

Data Path : Z:\VOASRV\HPCHEM1\MSVOA V\DATA\VV101618\  
 Data File : VV008308.D  
 Acq On : 16 Oct 2018 20:40  
 Operator : SY/MD  
 Sample : VSTDCCC005  
 Misc : 25.0 mL/MSVOA V/WATER  
 ALS Vial : 25 Sample Multiplier: 1

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

Quant Time: Oct 17 02:33:34 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOMVTR101518WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Wed Oct 17 02:28:08 2018  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.67  | 114  | 86056    | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 8.90  | 117  | 78611    | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.30 | 152  | 34701    | 5.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.32   | 65    | 22242    | 4.57     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 91.40%  |
| 7) Chloroethane-d5             | 1.58   | 69    | 17539    | 4.57     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 91.40%  |
| 11) 1,1-Dichloroethene-d2      | 2.13   | 63    | 46177    | 4.95     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 99.00%  |
| 20) 2-Butanone-d5              | 3.98   | 46    | 81864    | 50.19    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 100.38% |
| 24) Chloroform-d               | 4.41   | 84    | 48828    | 4.49     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 89.80%  |
| 26) 1,2-Dichloroethane-d4      | 5.09   | 65    | 25641    | 4.65     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 93.00%  |
| 32) Benzene-d6                 | 5.10   | 84    | 100931   | 4.37     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 87.40%  |
| 36) 1,2-Dichloropropane-d6     | 6.12   | 67    | 35214    | 4.63     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 92.60%  |
| 41) Toluene-d8                 | 7.36   | 98    | 92489    | 4.42     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 88.40%  |
| 43) trans-1,3-Dichloropropene- | 7.67   | 79    | 13359    | 4.24     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 84.80%  |
| 46) 2-Hexanone-d5              | 8.14   | 63    | 56735    | 51.34    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 102.68% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.27  | 84    | 23010    | 4.56     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 91.20%  |
| 64) 1,2-Dichlorobenzene-d4     | 11.68  | 152   | 30156    | 4.58     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 91.60%  |

## Target Compounds

|                                |      |     |       |        | Ovalue    |
|--------------------------------|------|-----|-------|--------|-----------|
| 2) Dichlorodifluoromethane     | 1.14 | 85  | 30185 | 4.556  | ug/L 99   |
| 3) Chloromethane               | 1.25 | 50  | 35387 | 5.233  | ug/L 96   |
| 5) Vinyl chloride              | 1.32 | 62  | 33409 | 5.218  | ug/L 97   |
| 6) Bromomethane                | 1.54 | 94  | 18955 | 5.173  | ug/L 99   |
| 8) Chloroethane                | 1.60 | 64  | 18246 | 5.482  | ug/L 95   |
| 9) Trichlorofluoromethane      | 1.77 | 101 | 45856 | 5.890  | ug/L 98   |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.14 | 101 | 24336 | 5.478  | ug/L 98   |
| 12) 1,1-Dichloroethene         | 2.14 | 96  | 23094 | 5.586  | ug/L 93   |
| 13) Acetone                    | 2.23 | 43  | 45609 | 51.677 | ug/L 99   |
| 14) Carbon disulfide           | 2.32 | 76  | 76938 | 5.409  | ug/L 99   |
| 15) Methyl Acetate             | 2.48 | 43  | 11890 | 5.416  | ug/L 95   |
| 16) Methylene chloride         | 2.54 | 84  | 25328 | 5.293  | ug/L 97   |
| 17) Methyl tert-butyl Ether    | 2.82 | 73  | 70094 | 5.969  | ug/L 97   |
| 18) trans-1,2-Dichloroethene   | 2.79 | 96  | 24817 | 5.580  | ug/L 95   |
| 19) 1,1-Dichloroethane         | 3.23 | 63  | 48717 | 5.302  | ug/L 98   |
| 21) 2-Butanone                 | 4.07 | 43  | 89279 | 48.717 | ug/L 99   |
| 22) cis-1,2-Dichloroethene     | 3.96 | 96  | 34604 | 4.819  | ug/L # 97 |

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 Operator : SY/MD  
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 Misc : 25.0 mL/MSVOA V/WATER  
 ALS Vial : 25 Sample Multiplier: 1

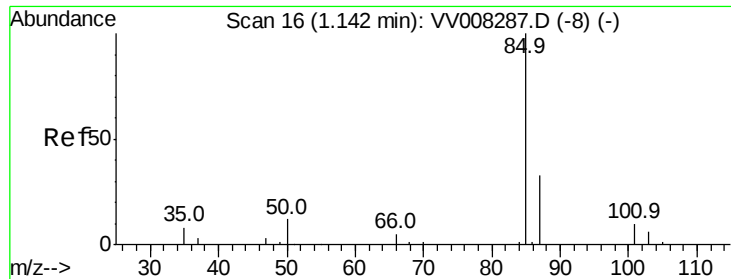
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

Quant Time: Oct 17 02:33:34 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOMVTR101518WMA.M  
 Quant Title : TRACE VOA SOM01.0  
 QLast Update : Wed Oct 17 02:28:08 2018  
 Response via : Initial Calibration

| Internal Standards              | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|---------------------------------|-------|------|----------|--------|-------|----------|
| 23) Bromochloromethane          | 4.31  | 128  | 13824    | 5.192  | ug/L  | 93       |
| 25) Chloroform                  | 4.43  | 83   | 55215    | 4.902  | ug/L  | 95       |
| 27) 1,2-Dichloroethane          | 5.19  | 62   | 35385    | 5.284  | ug/L  | 98       |
| 29) 1,1,1-Trichloroethane       | 4.66  | 97   | 47712    | 4.874  | ug/L  | 97       |
| 30) Cyclohexane                 | 4.72  | 56   | 59040    | 4.798  | ug/L  | 99       |
| 31) Carbon tetrachloride        | 4.87  | 117  | 40205    | 4.884  | ug/L  | 99       |
| 33) Benzene                     | 5.15  | 78   | 129496   | 4.888  | ug/L  | 100      |
| 34) Trichloroethene             | 5.96  | 95   | 35867    | 4.886  | ug/L  | 96       |
| 35) Methylcyclohexane           | 6.18  | 83   | 58693    | 4.741  | ug/L  | 99       |
| 37) 1,2-Dichloropropane         | 6.23  | 63   | 35854    | 5.016  | ug/L  | 100      |
| 38) Bromodichloromethane        | 6.56  | 83   | 40017    | 4.984  | ug/L  | 97       |
| 39) cis-1,3-Dichloropropene     | 7.07  | 75   | 50396    | 4.942  | ug/L  | 97       |
| 40) 4-Methyl-2-pentanone        | 7.29  | 43   | 226539   | 51.752 | ug/L  | 99       |
| 42) Toluene                     | 7.43  | 91   | 136375   | 4.939  | ug/L  | 98       |
| 44) trans-1,3-Dichloropropene   | 7.70  | 75   | 40403    | 4.950  | ug/L  | 99       |
| 45) 1,1,2-Trichloroethane       | 7.89  | 97   | 22729    | 5.122  | ug/L  | 98       |
| 47) Tetrachloroethene           | 8.02  | 164  | 23508    | 5.111  | ug/L  | 94       |
| 48) 2-Hexanone                  | 8.20  | 43   | 160986   | 50.317 | ug/L  | 98       |
| 49) Dibromochloromethane        | 8.29  | 129  | 25542    | 5.050  | ug/L  | 97       |
| 50) 1,2-Dibromoethane           | 8.40  | 107  | 21394    | 5.144  | ug/L  | 88       |
| 51) Chlorobenzene               | 8.93  | 112  | 83533    | 5.092  | ug/L  | 99       |
| 52) Ethylbenzene                | 9.06  | 91   | 148921   | 4.905  | ug/L  | 99       |
| 53) m,p-xylene                  | 9.18  | 106  | 56511    | 5.146  | ug/L  | 96       |
| 54) o-xylene                    | 9.59  | 106  | 54885    | 5.016  | ug/L  | 100      |
| 55) Styrene                     | 9.61  | 104  | 89198    | 5.067  | ug/L  | 98       |
| 56) Isopropylbenzene            | 9.98  | 105  | 143805   | 4.988  | ug/L  | 99       |
| 58) 1,1,1,2,2-Tetrachloroethane | 10.29 | 83   | 24714    | 4.895  | ug/L  | 97       |
| 59) 1,2,3-Trichloropropane      | 10.32 | 75   | 20717    | 5.180  | ug/L  | 97       |
| 61) Bromoform                   | 9.78  | 173  | 12935    | 5.099  | ug/L  | 98       |
| 62) 1,3-Dichlorobenzene         | 11.23 | 146  | 60001    | 5.108  | ug/L  | 96       |
| 63) 1,4-Dichlorobenzene         | 11.32 | 146  | 59274    | 5.097  | ug/L  | 96       |
| 65) 1,2-Dichlorobenzene         | 11.69 | 146  | 57092    | 5.070  | ug/L  | 98       |
| 66) 1,2-Dibromo-3-chloropropan  | 12.48 | 75   | 3660     | 4.309  | ug/L  | 92       |
| 67) 1,3,5-Trichlorobenzene      | 12.70 | 180  | 39496    | 5.197  | ug/L  | 99       |
| 68) 1,2,4-trichlorobenzene      | 13.31 | 180  | 29221    | 5.401  | ug/L  | 100      |
| 69) Naphthalene                 | 13.56 | 128  | 51257    | 5.083  | ug/L  | 100      |
| 70) 1,2,3-Trichlorobenzene      | 13.80 | 180  | 28625    | 5.330  | ug/L  | 98       |

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





#2

Dichlorodifluoromethane

Concen: 4.556 ug/L

RT: 1.14 min Scan# 16

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

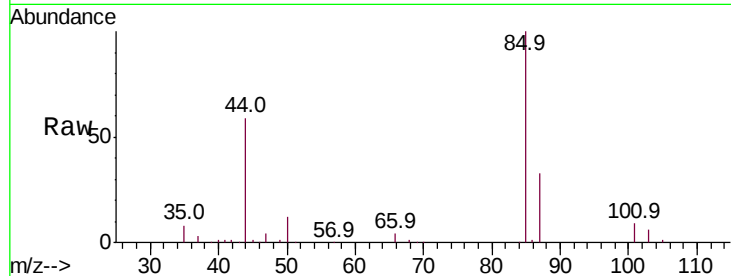
VSTD00569

Tot Ion: 85 Resp: 30185

Ion Ratio Lower Upper

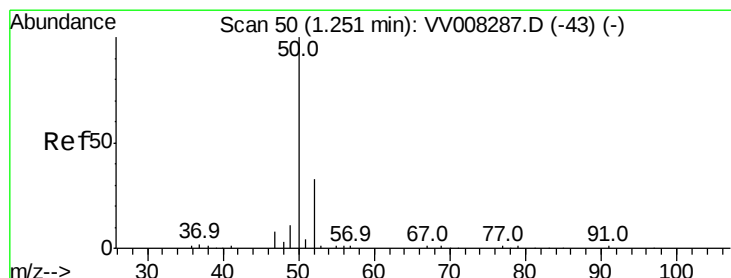
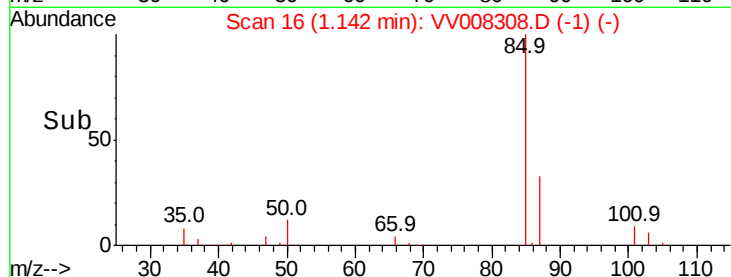
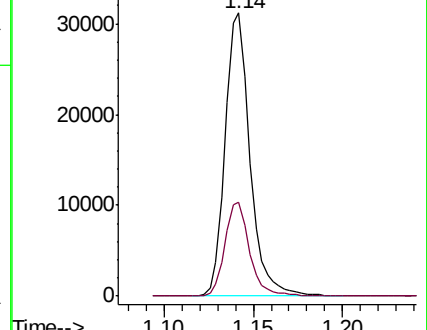
85 100

87 32.8 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VV008308.D (-1) (-)

Ion 87.00 (86.70 to 87.70): VV008308.D (-1) (-)



#3

Chloromethane

Concen: 5.233 ug/L

RT: 1.25 min Scan# 50

Delta R.T. -0.00 min

Lab File: VV008308.D

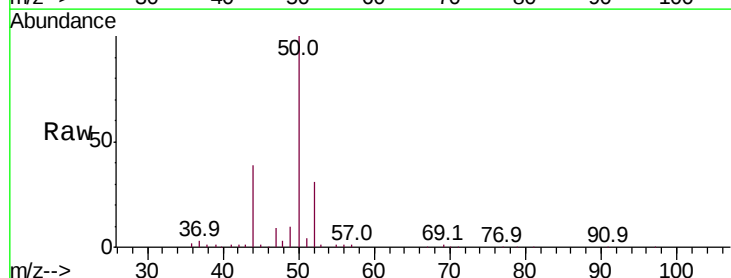
Acq: 16 Oct 2018 20:40

Tgt Ion: 50 Resp: 35387

Ion Ratio Lower Upper

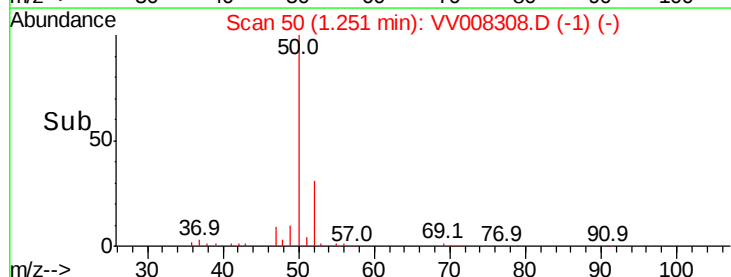
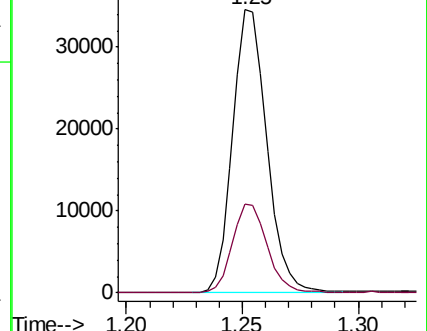
50 100

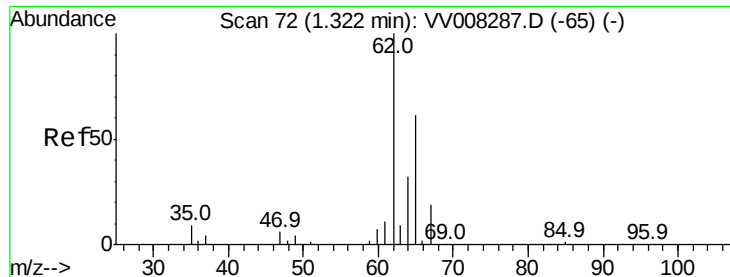
52 31.3 23.7 43.9



Abundance Ion 50.05 (49.75 to 50.75): VV008308.D (-1) (-)

Ion 52.05 (51.75 to 52.75): VV008308.D (-1) (-)





#5

Vinyl chloride

Concen: 5.218 ug/L

RT: 1.32 min Scan# 72

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

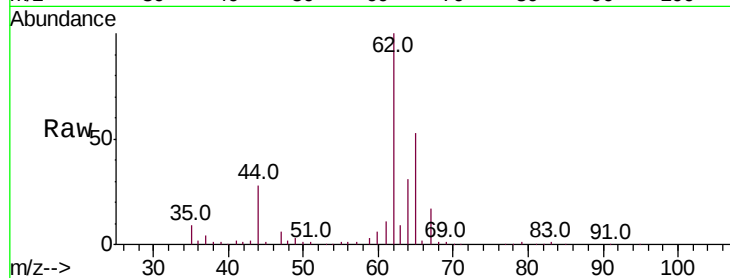
VSTD00569

Tot Ion: 62 Resp: 33409

Ion Ratio Lower Upper

62 100

64 30.9 22.9 42.5



Abundance Ion 62.00 (61.70 to 62.70): VV0

Ion 64.10 (63.80 to 64.80): VV0

1.32

40000

30000

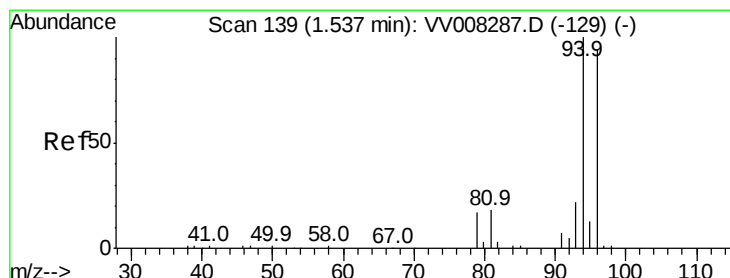
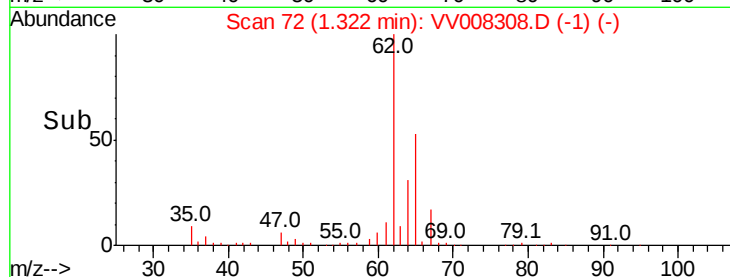
20000

10000

0

1.30 1.35

Time-->



#6

Bromomethane

Concen: 5.173 ug/L

RT: 1.54 min Scan# 139

Delta R.T. -0.00 min

Lab File: VV008308.D

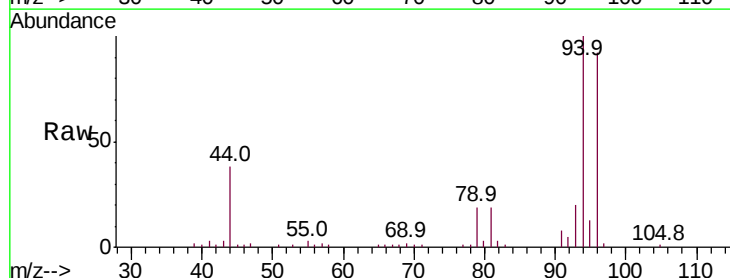
Acq: 16 Oct 2018 20:40

Tgt Ion: 94 Resp: 18955

Ion Ratio Lower Upper

94 100

96 92.1 65.0 120.8



Abundance Ion 94.00 (93.70 to 94.70): VV0

Ion 96.00 (95.70 to 96.70): VV0

20000

15000

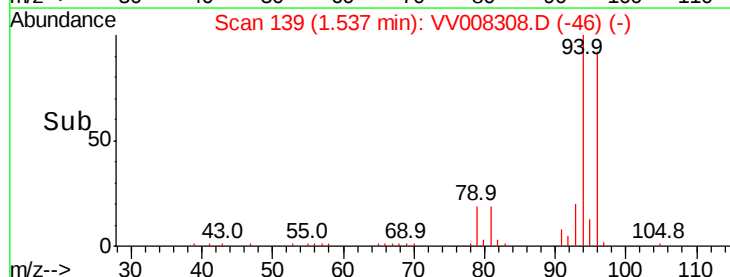
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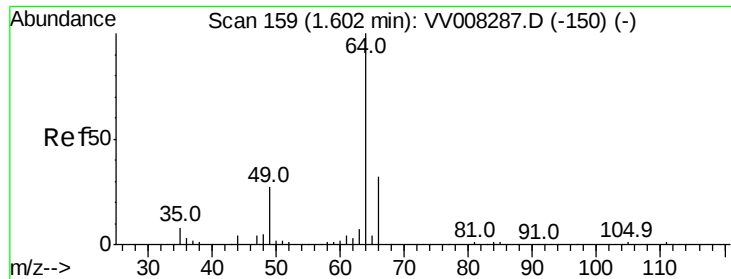
5000

0

1.50 1.55 1.60

Time-->

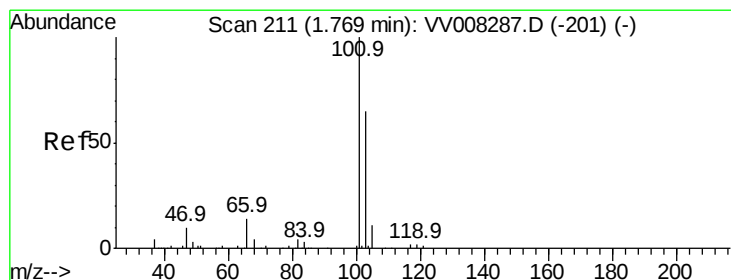
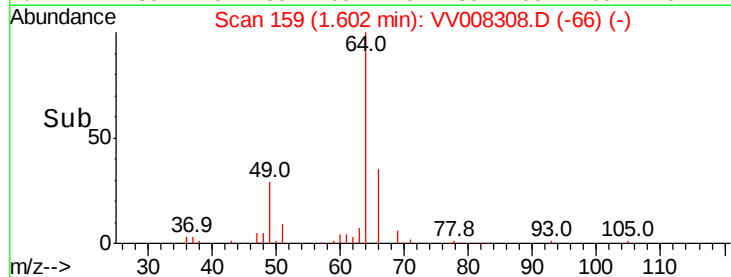
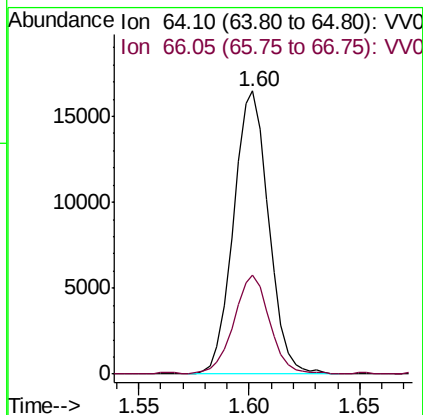
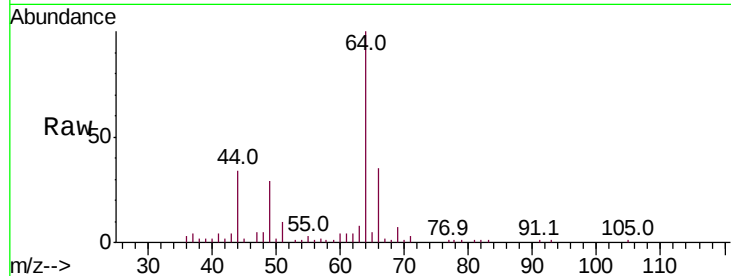




#8  
Chloroethane  
Concen: 5.482 ug/L  
RT: 1.60 min Scan# 159  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

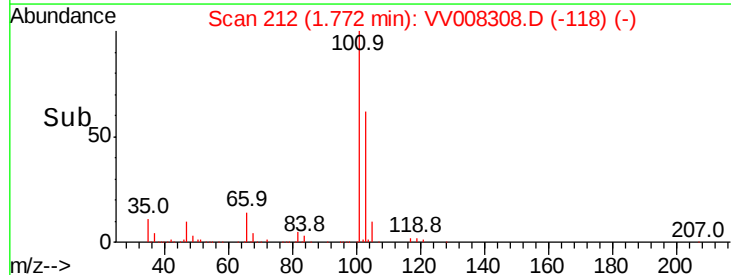
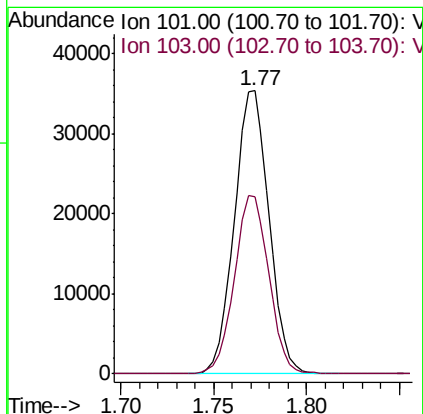
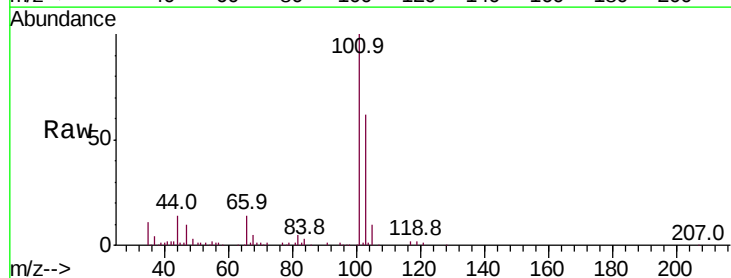
Instrument :  
MSVOA\_V  
ClientSampleId :  
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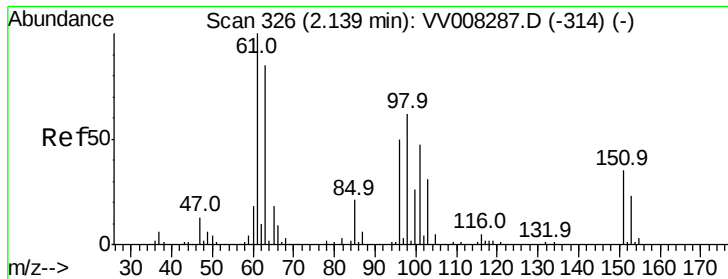
Tot Ion: 64 Resp: 18246  
Ion Ratio Lower Upper  
64 100  
66 34.9 22.5 41.9



#9  
Trichlorofluoromethane  
Concen: 5.890 ug/L  
RT: 1.77 min Scan# 212  
Delta R.T. 0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Tgt Ion: 101 Resp: 45856  
Ion Ratio Lower Upper  
101 100  
103 62.7 51.8 77.6





#10

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

Concen: 5.478 ug/L

RT: 2.14 min Scan# 327

Delta R.T. 0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00569

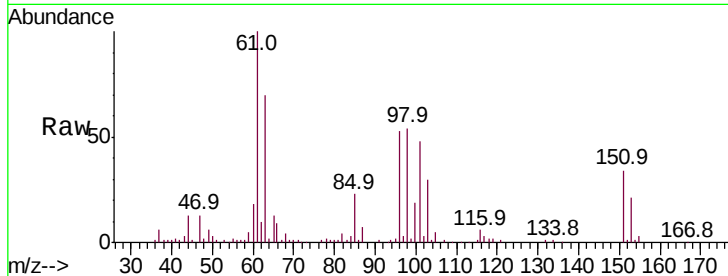
Tot Ion:101 Resp: 24336

Ion Ratio Lower Upper

101 100

85 47.8 37.4 56.2

151 71.7 59.0 88.6



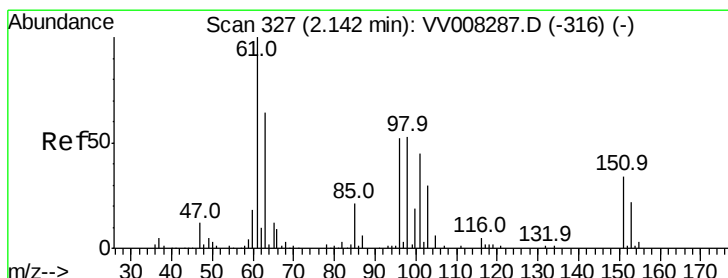
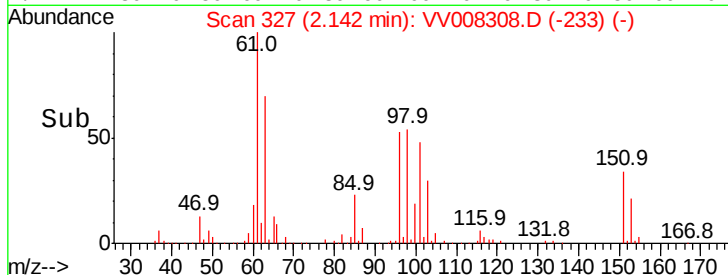
Abundance Ion 101.00 (100.70 to 101.70): VV008308.D (-314) (-)

Ion 85.00 (84.70 to 85.70): VV008308.D (-314) (-)

Ion 151.00 (150.70 to 151.70): VV008308.D (-314) (-)

2.14

Time-->



#12

1,1-Dichloroethene

Concen: 5.586 ug/L

RT: 2.14 min Scan# 327

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

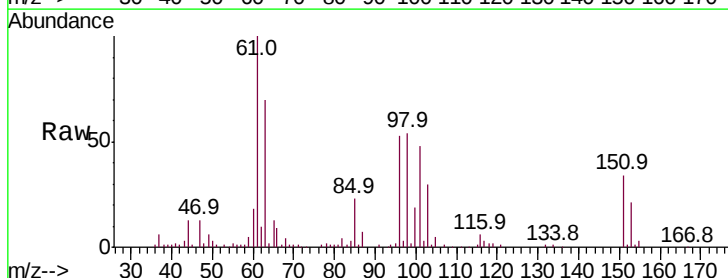
Tgt Ion: 96 Resp: 23094

Ion Ratio Lower Upper

96 100

61 187.6 129.9 241.3

63 130.9 103.0 191.4



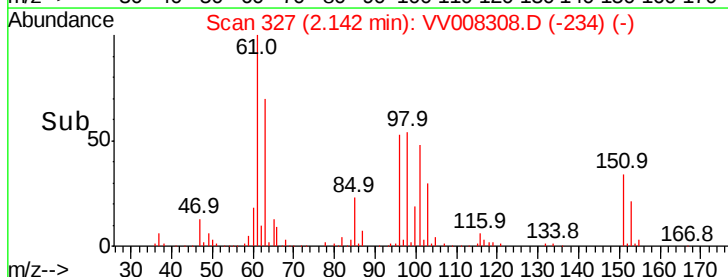
Abundance Ion 96.00 (95.70 to 96.70): VV008308.D (-233) (-)

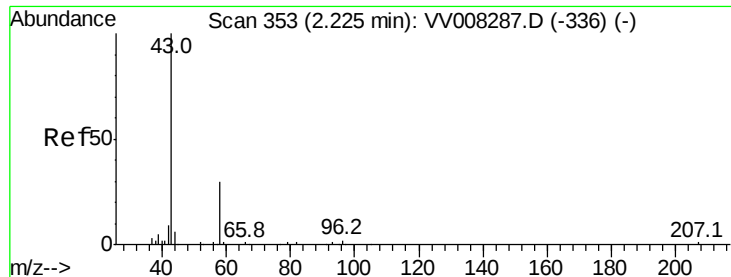
Ion 61.05 (60.75 to 61.75): VV008308.D (-233) (-)

Ion 63.00 (62.70 to 63.70): VV008308.D (-233) (-)

2.14

Time-->





#13

Acetone

Concen: 51.677 ug/L

RT: 2.23 min Scan# 353

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

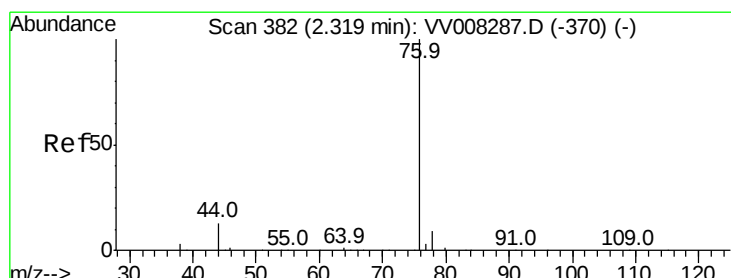
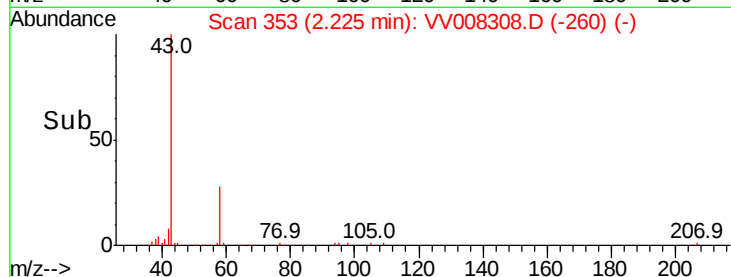
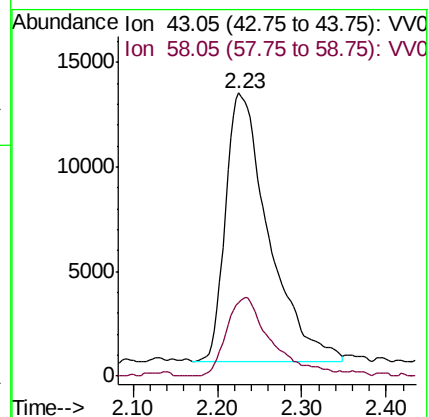
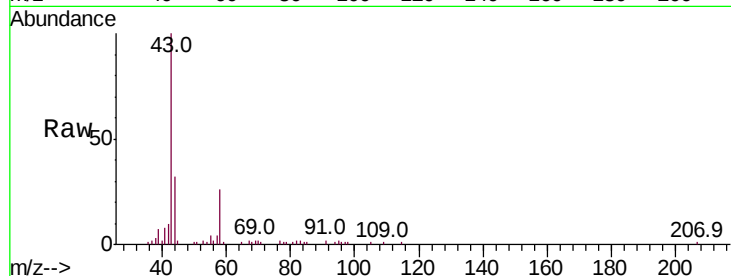
VSTD00569

Tot Ion: 43 Resp: 45609

Ion Ratio Lower Upper

43 100

58 30.5 0.0 62.0



#14

Carbon disulfide

Concen: 5.409 ug/L

RT: 2.32 min Scan# 382

Delta R.T. -0.00 min

Lab File: VV008308.D

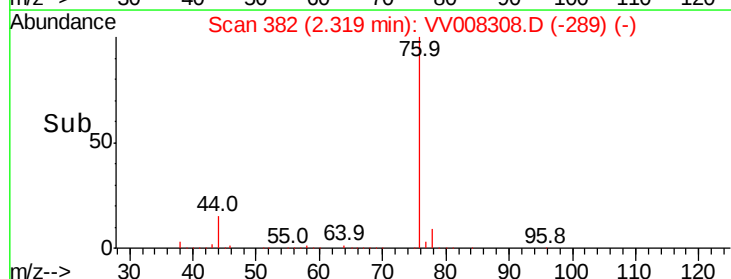
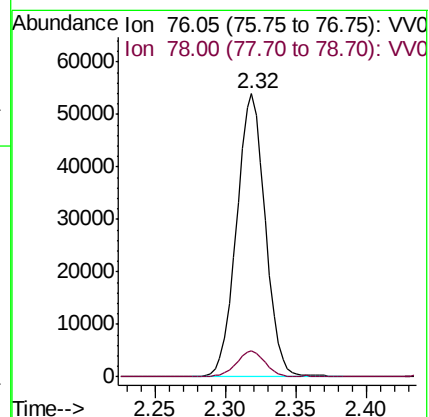
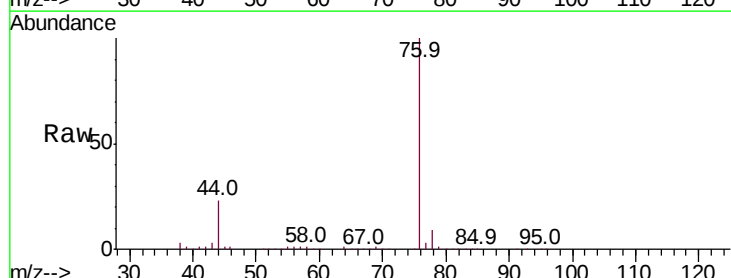
Acq: 16 Oct 2018 20:40

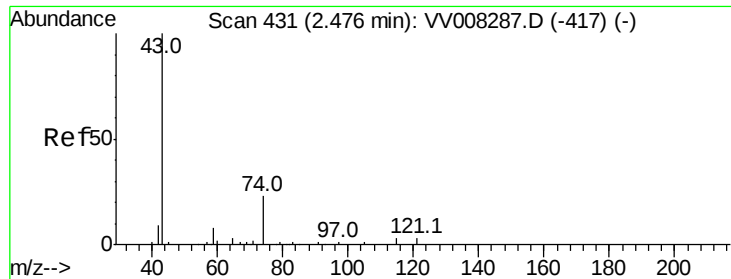
Tgt Ion: 76 Resp: 76938

Ion Ratio Lower Upper

76 100

78 9.1 7.4 11.2





#15

Methvl Acetate

Concen: 5.416 ug/L

RT: 2.48 min Scan# 431

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

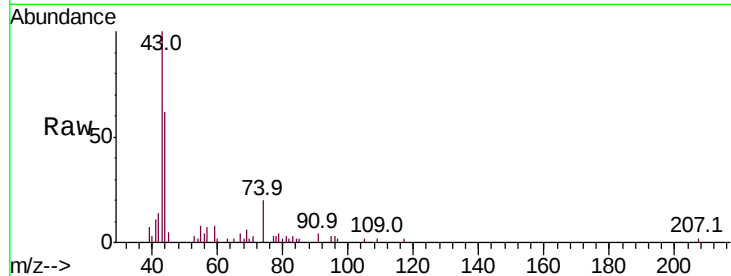
VSTD00569

Tot Ion: 43 Resp: 11890

Ion Ratio Lower Upper

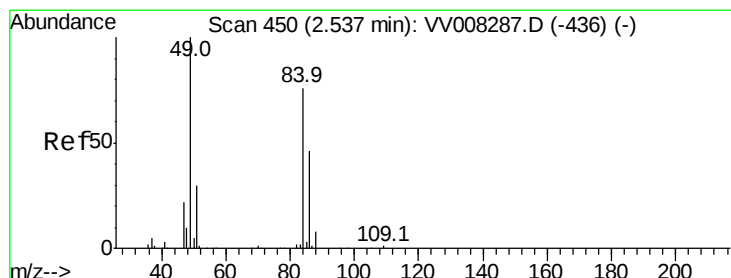
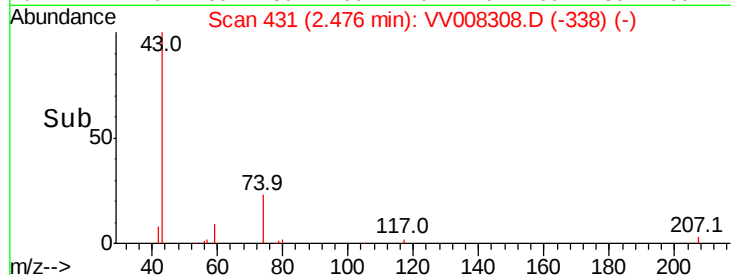
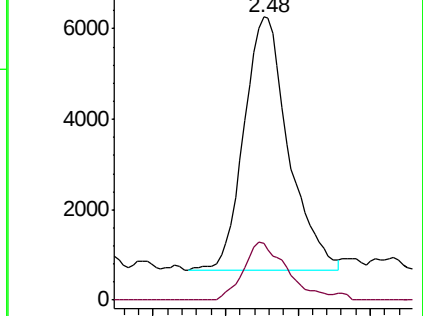
43 100

74 22.5 20.0 30.0



Abundance Ion 43.05 (42.75 to 43.75): VV0

Ion 74.05 (73.75 to 74.75): VV0



#16

Methylene chloride

Concen: 5.293 ug/L

RT: 2.54 min Scan# 450

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

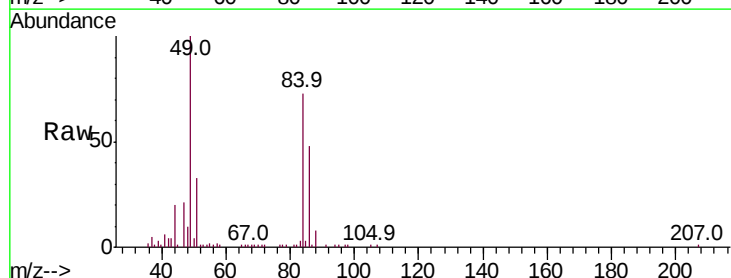
Tgt Ion: 84 Resp: 25328

Ion Ratio Lower Upper

84 100

86 65.6 45.0 83.6

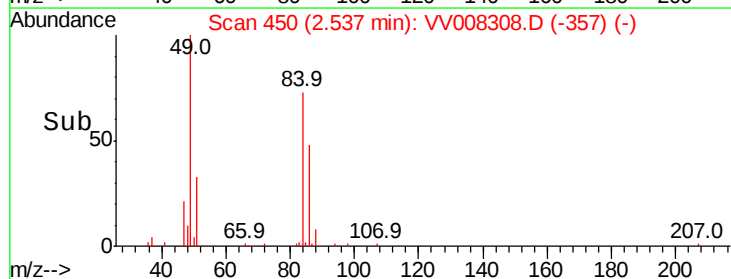
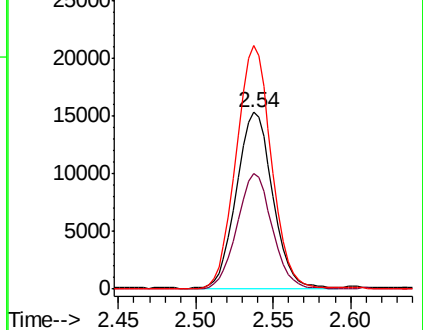
49 137.7 92.9 172.5

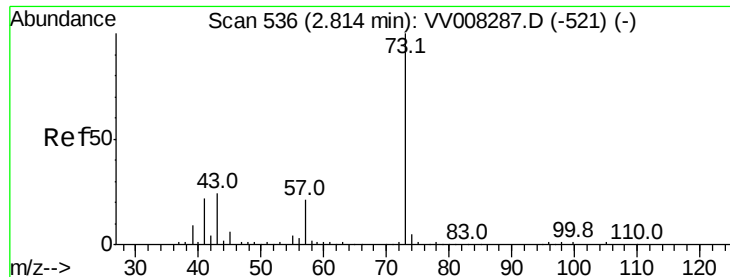


Abundance Ion 84.05 (83.75 to 84.75): VV0

Ion 86.00 (85.70 to 86.70): VV0

Ion 49.10 (48.80 to 49.80): VV0





#17

Methvl tert-butvl Ether

Concen: 5.969 ug/L

RT: 2.82 min Scan# 537

Delta R.T. 0.00 min

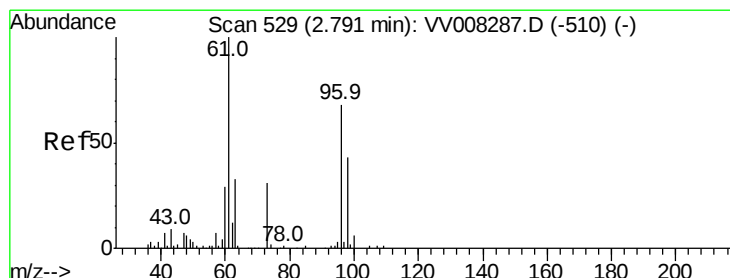
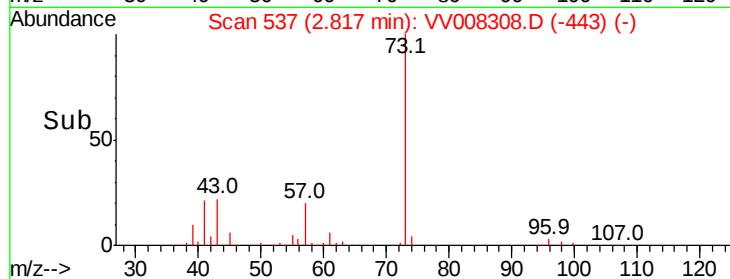
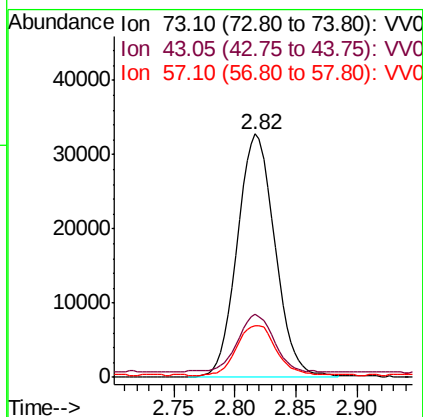
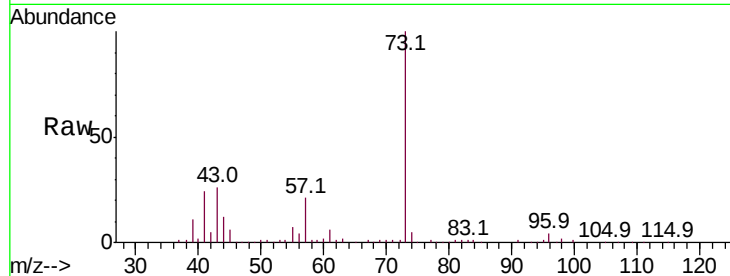
Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

Tot Ion: 73 Resp: 70094

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 73  | 100   |       |       |
| 43  | 21.8  | 19.0  | 28.6  |
| 57  | 21.7  | 18.2  | 27.2  |



#18

trans-1,2-Dichloroethene

Concen: 5.580 ug/L

RT: 2.79 min Scan# 529

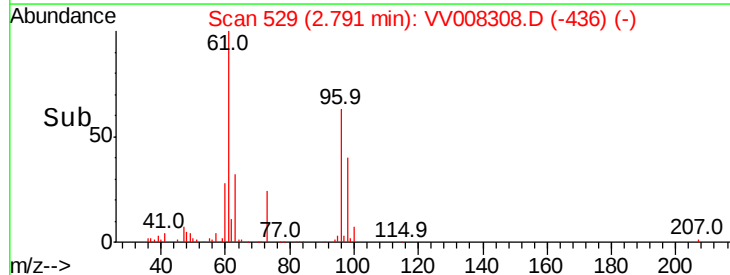
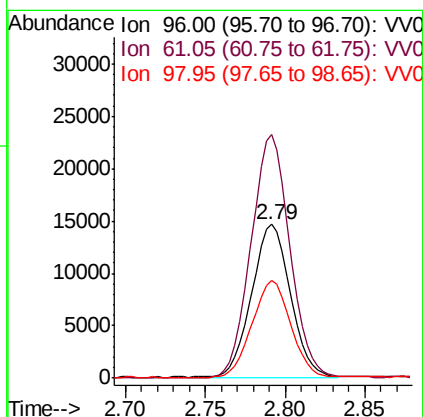
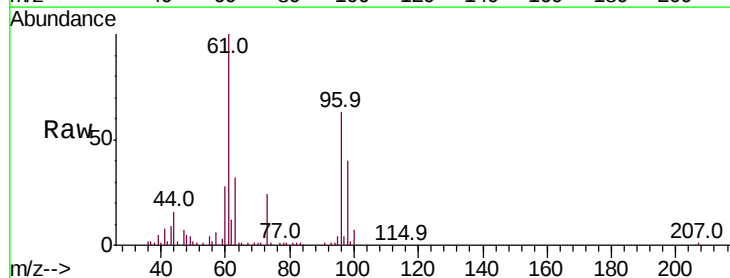
Delta R.T. -0.00 min

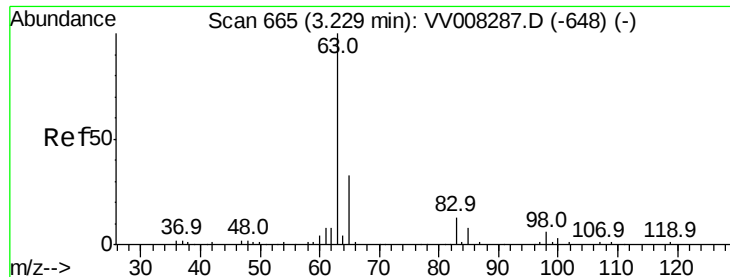
Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Tgt Ion: 96 Resp: 24817

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 96  | 100   |       |       |
| 61  | 158.4 | 104.6 | 194.2 |
| 98  | 63.7  | 44.1  | 81.9  |

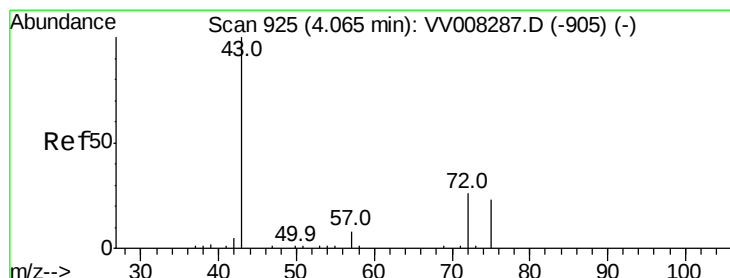
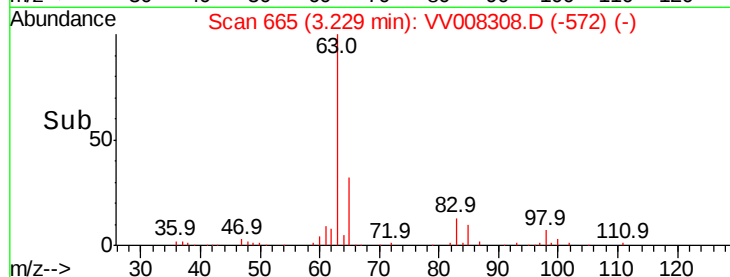
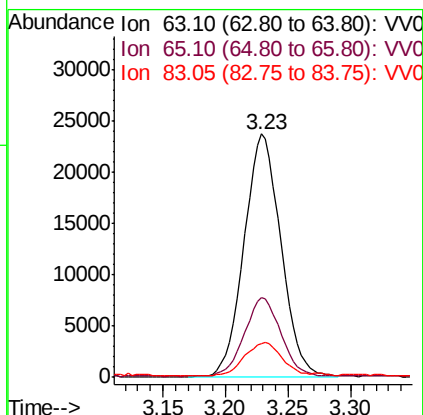
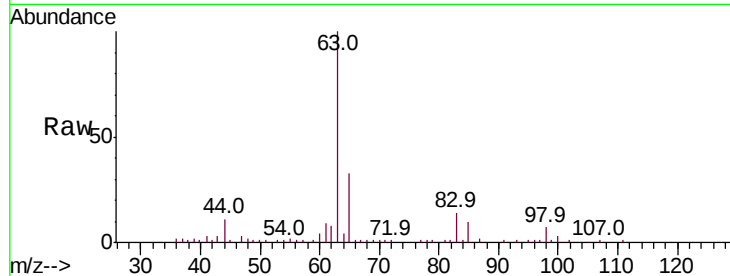




#19  
 1,1-Dichloroethane  
 Concen: 5.302 ug/L  
 RT: 3.23 min Scan# 665  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

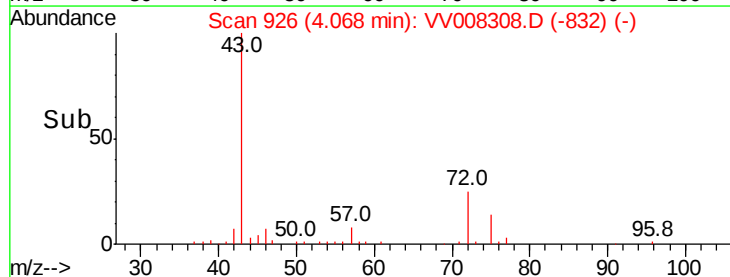
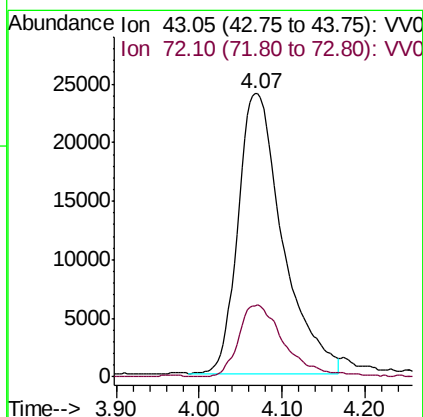
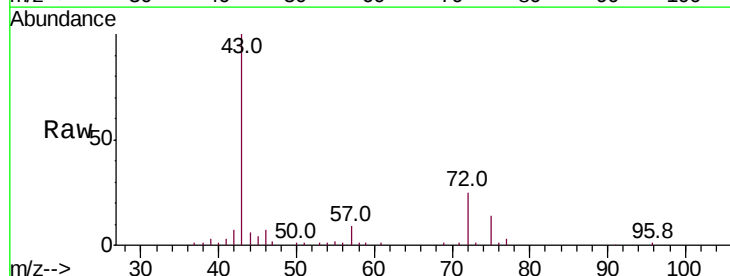
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

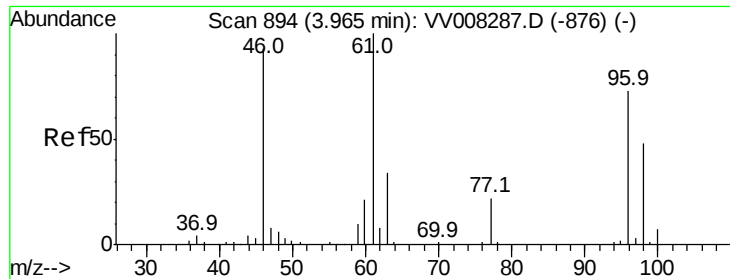
Tot Ion: 63 Resp: 48717  
 Ion Ratio Lower Upper  
 63 100  
 65 32.8 22.6 42.0  
 83 14.0 11.0 20.4



#21  
 2-Butanone  
 Concen: 48.717 ug/L  
 RT: 4.07 min Scan# 926  
 Delta R.T. 0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Tgt Ion: 43 Resp: 89279  
 Ion Ratio Lower Upper  
 43 100  
 72 26.3 12.9 38.7





#22

cis-1,2-Dichloroethene

Concen: 4.819 ug/L

RT: 3.96 min Scan# 894

Delta R.T. -0.00 min

Lab File: VV008308.D

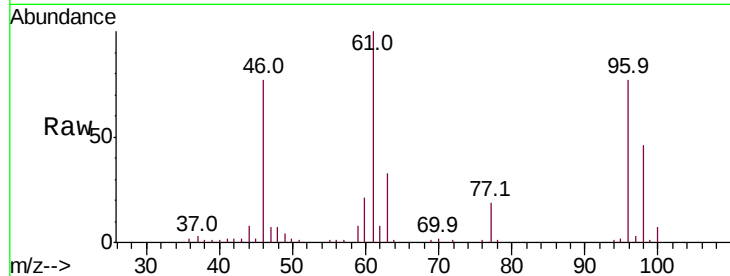
Acq: 16 Oct 2018 20:40

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

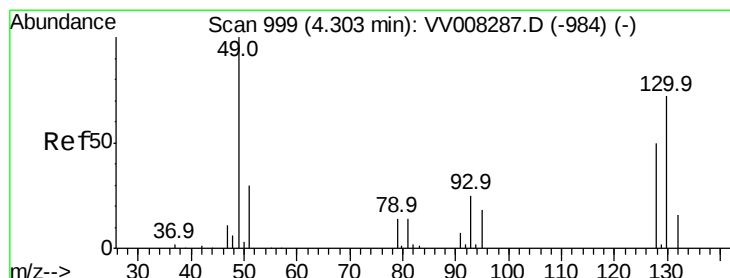
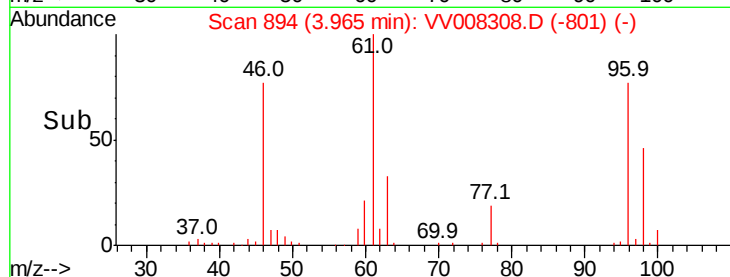
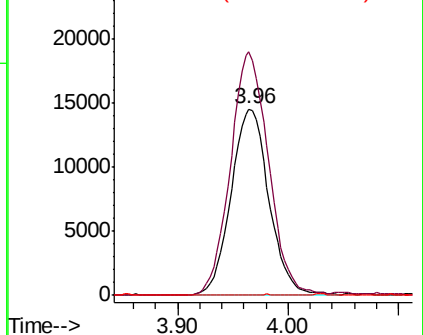
Tot Ion: 96 Resp: 34604

Ion Ratio Lower Upper

|    |       |      |       |
|----|-------|------|-------|
| 96 | 100   |      |       |
| 61 | 130.6 | 93.7 | 174.1 |
| 68 | 0.0   | 0.6  | 1.2#  |



Abundance Ion 96.00 (95.70 to 96.70): VV0  
Ion 61.05 (60.75 to 61.75): VV0  
Ion 68.15 (67.85 to 68.85): VV0



#23

Bromochloromethane

Concen: 5.192 ug/L

RT: 4.31 min Scan# 1000

Delta R.T. 0.00 min

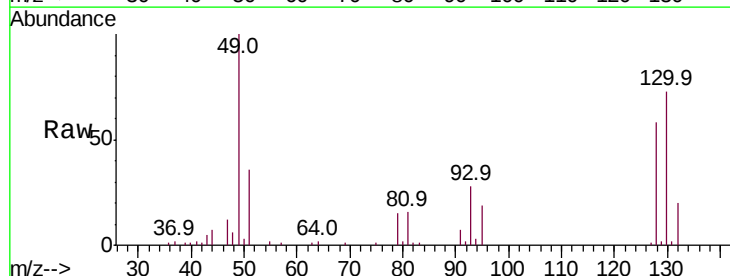
Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

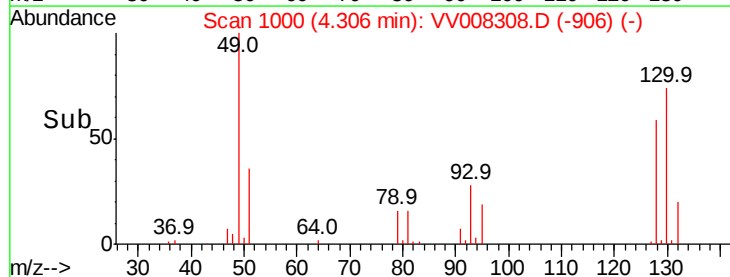
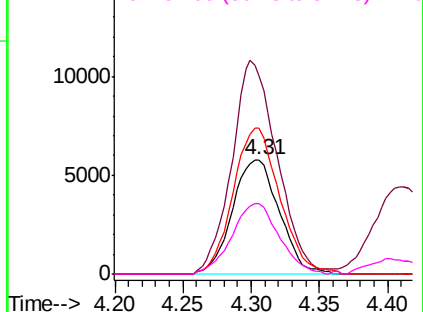
Tgt Ion: 128 Resp: 13824

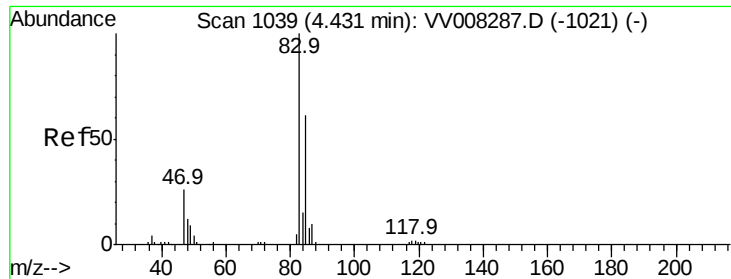
Ion Ratio Lower Upper

|     |       |       |       |
|-----|-------|-------|-------|
| 128 | 100   |       |       |
| 49  | 172.9 | 131.3 | 243.9 |
| 130 | 126.9 | 86.0  | 159.8 |
| 51  | 61.5  | 50.9  | 76.3  |



Abundance Ion 127.90 (127.60 to 128.60): V  
Ion 49.10 (48.80 to 49.80): VV0  
Ion 129.95 (129.65 to 130.65): V  
Ion 51.05 (50.75 to 51.75): VV0





#25

Chloroform

Concen: 4.902 ug/L

RT: 4.43 min Scan# 1040

Delta R.T. 0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

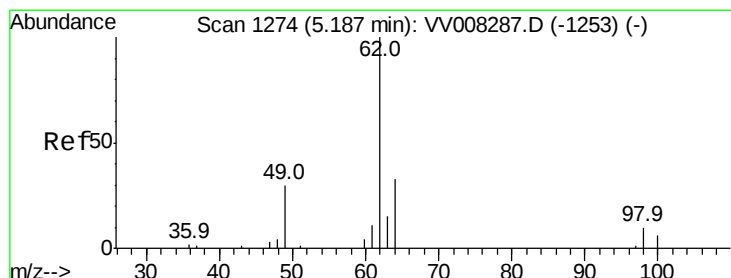
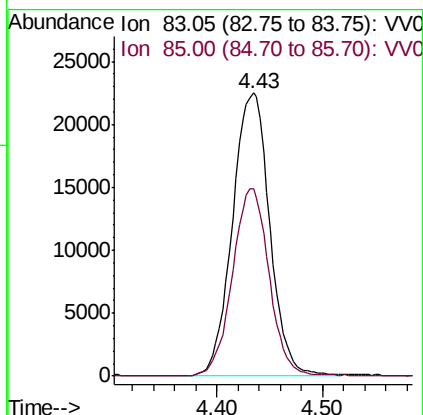
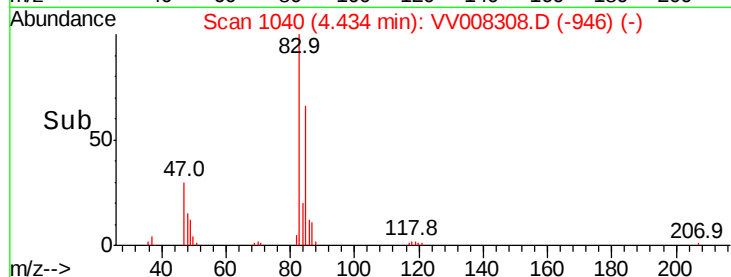
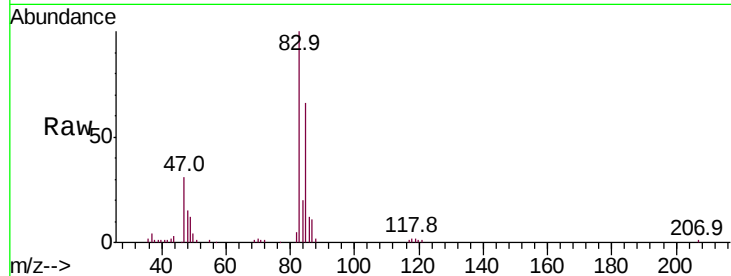
VSTD00569

Tot Ion: 83 Resp: 55215

Ion Ratio Lower Upper

83 100

85 66.1 43.4 80.6



#27

1,2-Dichloroethane

Concen: 5.284 ug/L

RT: 5.19 min Scan# 1274

Delta R.T. -0.00 min

Lab File: VV008308.D

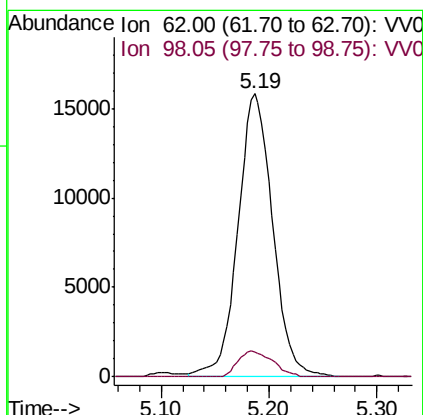
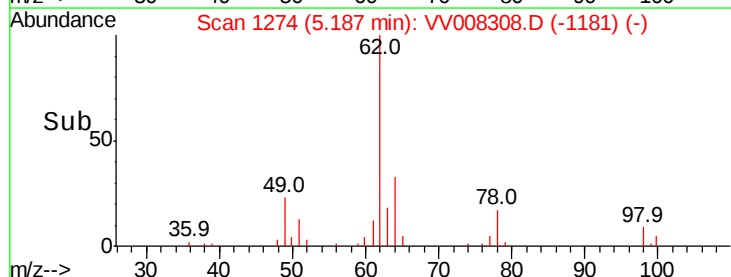
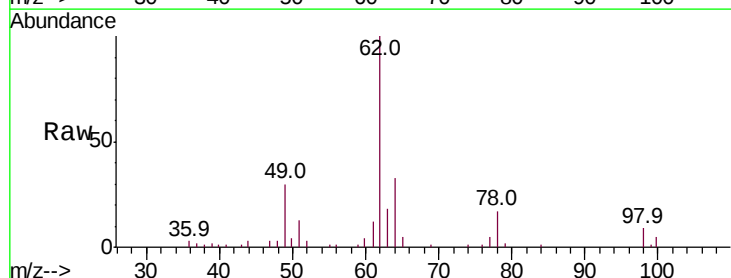
Acq: 16 Oct 2018 20:40

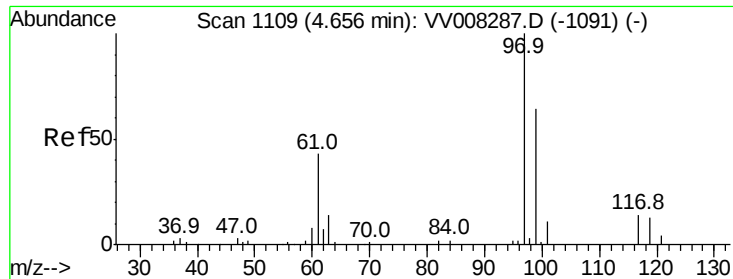
Tgt Ion: 62 Resp: 35385

Ion Ratio Lower Upper

62 100

98 8.9 7.6 11.4

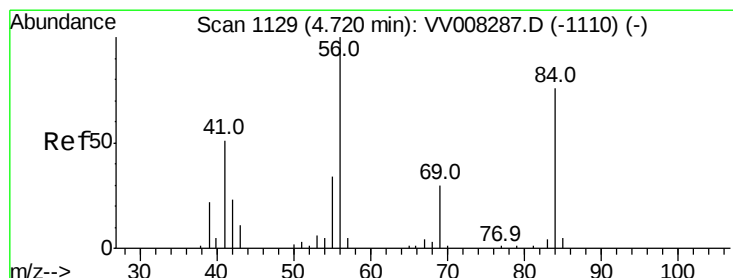
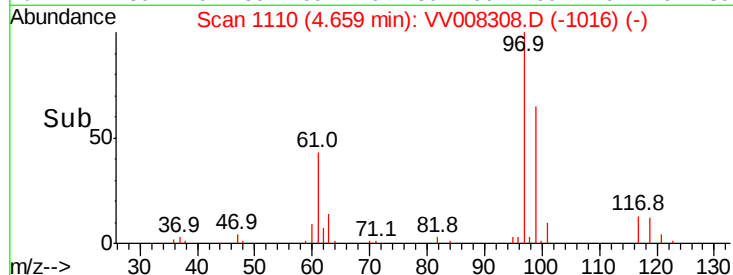
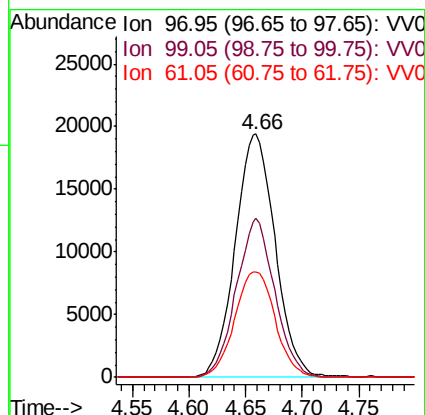
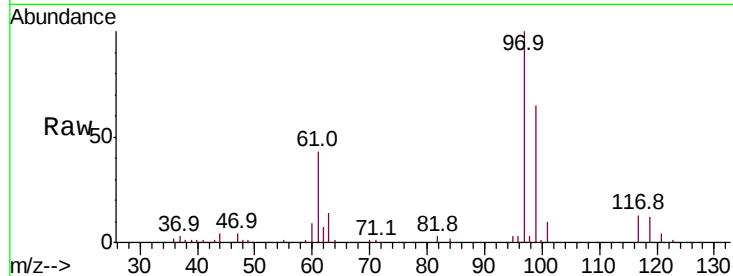




#29  
1,1,1-Trichloroethane  
Concen: 4.874 ug/L  
RT: 4.66 min Scan# 1110  
Delta R.T. 0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

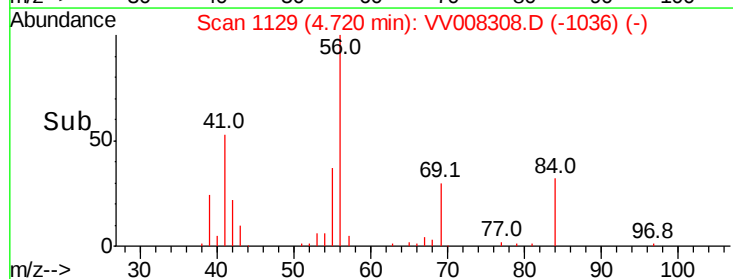
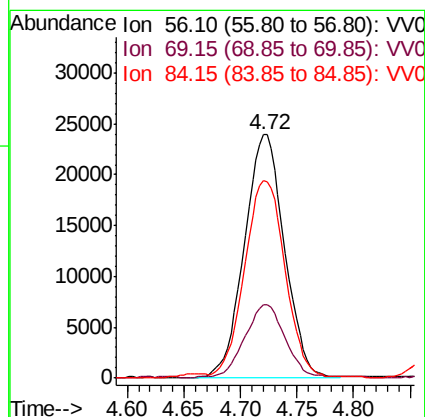
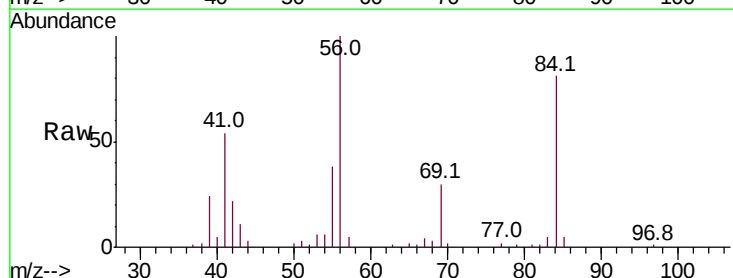
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

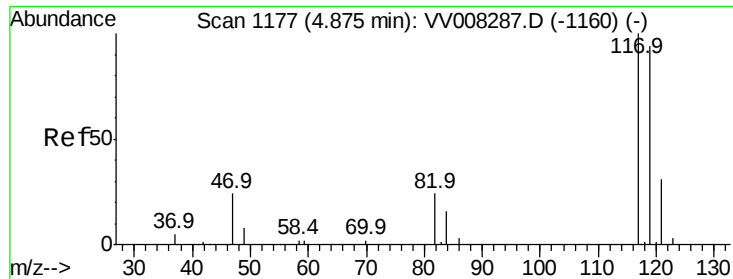
Tot Ion: 97 Resp: 47712  
Ion Ratio Lower Upper  
97 100  
99 62.8 51.6 77.4  
61 43.9 37.0 55.6



#30  
Cyclohexane  
Concen: 4.798 ug/L  
RT: 4.72 min Scan# 1129  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Tgt Ion: 56 Resp: 59040  
Ion Ratio Lower Upper  
56 100  
69 30.6 24.3 36.5  
84 81.8 64.1 96.1





#31

Carbon tetrachloride

Concen: 4.884 ug/L

RT: 4.87 min Scan# 1177

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

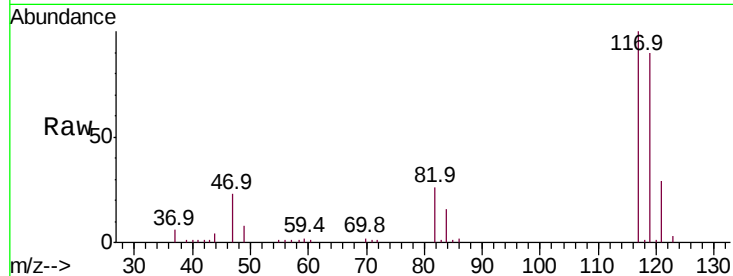
VSTD00569

Tot Ion:117 Resp: 40205

Ion Ratio Lower Upper

117 100

119 93.9 75.5 113.3



Abundance Ion 116.90 (116.60 to 117.60): V

Ion 118.90 (118.60 to 119.60): V

4.87

20000

15000

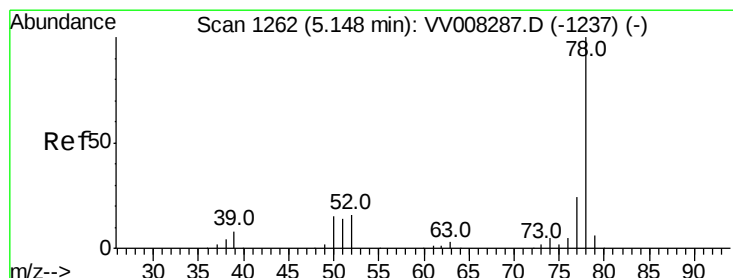
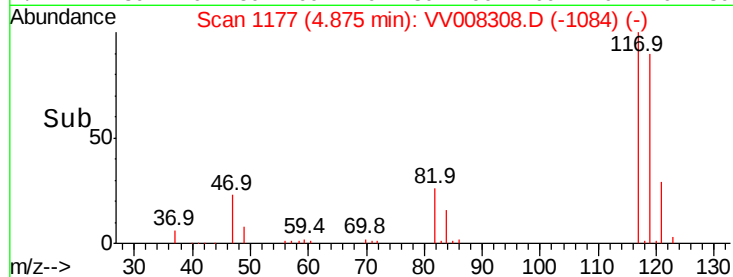
10000

5000

0

4.80 4.85 4.90 4.95

Time-->



#33

Benzene

Concen: 4.888 ug/L

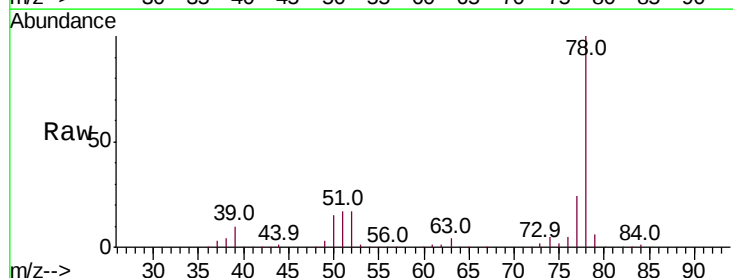
RT: 5.15 min Scan# 1262

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Tgt Ion: 78 Resp: 129496



Abundance Ion 78.10 (77.80 to 78.80): VV0

5.15

60000

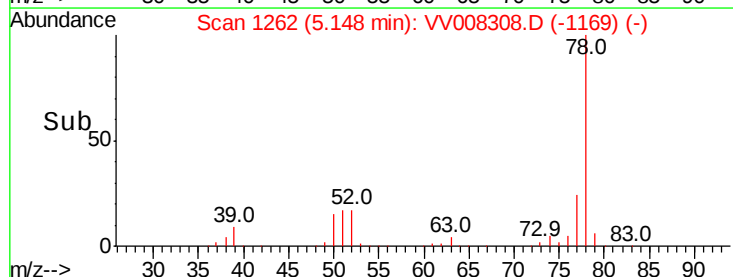
40000

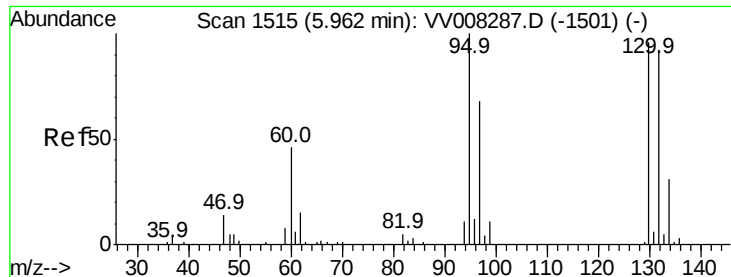
20000

0

5.00 5.10 5.20

Time-->





#34

Trichloroethene

Concen: 4.886 ug/L

RT: 5.96 min Scan# 1515

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00569

Tot Ion: 95 Resp: 35867

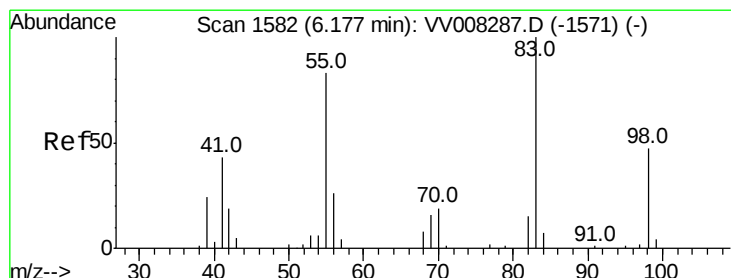
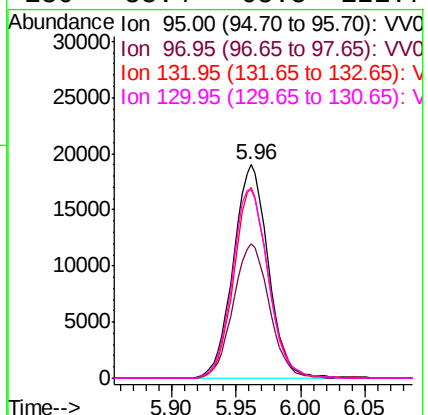
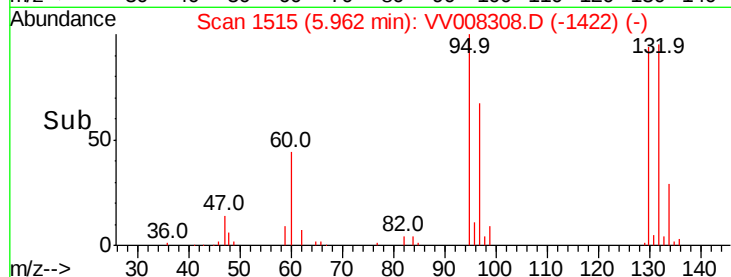
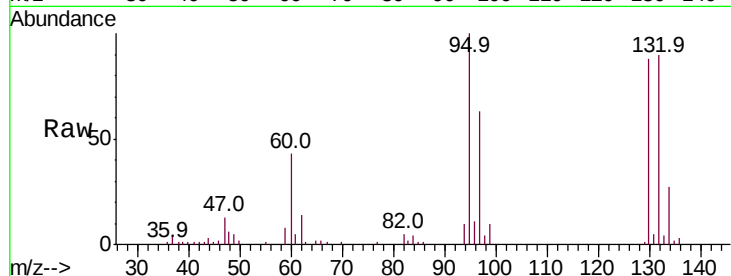
Ion Ratio Lower Upper

95 100

97 62.8 44.4 82.4

132 89.6 60.4 112.2

130 88.4 65.5 121.7



#35

Methylcyclohexane

Concen: 4.741 ug/L

RT: 6.18 min Scan# 1582

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

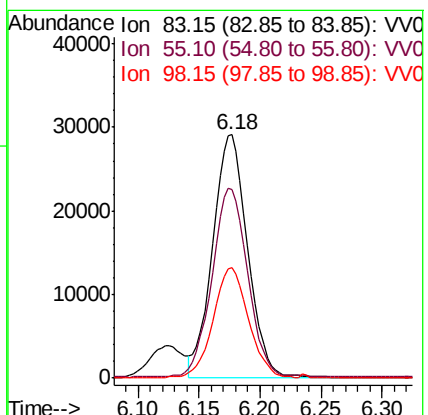
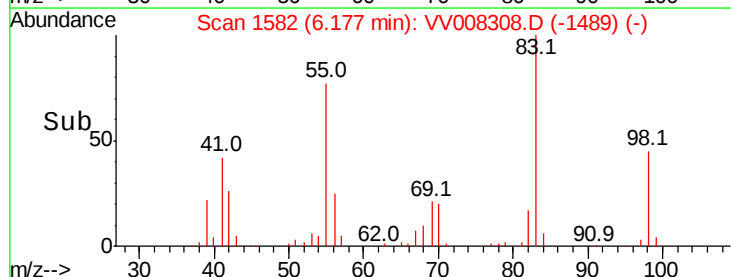
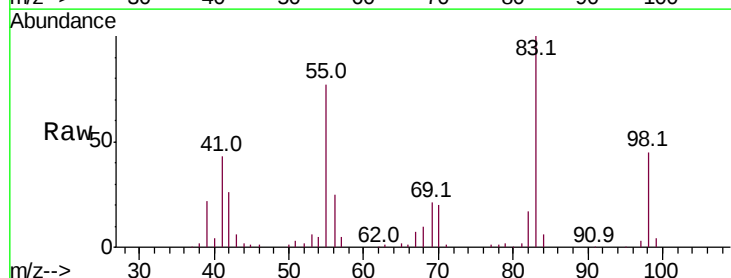
Tgt Ion: 83 Resp: 58693

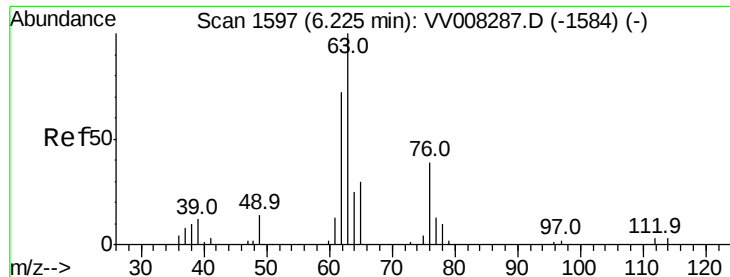
Ion Ratio Lower Upper

83 100

55 78.8 64.0 96.0

98 46.0 37.0 55.4





#37

1,2-Dichloropropane

Concen: 5.016 ug/L

RT: 6.23 min Scan# 1597

Delta R.T. -0.00 min

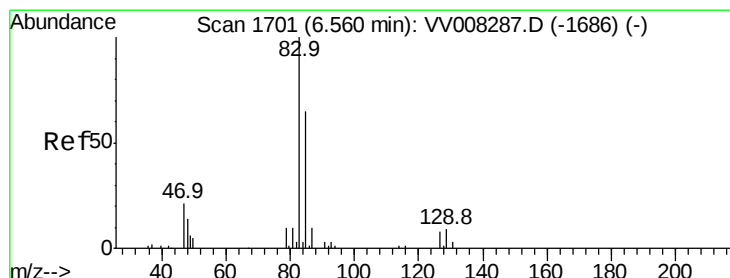
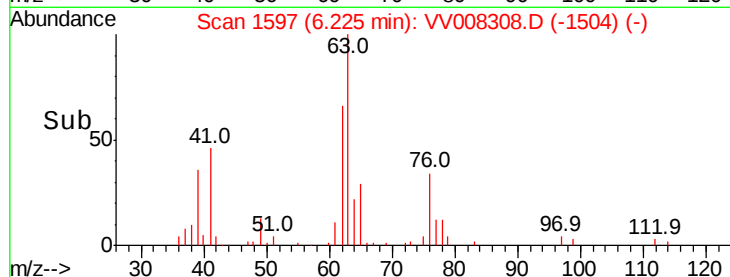
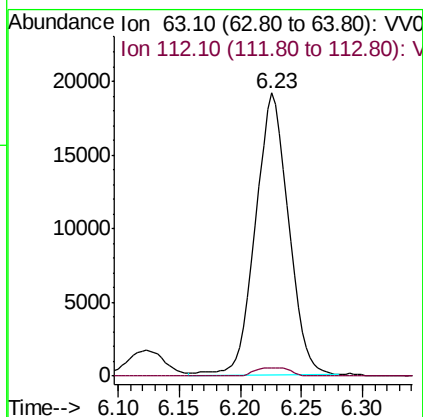
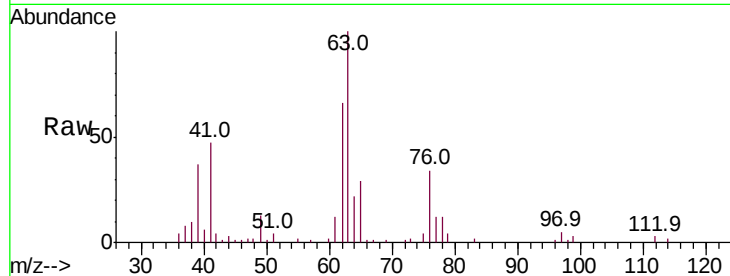
Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

Tot Ion: 63 Resp: 35854

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 63  | 100   |       |       |
| 112 | 3.1   | 2.6   | 3.8   |



#38

Bromodichloromethane

Concen: 4.984 ug/L

RT: 6.56 min Scan# 1701

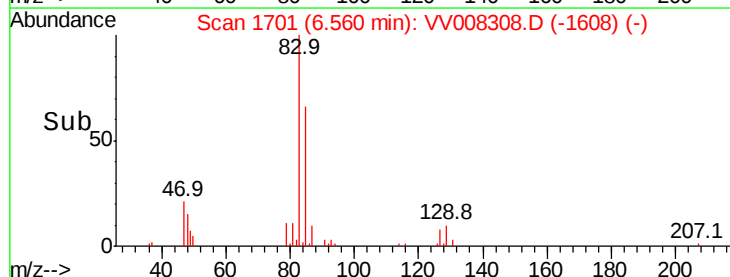
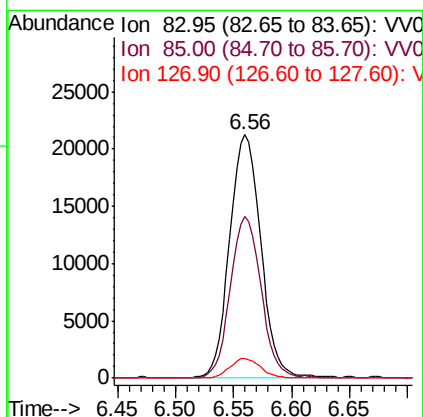
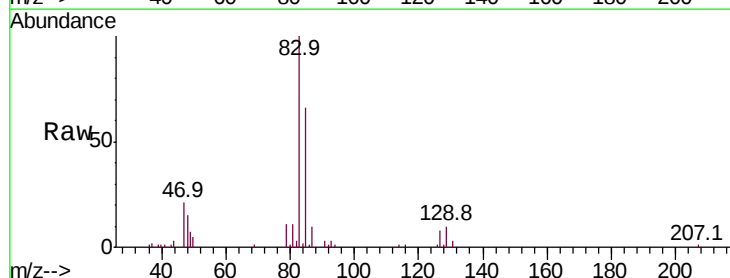
Delta R.T. -0.00 min

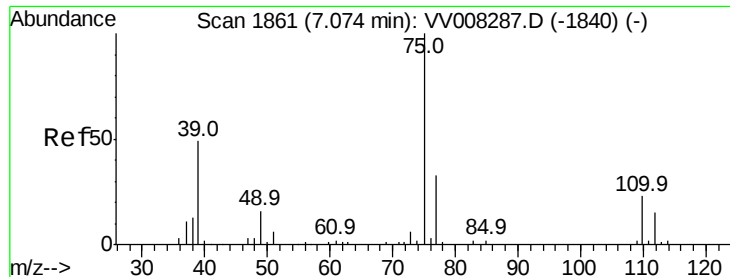
Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Tgt Ion: 83 Resp: 40017

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 83  | 100   |       |       |
| 85  | 66.3  | 44.3  | 82.3  |
| 127 | 8.1   | 6.6   | 10.0  |

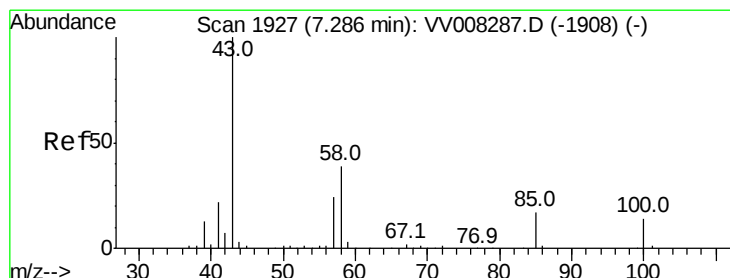
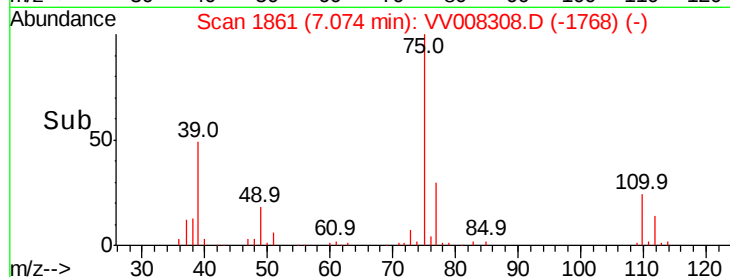
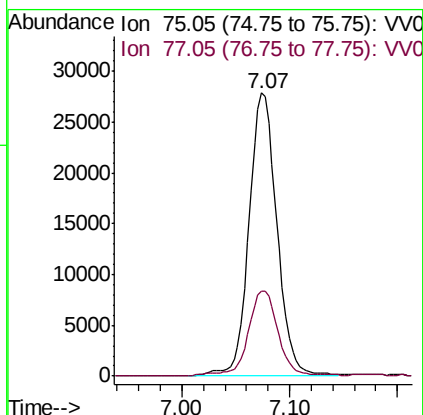
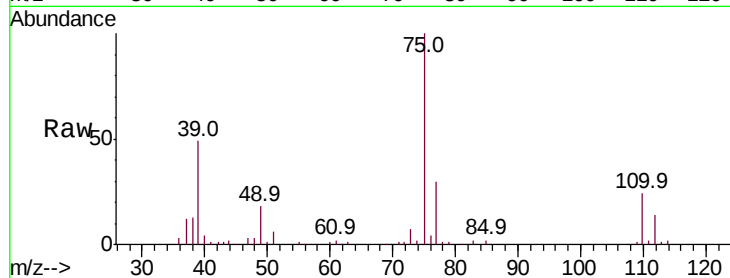




#39  
 cis-1,3-Dichloropropene  
 Concen: 4.942 ug/L  
 RT: 7.07 min Scan# 1861  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

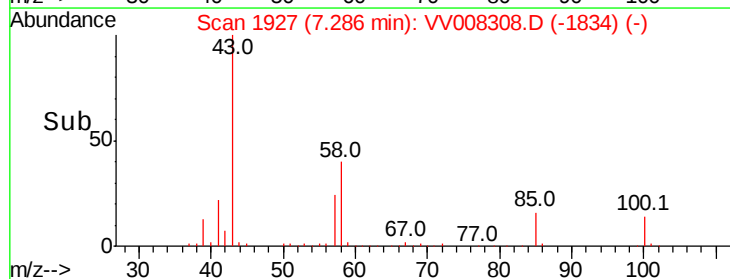
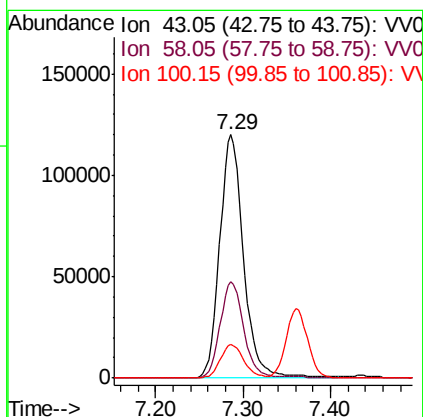
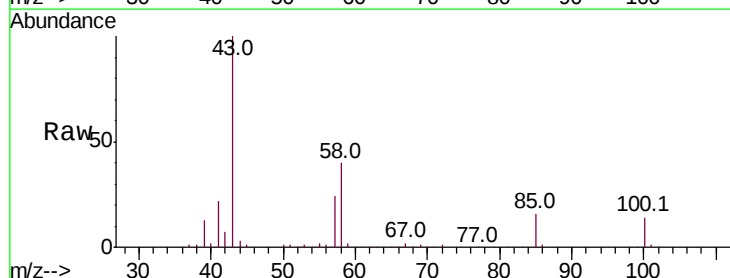
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

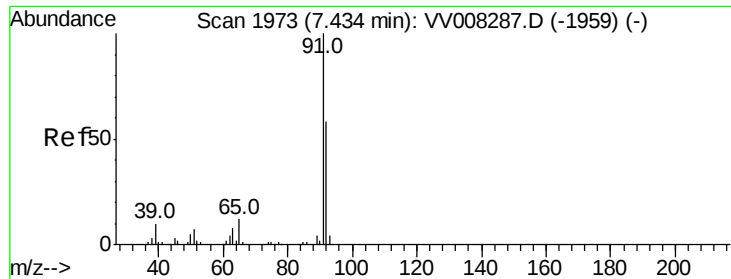
Tot Ion: 75 Resp: 50396  
 Ion Ratio Lower Upper  
 75 100  
 77 30.2 22.3 41.3



#40  
 4-Methyl-2-pentanone  
 Concen: 51.752 ug/L  
 RT: 7.29 min Scan# 1927  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Tgt Ion: 43 Resp: 226539  
 Ion Ratio Lower Upper  
 43 100  
 58 39.4 31.3 46.9  
 100 13.7 10.5 15.7





#42

Toluene

Concen: 4.939 ug/L

RT: 7.43 min Scan# 1973

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

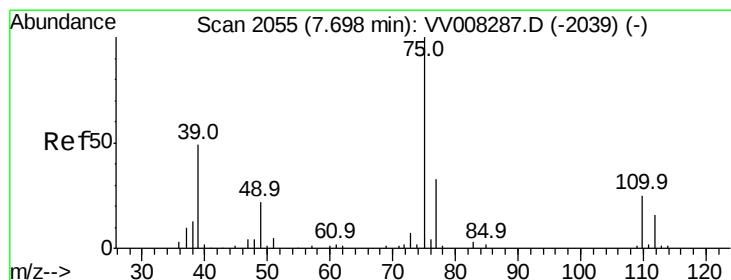
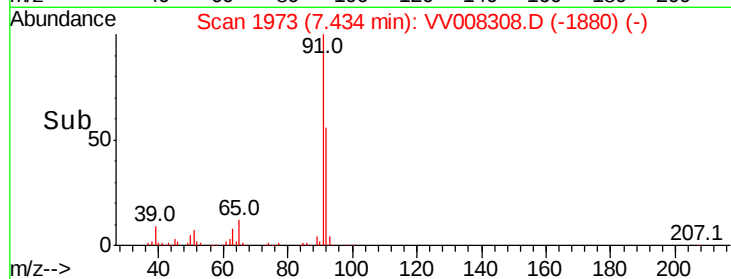
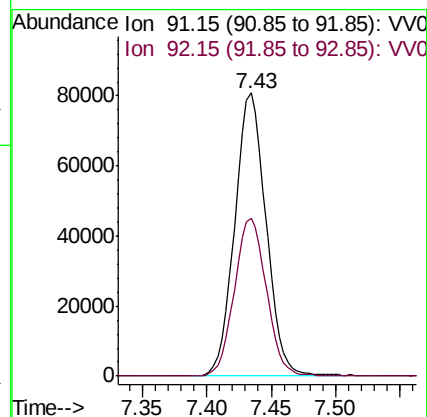
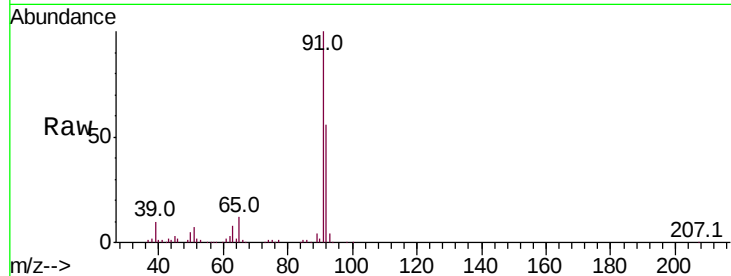
VSTD00569

Tot Ion: 91 Resp: 136375

Ion Ratio Lower Upper

91 100

92 55.6 40.1 74.5



#44

trans-1,3-Dichloropropene

Concen: 4.950 ug/L

RT: 7.70 min Scan# 2055

Delta R.T. -0.00 min

Lab File: VV008308.D

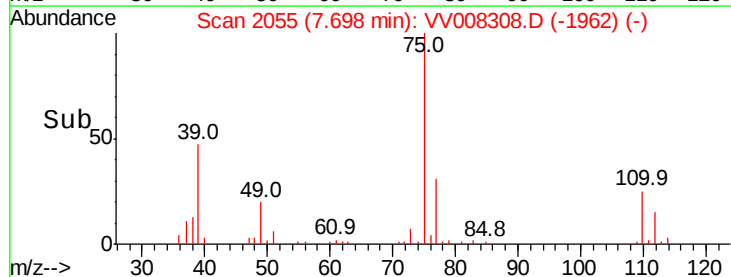
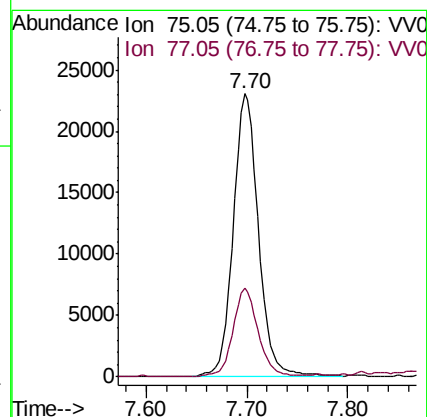
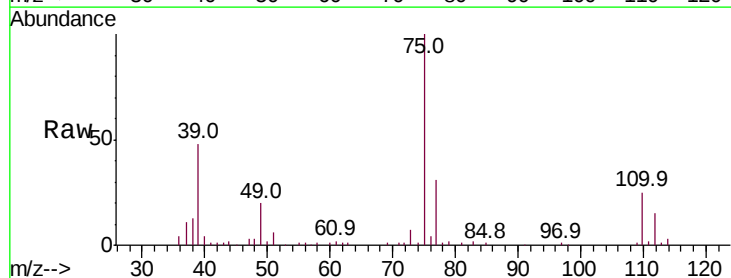
Acq: 16 Oct 2018 20:40

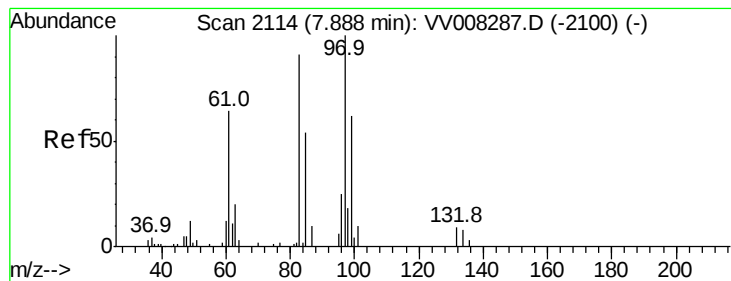
Tgt Ion: 75 Resp: 40403

Ion Ratio Lower Upper

75 100

77 31.2 22.3 41.5





#45

1,1,2-Trichloroethane

Concen: 5.122 ug/L

RT: 7.89 min Scan# 2114

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00569

Tot Ion: 97 Resp: 22729

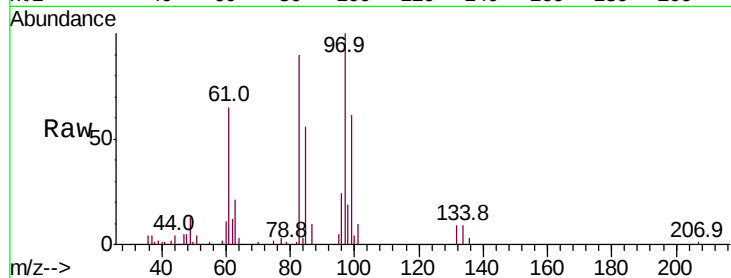
Ion Ratio Lower Upper

97 100

99 61.4 44.1 81.9

83 89.5 63.7 118.3

85 56.0 40.7 75.7

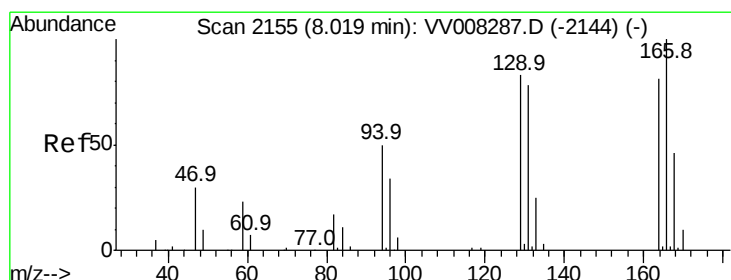
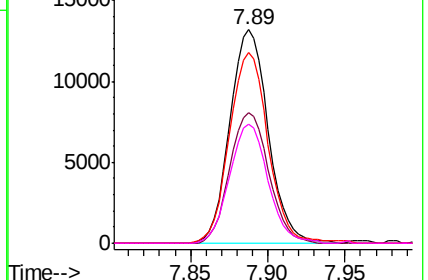
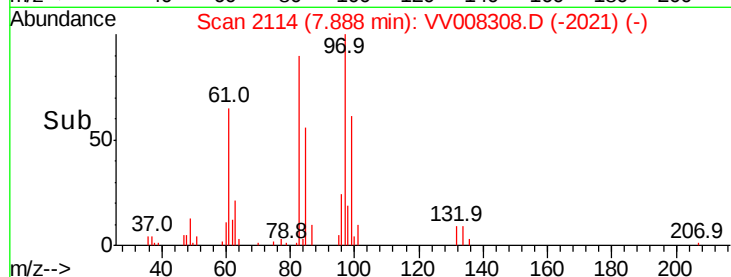


Abundance Ion 96.95 (96.65 to 97.65): VV0

Ion 99.05 (98.75 to 99.75): VV0

Ion 82.95 (82.65 to 83.65): VV0

Ion 85.00 (84.70 to 85.70): VV0



#47

Tetrachloroethene

Concen: 5.111 ug/L

RT: 8.02 min Scan# 2155

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Tgt Ion: 164 Resp: 23508

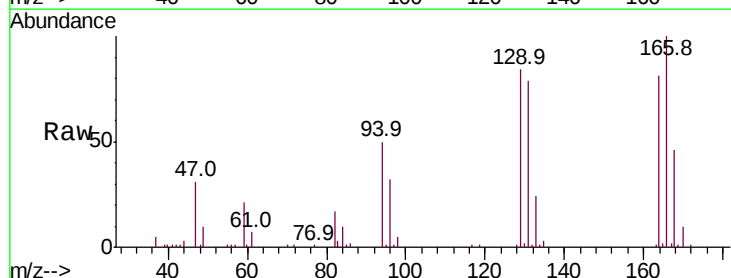
Ion Ratio Lower Upper

164 100

129 104.4 76.5 142.1

131 97.7 74.7 138.7

166 123.7 91.6 170.0

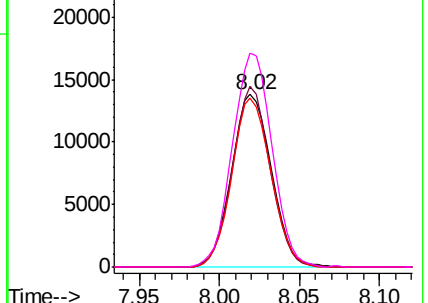
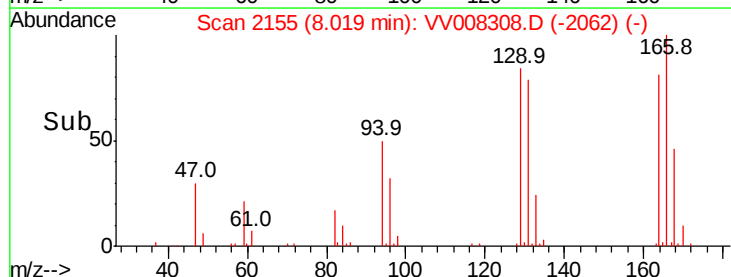


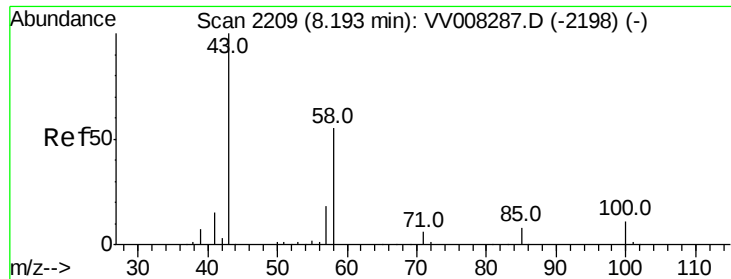
Abundance Ion 163.90 (163.60 to 164.60): V

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

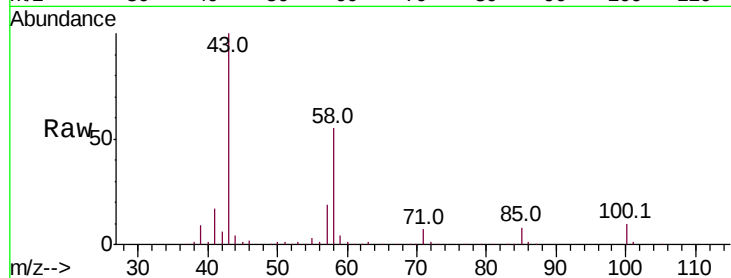




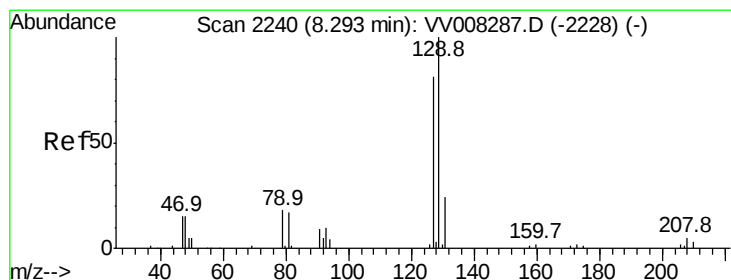
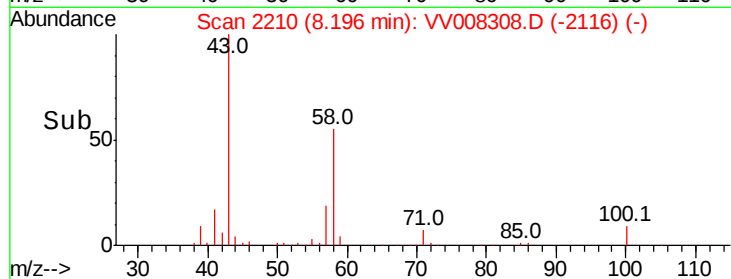
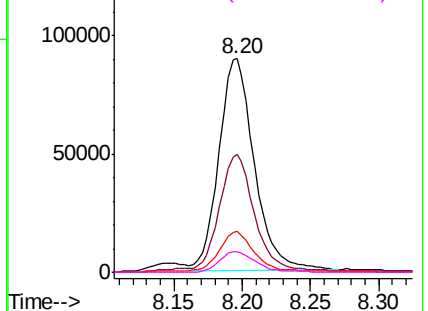
#48  
2-Hexanone  
Concen: 50.317 ug/L  
RT: 8.20 min Scan# 2210  
Delta R.T. 0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

Tot Ion: 43 Resp: 160986  
Ion Ratio Lower Upper  
43 100  
58 58.3 45.0 67.4  
57 18.8 14.4 21.6  
100 10.1 7.9 11.9

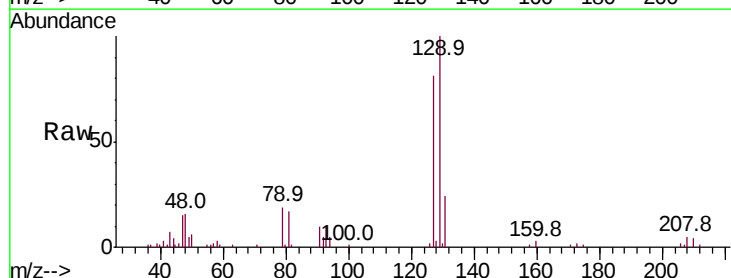


Abundance Ion 43.05 (42.75 to 43.75): VV0  
Ion 58.05 (57.75 to 58.75): VV0  
Ion 57.20 (56.90 to 57.90): VV0  
Ion 100.15 (99.85 to 100.85): VV0

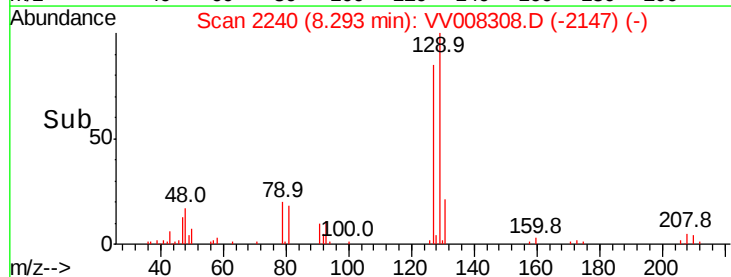
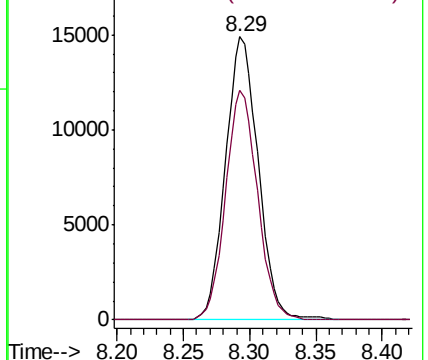


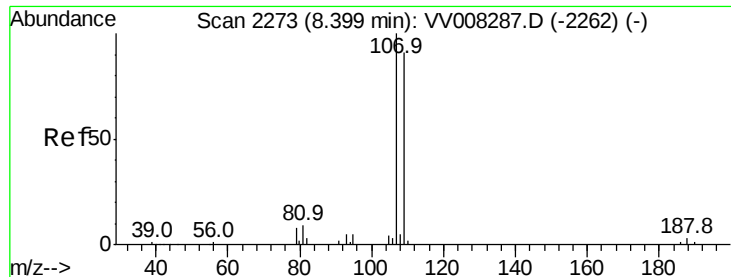
#49  
Dibromochloromethane  
Concen: 5.050 ug/L  
RT: 8.29 min Scan# 2240  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Tgt Ion:129 Resp: 25542  
Ion Ratio Lower Upper  
129 100  
127 81.2 54.7 101.7



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

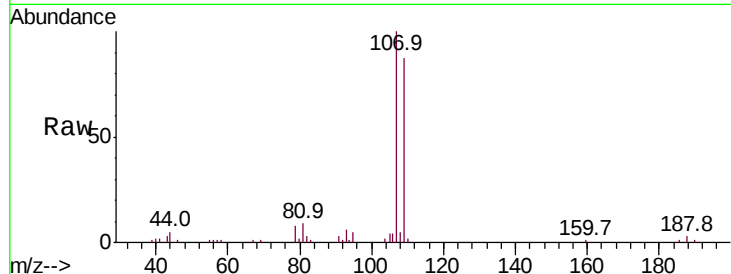




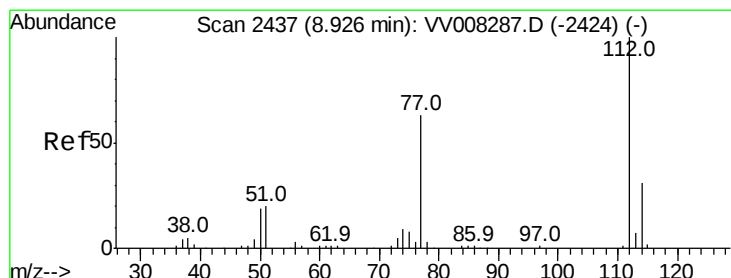
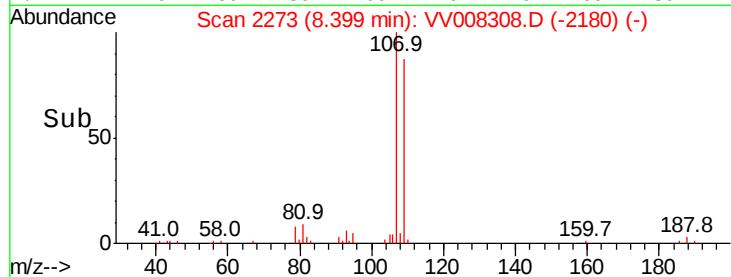
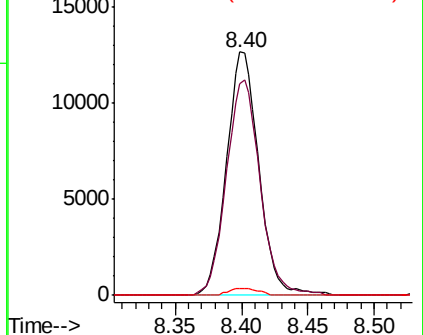
#50  
1,2-Dibromoethane  
Concen: 5.144 ug/L  
RT: 8.40 min Scan# 2273  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00569

Tot Ion:107 Resp: 21394  
Ion Ratio Lower Upper  
107 100  
109 86.9 69.6 129.2  
188 2.9 2.9 4.3

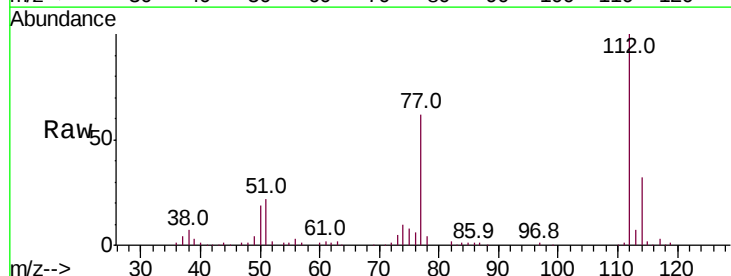


Abundance Ion 106.95 (106.65 to 107.65): V  
Ion 109.00 (108.70 to 109.70): V  
Ion 187.90 (187.60 to 188.60): V

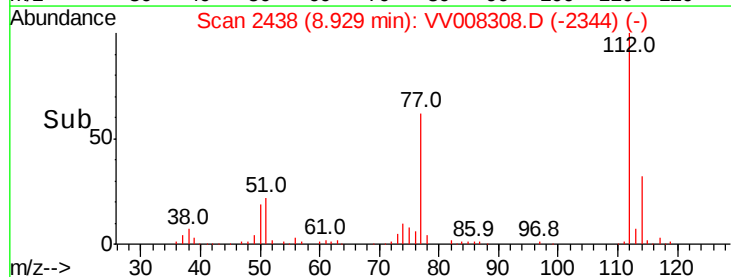
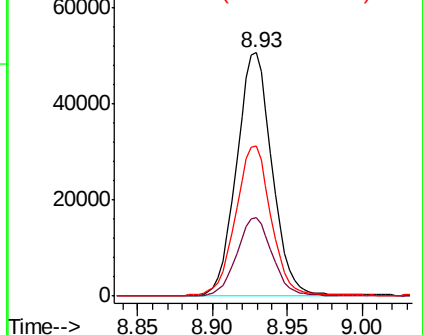


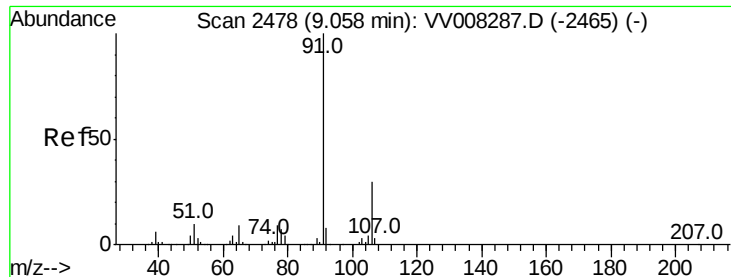
#51  
Chlorobenzene  
Concen: 5.092 ug/L  
RT: 8.93 min Scan# 2438  
Delta R.T. 0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Tgt Ion:112 Resp: 83533  
Ion Ratio Lower Upper  
112 100  
114 32.0 21.6 40.0  
77 61.6 49.7 74.5



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

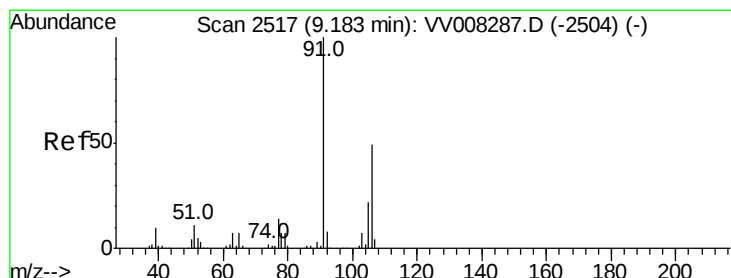
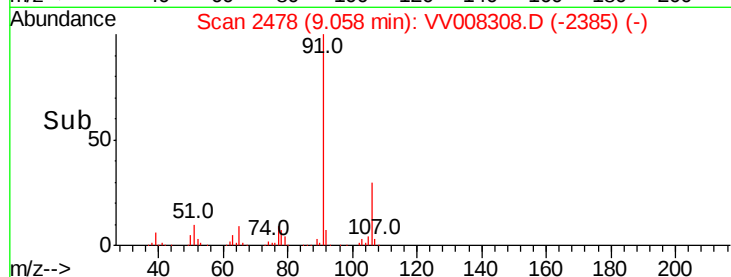
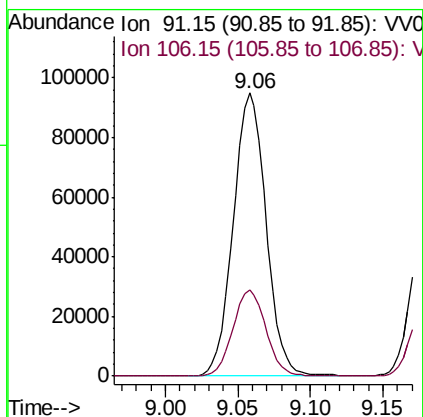
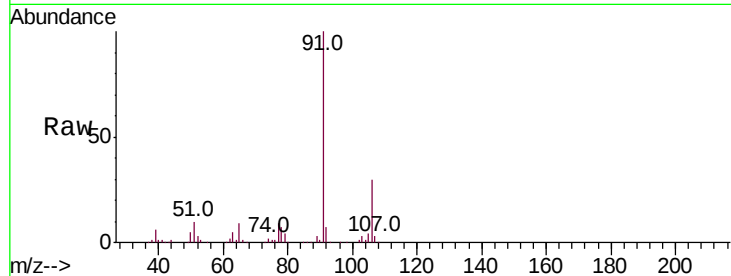




#52  
Ethylbenzene  
Concen: 4.905 ug/L  
RT: 9.06 min Scan# 2478  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

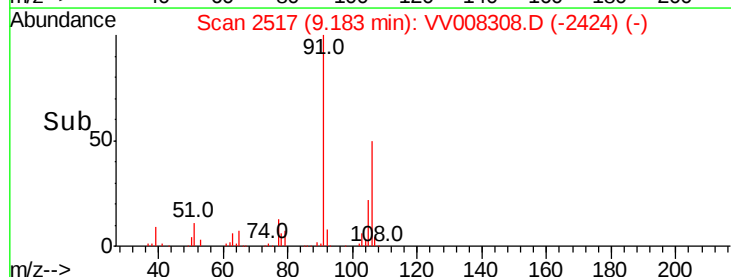
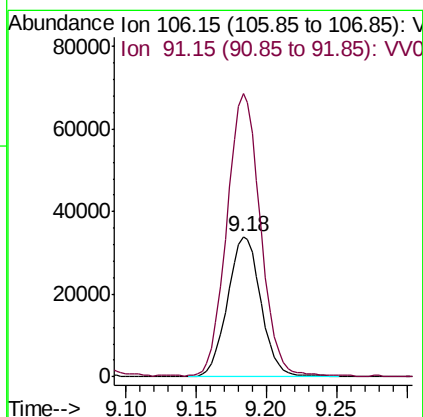
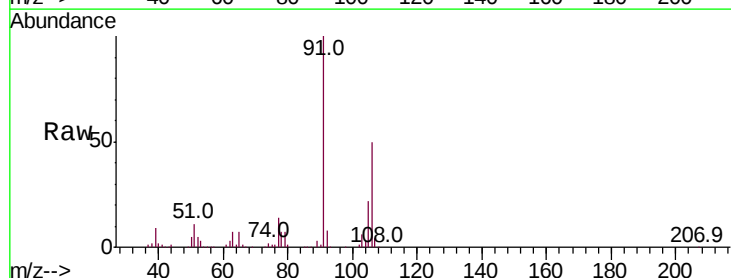
Instrument :  
MSVOA\_V  
ClientSampled :  
VSTD00569

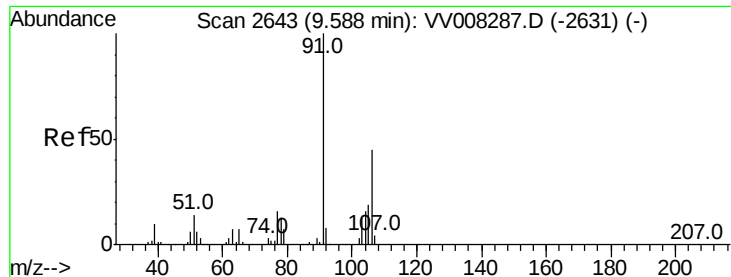
Tot Ion: 91 Resp: 148921  
Ion Ratio Lower Upper  
91 100  
106 30.4 21.6 40.2



#53  
m,p-xylene  
Concen: 5.146 ug/L  
RT: 9.18 min Scan# 2517  
Delta R.T. -0.00 min  
Lab File: VV008308.D  
Acq: 16 Oct 2018 20:40

Tgt Ion: 106 Resp: 56511  
Ion Ratio Lower Upper  
106 100  
91 201.8 145.2 269.6





#54

o-xylene

Concen: 5.016 ug/L

RT: 9.59 min Scan# 2643

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

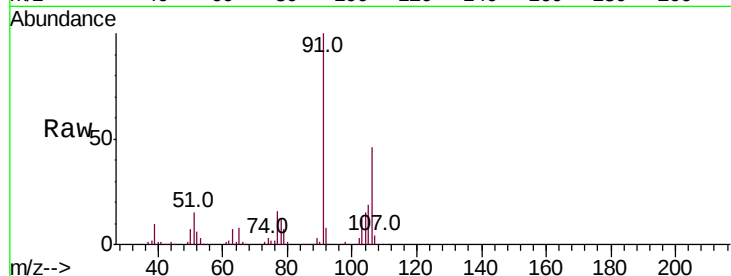
VSTD00569

Tot Ion:106 Resp: 54885

Ion Ratio Lower Upper

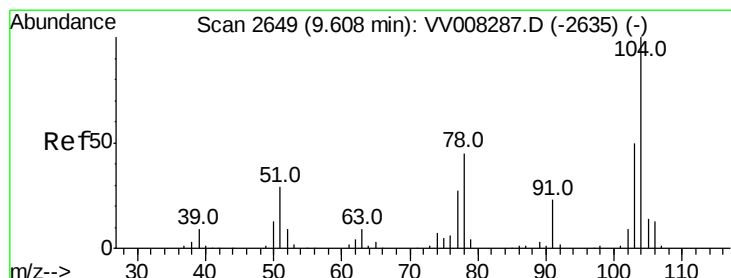
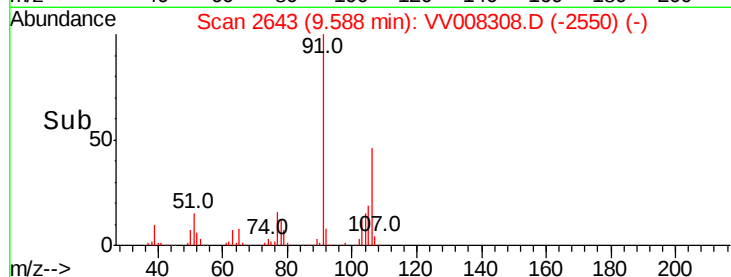
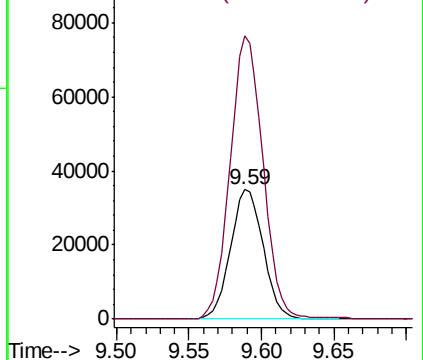
106 100

91 218.4 153.2 284.4



Abundance Ion 106.15 (105.85 to 106.85): V

Ion 91.15 (90.85 to 91.85): VV0



#55

Styrene

Concen: 5.067 ug/L

RT: 9.61 min Scan# 2649

Delta R.T. -0.00 min

Lab File: VV008308.D

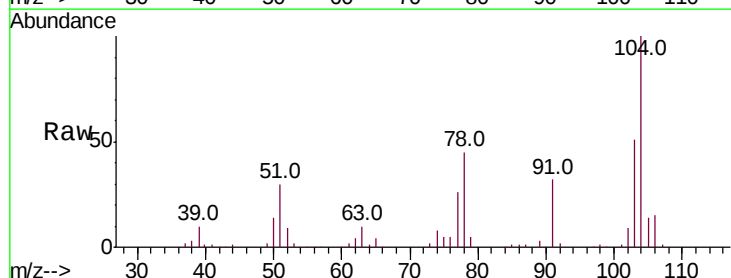
Acq: 16 Oct 2018 20:40

Tgt Ion:104 Resp: 89198

Ion Ratio Lower Upper

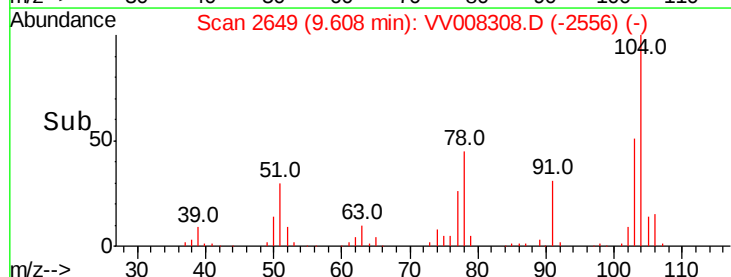
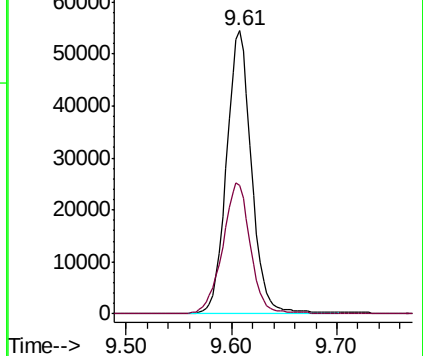
104 100

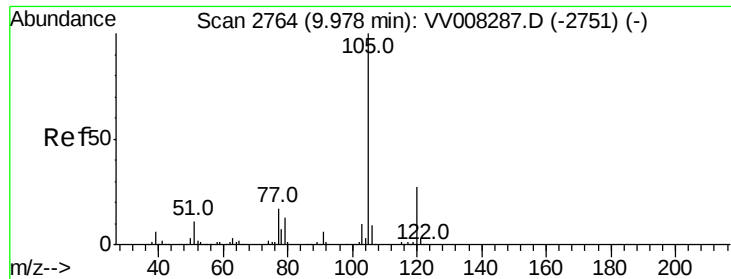
78 45.3 32.5 60.3



Abundance Ion 104.10 (103.80 to 104.80): V

Ion 78.10 (77.80 to 78.80): VV0





#56

Isopropylbenzene

Concen: 4.988 ug/L

RT: 9.98 min Scan# 2764

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00569

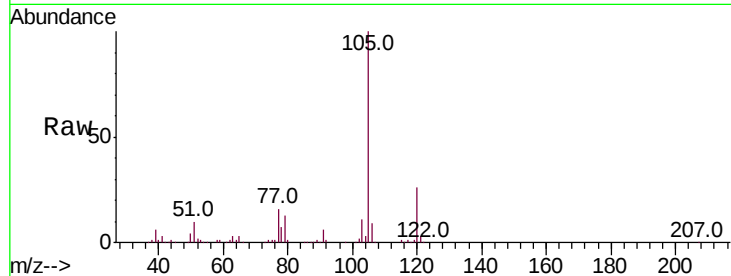
Tot Ion:105 Resp: 143805

Ion Ratio Lower Upper

105 100

120 26.0 21.2 31.8

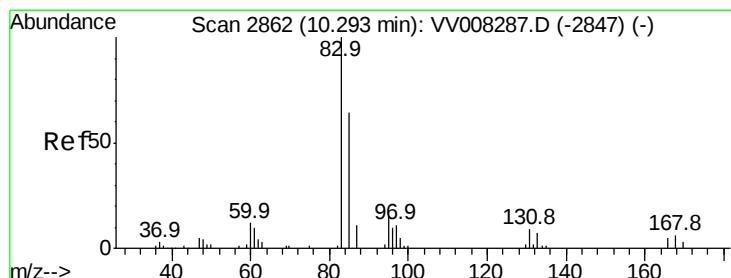
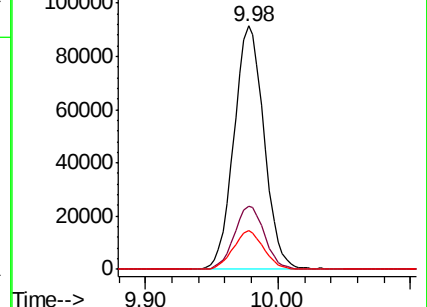
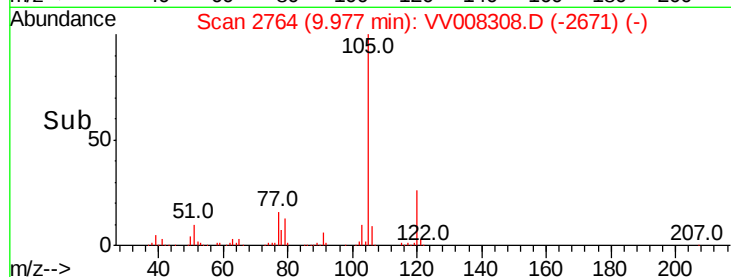
77 16.1 13.0 19.6



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: 4.895 ug/L

RT: 10.29 min Scan# 2861

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

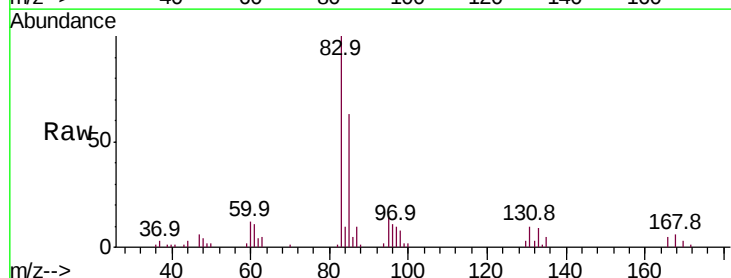
Tgt Ion: 83 Resp: 24714

Ion Ratio Lower Upper

83 100

85 62.8 45.6 84.6

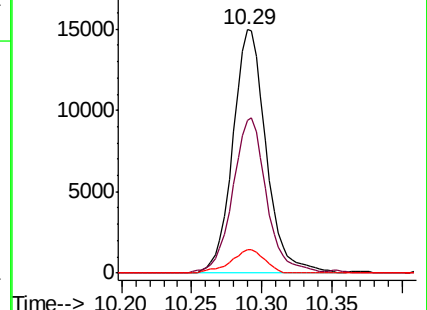
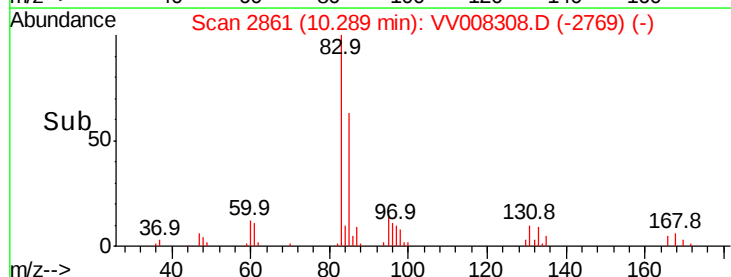
131 9.6 6.6 10.0

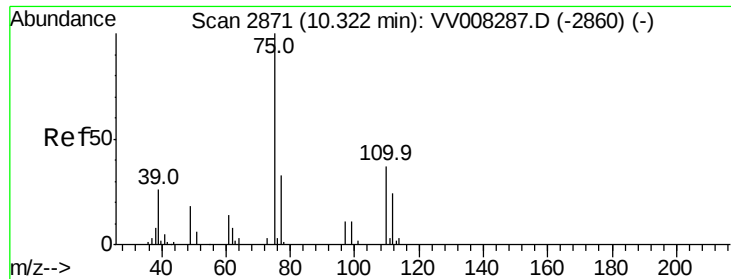


Abundance Ion 82.95 (82.65 to 83.65): VV0

Ion 85.00 (84.70 to 85.70): VV0

Ion 130.95 (130.65 to 131.65): V





#59

1,2,3-Trichloropropane

Concen: 5.180 ug/L

RT: 10.32 min Scan# 2872

Delta R.T. 0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

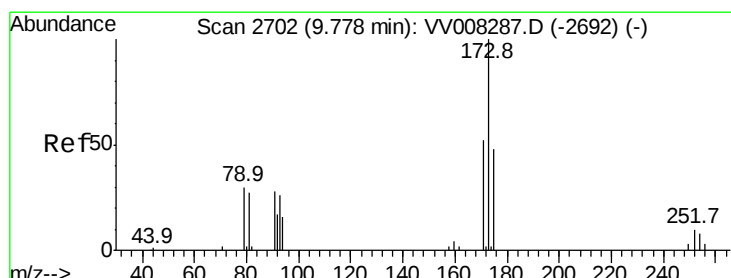
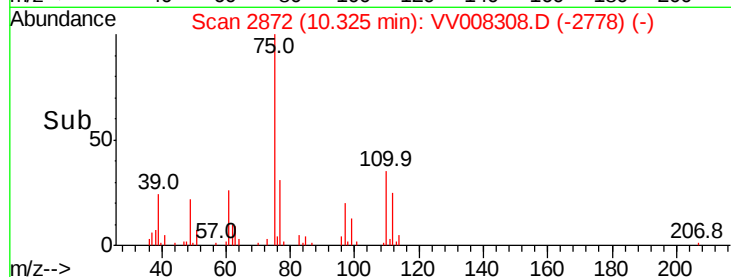
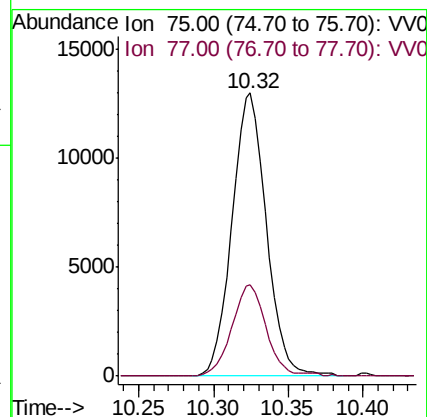
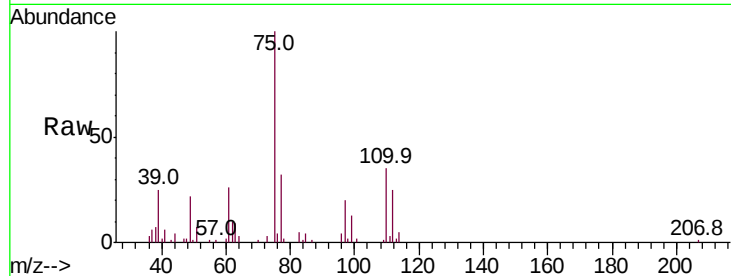
VSTD00569

Tot Ion: 75 Resp: 20717

Ion Ratio Lower Upper

75 100

77 32.0 27.0 40.6



#61

Bromoform

Concen: 5.099 ug/L

RT: 9.78 min Scan# 2703

Delta R.T. 0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

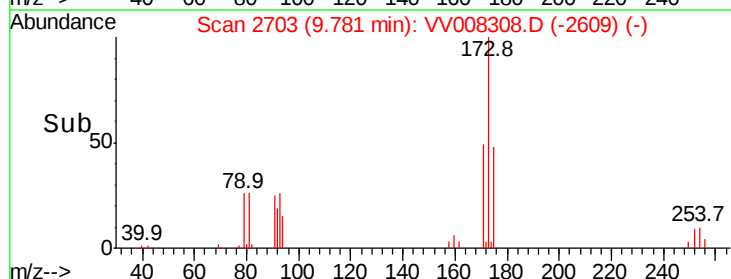
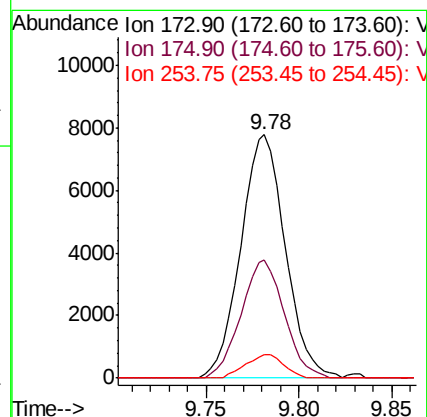
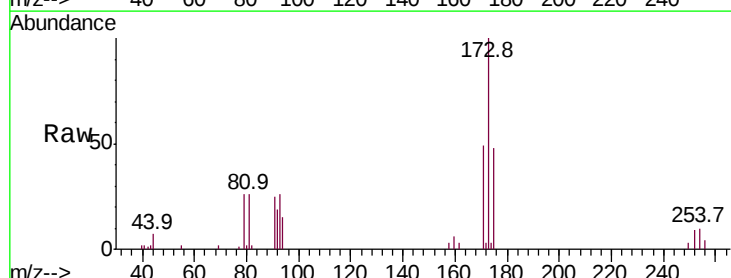
Tgt Ion: 173 Resp: 12935

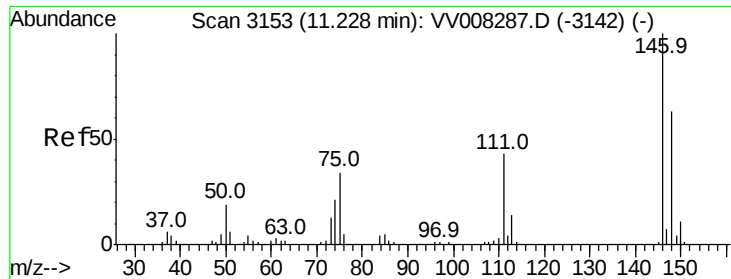
Ion Ratio Lower Upper

173 100

175 47.1 38.7 58.1

254 8.3 5.9 8.9

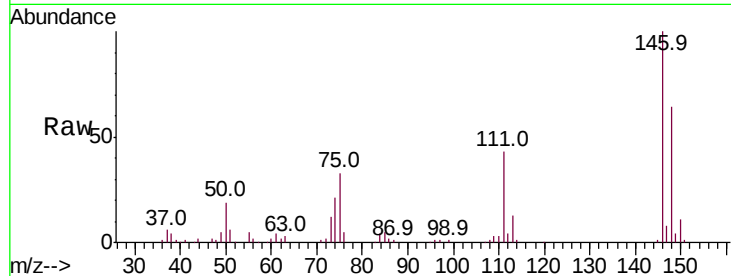




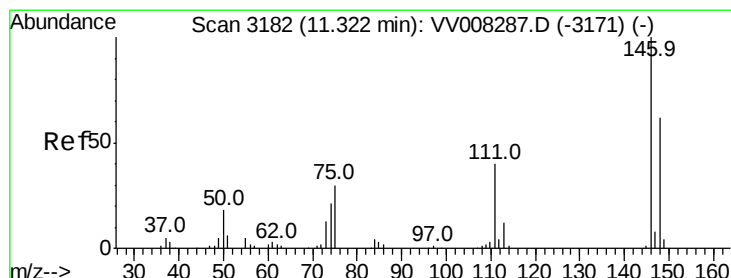
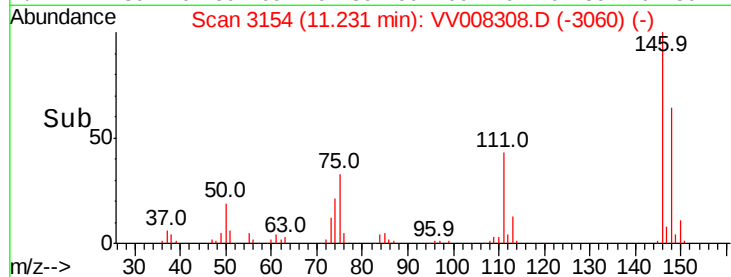
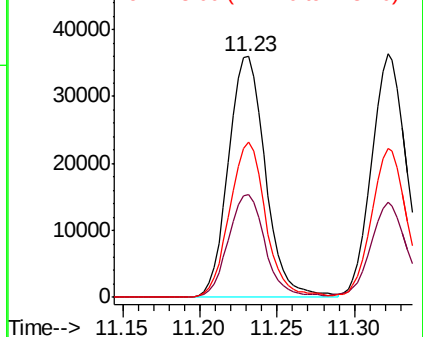
#62  
 1,3-Dichlorobenzene  
 Concen: 5.108 ug/L  
 RT: 11.23 min Scan# 3154  
 Delta R.T. 0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

Tot Ion:146 Resp: 60001  
 Ion Ratio Lower Upper  
 146 100  
 111 42.7 28.0 52.0  
 148 64.4 42.9 79.7

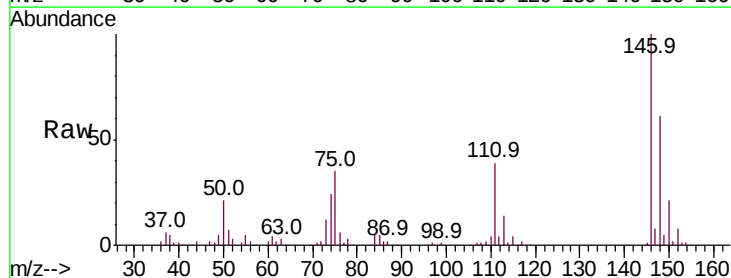


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

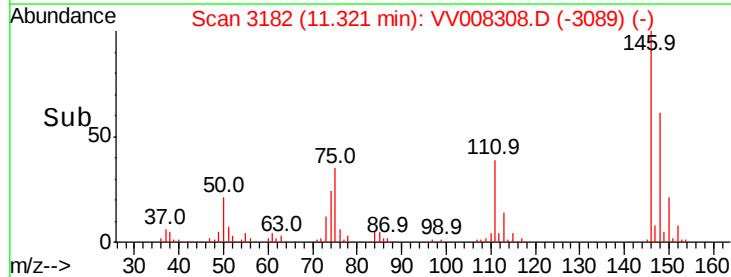
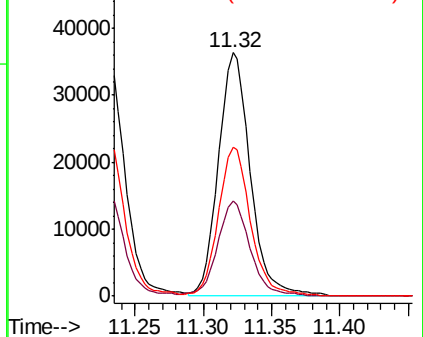


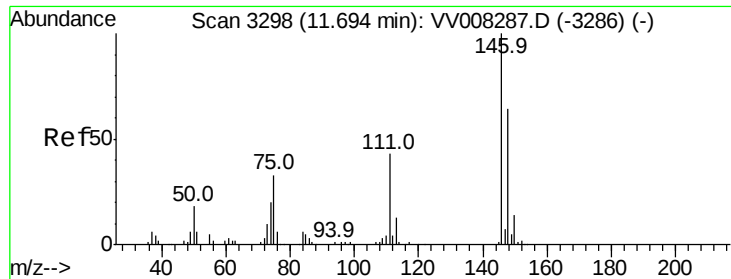
#63  
 1,4-Dichlorobenzene  
 Concen: 5.097 ug/L  
 RT: 11.32 min Scan# 3182  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Tgt Ion:146 Resp: 59274  
 Ion Ratio Lower Upper  
 146 100  
 111 38.9 30.0 55.6  
 148 61.3 44.5 82.7



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

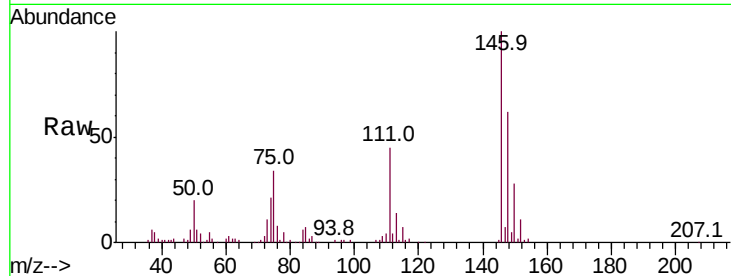




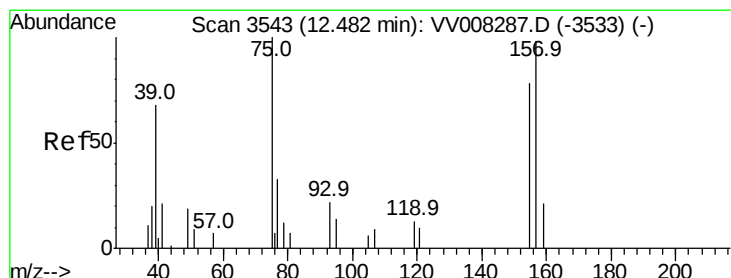
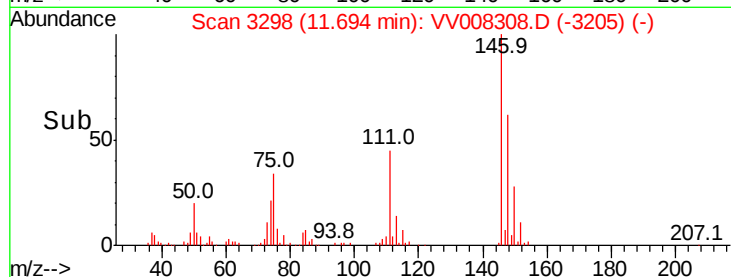
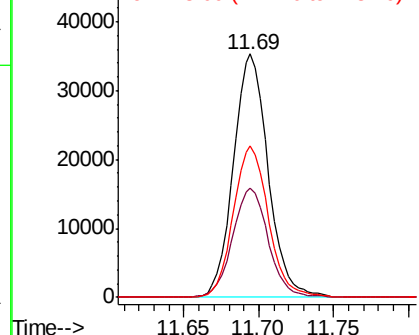
#65  
 1,2-Dichlorobenzene  
 Concen: 5.070 ug/L  
 RT: 11.69 min Scan# 3298  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

Tot Ion:146 Resp: 57092  
 Ion Ratio Lower Upper  
 146 100  
 111 44.8 35.5 53.3  
 148 62.0 51.5 77.3

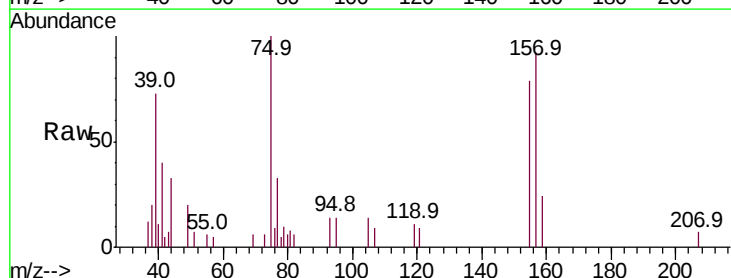


Abundance Ion 145.95 (145.65 to 146.65): V  
 Ion 111.00 (110.70 to 111.70): V  
 Ion 148.00 (147.70 to 148.70): V

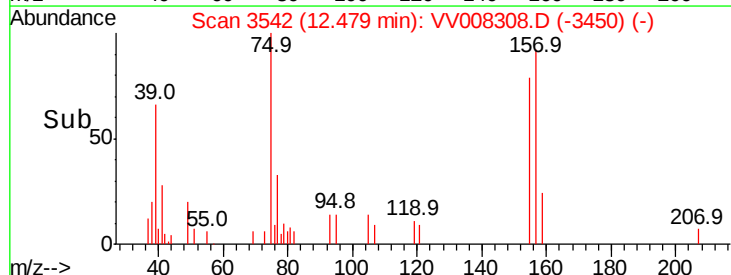
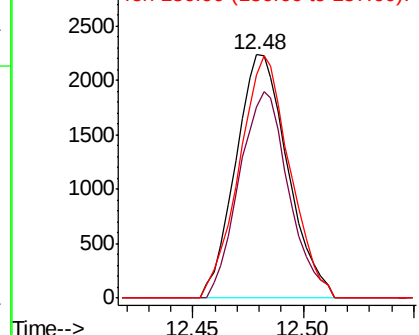


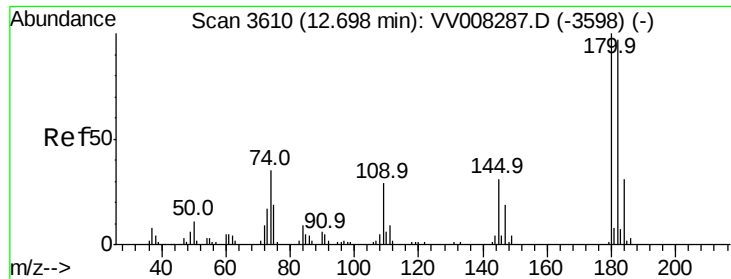
#66  
 1,2-Dibromo-3-chloropropane  
 Concen: 4.309 ug/L  
 RT: 12.48 min Scan# 3542  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Tgt Ion: 75 Resp: 3660  
 Ion Ratio Lower Upper  
 75 100  
 155 78.7 63.6 95.4  
 157 91.7 84.3 126.5



Abundance Ion 75.05 (74.75 to 75.75): VV0  
 Ion 154.95 (154.65 to 155.65): V  
 Ion 156.90 (156.60 to 157.60): V

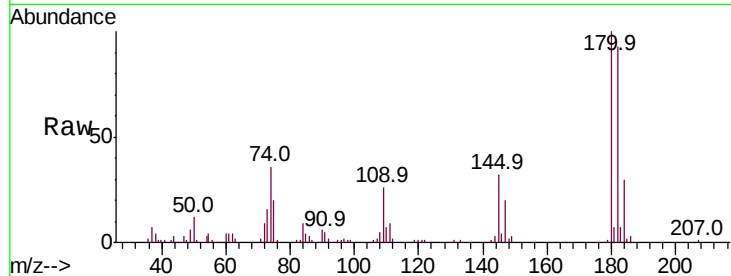




#67  
 1,3,5-Trichlorobenzene  
 Concen: 5.197 ug/L  
 RT: 12.70 min Scan# 3610  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00569

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 94.5  | 74.5  | 111.7 |
| 184     | 30.4  | 23.5  | 35.3  |
| 145     | 32.3  | 25.9  | 38.9  |



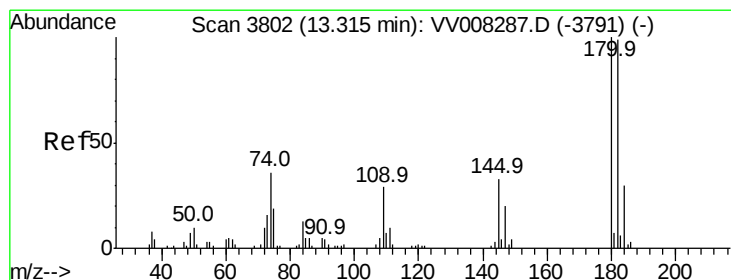
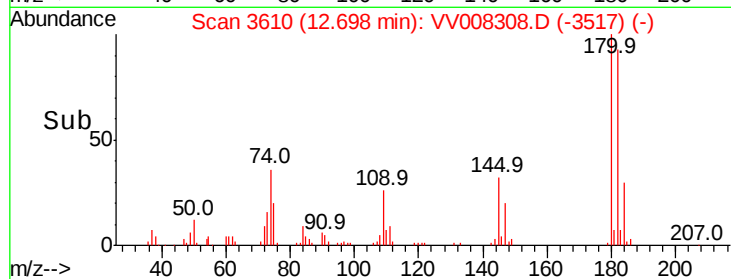
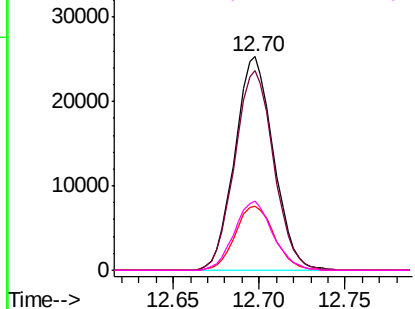
Abundance

Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

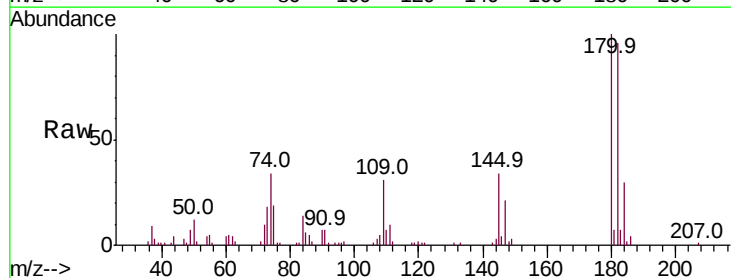
Ion 184.00 (183.70 to 184.70): V

Ion 145.00 (144.70 to 145.70): V



#68  
 1,2,4-trichlorobenzene  
 Concen: 5.401 ug/L  
 RT: 13.31 min Scan# 3802  
 Delta R.T. -0.00 min  
 Lab File: VV008308.D  
 Acq: 16 Oct 2018 20:40

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 94.4  | 75.3  | 112.9 |
| 145     | 32.2  | 26.1  | 39.1  |

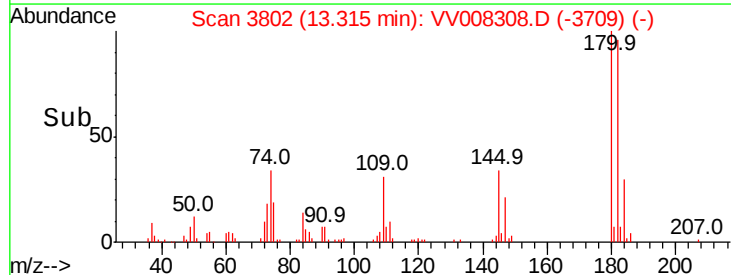
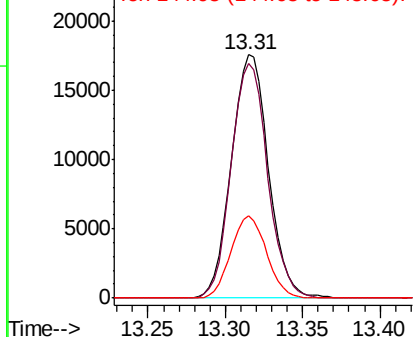


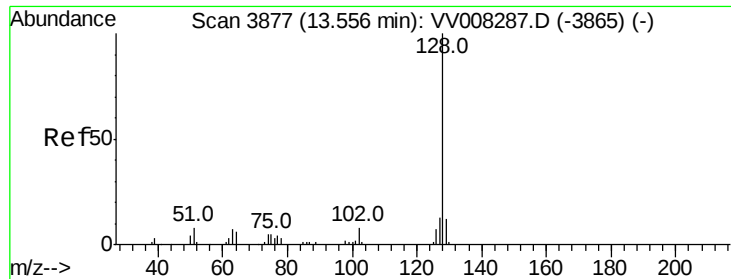
Abundance

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: 5.083 ug/L

RT: 13.56 min Scan# 3877

Delta R.T. -0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00569

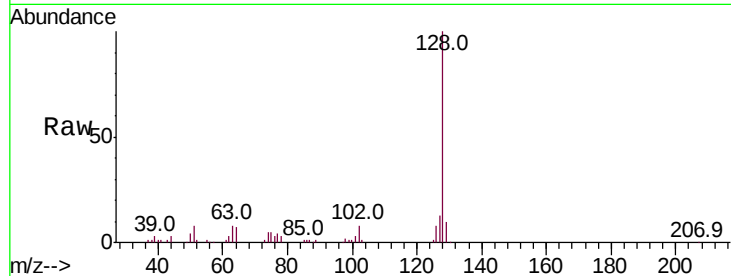
Tot Ion:128 Resp: 51257

Ion Ratio Lower Upper

128 100

129 10.7 8.6 12.8

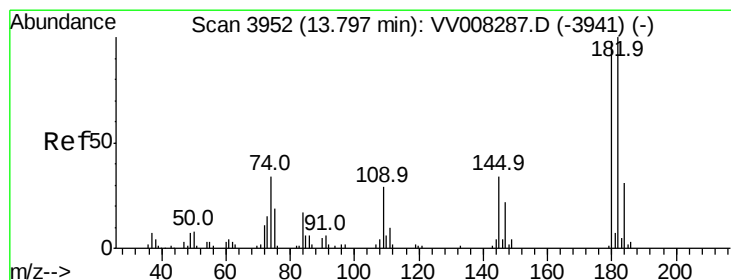
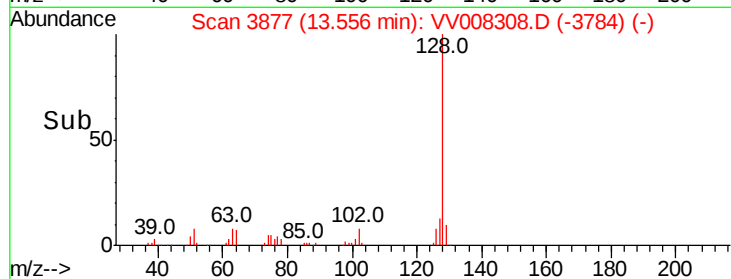
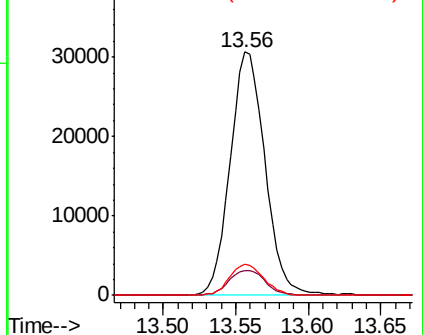
127 12.4 10.1 15.1



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: 5.330 ug/L

RT: 13.80 min Scan# 3953

Delta R.T. 0.00 min

Lab File: VV008308.D

Acq: 16 Oct 2018 20:40

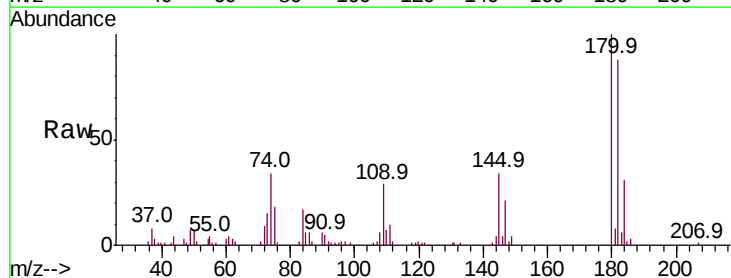
Tgt Ion:180 Resp: 28625

Ion Ratio Lower Upper

180 100

182 93.1 75.8 113.8

145 34.7 28.3 42.5



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

