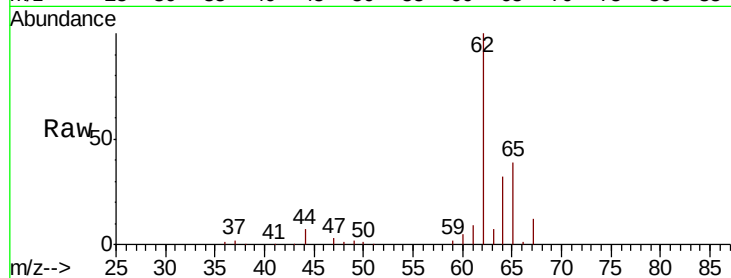
VSTD00552

Tot Ion: 62 Resp: 47381

Ion Ratio Lower Upper

62 100

64 32.0 21.6 40.2



#6

Bromomethane

Concen: 4.840 ug/L

RT: 1.63 min Scan# 141

Delta R.T. 0.00 min

Lab File: VU028989.D

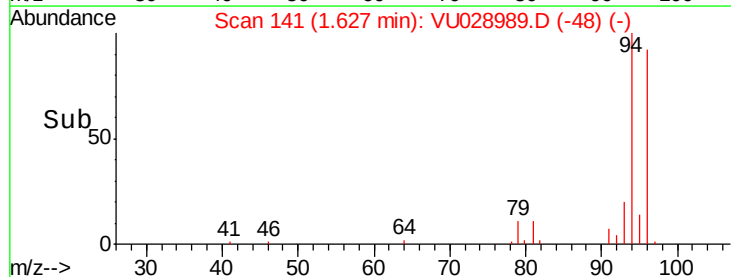
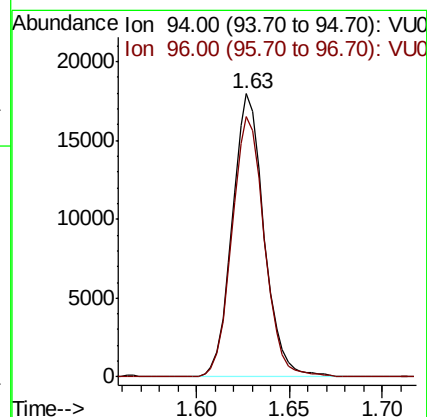
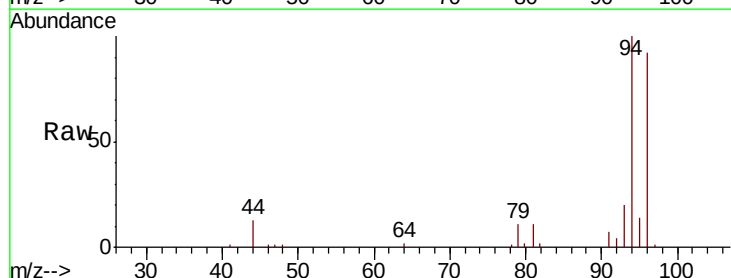
Acq: 02 Jan 2019 14:51

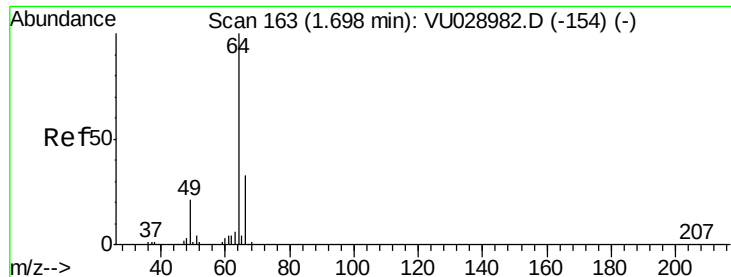
Tgt Ion: 94 Resp: 21387

Ion Ratio Lower Upper

94 100

96 92.2 66.0 122.6

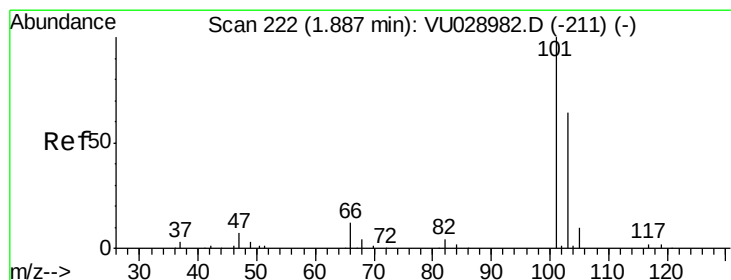
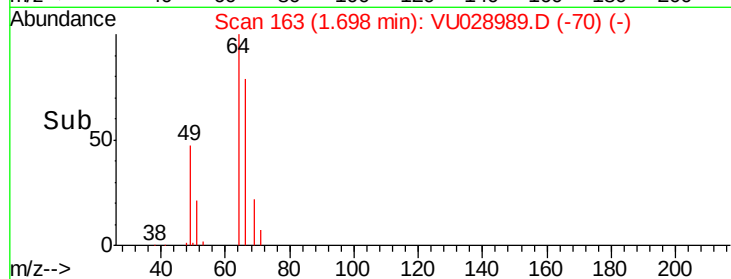
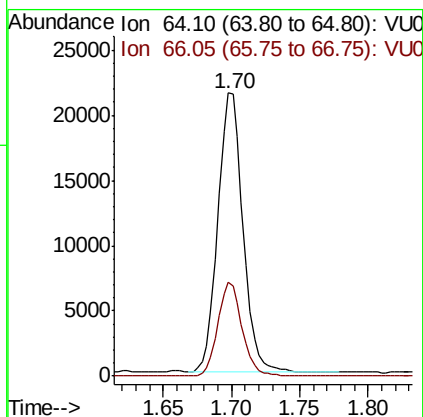
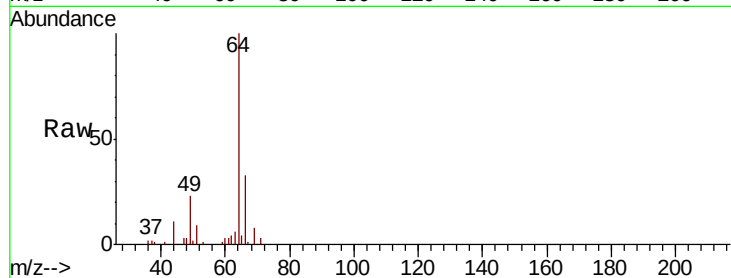




#8  
Chloroethane  
Concen: 5.044 ug/L  
RT: 1.70 min Scan# 163  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

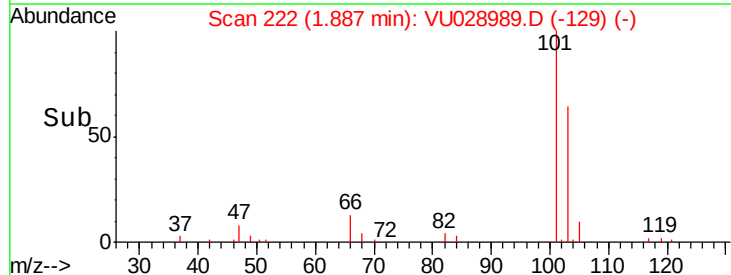
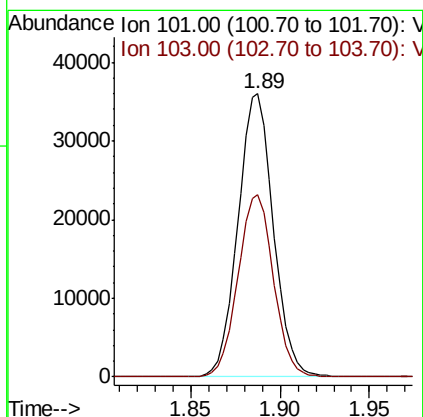
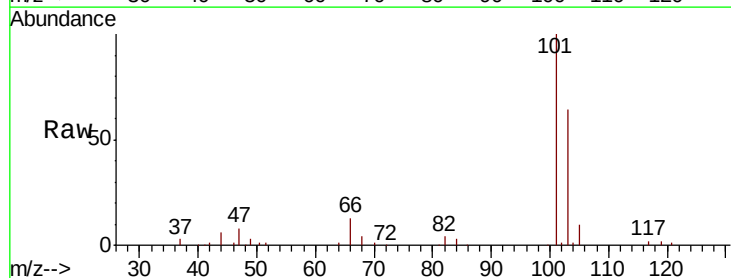
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00552

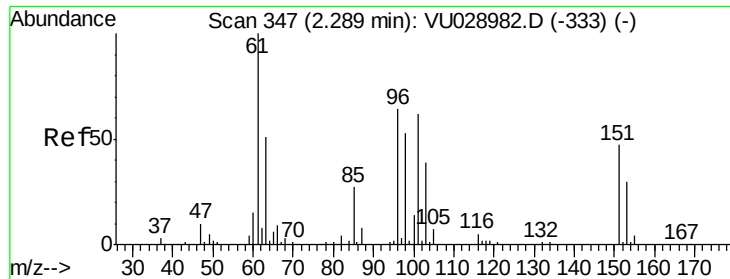
Tot Ion: 64 Resp: 27471  
Ion Ratio Lower Upper  
64 100  
66 33.4 22.6 42.0



#9  
Trichlorofluoromethane  
Concen: 4.568 ug/L  
RT: 1.89 min Scan# 222  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Tgt Ion: 101 Resp: 49862  
Ion Ratio Lower Upper  
101 100  
103 64.6 51.2 76.8





#10

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

Concen: 4.680 ug/L

RT: 2.29 min Scan# 346

Delta R.T. -0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

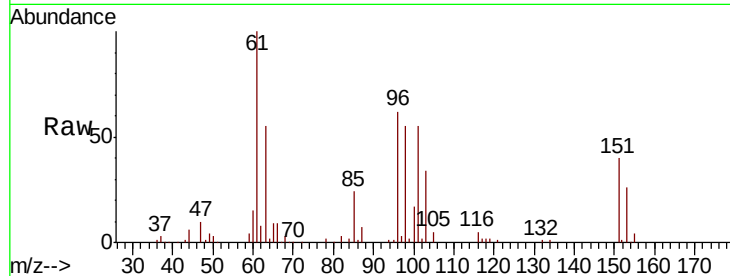
Tot Ion:101 Resp: 32964

Ion Ratio Lower Upper

101 100

85 43.3 33.8 50.6

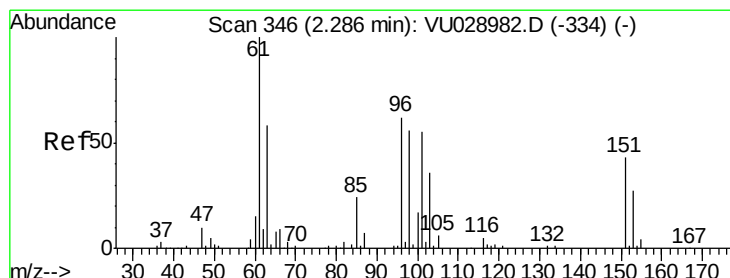
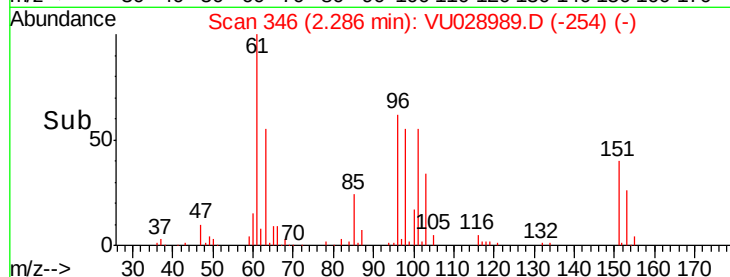
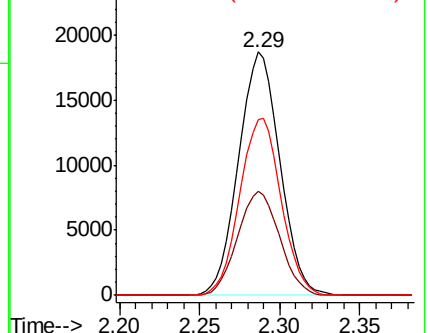
151 72.7 60.9 91.3



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: 4.761 ug/L

RT: 2.28 min Scan# 345

Delta R.T. -0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

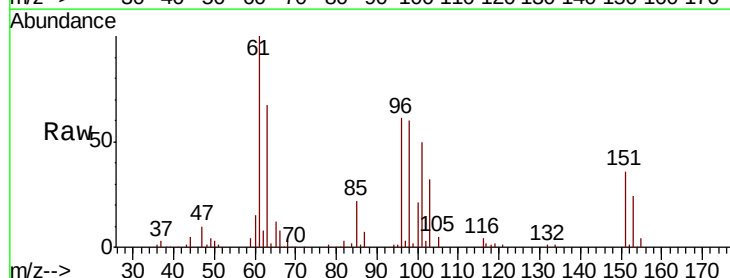
Tgt Ion: 96 Resp: 32605

Ion Ratio Lower Upper

96 100

61 165.2 110.5 205.3

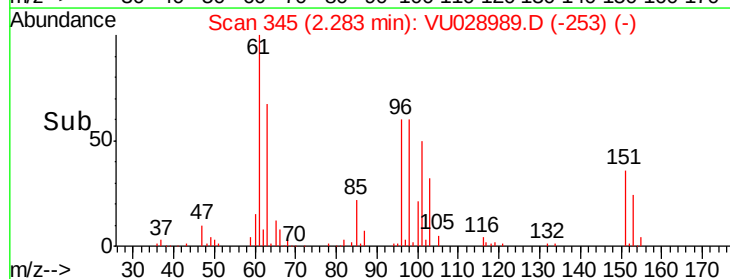
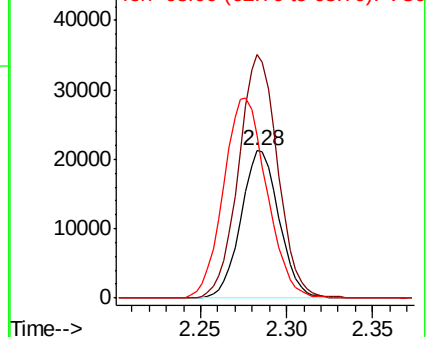
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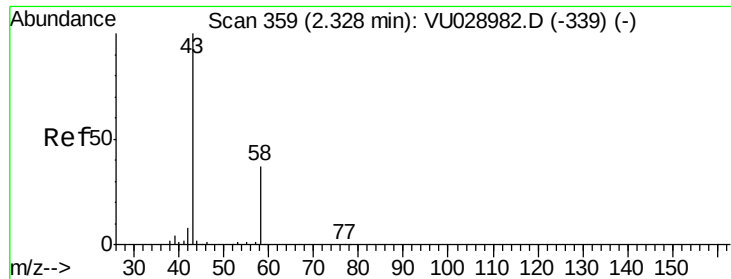


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 49.063 ug/L

RT: 2.32 min Scan# 358

Delta R.T. -0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

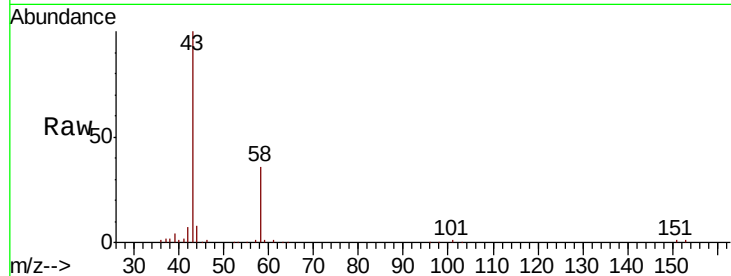
VSTD00552

Tot Ion: 43 Resp: 52949

Ion Ratio Lower Upper

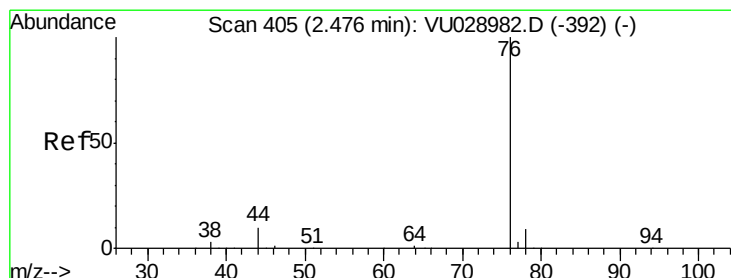
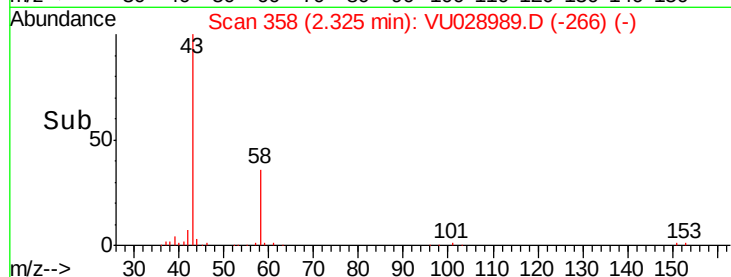
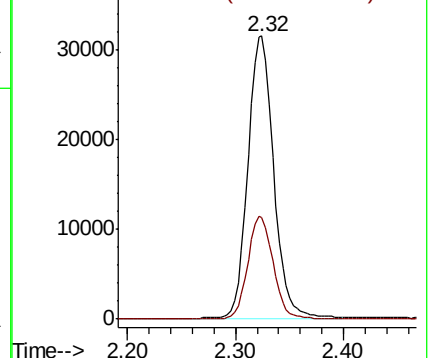
43 100

58 35.3 0.0 71.8



Abundance Ion 43.05 (42.75 to 43.75): VU0

Ion 58.05 (57.75 to 58.75): VU0



#14

Carbon disulfide

Concen: 4.895 ug/L

RT: 2.48 min Scan# 405

Delta R.T. 0.00 min

Lab File: VU028989.D

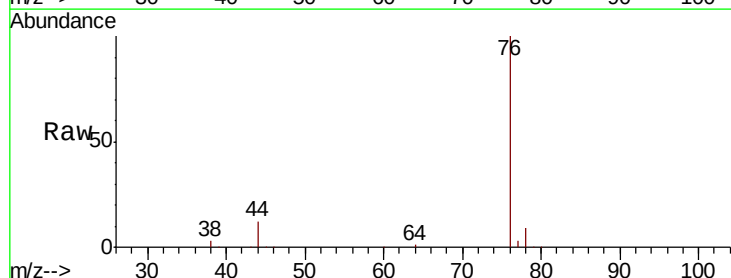
Acq: 02 Jan 2019 14:51

Tgt Ion: 76 Resp: 117142

Ion Ratio Lower Upper

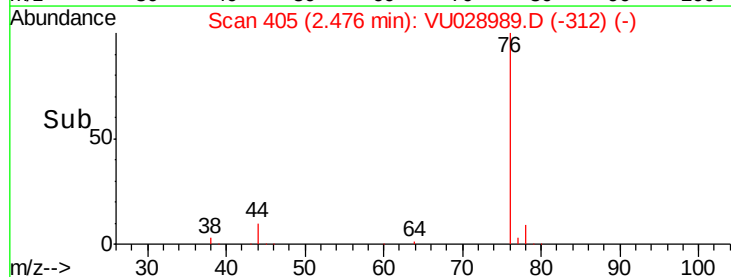
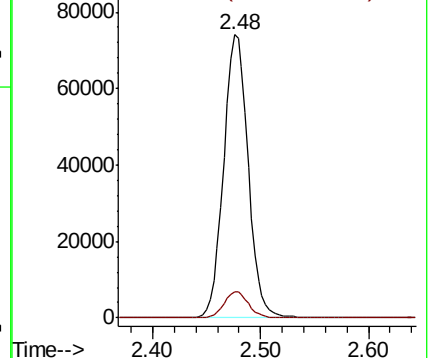
76 100

78 9.2 7.7 11.5

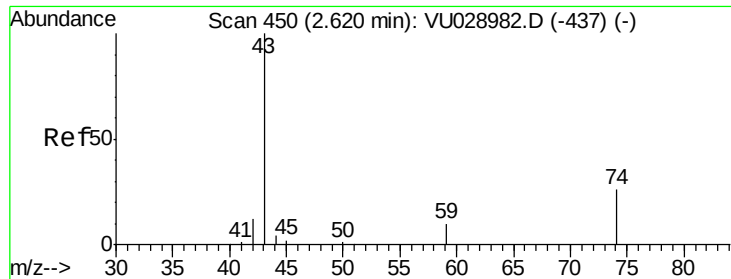


Abundance Ion 76.05 (75.75 to 76.75): VU0

Ion 78.00 (77.70 to 78.70): VU0



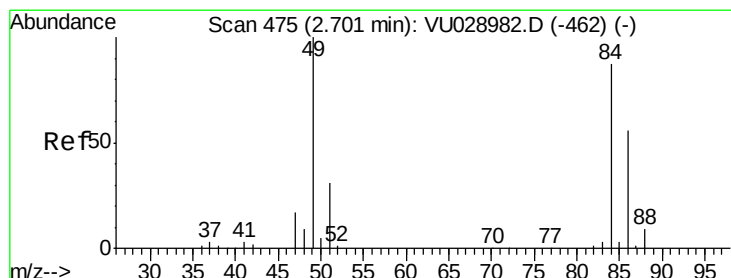
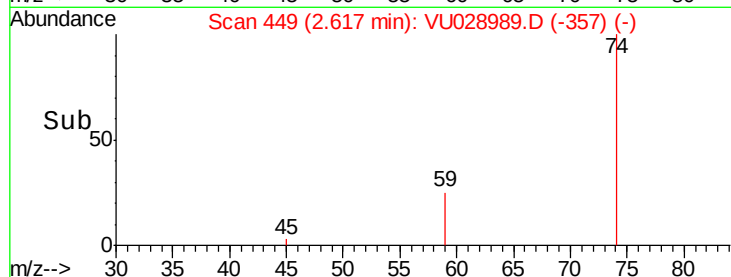
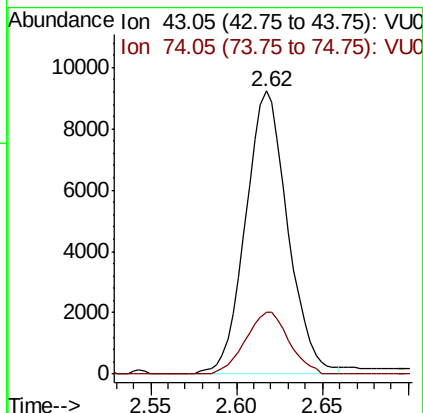
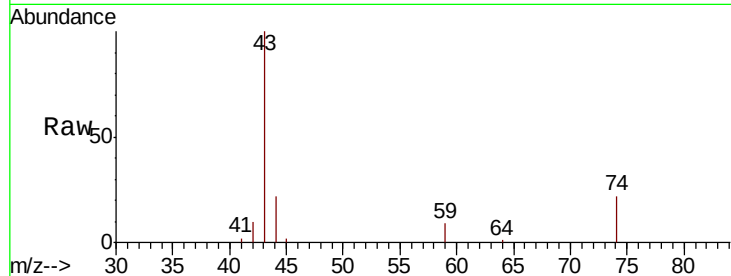




#15  
Methyl Acetate  
Concen: 4.981 ug/L  
RT: 2.62 min Scan# 449  
Delta R.T. -0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

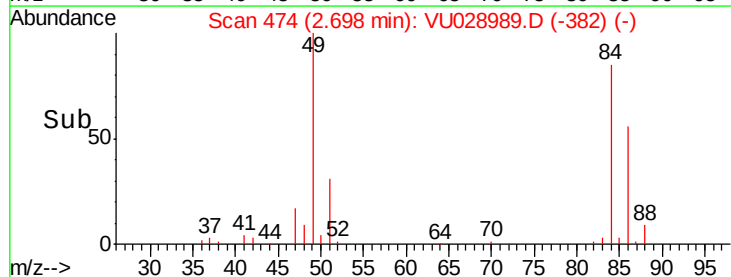
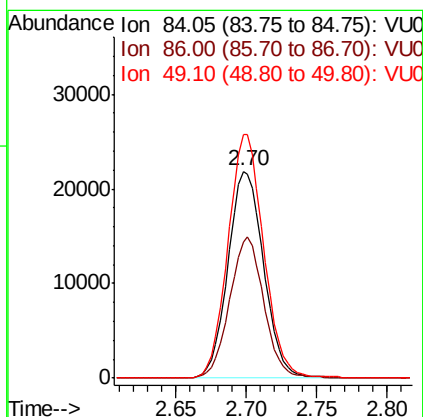
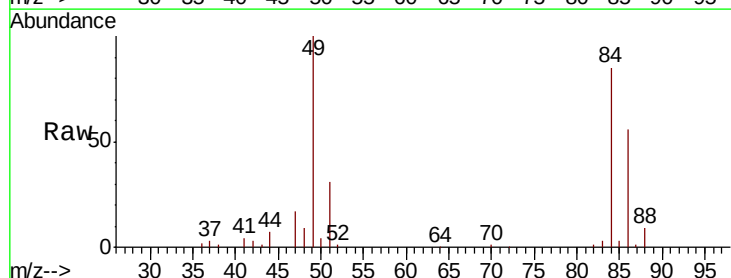
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00552

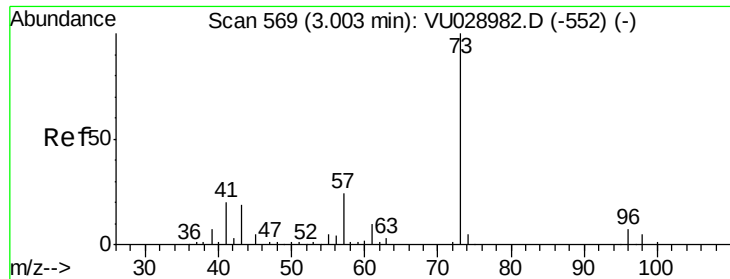
Tot Ion: 43 Resp: 15750  
Ion Ratio Lower Upper  
43 100  
74 22.5 20.6 30.8



#16  
Methylene chloride  
Concen: 3.948 ug/L  
RT: 2.70 min Scan# 474  
Delta R.T. -0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Tgt Ion: 84 Resp: 38712  
Ion Ratio Lower Upper  
84 100  
86 66.0 45.6 84.6  
49 117.4 79.7 148.1



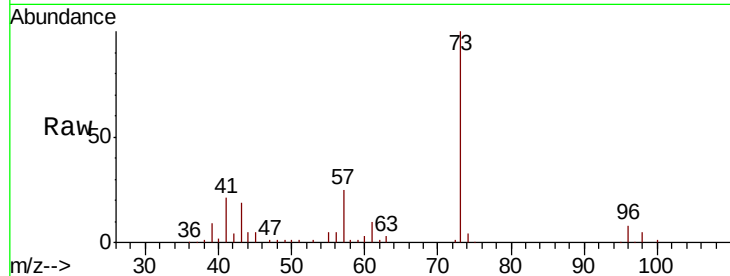


#17

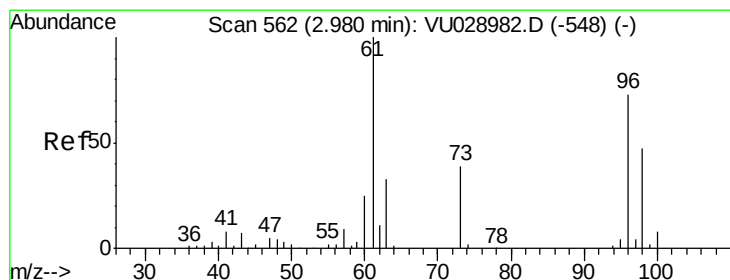
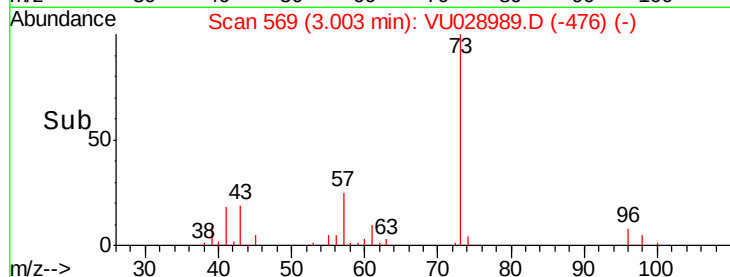
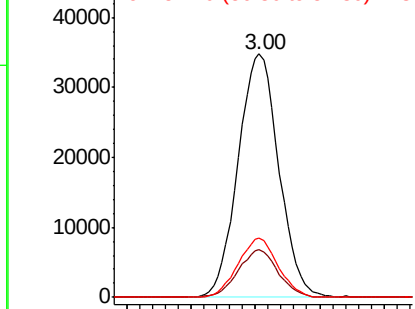
Methyl tert-butyl Ether  
 Concen: 4.545 ug/L  
 RT: 3.00 min Scan# 569  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Tot Ion: 73 Resp: 76434  
 Ion Ratio Lower Upper  
 73 100  
 43 19.3 13.8 20.8  
 57 23.9 17.5 26.3



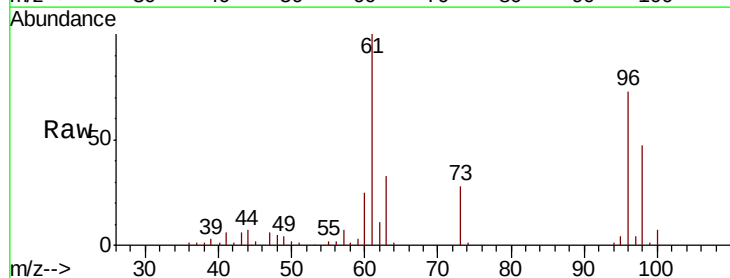
Abundance Ion 73.10 (72.80 to 73.80): VU0  
 Ion 43.05 (42.75 to 43.75): VU0  
 Ion 57.10 (56.80 to 57.80): VU0



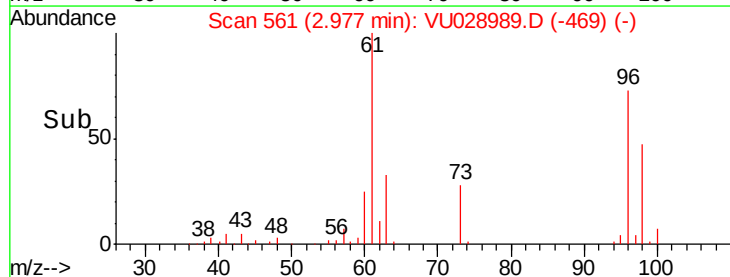
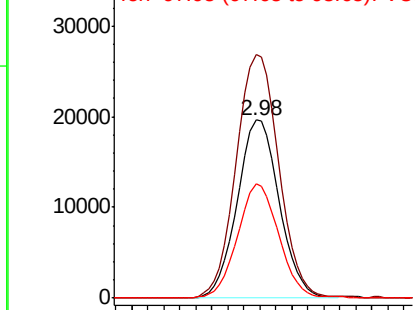
#18

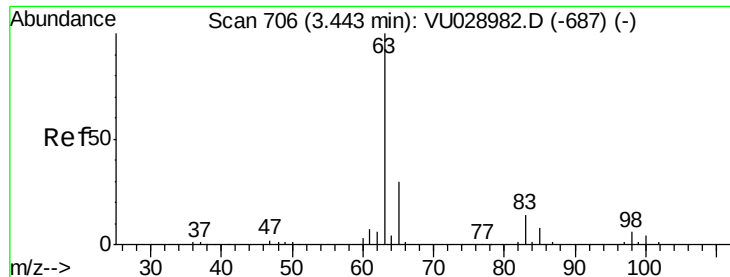
trans-1,2-Dichloroethene  
 Concen: 4.671 ug/L  
 RT: 2.98 min Scan# 561  
 Delta R.T. -0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion: 96 Resp: 35123  
 Ion Ratio Lower Upper  
 96 100  
 61 136.8 96.6 179.4  
 98 64.4 46.0 85.4



Abundance Ion 96.00 (95.70 to 96.70): VU0  
 Ion 61.05 (60.75 to 61.75): VU0  
 Ion 97.95 (97.65 to 98.65): VU0

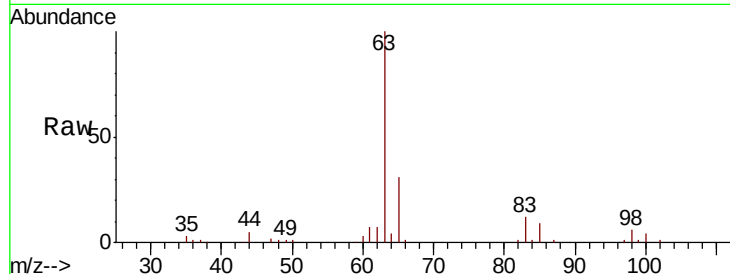




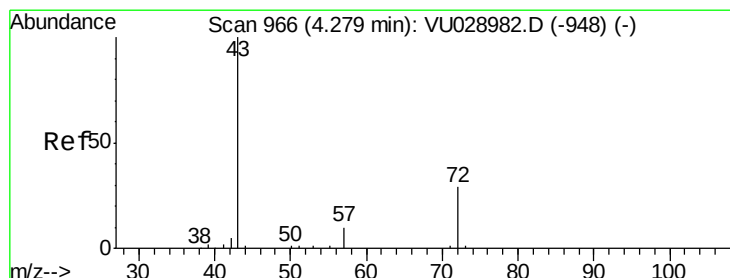
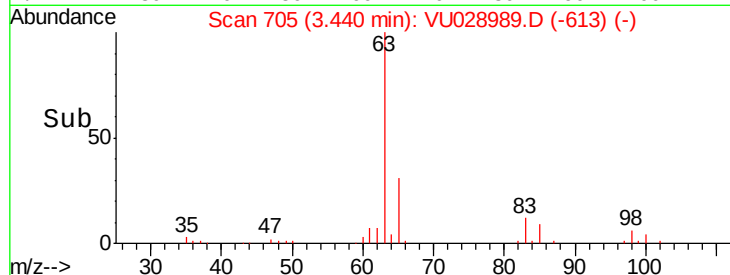
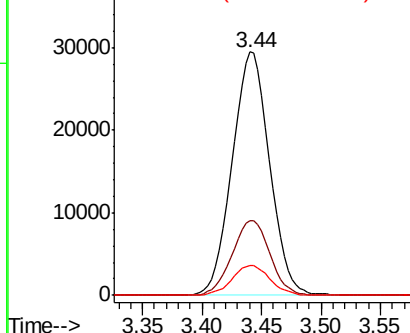
#19  
 1,1-Dichloroethane  
 Concen: 5.024 ug/L  
 RT: 3.44 min Scan# 705  
 Delta R.T. -0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Tot Ion: 63 Resp: 64131  
 Ion Ratio Lower Upper  
 63 100  
 65 30.8 21.8 40.6  
 83 12.3 9.3 17.3

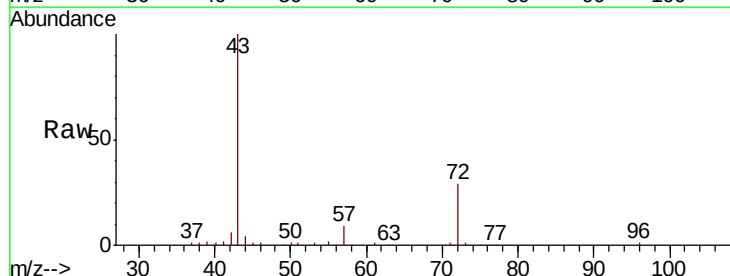


Abundance Ion 63.10 (62.80 to 63.80): VU0  
 Ion 65.10 (64.80 to 65.80): VU0  
 Ion 83.05 (82.75 to 83.75): VU0

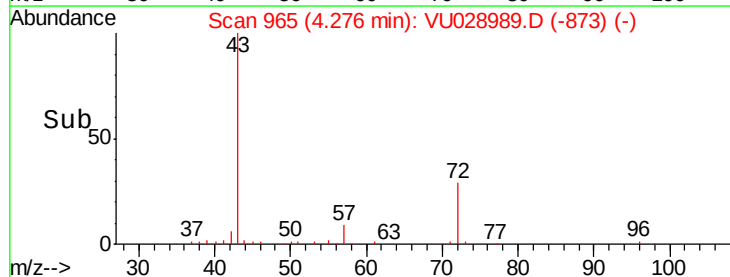
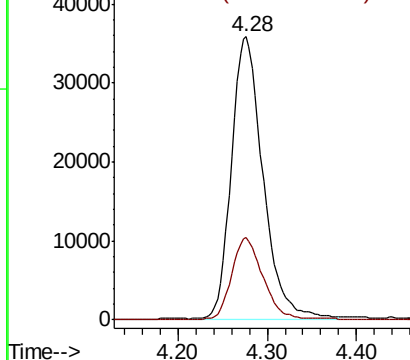


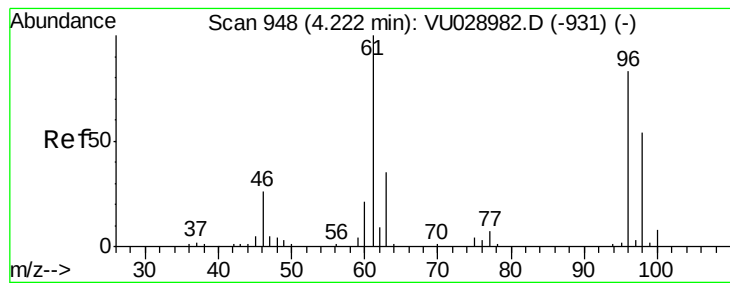
#21  
 2-Butanone  
 Concen: 54.298 ug/L  
 RT: 4.28 min Scan# 965  
 Delta R.T. -0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion: 43 Resp: 87669  
 Ion Ratio Lower Upper  
 43 100  
 72 29.3 15.2 45.5



Abundance Ion 43.05 (42.75 to 43.75): VU0  
 Ion 72.10 (71.80 to 72.80): VU0





#22

cis-1,2-Dichloroethene

Concen: 4.822 ug/L

RT: 4.22 min Scan# 948

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

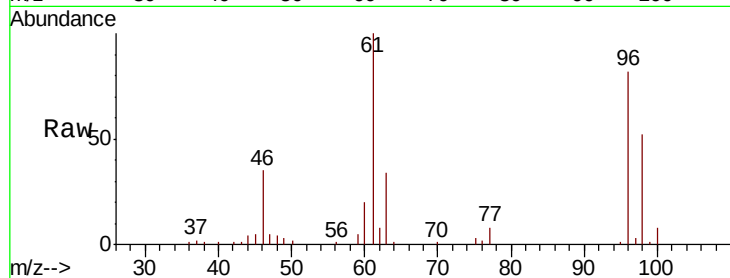
Tot Ion: 96 Resp: 37508

Ion Ratio Lower Upper

96 100

61 122.7 84.7 157.3

68 0.0 0.0 0.0

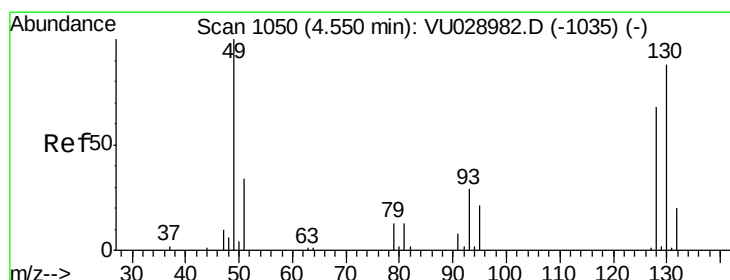
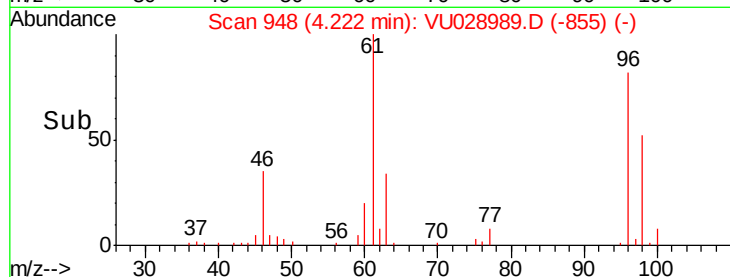
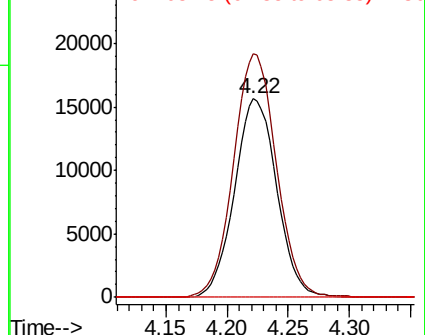


Abundance

Ion 96.00 (95.70 to 96.70): VU0

Ion 61.05 (60.75 to 61.75): VU0

Ion 68.15 (67.85 to 68.85): VU0



#23

Bromochloromethane

Concen: 5.128 ug/L

RT: 4.55 min Scan# 1049

Delta R.T. -0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Tgt Ion: 128 Resp: 16186

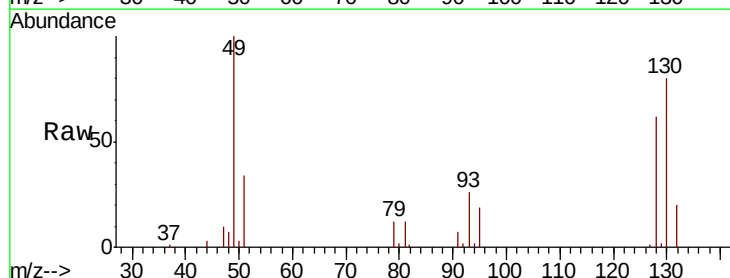
Ion Ratio Lower Upper

128 100

49 161.4 109.3 202.9

130 129.8 88.7 164.7

51 54.1 38.8 58.2



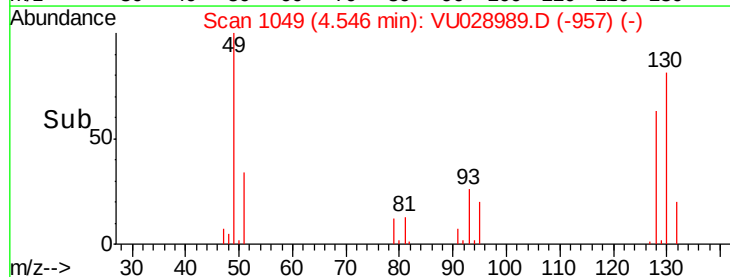
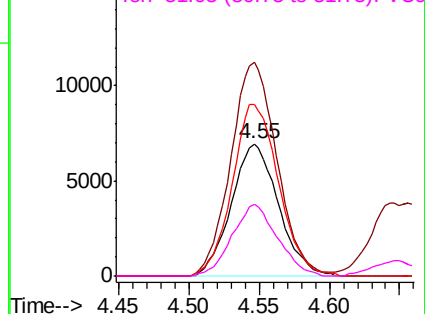
Abundance

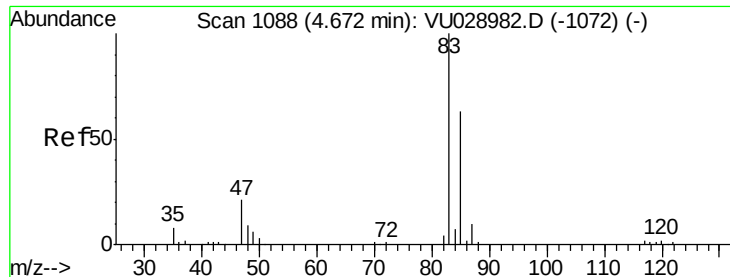
Ion 127.90 (127.60 to 128.60): V

Ion 49.10 (48.80 to 49.80): VU0

Ion 129.95 (129.65 to 130.65): V

Ion 51.05 (50.75 to 51.75): VU0





#25

Chloroform

Concen: 5.055 ug/L

RT: 4.67 min Scan# 1088

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

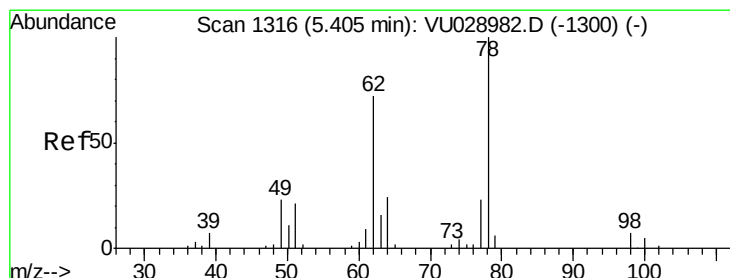
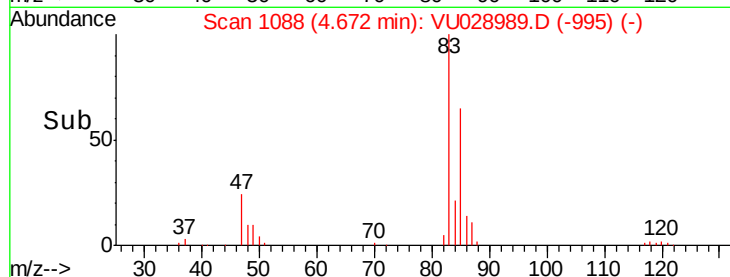
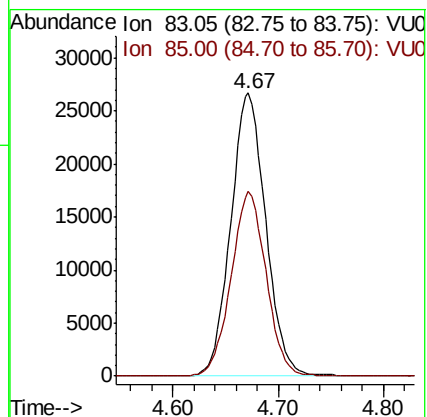
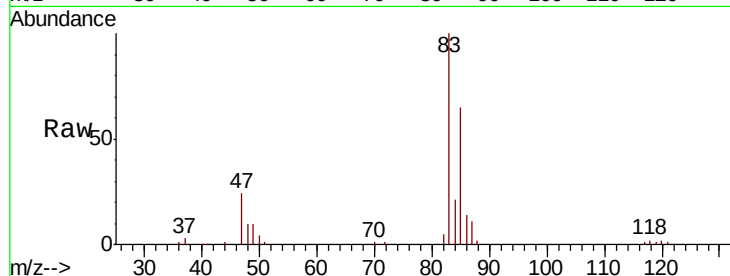
VSTD00552

Tot Ion: 83 Resp: 61311

Ion Ratio Lower Upper

83 100

85 65.1 45.6 84.8



#27

1,2-Dichloroethane

Concen: 5.133 ug/L

RT: 5.40 min Scan# 1316

Delta R.T. 0.00 min

Lab File: VU028989.D

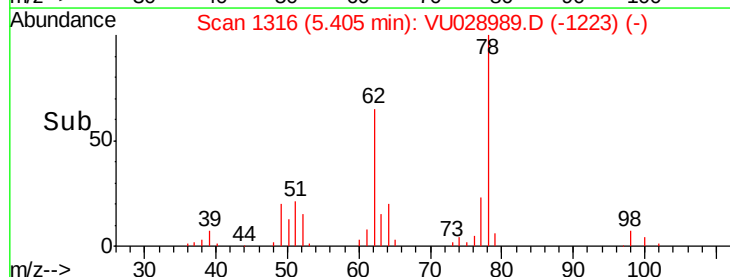
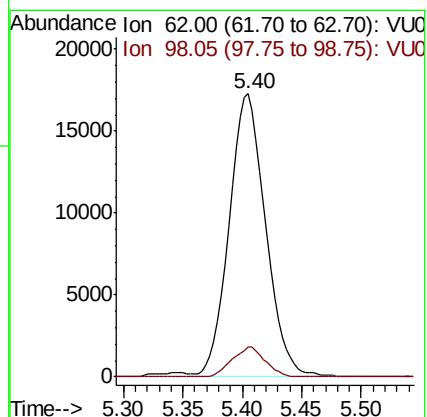
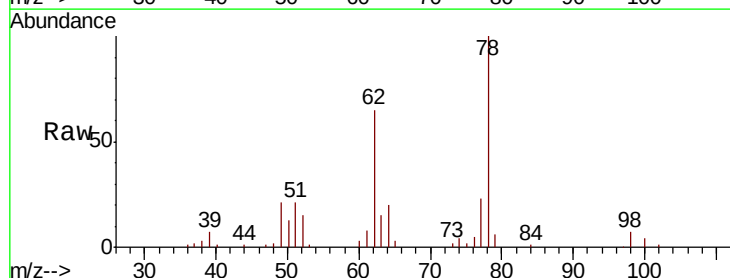
Acq: 02 Jan 2019 14:51

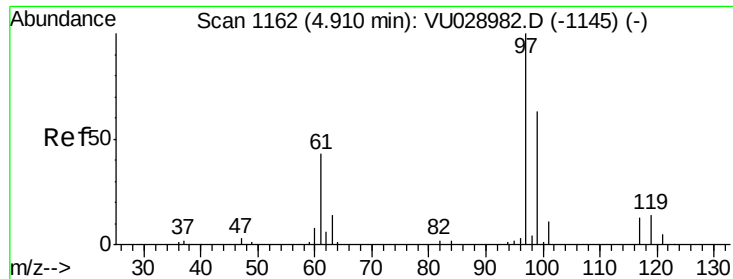
Tgt Ion: 62 Resp: 36830

Ion Ratio Lower Upper

62 100

98 10.4 8.2 12.2

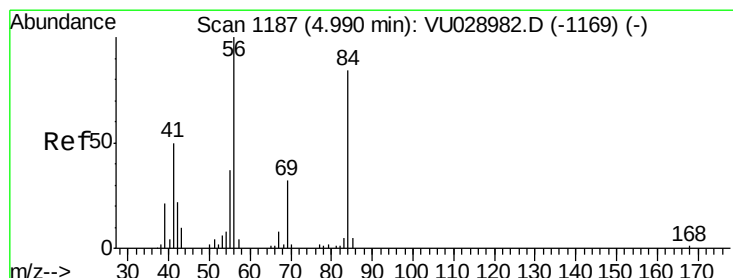
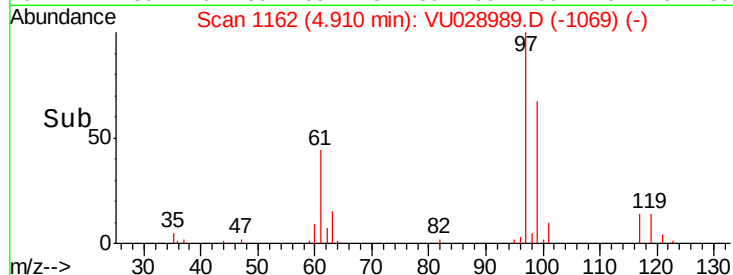
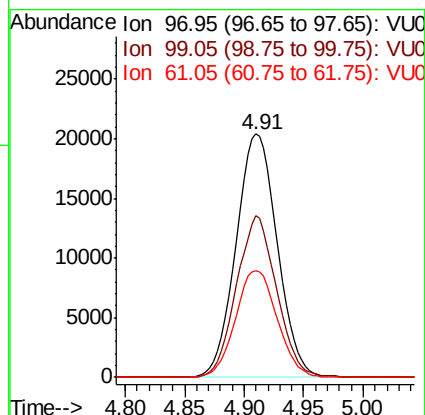
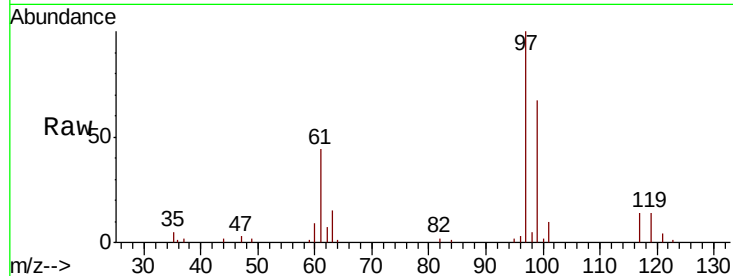




#29  
 1,1,1-Trichloroethane  
 Concen: 4.796 ug/L  
 RT: 4.91 min Scan# 1162  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

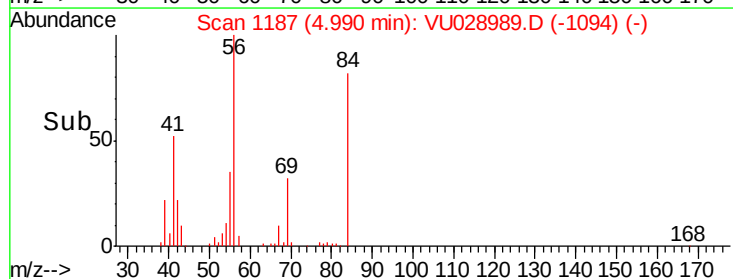
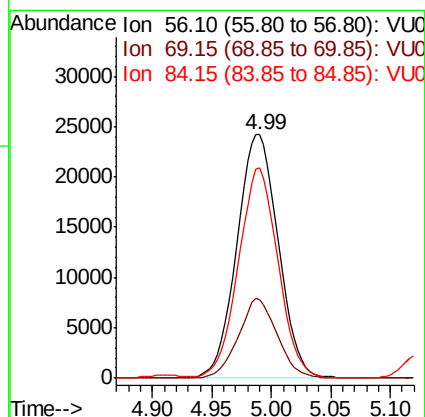
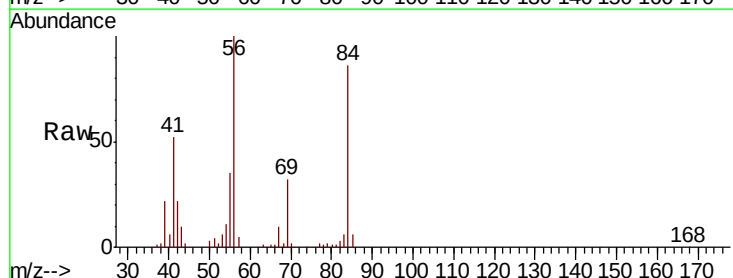
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

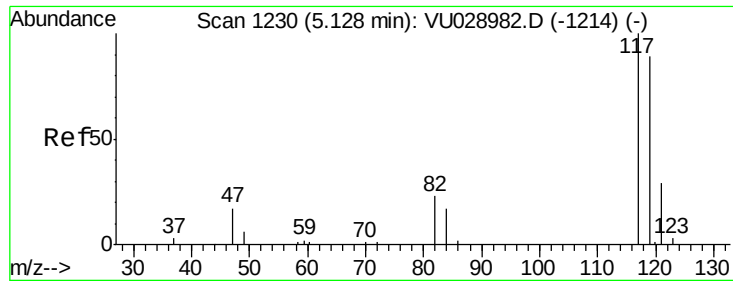
Tot Ion: 97 Resp: 48982  
 Ion Ratio Lower Upper  
 97 100  
 99 64.6 51.6 77.4  
 61 44.4 34.1 51.1



#30  
 Cyclohexane  
 Concen: 4.759 ug/L  
 RT: 4.99 min Scan# 1187  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion: 56 Resp: 58236  
 Ion Ratio Lower Upper  
 56 100  
 69 30.5 24.8 37.2  
 84 82.5 69.1 103.7

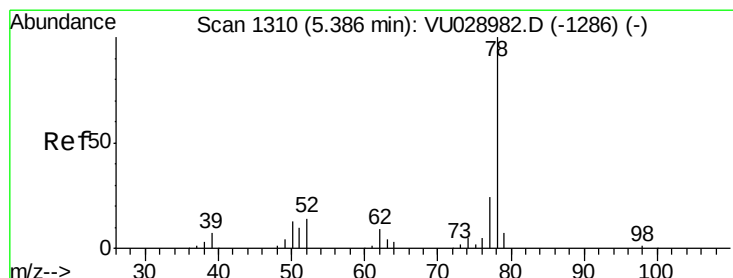
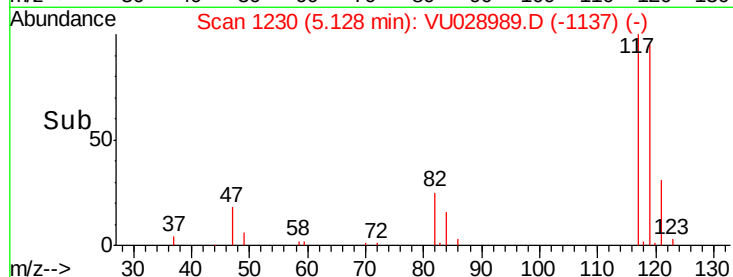
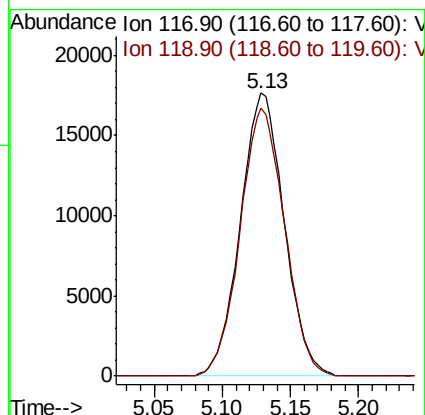
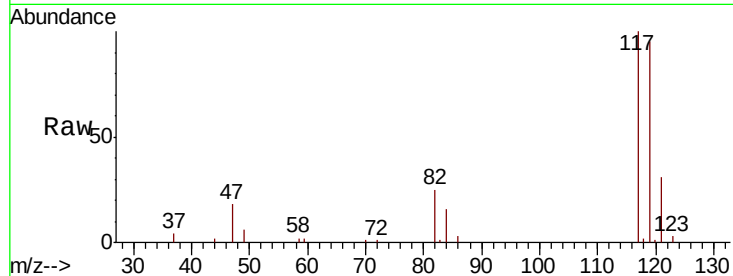




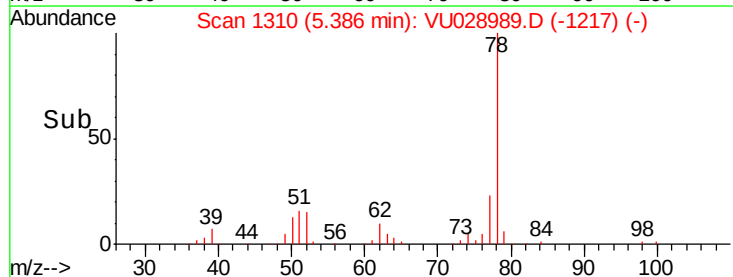
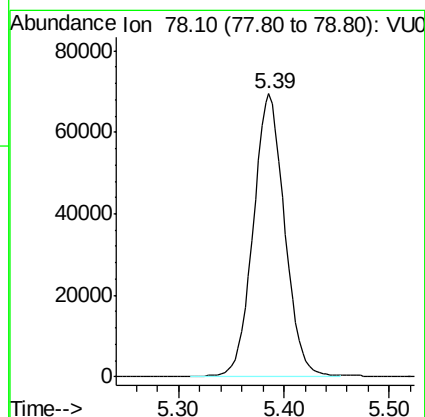
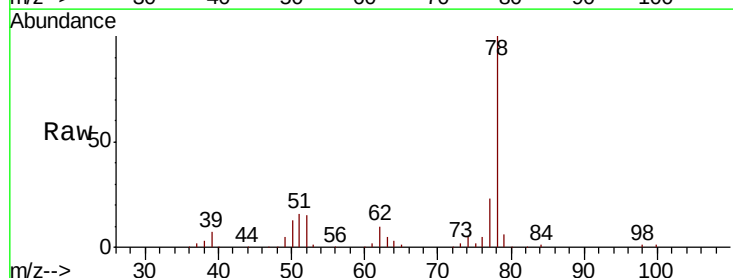
#31  
Carbon tetrachloride  
Concen: 4.843 ug/L  
RT: 5.13 min Scan# 1230  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

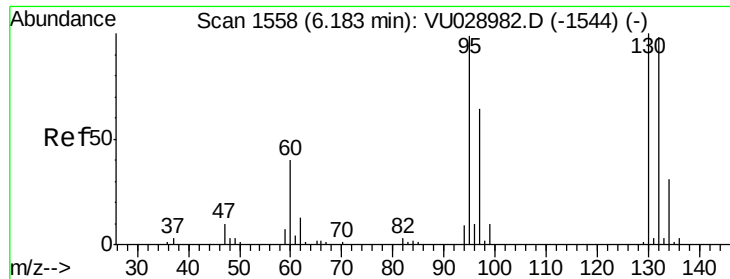
Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00552

Tot Ion:117 Resp: 39390  
Ion Ratio Lower Upper  
117 100  
119 95.9 75.4 113.2



#33  
Benzene  
Concen: 4.849 ug/L  
RT: 5.39 min Scan# 1310  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51  
Tgt Ion: 78 Resp: 144193





#34

Trichloroethene

Concen: 4.728 ug/L

RT: 6.18 min Scan# 1558

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

Tot Ion: 95 Resp: 35952

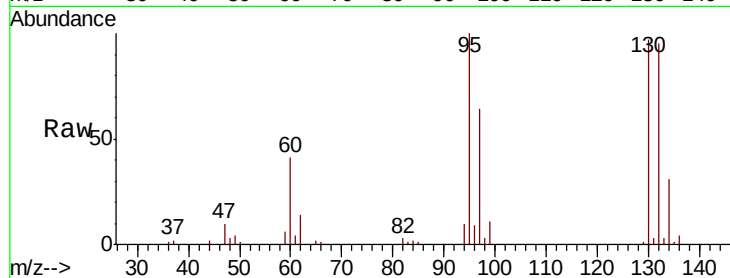
Ion Ratio Lower Upper

95 100

97 63.5 45.4 84.2

132 95.0 70.8 131.6

130 96.7 70.7 131.3



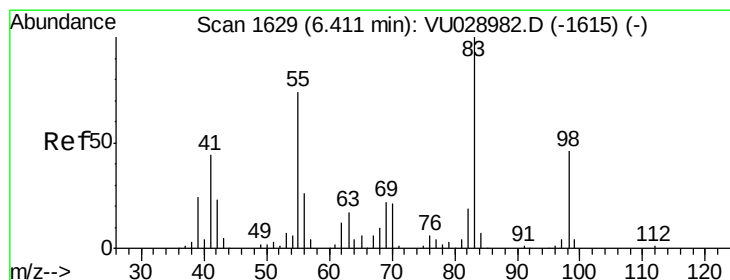
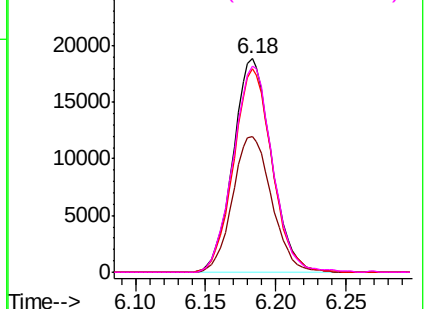
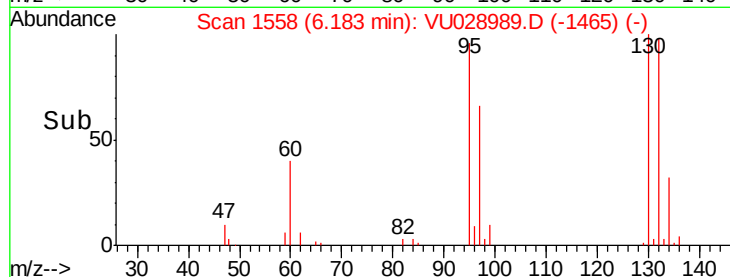
Abundance

Ion 95.00 (94.70 to 95.70): VU0

Ion 96.95 (96.65 to 97.65): VU0

Ion 131.95 (131.65 to 132.65): V

Ion 129.95 (129.65 to 130.65): V



#35

Methylcyclohexane

Concen: 4.608 ug/L

RT: 6.41 min Scan# 1629

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

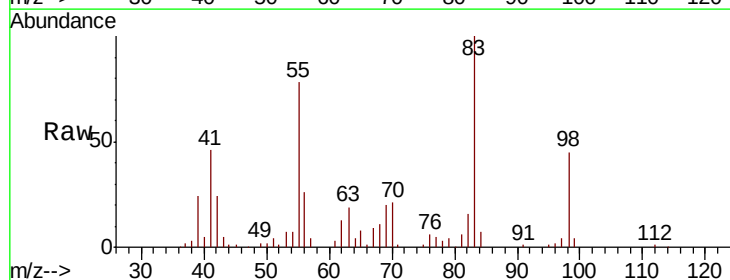
Tgt Ion: 83 Resp: 60180

Ion Ratio Lower Upper

83 100

55 77.9 59.8 89.6

98 43.3 37.0 55.6

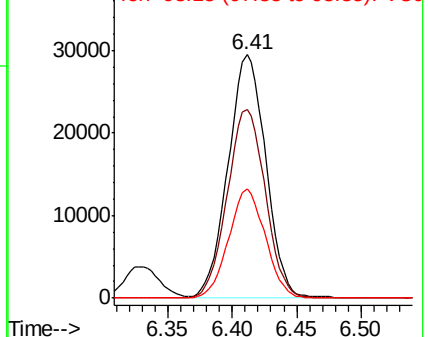
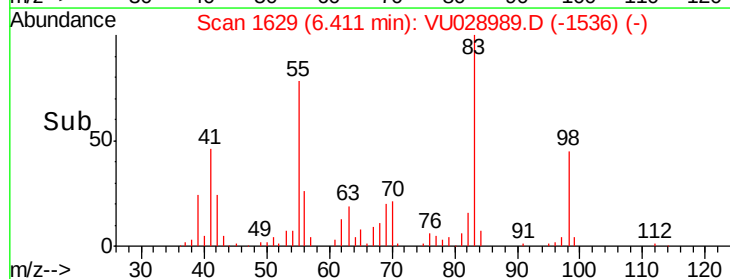


Abundance

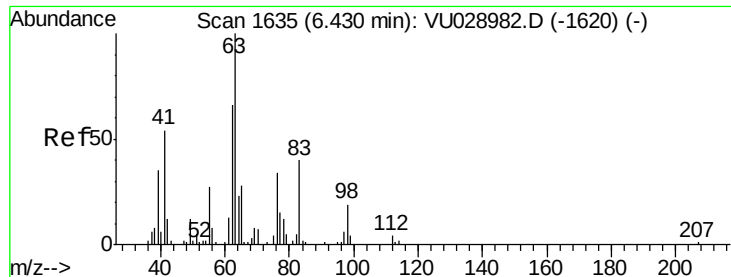
Ion 83.15 (82.85 to 83.85): VU0

Ion 55.10 (54.80 to 55.80): VU0

Ion 98.15 (97.85 to 98.85): VU0



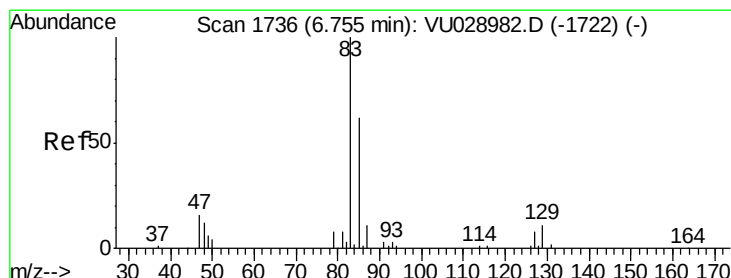
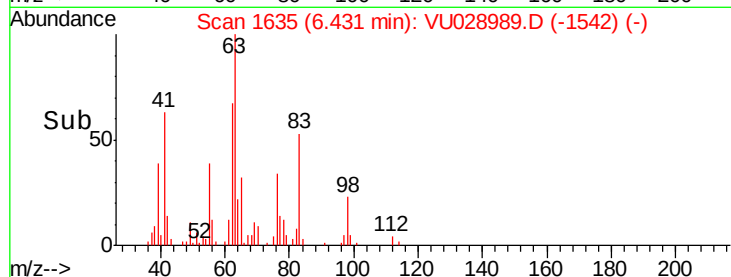
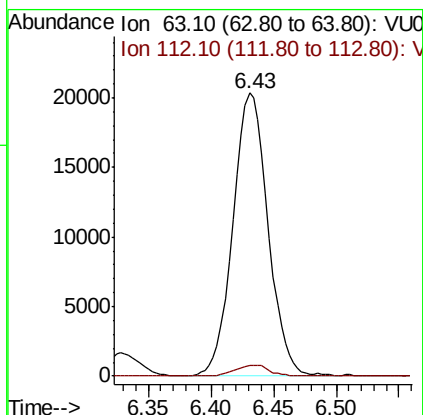
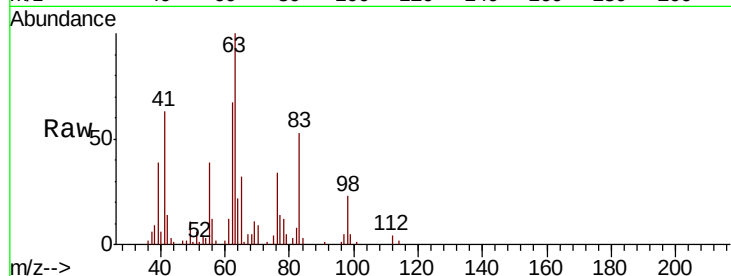




#37  
 1,2-Dichloropropane  
 Concen: 5.226 ug/L  
 RT: 6.43 min Scan# 1635  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

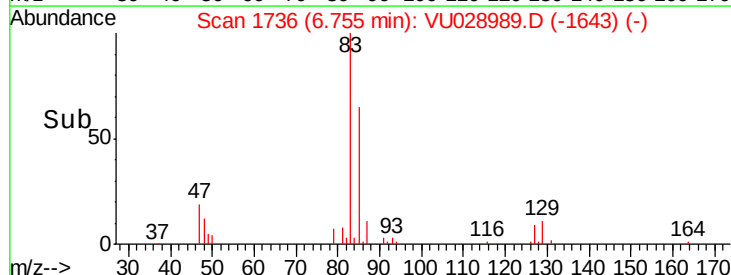
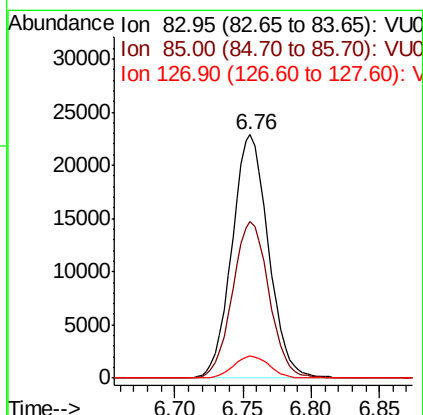
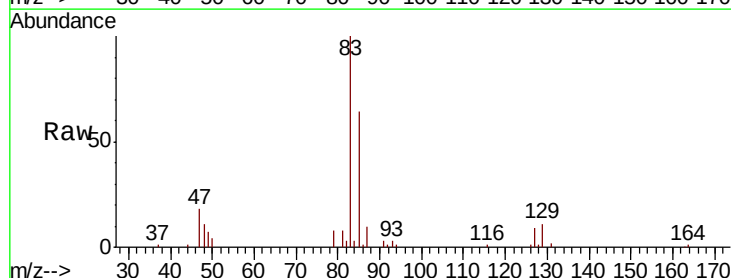
Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

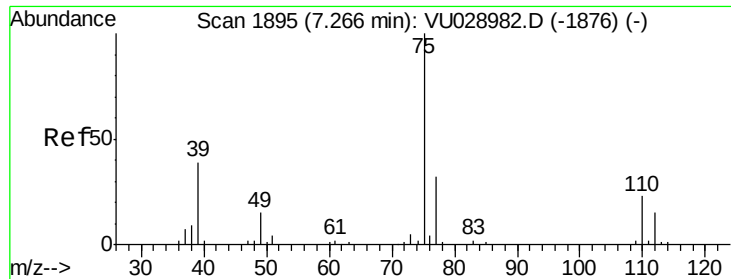
Tot Ion: 63 Resp: 39592  
 Ion Ratio Lower Upper  
 63 100  
 112 3.7 3.0 4.4



#38  
 Bromodichloromethane  
 Concen: 4.962 ug/L  
 RT: 6.76 min Scan# 1736  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion: 83 Resp: 42320  
 Ion Ratio Lower Upper  
 83 100  
 85 64.3 45.1 83.9  
 127 8.9 6.8 10.2





#39

cis-1,3-Dichloropropene

Concen: 4.775 ug/L

RT: 7.27 min Scan# 1895

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

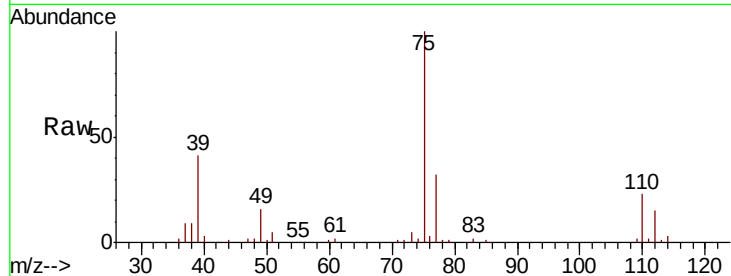
VSTD00552

Tot Ion: 75 Resp: 51874

Ion Ratio Lower Upper

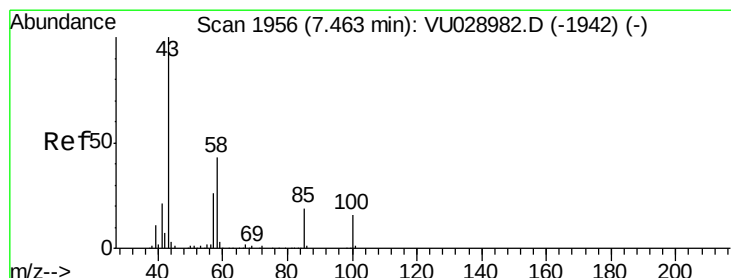
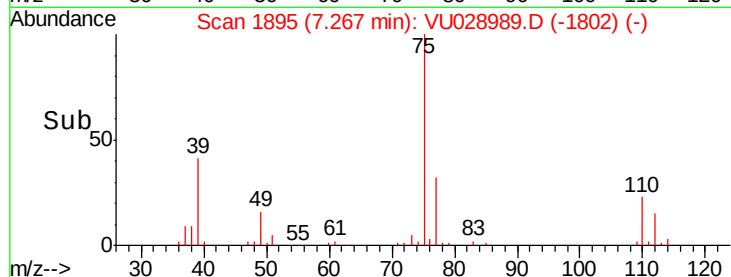
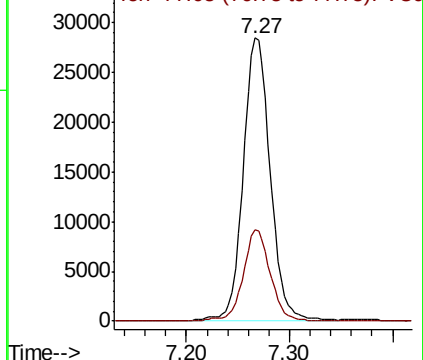
75 100

77 32.3 21.5 39.9



Abundance Ion 75.05 (74.75 to 75.75): VU028982.D (-1876) (-)

Ion 77.05 (76.75 to 77.75): VU028982.D (-1876) (-)



#40

4-Methyl-2-pentanone

Concen: 52.446 ug/L

RT: 7.46 min Scan# 1956

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

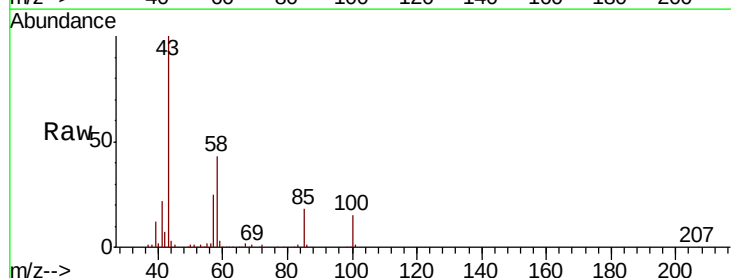
Tgt Ion: 43 Resp: 211419

Ion Ratio Lower Upper

43 100

58 41.7 34.6 51.8

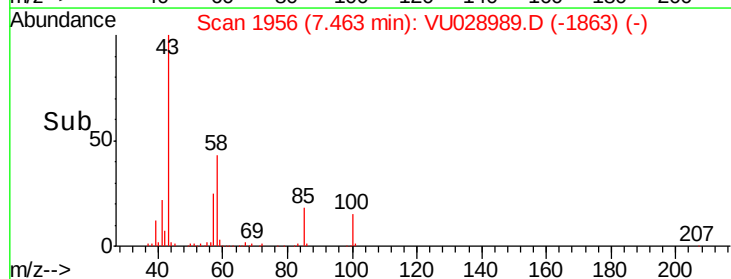
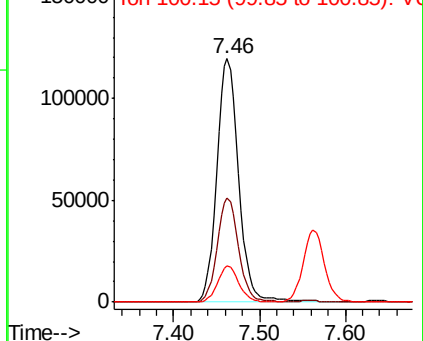
100 14.4 13.4 20.0

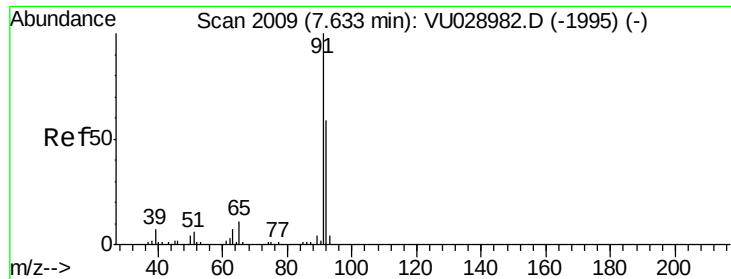


Abundance Ion 43.05 (42.75 to 43.75): VU028982.D (-1942) (-)

Ion 58.05 (57.75 to 58.75): VU028982.D (-1942) (-)

Ion 100.15 (99.85 to 100.85): VU028982.D (-1942) (-)





#42

Toluene

Concen: 4.771 ug/L

RT: 7.63 min Scan# 2009

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

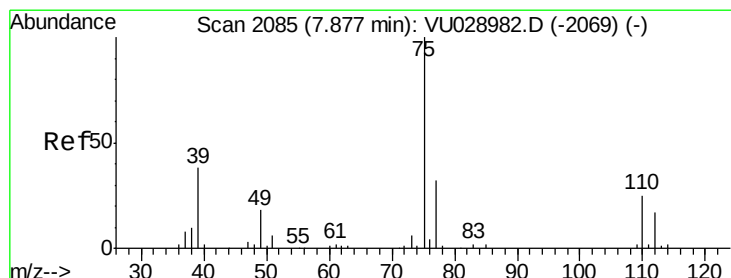
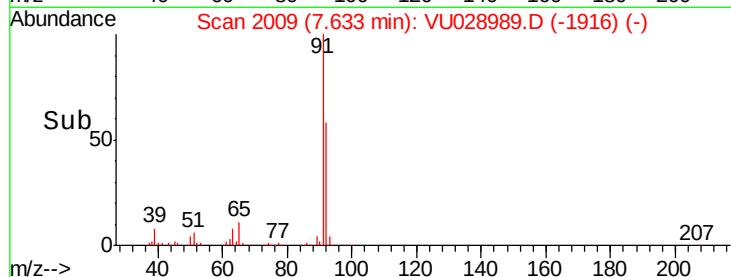
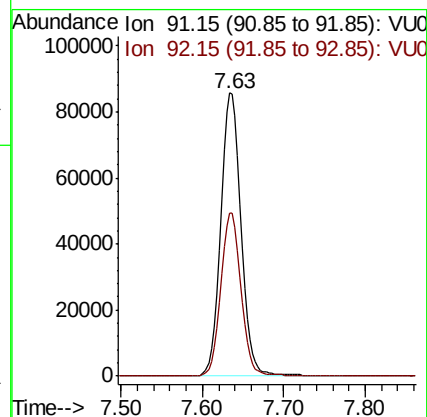
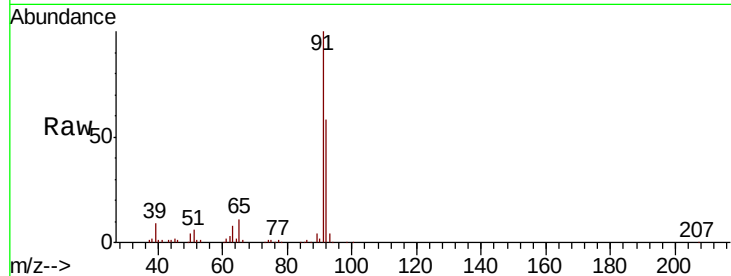
VSTD00552

Tot Ion: 91 Resp: 151886

Ion Ratio Lower Upper

91 100

92 57.5 39.3 73.1



#44

trans-1,3-Dichloropropene

Concen: 4.885 ug/L

RT: 7.88 min Scan# 2086

Delta R.T. 0.00 min

Lab File: VU028989.D

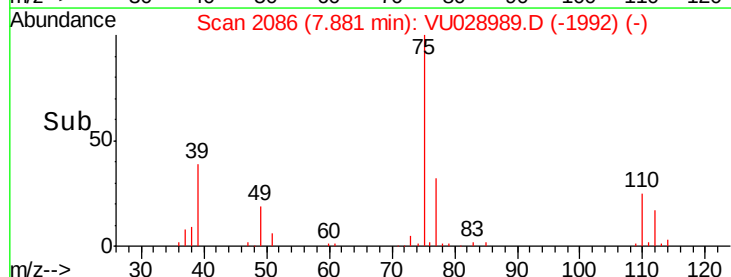
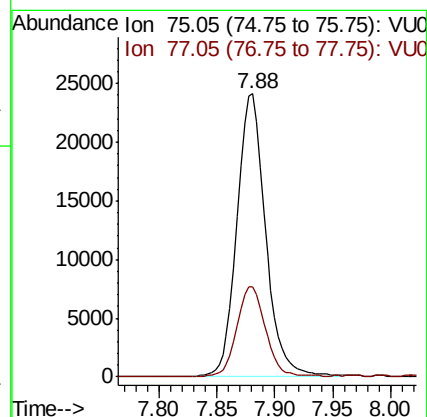
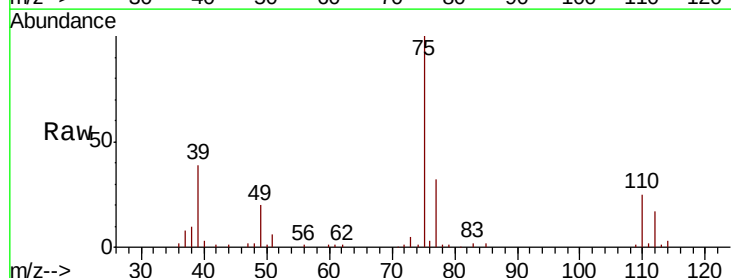
Acq: 02 Jan 2019 14:51

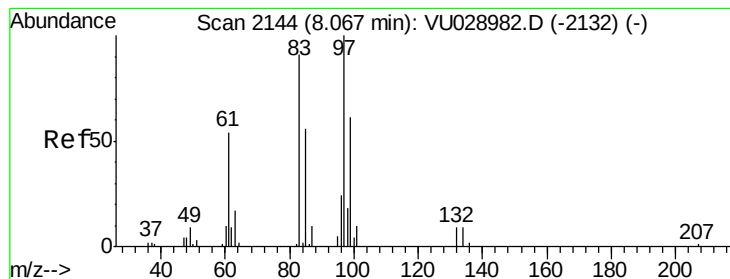
Tgt Ion: 75 Resp: 41353

Ion Ratio Lower Upper

75 100

77 31.9 21.6 40.0





#45

1,1,2-Trichloroethane

Concen: 4.958 ug/L

RT: 8.07 min Scan# 2144

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

Tot Ion: 97 Resp: 25564

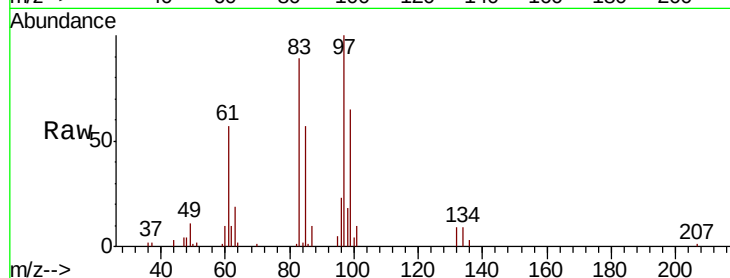
Ion Ratio Lower Upper

97 100

99 65.3 42.4 78.6

83 88.7 59.6 110.6

85 56.6 39.0 72.4

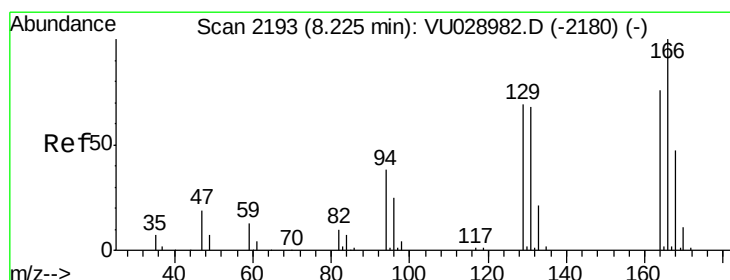
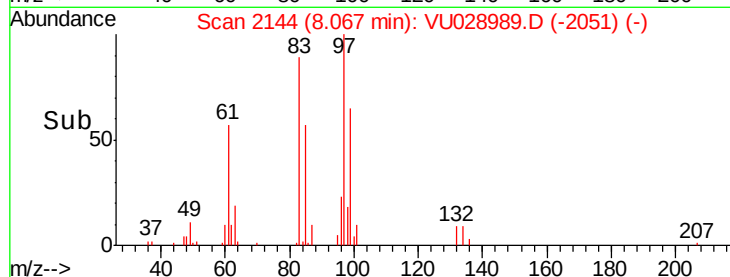
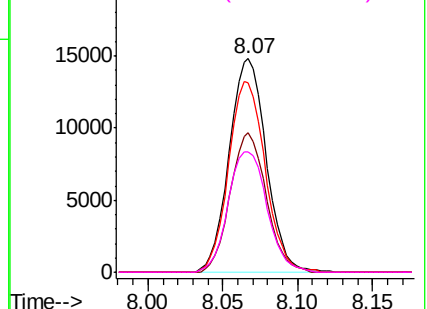


Abundance Ion 96.95 (96.65 to 97.65): VU0

Ion 99.05 (98.75 to 99.75): VU0

Ion 82.95 (82.65 to 83.65): VU0

Ion 85.00 (84.70 to 85.70): VU0



#47

Tetrachloroethene

Concen: 4.672 ug/L

RT: 8.22 min Scan# 2193

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Tgt Ion:164 Resp: 29422

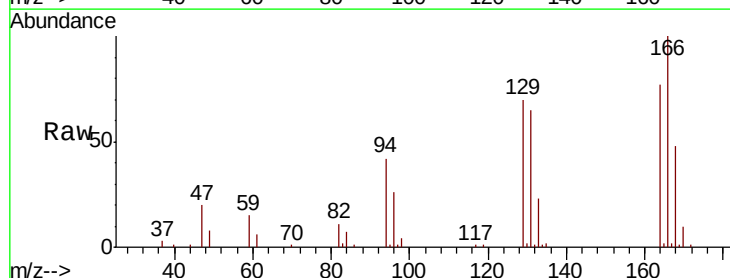
Ion Ratio Lower Upper

164 100

129 91.8 65.3 121.3

131 85.2 62.9 116.7

166 130.7 86.7 160.9

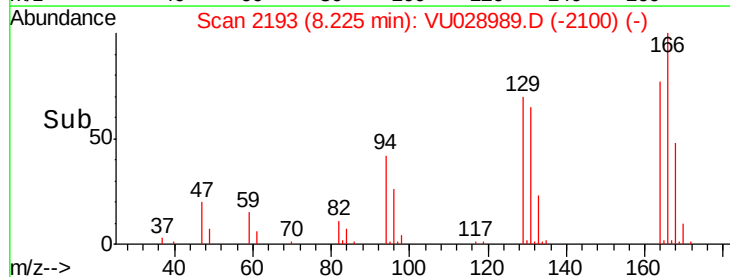
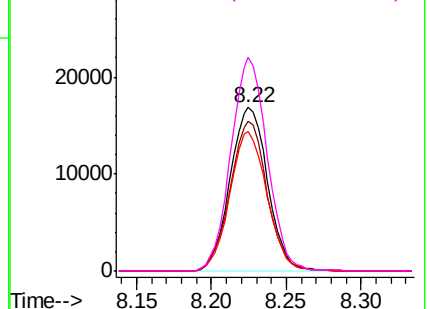


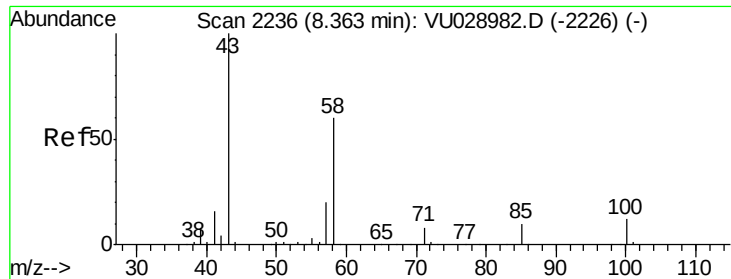
Abundance Ion 163.90 (163.60 to 164.60): V

Ion 128.95 (128.65 to 129.65): V

Ion 130.95 (130.65 to 131.65): V

Ion 165.90 (165.60 to 166.60): V

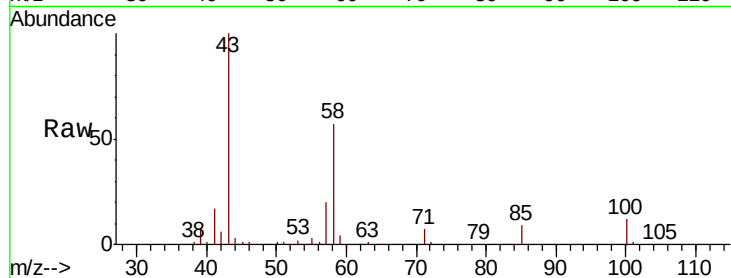




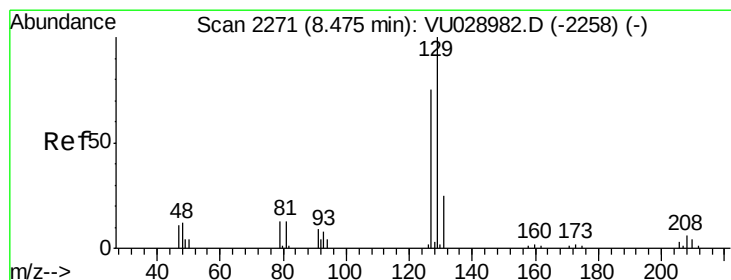
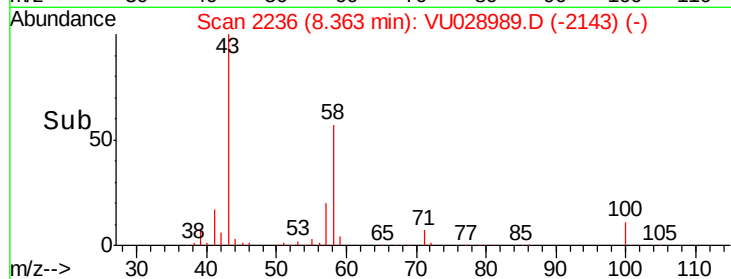
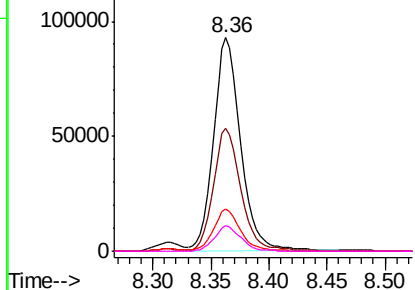
#48  
2-Hexanone  
Concen: 54.157 ug/L  
RT: 8.36 min Scan# 2236  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00552

Tot Ion: 43 Resp: 151016  
Ion Ratio Lower Upper  
43 100  
58 57.7 48.8 73.2  
57 19.3 16.0 24.0  
100 11.8 10.2 15.4

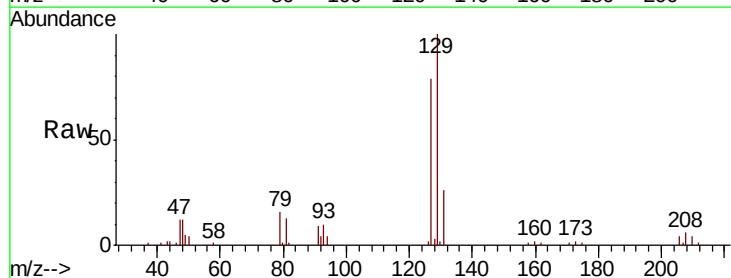


Abundance Ion 43.05 (42.75 to 43.75): VU0  
Ion 58.05 (57.75 to 58.75): VU0  
Ion 57.20 (56.90 to 57.90): VU0  
Ion 100.15 (99.85 to 100.85): VU0

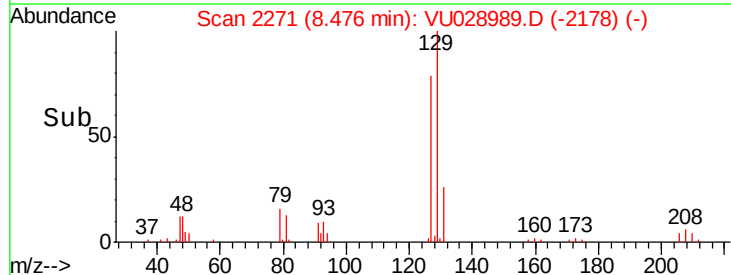
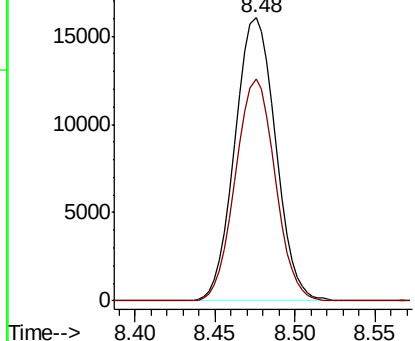


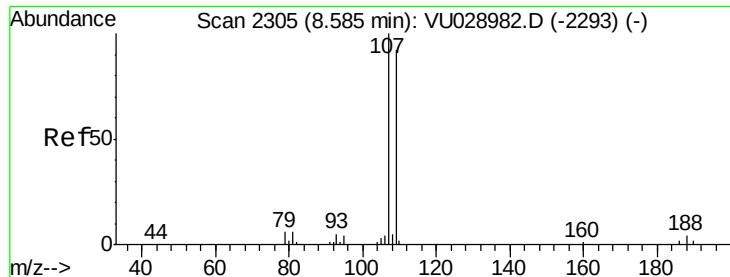
#49  
Dibromochloromethane  
Concen: 5.096 ug/L  
RT: 8.48 min Scan# 2271  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Tgt Ion: 129 Resp: 27893  
Ion Ratio Lower Upper  
129 100  
127 78.5 54.4 101.0



Abundance Ion 128.95 (128.65 to 129.65): V  
Ion 126.90 (126.60 to 127.60): V

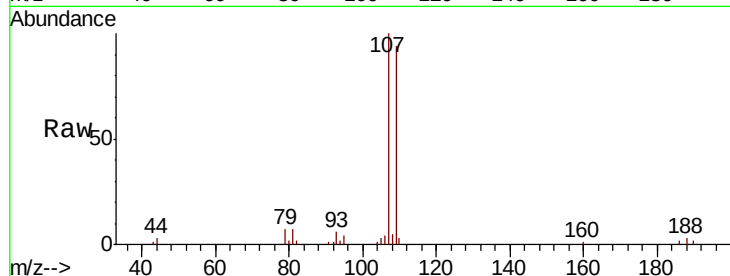




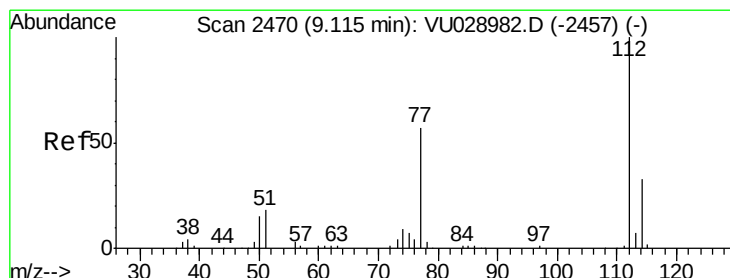
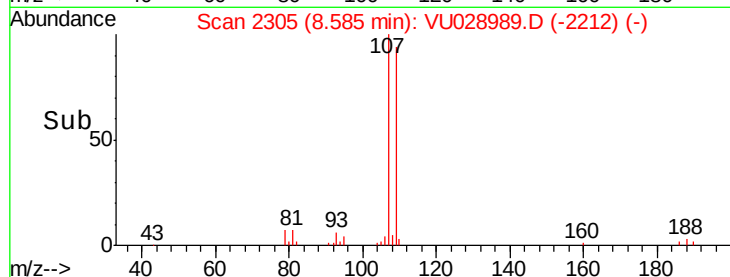
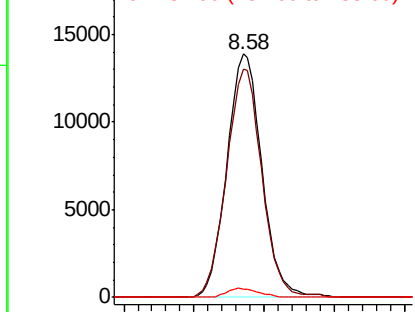
#50  
1,2-Dibromoethane  
Concen: 4.992 ug/L  
RT: 8.58 min Scan# 2305  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Instrument :  
MSVOA\_U  
ClientSampleId :  
VSTD00552

Tot Ion:107 Resp: 24073  
Ion Ratio Lower Upper  
107 100  
109 93.9 64.0 119.0  
188 3.5 3.0 4.4

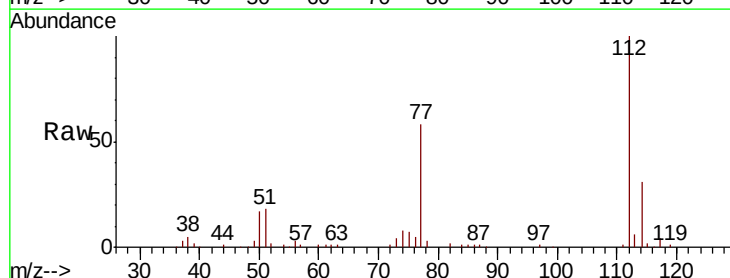


Abundance Ion 106.95 (106.65 to 107.65): V  
Ion 109.00 (108.70 to 109.70): V  
Ion 187.90 (187.60 to 188.60): V

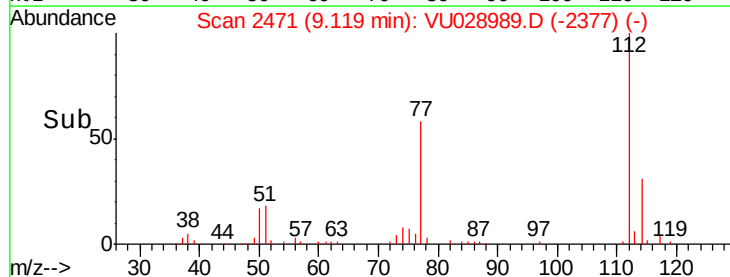
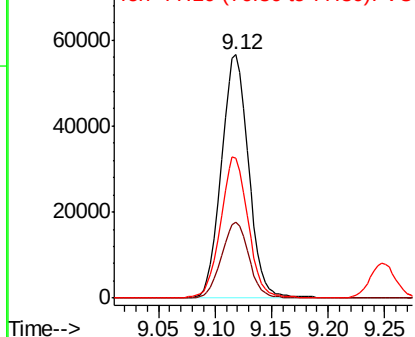


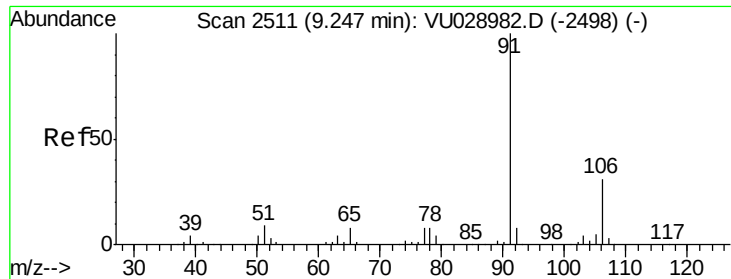
#51  
Chlorobenzene  
Concen: 4.750 ug/L  
RT: 9.12 min Scan# 2471  
Delta R.T. 0.00 min  
Lab File: VU028989.D  
Acq: 02 Jan 2019 14:51

Tgt Ion:112 Resp: 94837  
Ion Ratio Lower Upper  
112 100  
114 31.1 22.2 41.2  
77 57.7 44.9 67.3



Abundance Ion 112.10 (111.80 to 112.80): V  
Ion 114.05 (113.75 to 114.75): V  
Ion 77.10 (76.80 to 77.80): V





#52

Ethylbenzene

Concen: 4.652 ug/L

RT: 9.25 min Scan# 2511

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

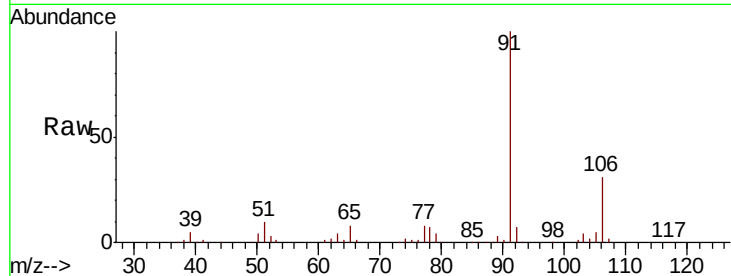
VSTD00552

Tot Ion: 91 Resp: 157085

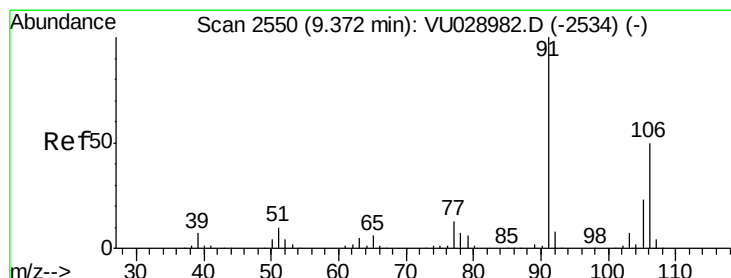
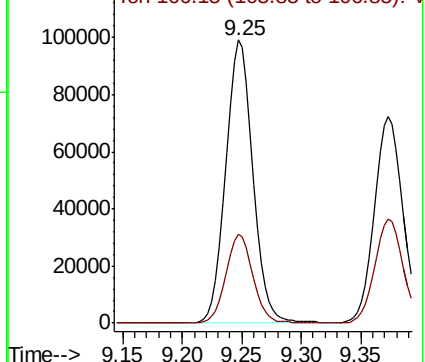
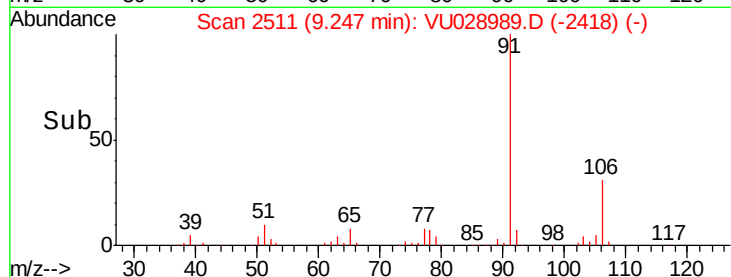
Ion Ratio Lower Upper

91 100

106 31.4 22.7 42.1



Abundance Ion 91.15 (90.85 to 91.85): VU028989.D (-2418) (-)



#53

m,p-xylene

Concen: 4.705 ug/L

RT: 9.37 min Scan# 2550

Delta R.T. 0.00 min

Lab File: VU028989.D

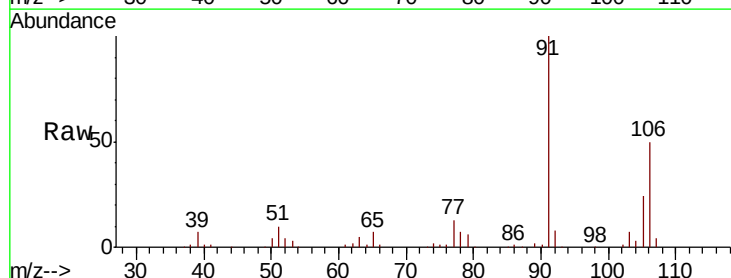
Acq: 02 Jan 2019 14:51

Tgt Ion: 106 Resp: 60459

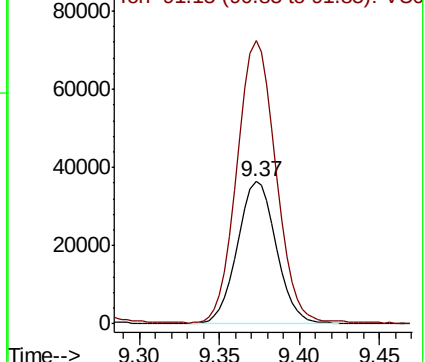
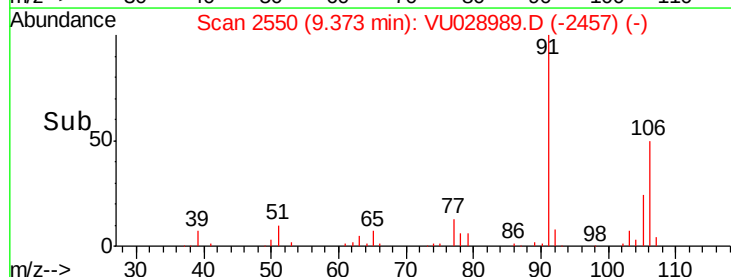
Ion Ratio Lower Upper

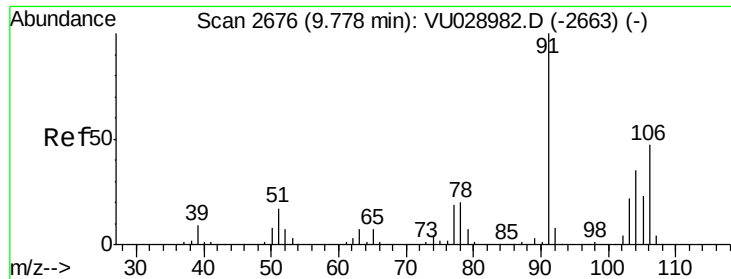
106 100

91 198.7 138.5 257.1



Abundance Ion 106.15 (105.85 to 106.85): VU028989.D (-2457) (-)





#54

o-xylene

Concen: 4.711 ug/L

RT: 9.78 min Scan# 2676

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

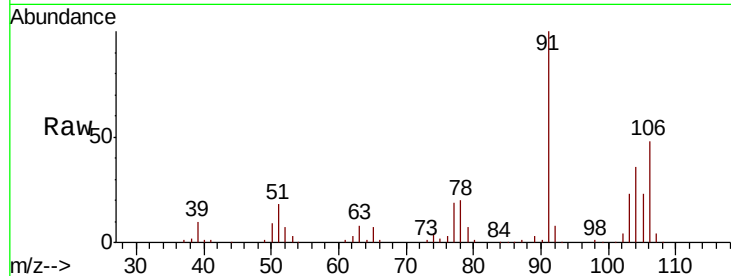
VSTD00552

Tot Ion:106 Resp: 58768

Ion Ratio Lower Upper

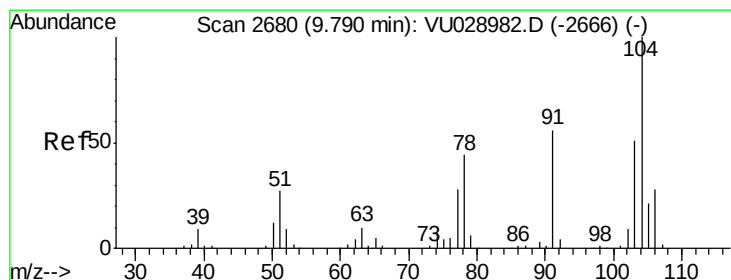
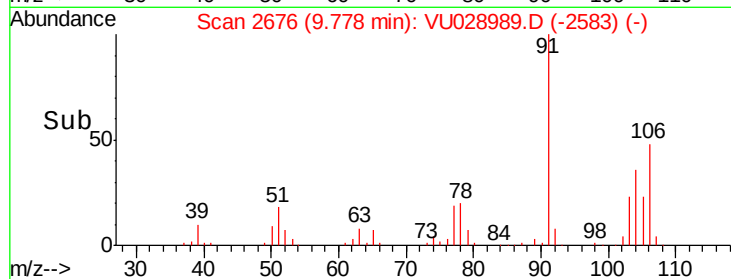
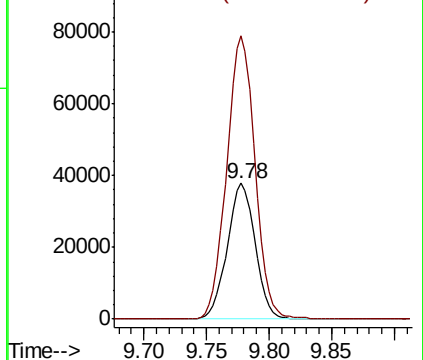
106 100

91 208.1 146.5 272.1



Abundance Ion 106.15 (105.85 to 106.85): V

Ion 91.15 (90.85 to 91.85): VU0



#55

Styrene

Concen: 4.785 ug/L

RT: 9.79 min Scan# 2680

Delta R.T. 0.00 min

Lab File: VU028989.D

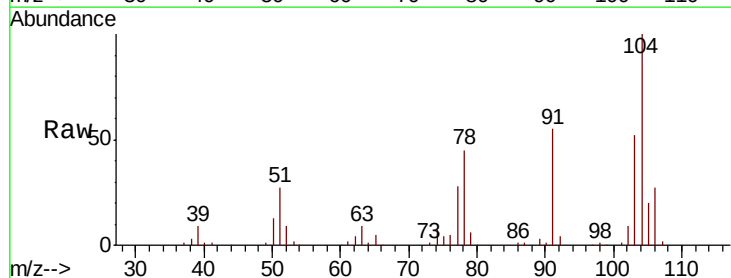
Acq: 02 Jan 2019 14:51

Tgt Ion:104 Resp: 99348

Ion Ratio Lower Upper

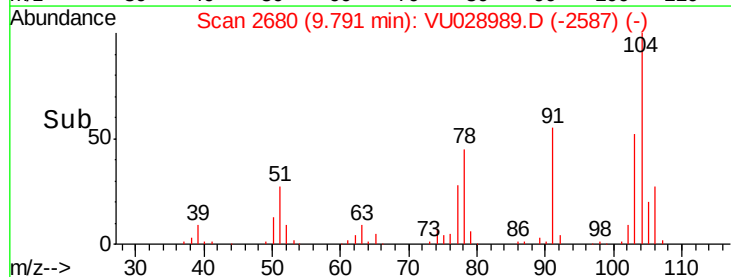
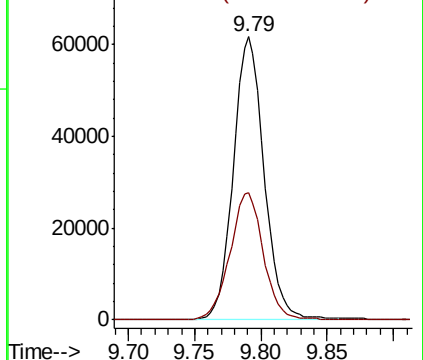
104 100

78 44.9 30.9 57.5

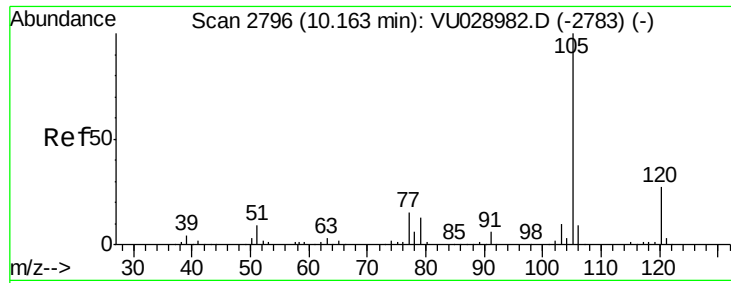


Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VU0







#56

Isopropylbenzene

Concen: 4.554 ug/L

RT: 10.16 min Scan# 2796

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

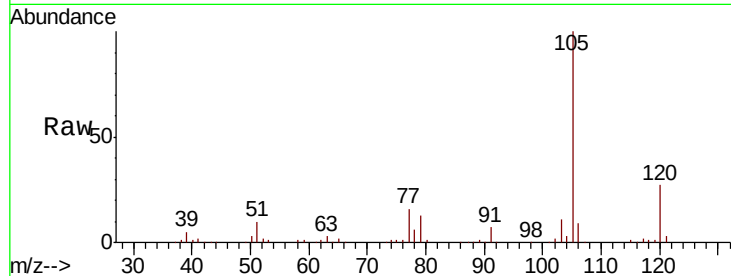
Tot Ion:105 Resp: 149816

Ion Ratio Lower Upper

105 100

120 27.0 20.9 31.3

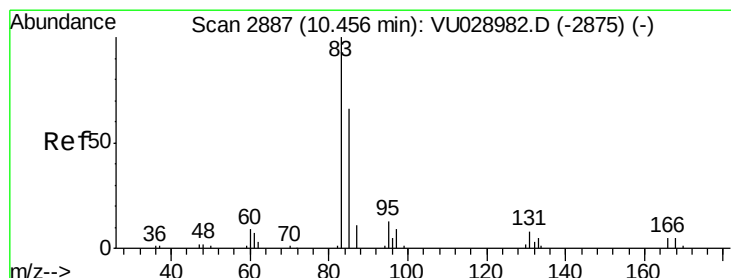
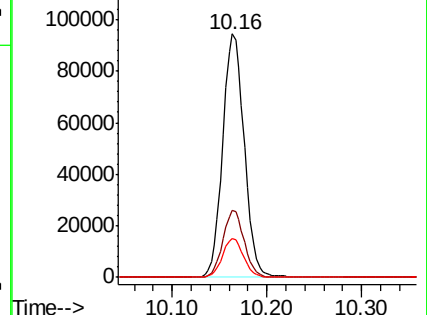
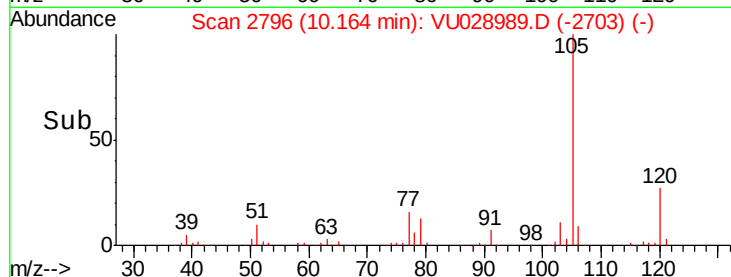
77 15.6 12.0 18.0



Abundance Ion 105.05 (104.75 to 105.75): V

Ion 120.10 (119.80 to 120.80): V

Ion 77.10 (76.80 to 77.80): V



#58

1,1,2,2-Tetrachloroethane

Concen: 5.274 ug/L

RT: 10.46 min Scan# 2887

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

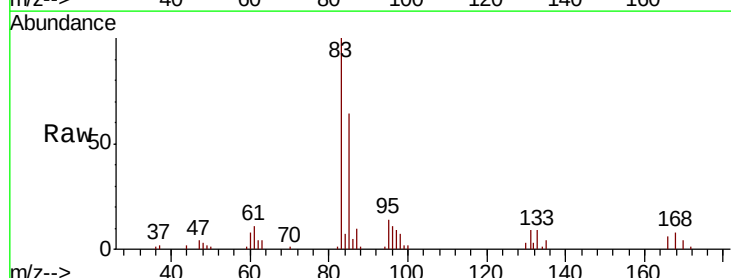
Tgt Ion: 83 Resp: 33290

Ion Ratio Lower Upper

83 100

85 64.4 44.0 81.8

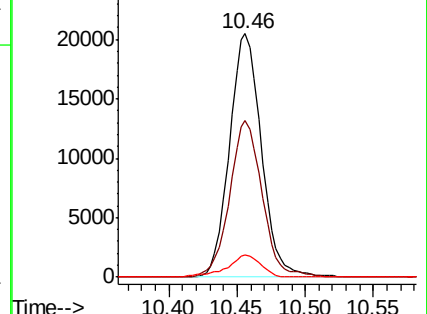
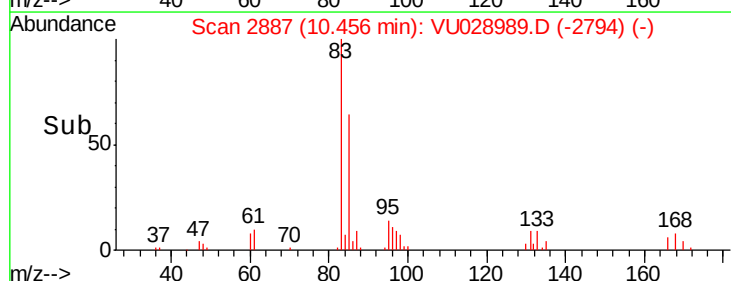
131 9.0 7.8 11.8

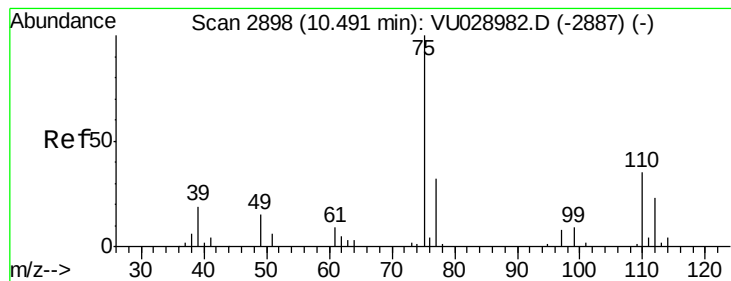


Abundance Ion 82.95 (82.65 to 83.65): V

Ion 85.00 (84.70 to 85.70): V

Ion 130.95 (130.65 to 131.65): V





#59

1,2,3-Trichloropropane

Concen: 5.191 ug/L

RT: 10.49 min Scan# 2898

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

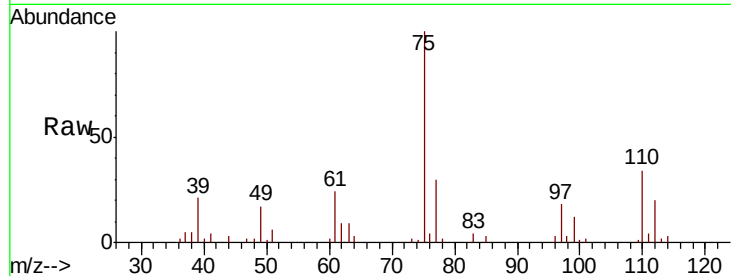
VSTD00552

Tot Ion: 75 Resp: 22926

Ion Ratio Lower Upper

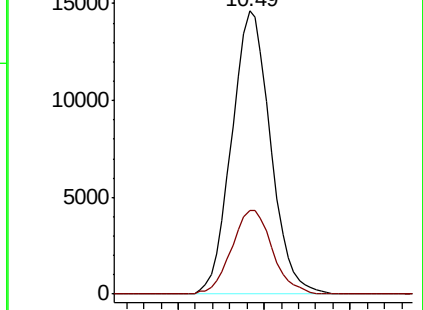
75 100

77 31.2 26.0 39.0

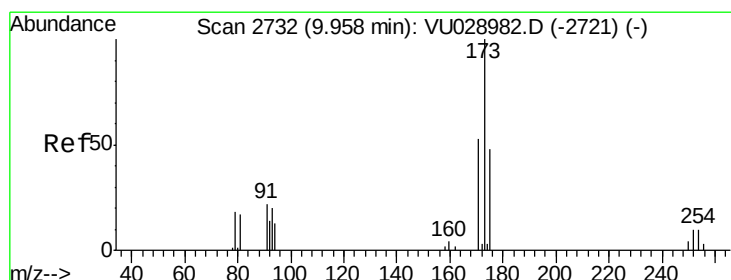
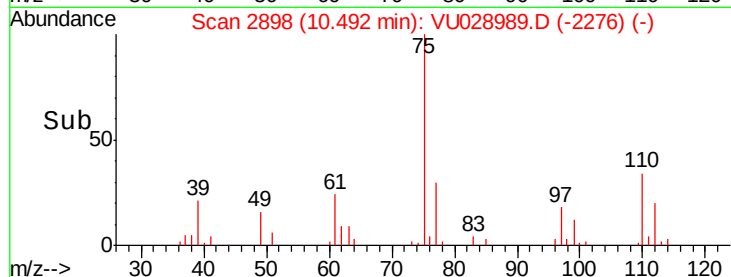


Abundance Ion 75.00 (74.70 to 75.70): VU028989.D (-2276) (-)

Ion 77.00 (76.70 to 77.70): VU028989.D (-2276) (-)



Time-->



#61

Bromoform

Concen: 5.291 ug/L

RT: 9.96 min Scan# 2732

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

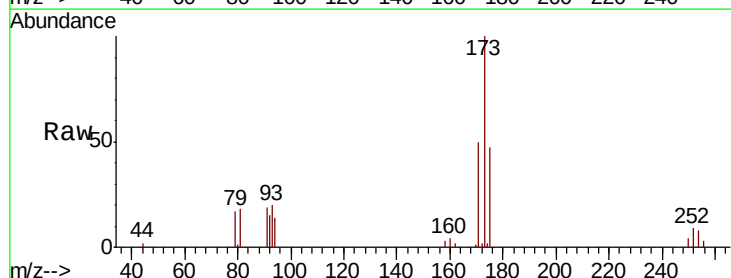
Tgt Ion: 173 Resp: 16584

Ion Ratio Lower Upper

173 100

175 46.6 35.4 53.2

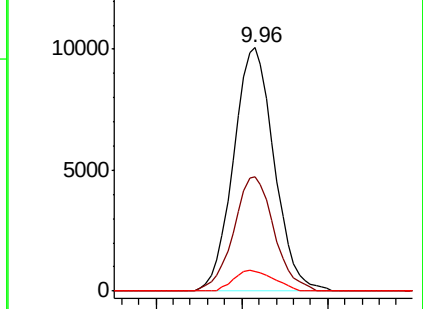
254 8.4 7.5 11.3



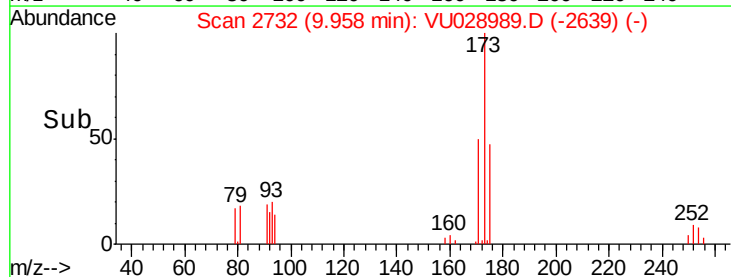
Abundance Ion 172.90 (172.60 to 173.60): VU028989.D (-2639) (-)

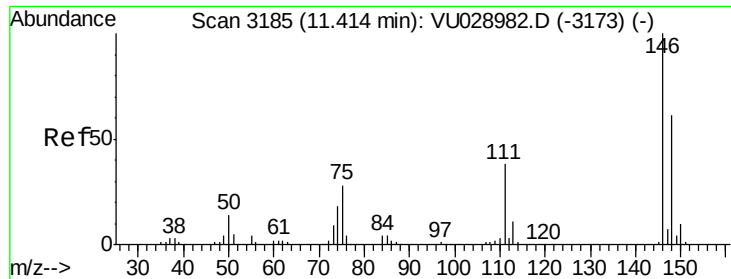
Ion 174.90 (174.60 to 175.60): VU028989.D (-2639) (-)

Ion 253.75 (253.45 to 254.45): VU028989.D (-2639) (-)



Time-->

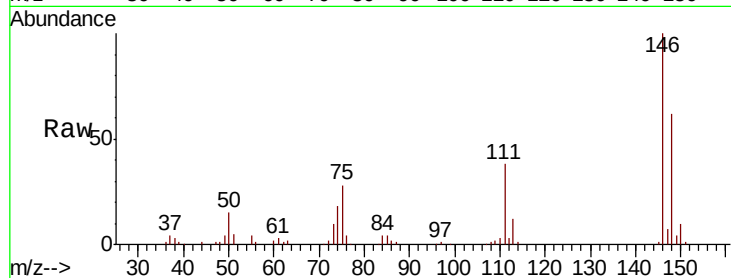




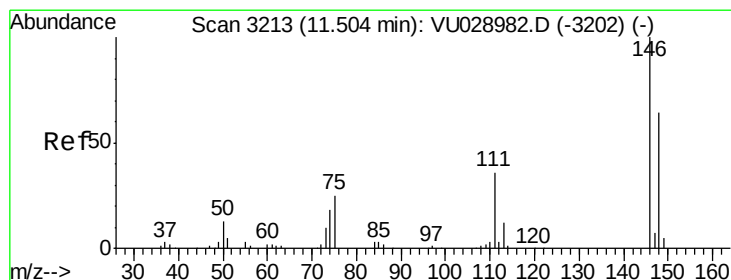
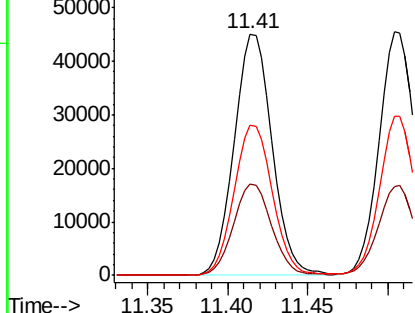
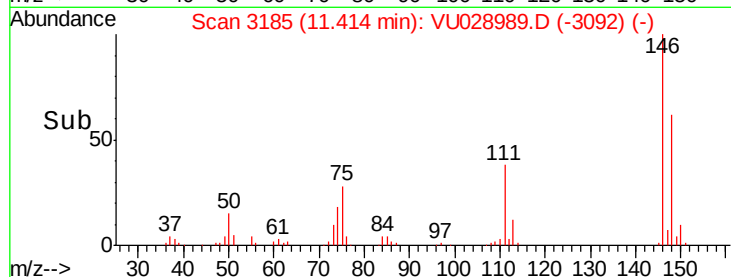
#62  
 1,3-Dichlorobenzene  
 Concen: 4.674 ug/L  
 RT: 11.41 min Scan# 3185  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Tot Ion:146 Resp: 72576  
 Ion Ratio Lower Upper  
 146 100  
 111 37.7 27.7 51.5  
 148 62.1 44.9 83.5

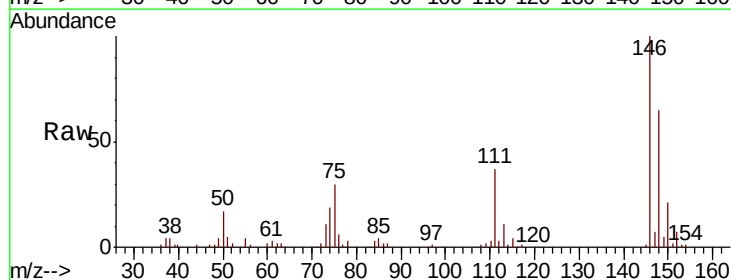


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

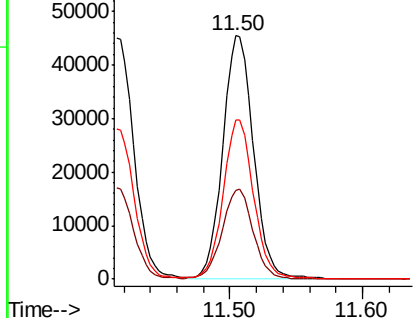
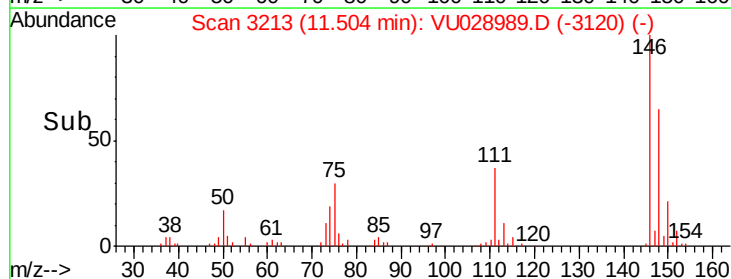


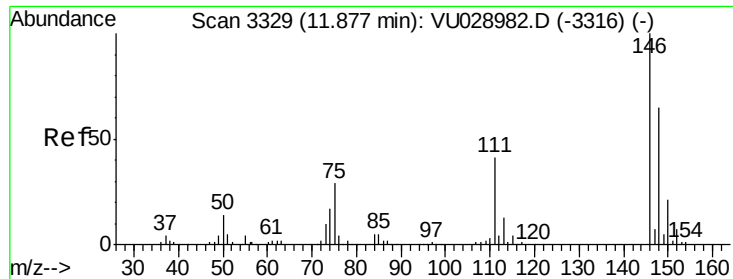
#63  
 1,4-Dichlorobenzene  
 Concen: 4.598 ug/L  
 RT: 11.50 min Scan# 3213  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion:146 Resp: 72857  
 Ion Ratio Lower Upper  
 146 100  
 111 36.7 24.9 46.3  
 148 65.4 44.9 83.3



Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

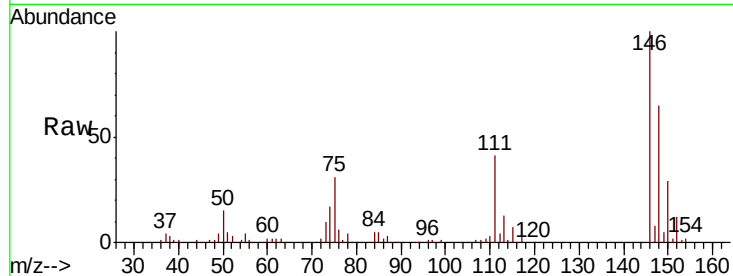




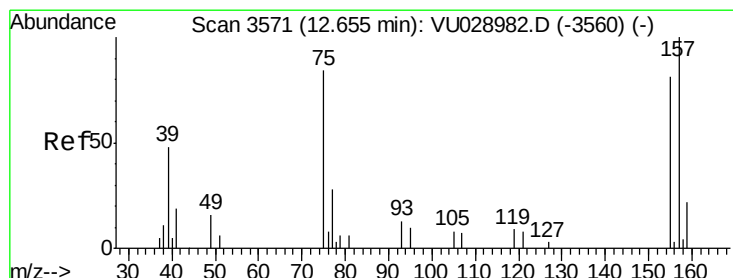
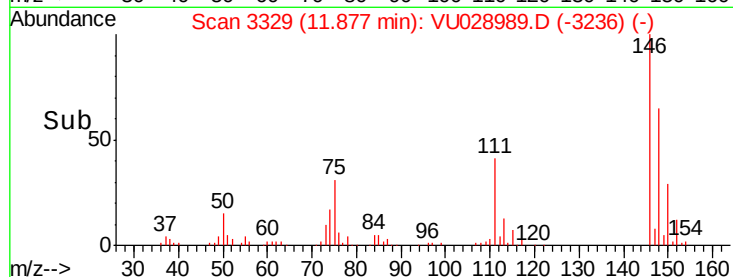
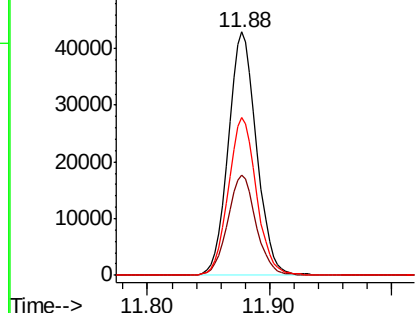
#65  
 1,2-Dichlorobenzene  
 Concen: 4.730 ug/L  
 RT: 11.88 min Scan# 3329  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

Tot Ion:146 Resp: 69499  
 Ion Ratio Lower Upper  
 146 100  
 111 41.1 32.2 48.4  
 148 64.7 53.2 79.8

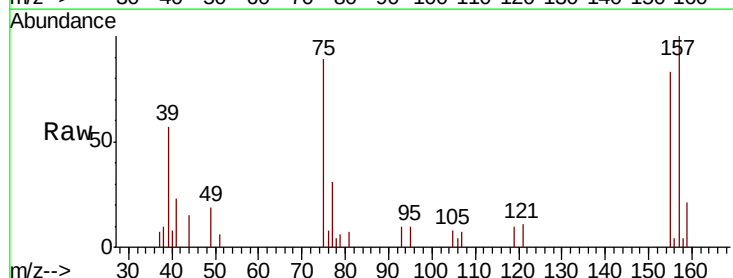


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

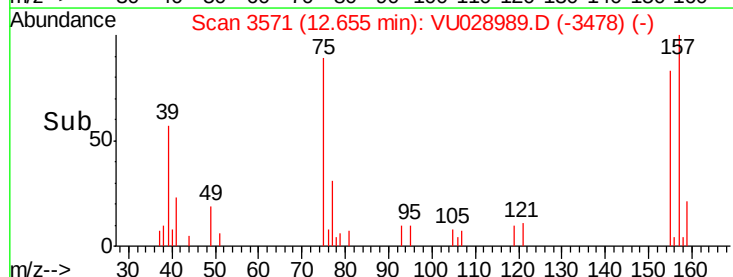
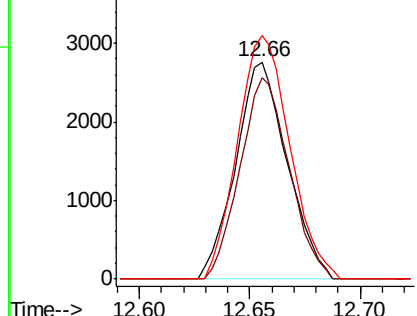


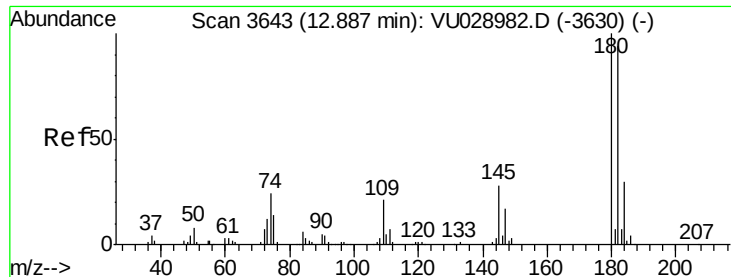
#66  
 1,2-Dibromo-3-chloropropane  
 Concen: 5.144 ug/L  
 RT: 12.66 min Scan# 3571  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Tgt Ion: 75 Resp: 4463  
 Ion Ratio Lower Upper  
 75 100  
 155 92.9 72.2 108.2  
 157 112.2 93.0 139.6



Abundance Ion 75.05 (74.75 to 75.75): VU0  
 Ion 154.95 (154.65 to 155.65): V  
 Ion 156.90 (156.60 to 157.60): V

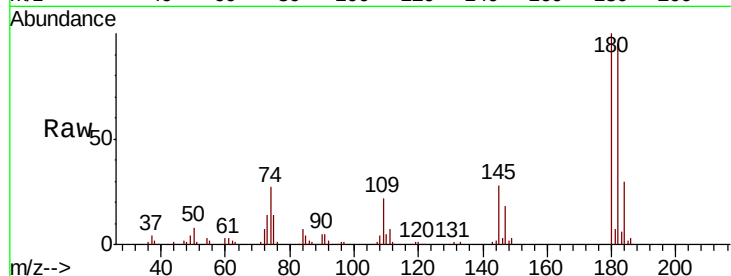




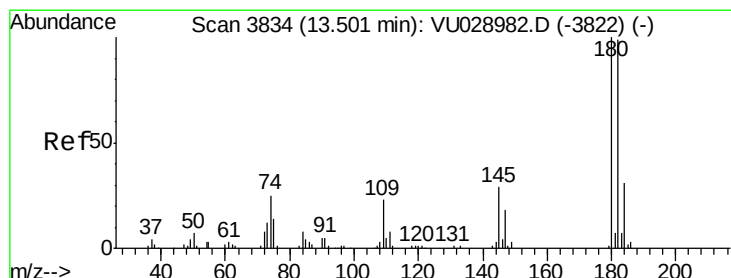
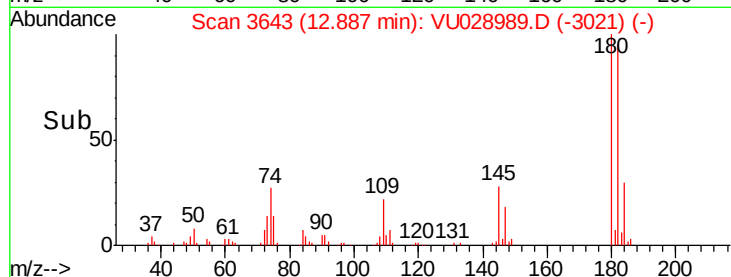
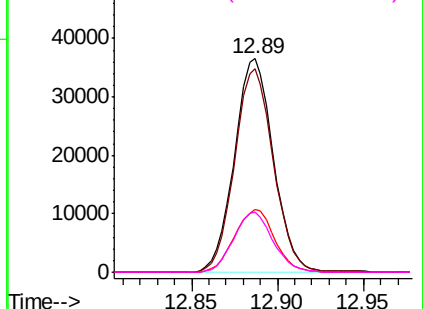
#67  
 1,3,5-Trichlorobenzene  
 Concen: 4.772 ug/L  
 RT: 12.89 min Scan# 3643  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

Instrument :  
 MSVOA\_U  
 ClientSampleId :  
 VSTD00552

|             |       |       |  |
|-------------|-------|-------|--|
| Tot Ion:180 | Resp: | 57333 |  |
| Ion Ratio   | Lower | Upper |  |
| 180 100     |       |       |  |
| 182 95.3    | 76.6  | 114.8 |  |
| 184 30.2    | 24.4  | 36.6  |  |
| 145 28.3    | 21.7  | 32.5  |  |

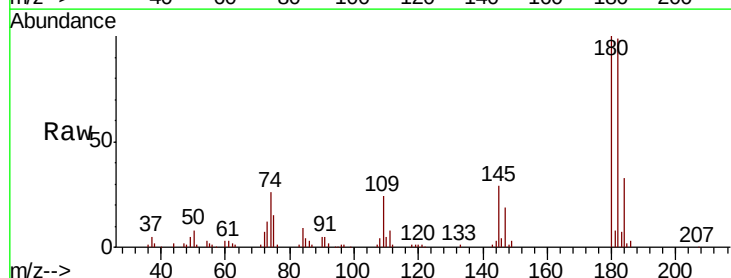


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

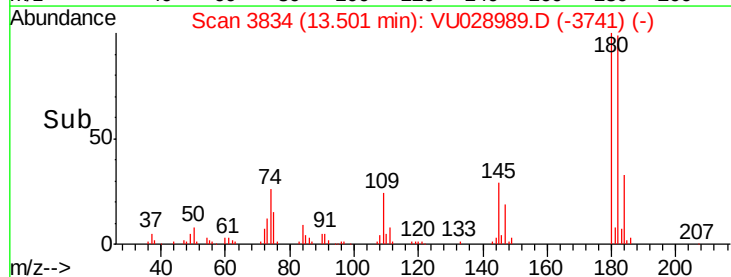
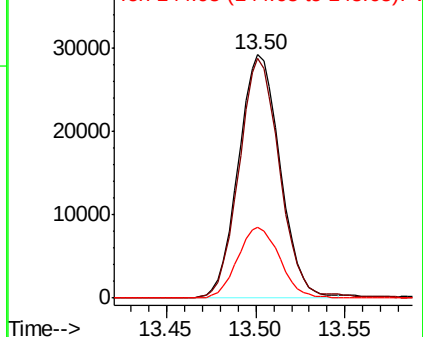


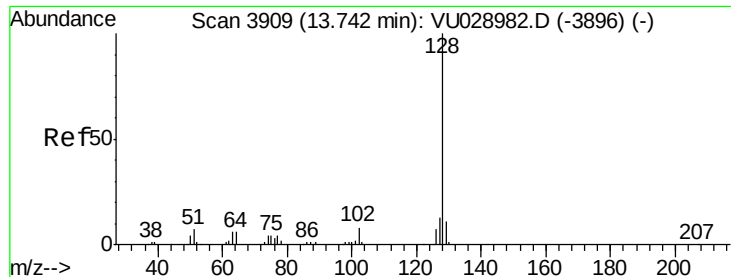
#68  
 1,2,4-trichlorobenzene  
 Concen: 4.744 ug/L  
 RT: 13.50 min Scan# 3834  
 Delta R.T. 0.00 min  
 Lab File: VU028989.D  
 Acq: 02 Jan 2019 14:51

|             |             |
|-------------|-------------|
| Tgt Ion:180 | Resp: 47501 |
| Ion Ratio   | Lower Upper |
| 180 100     |             |
| 182 96.8    | 76.0 114.0  |
| 145 29.5    | 22.6 33.8   |



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





#69

Naphthalene

Concen: 4.698 ug/L

RT: 13.74 min Scan# 3909

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

Instrument :

MSVOA\_U

ClientSampleId :

VSTD00552

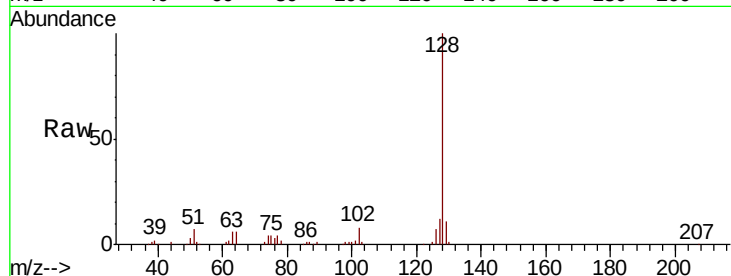
Tot Ion:128 Resp: 80465

Ion Ratio Lower Upper

128 100

129 10.4 8.3 12.5

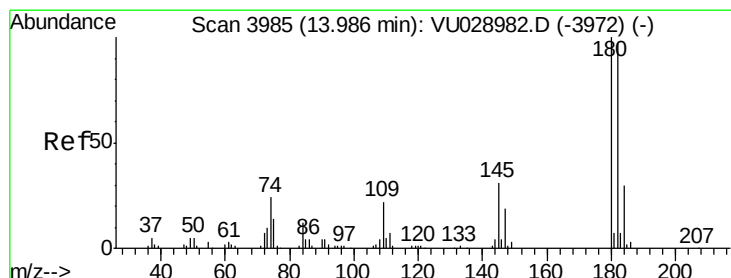
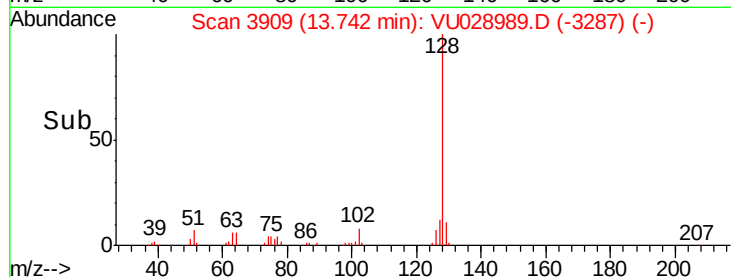
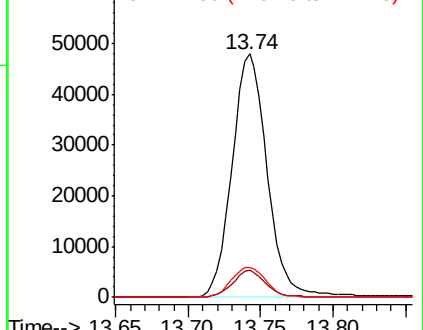
127 12.2 9.8 14.6



Abundance Ion 128.00 (127.70 to 128.70): V

Ion 129.00 (128.70 to 129.70): V

Ion 127.00 (126.70 to 127.70): V



#70

1,2,3-Trichlorobenzene

Concen: 4.708 ug/L

RT: 13.99 min Scan# 3985

Delta R.T. 0.00 min

Lab File: VU028989.D

Acq: 02 Jan 2019 14:51

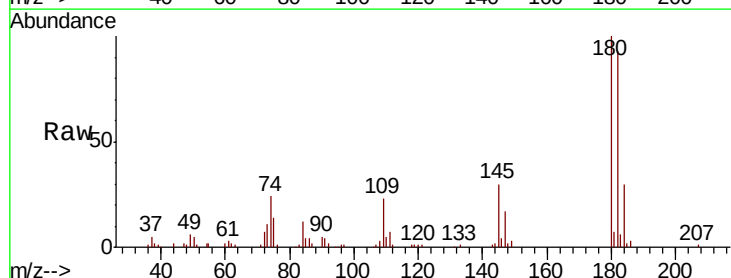
Tgt Ion:180 Resp: 44968

Ion Ratio Lower Upper

180 100

182 95.0 77.1 115.7

145 29.8 24.6 36.8



Abundance Ion 179.90 (179.60 to 180.60): V

Ion 181.90 (181.60 to 182.60): V

Ion 144.95 (144.65 to 145.65): V

