

Data File : VV013458.D  
Acq On : 31 Oct 2019 20:37  
Operator : SY/MD  
Sample : VSTDCCC005EC  
Misc : 25.0ML/MSVOA\_V/WATER  
ALS Vial : 19 Sample Multiplier: 1

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

Quant Time: Nov 01 05:36:47 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOMVTR103119WMA.M  
Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri Nov 01 05:32:11 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.66  | 114  | 349134   | 5.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 8.89  | 117  | 362523   | 5.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.29 | 152  | 232727   | 5.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |        |       |          |          |      |         |
|--------------------------------|--------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.32   | 65    | 134753   | 5.24     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 40 - 130 | Recovery | =    | 104.80% |
| 7) Chloroethane-d5             | 1.58   | 69    | 102343   | 4.78     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 130 | Recovery | =    | 95.60%  |
| 11) 1,1-Dichloroethene-d2      | 2.13   | 63    | 242044   | 5.26     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 125 | Recovery | =    | 105.20% |
| 20) 2-Butanone-d5              | 3.94   | 46    | 428628   | 53.77    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 40 - 130 | Recovery | =    | 107.54% |
| 24) Chloroform-d               | 4.40   | 84    | 305561   | 4.95     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 99.00%  |
| 26) 1,2-Dichloroethane-d4      | 5.08   | 65    | 159805   | 4.98     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 99.60%  |
| 32) Benzene-d6                 | 5.10   | 84    | 601976   | 5.02     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 125 | Recovery | =    | 100.40% |
| 36) 1,2-Dichloropropane-d6     | 6.12   | 67    | 188737   | 5.02     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 60 - 140 | Recovery | =    | 100.40% |
| 41) Toluene-d8                 | 7.36   | 98    | 554010   | 4.97     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 70 - 130 | Recovery | =    | 99.40%  |
| 43) trans-1,3-Dichloropropene- | 7.66   | 79    | 72724    | 4.82     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 55 - 130 | Recovery | =    | 96.40%  |
| 46) 2-Hexanone-d5              | 8.13   | 63    | 276465   | 49.85    | ug/L | 0.00    |
| Spiked Amount                  | 50.000 | Range | 45 - 130 | Recovery | =    | 99.70%  |
| 57) 1,1,2,2-Tetrachloroethane- | 10.26  | 84    | 140307   | 4.86     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 65 - 120 | Recovery | =    | 97.20%  |
| 64) 1,2-Dichlorobenzene-d4     | 11.67  | 152   | 218302   | 4.61     | ug/L | 0.00    |
| Spiked Amount                  | 5.000  | Range | 80 - 120 | Recovery | =    | 92.20%  |

#### Target Compounds

|                                |      |     |        |        | Qvalue   |
|--------------------------------|------|-----|--------|--------|----------|
| 2) Dichlorodifluoromethane     | 1.14 | 85  | 215667 | 5.177  | ug/L 100 |
| 3) Chloromethane               | 1.25 | 50  | 190327 | 5.538  | ug/L 96  |
| 5) Vinyl chloride              | 1.32 | 62  | 194155 | 5.583  | ug/L 97  |
| 6) Bromomethane                | 1.54 | 94  | 86571  | 5.292  | ug/L 100 |
| 8) Chloroethane                | 1.60 | 64  | 99693  | 5.232  | ug/L 96  |
| 9) Trichlorofluoromethane      | 1.77 | 101 | 252206 | 5.464  | ug/L 100 |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.14 | 101 | 139873 | 5.319  | ug/L 98  |
| 12) 1,1-Dichloroethene         | 2.14 | 96  | 134191 | 5.449  | ug/L 96  |
| 13) Acetone                    | 2.20 | 43  | 220622 | 61.083 | ug/L 98  |
| 14) Carbon disulfide           | 2.32 | 76  | 401588 | 5.258  | ug/L 100 |
| 15) Methyl Acetate             | 2.46 | 43  | 74090  | 5.777  | ug/L 99  |
| 16) Methylene chloride         | 2.53 | 84  | 174757 | 4.695  | ug/L 98  |
| 17) Methyl tert-butyl Ether    | 2.80 | 73  | 382426 | 5.224  | ug/L 99  |
| 18) trans-1,2-Dichloroethene   | 2.79 | 96  | 167958 | 5.143  | ug/L 97  |
| 19) 1,1-Dichloroethane         | 3.23 | 63  | 316279 | 5.315  | ug/L 100 |
| 21) 2-Butanone                 | 4.02 | 43  | 476092 | 58.343 | ug/L 96  |
| 22) cis-1,2-Dichloroethene     | 3.96 | 96  | 180860 | 5.260  | ug/L 93  |

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Quant Title : TRACE VOA SOM01.0  
QLast Update : Fri Nov 01 05:32:11 2019  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|--------------------------------|-------|------|----------|--------|-------|----------|
| 23) Bromochloromethane         | 4.30  | 128  | 78810    | 5.132  | ug/L  | 95       |
| 25) Chloroform                 | 4.43  | 83   | 326067   | 4.970  | ug/L  | 100      |
| 27) 1,2-Dichloroethane         | 5.18  | 62   | 197299   | 5.345  | ug/L  | 99       |
| 29) 1,1,1-Trichloroethane      | 4.66  | 97   | 271380   | 5.281  | ug/L  | 100      |
| 30) Cyclohexane                | 4.72  | 56   | 279950   | 5.040  | ug/L  | 98       |
| 31) Carbon tetrachloride       | 4.87  | 117  | 240938   | 5.270  | ug/L  | 99       |
| 33) Benzene                    | 5.14  | 78   | 695008   | 5.392  | ug/L  | 100      |
| 34) Trichloroethene            | 5.96  | 95   | 181679   | 5.191  | ug/L  | 99       |
| 35) Methylcyclohexane          | 6.17  | 83   | 273584   | 5.041  | ug/L  | 98       |
| 37) 1,2-Dichloropropane        | 6.22  | 63   | 175655   | 5.440  | ug/L  | 100      |
| 38) Bromodichloromethane       | 6.55  | 83   | 216371   | 5.177  | ug/L  | 100      |
| 39) cis-1,3-Dichloropropene    | 7.07  | 75   | 236462   | 5.223  | ug/L  | 97       |
| 40) 4-Methyl-2-pentanone       | 7.27  | 43   | 1138071  | 55.172 | ug/L  | 98       |
| 42) Toluene                    | 7.43  | 91   | 727825   | 5.430  | ug/L  | 98       |
| 44) trans-1,3-Dichloropropene  | 7.69  | 75   | 182090   | 5.142  | ug/L  | 98       |
| 45) 1,1,2-Trichloroethane      | 7.88  | 97   | 120805   | 5.265  | ug/L  | 98       |
| 47) Tetrachloroethene          | 8.02  | 164  | 155104   | 5.160  | ug/L  | 96       |
| 48) 2-Hexanone                 | 8.18  | 43   | 817483   | 54.886 | ug/L  | 98       |
| 49) Dibromochloromethane       | 8.29  | 129  | 146197   | 5.232  | ug/L  | 96       |
| 50) 1,2-Dibromoethane          | 8.39  | 107  | 112116   | 5.184  | ug/L  | 96       |
| 51) Chlorobenzene              | 8.92  | 112  | 458010   | 5.265  | ug/L  | 98       |
| 52) Ethylbenzene               | 9.05  | 91   | 762072   | 5.352  | ug/L  | 99       |
| 53) m,p-xylene                 | 9.18  | 106  | 297459   | 5.458  | ug/L  | 99       |
| 54) o-xylene                   | 9.59  | 106  | 282389   | 5.407  | ug/L  | 99       |
| 55) Styrene                    | 9.60  | 104  | 493068   | 5.547  | ug/L  | 99       |
| 56) Isopropylbenzene           | 9.97  | 105  | 754278   | 5.434  | ug/L  | 100      |
| 58) 1,1,2,2-Tetrachloroethane  | 10.28 | 83   | 135263   | 5.102  | ug/L  | 99       |
| 59) 1,2,3-Trichloropropane     | 10.31 | 75   | 104487   | 4.998  | ug/L  | 97       |
| 61) Bromoform                  | 9.77  | 173  | 83853    | 4.900  | ug/L  | 98       |
| 62) 1,3-Dichlorobenzene        | 11.22 | 146  | 387864   | 5.155  | ug/L  | 99       |
| 63) 1,4-Dichlorobenzene        | 11.31 | 146  | 386183   | 5.058  | ug/L  | 99       |
| 65) 1,2-Dichlorobenzene        | 11.68 | 146  | 350916   | 5.047  | ug/L  | 98       |
| 66) 1,2-Dibromo-3-chloropropan | 12.47 | 75   | 20307    | 4.801  | ug/L  | 94       |
| 67) 1,3,5-Trichlorobenzene     | 12.69 | 180  | 295553   | 4.878  | ug/L  | 100      |
| 68) 1,2,4-trichlorobenzene     | 13.31 | 180  | 234412   | 4.635  | ug/L  | 100      |
| 69) Naphthalene                | 13.55 | 128  | 337818   | 4.555  | ug/L  | 100      |
| 70) 1,2,3-Trichlorobenzene     | 13.79 | 180  | 224361   | 4.815  | ug/L  | 99       |

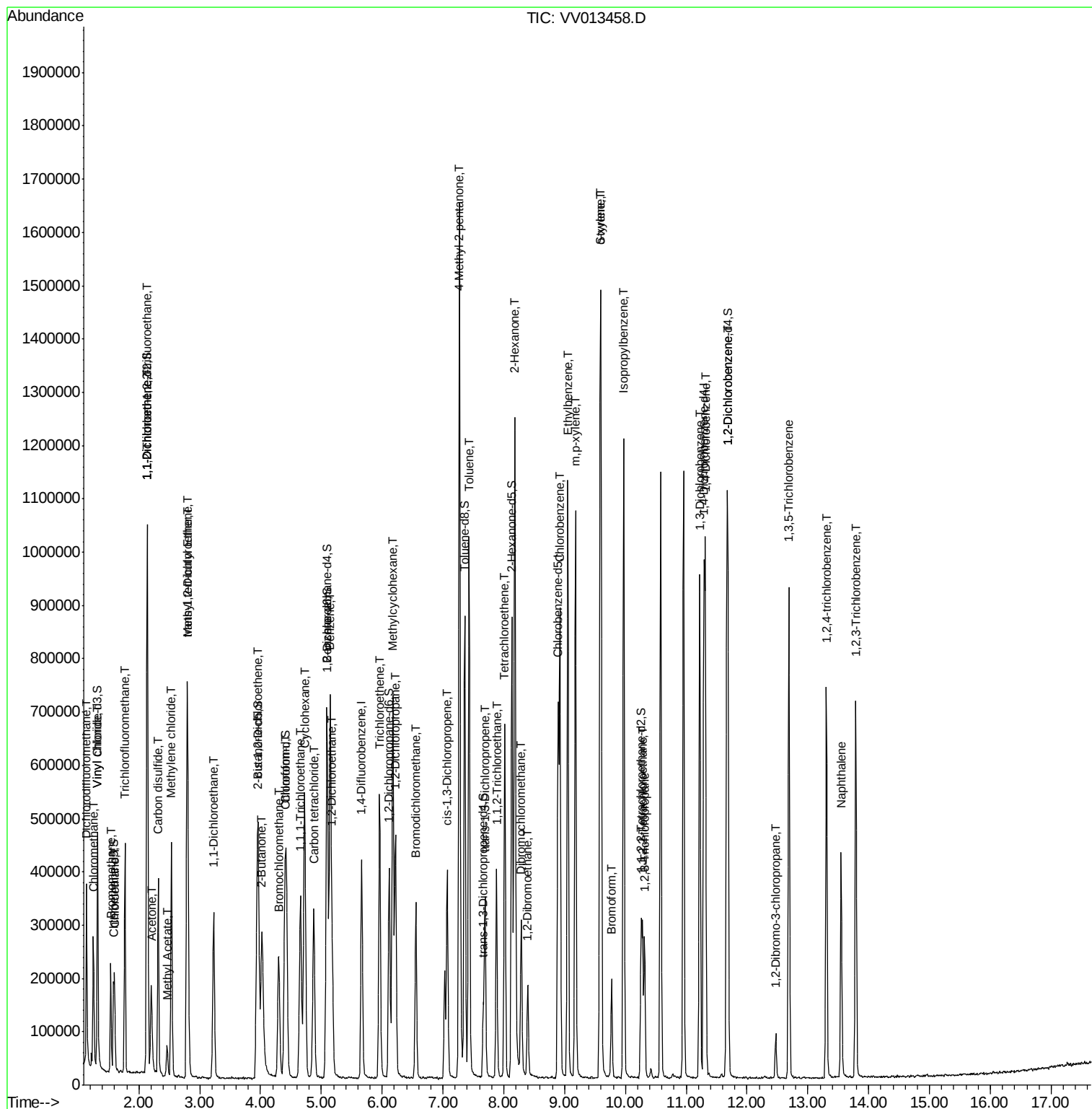
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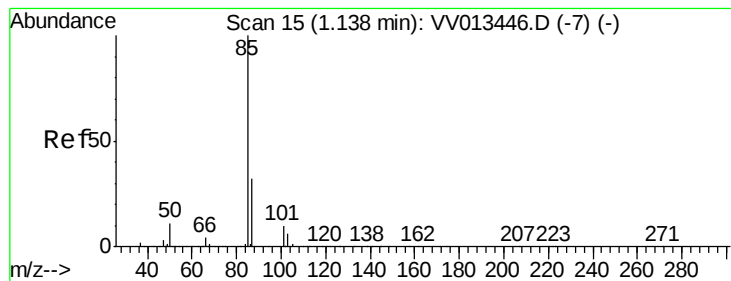
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#2

Dichlorodifluoromethane

Concen: 5.177 ug/L

RT: 1.14 min Scan# 15

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

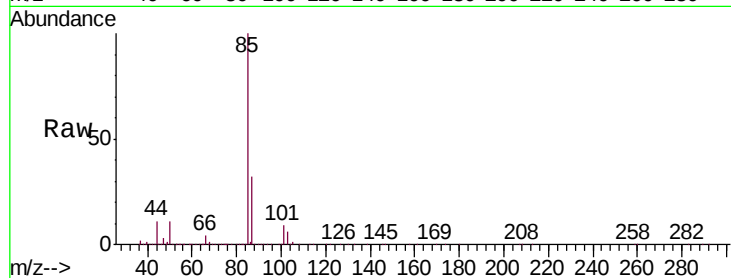
VSTD00543

Tgt Ion: 85 Resp: 215667

Ion Ratio Lower Upper

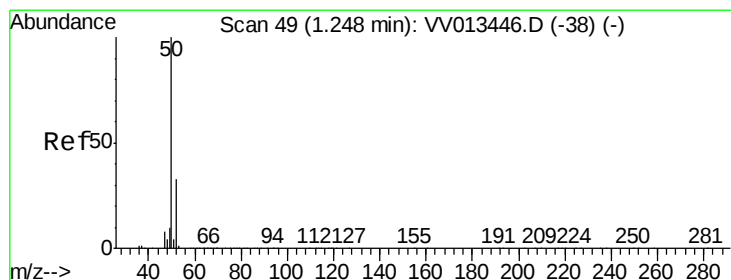
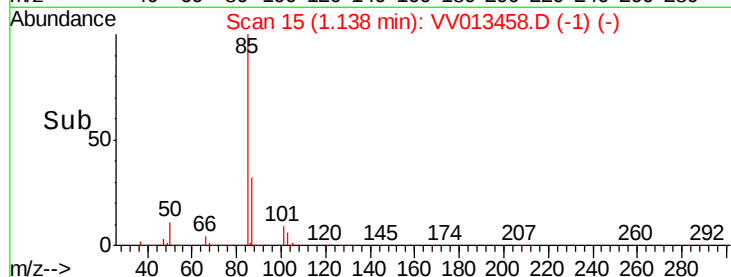
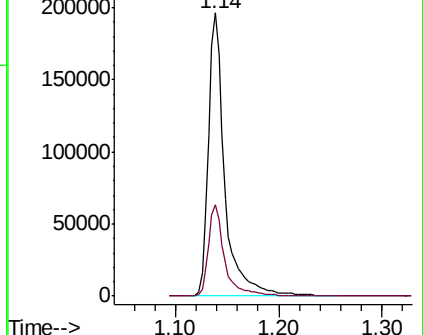
85 100

87 32.0 25.6 38.4



Abundance Ion 85.00 (84.70 to 85.70): VV0

Ion 87.00 (86.70 to 87.70): VV0



#3

Chloromethane

Concen: 5.538 ug/L

RT: 1.25 min Scan# 50

Delta R.T. 0.00 min

Lab File: VV013458.D

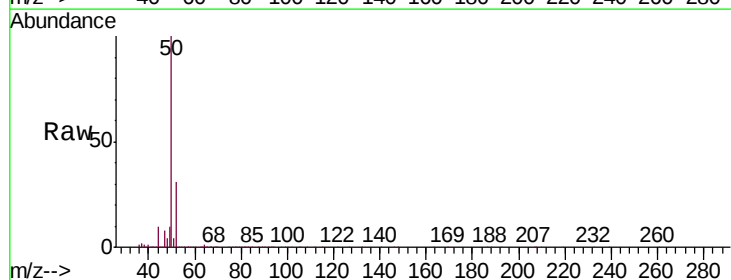
Acq: 31 Oct 2019 20:37

Tgt Ion: 50 Resp: 190327

Ion Ratio Lower Upper

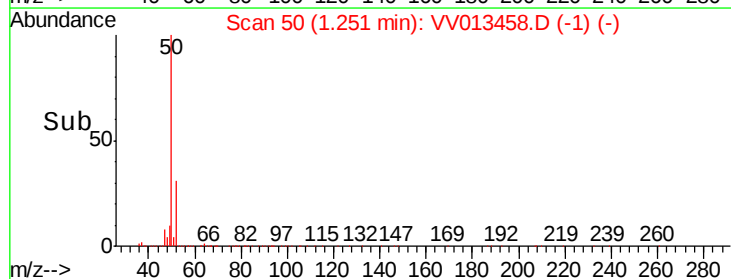
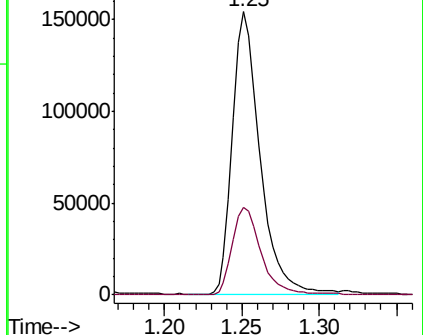
50 100

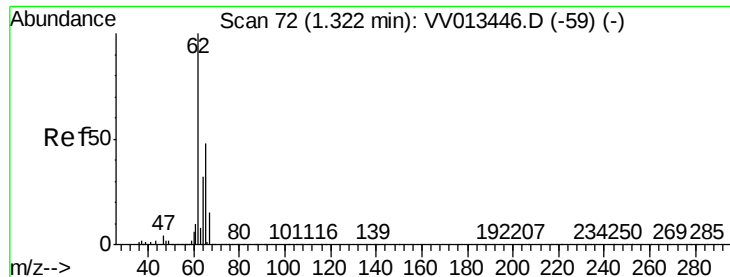
52 31.1 23.4 43.6



Abundance Ion 50.05 (49.75 to 50.75): VV0

Ion 52.05 (51.75 to 52.75): VV0





#5

Vinyl chloride

Concen: 5.583 ug/L

RT: 1.32 min Scan# 72

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

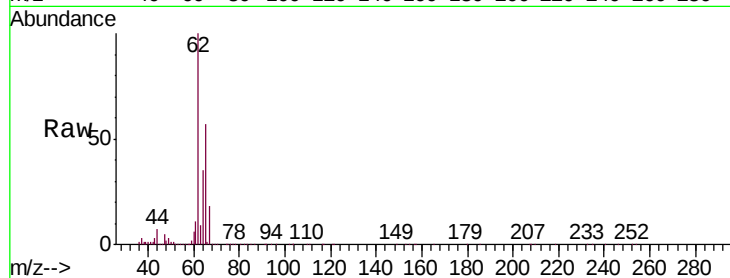
VSTD00543

Tgt Ion: 62 Resp: 194155

Ion Ratio Lower Upper

62 100

64 34.9 23.1 42.9



Abundance Ion 62.00 (61.70 to 62.70): VV0

Ion 64.10 (63.80 to 64.80): VV0

1.32

200000

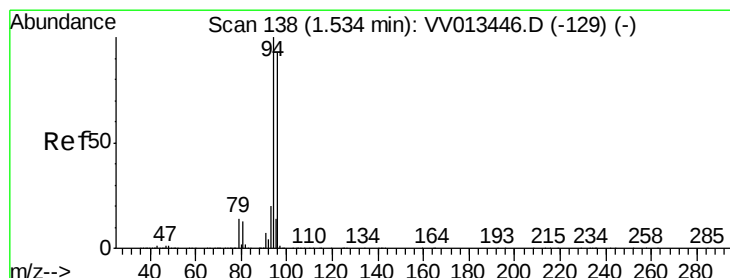
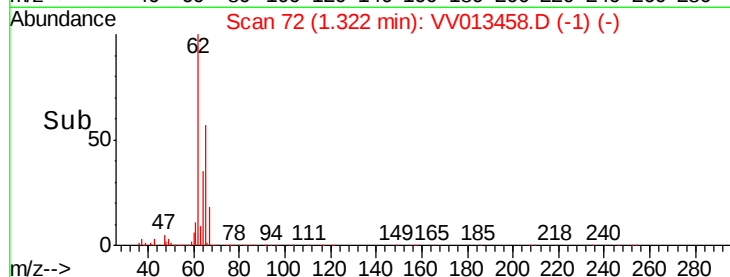
150000

100000

50000

0

Time-->



#6

Bromomethane

Concen: 5.292 ug/L

RT: 1.54 min Scan# 139

Delta R.T. 0.00 min

Lab File: VV013458.D

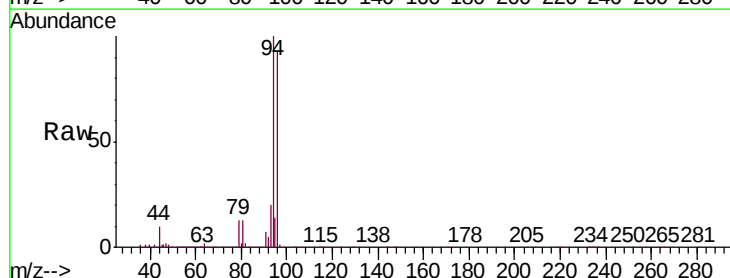
Acq: 31 Oct 2019 20:37

Tgt Ion: 94 Resp: 86571

Ion Ratio Lower Upper

94 100

96 93.1 65.2 121.2



Abundance Ion 94.00 (93.70 to 94.70): VV0

Ion 96.00 (95.70 to 96.70): VV0

1.54

80000

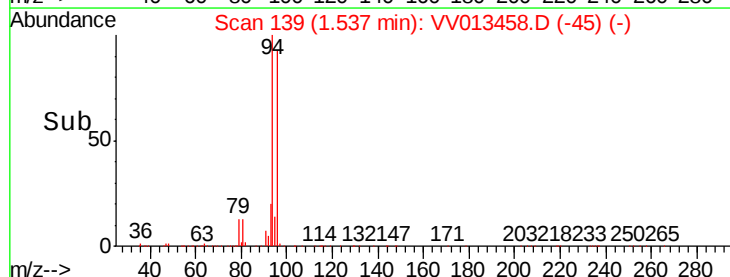
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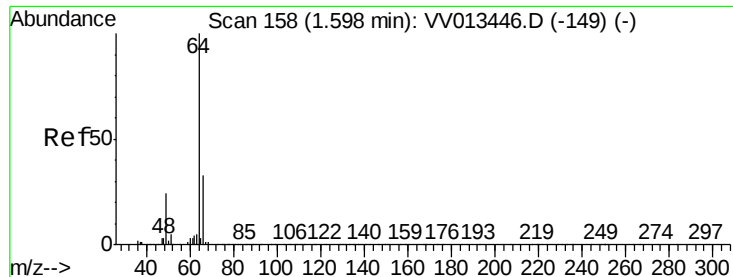
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20000

0

Time-->





#8

Chloroethane

Concen: 5.232 ug/L

RT: 1.60 min Scan# 159

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

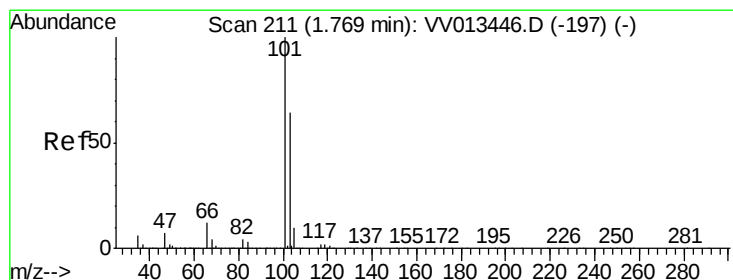
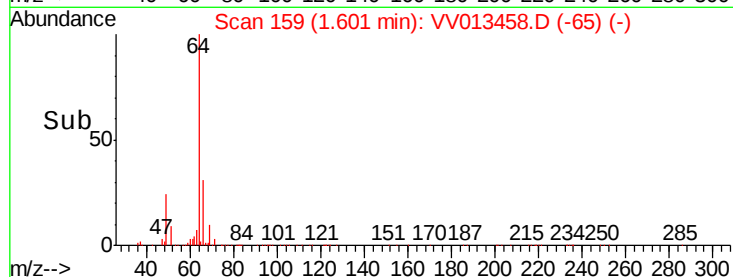
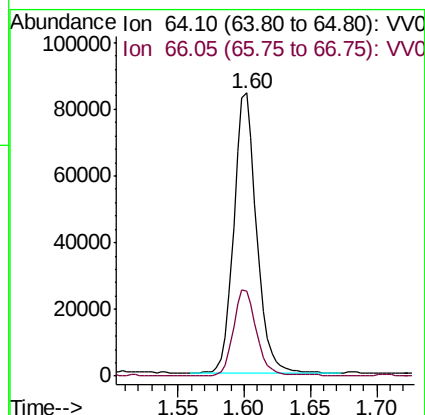
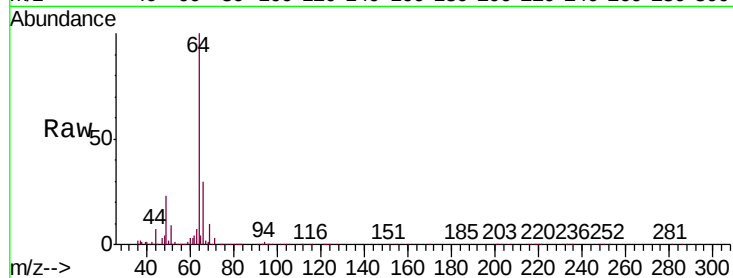
VSTD00543

Tgt Ion: 64 Resp: 99693

Ion Ratio Lower Upper

64 100

66 30.1 22.8 42.4



#9

Trichlorofluoromethane

Concen: 5.464 ug/L

RT: 1.77 min Scan# 211

Delta R.T. 0.00 min

Lab File: VV013458.D

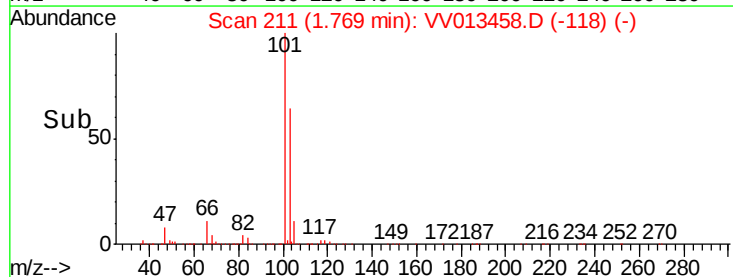
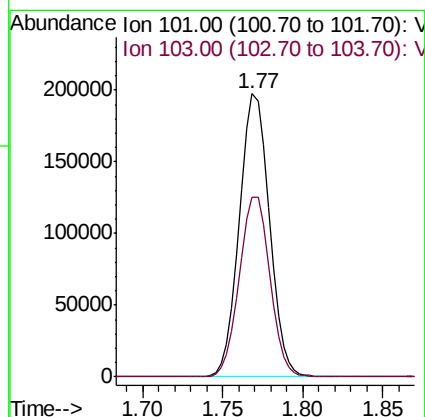
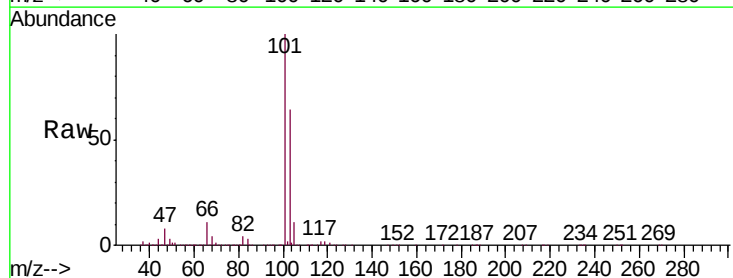
Acq: 31 Oct 2019 20:37

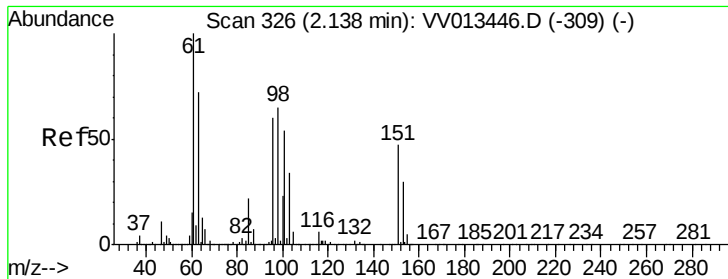
Tgt Ion: 101 Resp: 252206

Ion Ratio Lower Upper

101 100

103 64.9 52.1 78.1





#10

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

Concen: 5.319 ug/L

RT: 2.14 min Scan# 326

Delta R.T. 0.00 min

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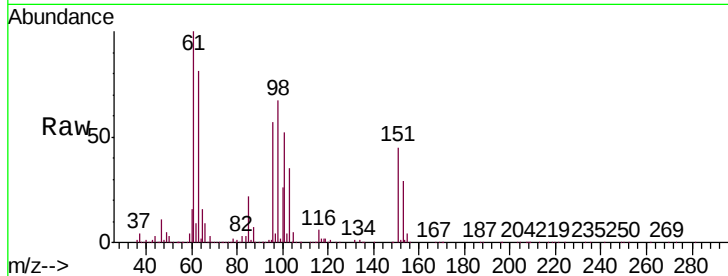
Tgt Ion: 101 Resp: 139873

Ion Ratio Lower Upper

101 100

85 41.4 33.1 49.7

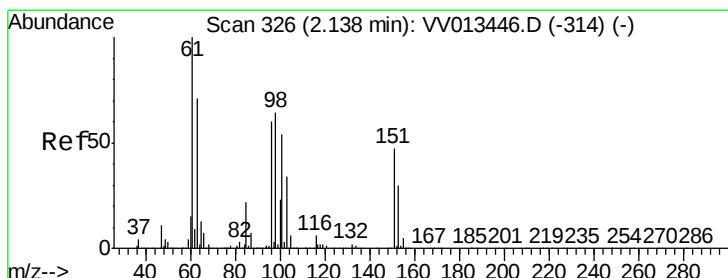
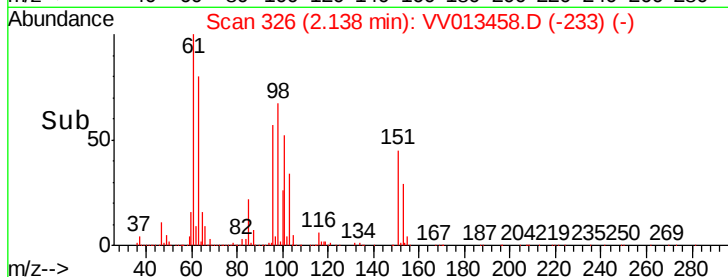
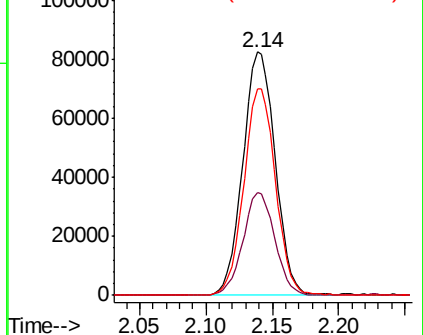
151 83.0 68.8 103.2



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 85.00 (84.70 to 85.70): VV0

Ion 151.00 (150.70 to 151.70): V



#12

1,1-Dichloroethene

Concen: 5.449 ug/L

RT: 2.14 min Scan# 327

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

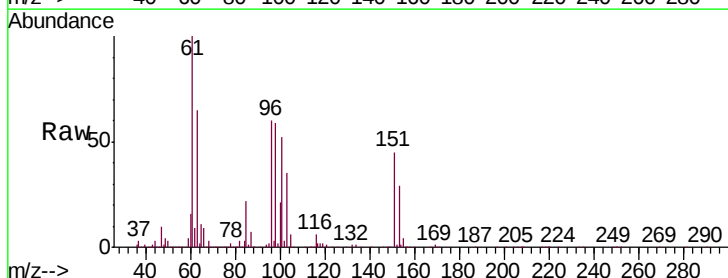
Tgt Ion: 96 Resp: 134191

Ion Ratio Lower Upper

96 100

61 167.8 117.1 217.5

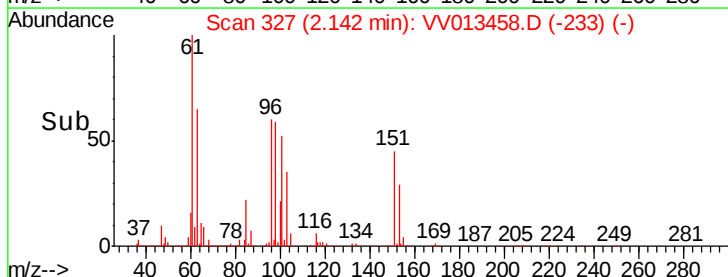
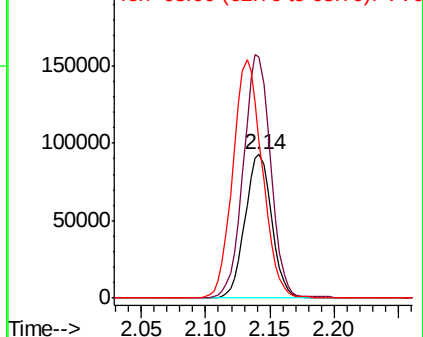
63 109.4 84.1 156.3

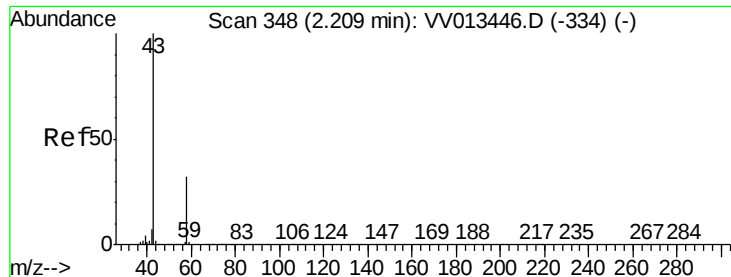


Abundance Ion 96.00 (95.70 to 96.70): VV0

Ion 61.05 (60.75 to 61.75): VV0

Ion 63.00 (62.70 to 63.70): VV0





#13

Acetone

Concen: 61.083 ug/L

RT: 2.20 min Scan# 346

Delta R.T. -0.01 min

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ClientSampleId :

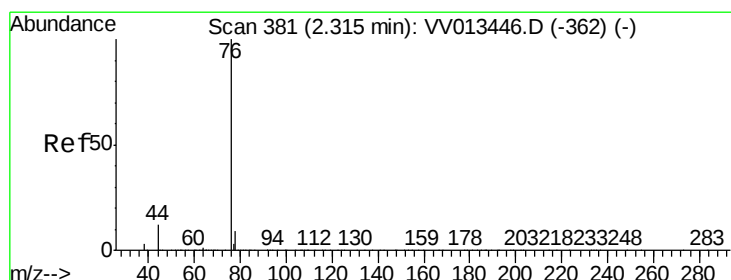
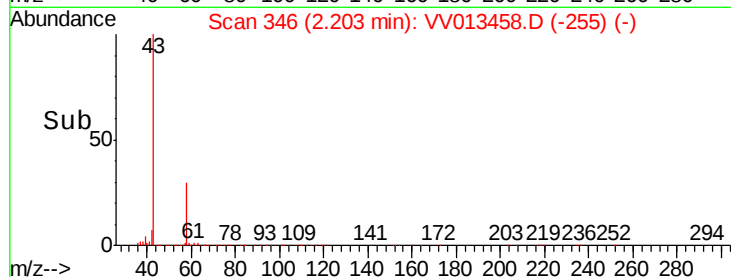
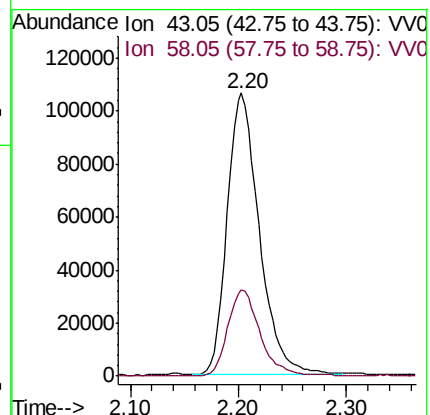
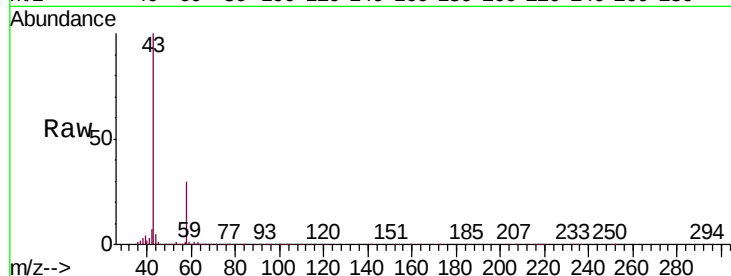
VSTD00543

Tgt Ion: 43 Resp: 220622

Ion Ratio Lower Upper

43 100

58 30.1 0.0 58.0



#14

Carbon disulfide

Concen: 5.258 ug/L

RT: 2.32 min Scan# 382

Delta R.T. 0.00 min

Lab File: VV013458.D

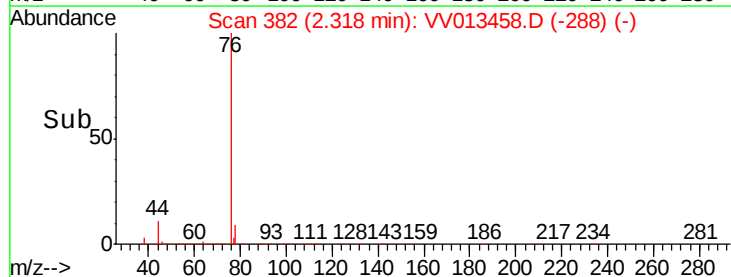
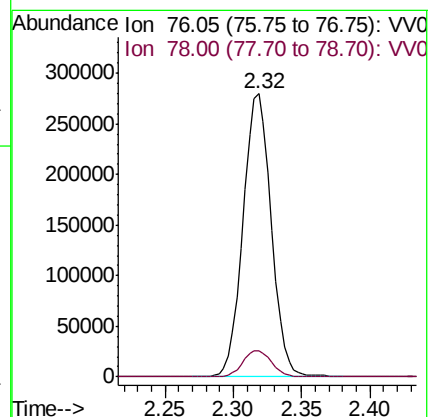
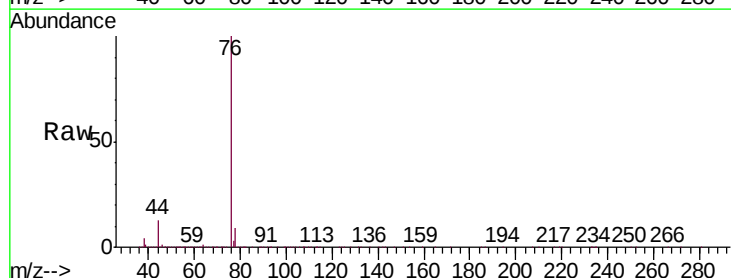
Acq: 31 Oct 2019 20:37

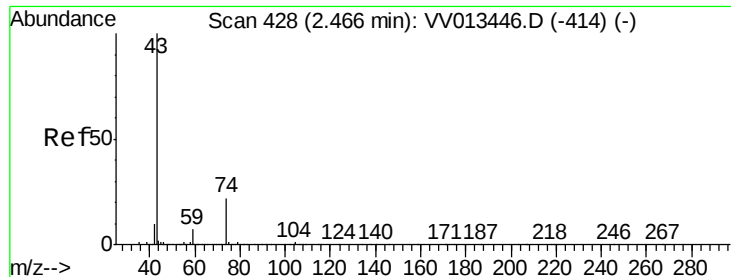
Tgt Ion: 76 Resp: 401588

Ion Ratio Lower Upper

76 100

78 9.3 7.4 11.0





#15

Methyl Acetate

Concen: 5.777 ug/L

RT: 2.46 min Scan# 427

Delta R.T. -0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

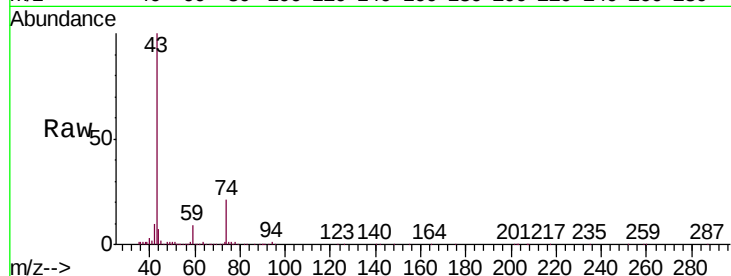
VSTD00543

Tgt Ion: 43 Resp: 74090

Ion Ratio Lower Upper

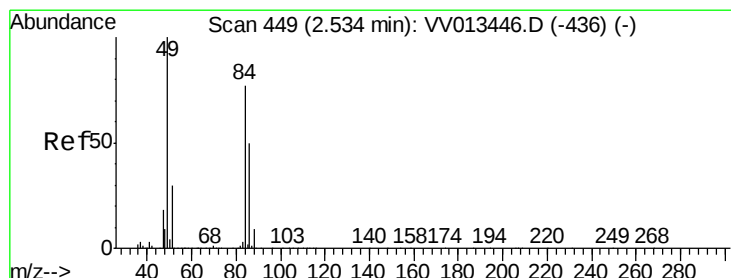
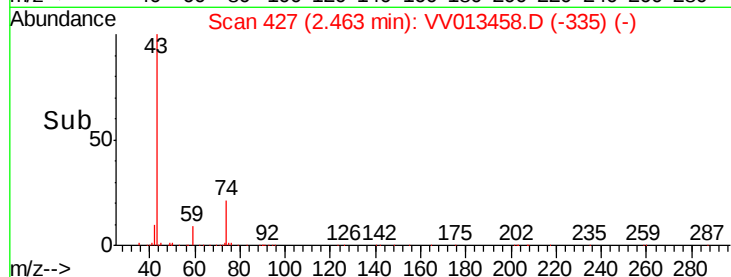
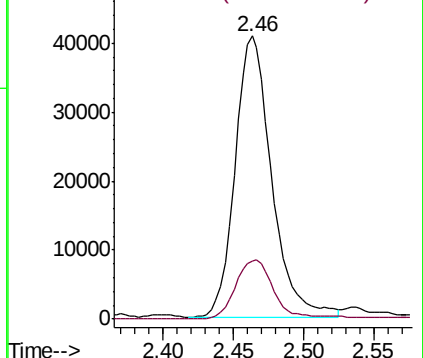
43 100

74 21.9 17.8 26.8



Abundance Ion 43.05 (42.75 to 43.75): VV0

Ion 74.05 (73.75 to 74.75): VV0



#16

Methylene chloride

Concen: 4.695 ug/L

RT: 2.53 min Scan# 449

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

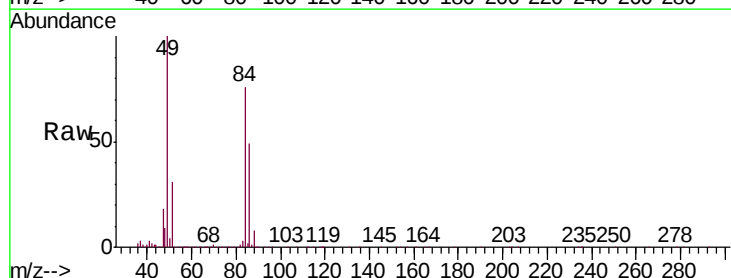
Tgt Ion: 84 Resp: 174757

Ion Ratio Lower Upper

84 100

86 65.5 45.3 84.1

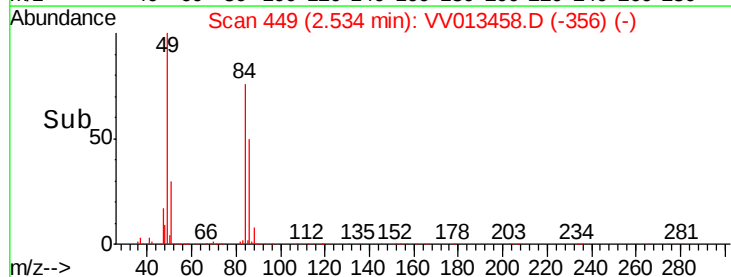
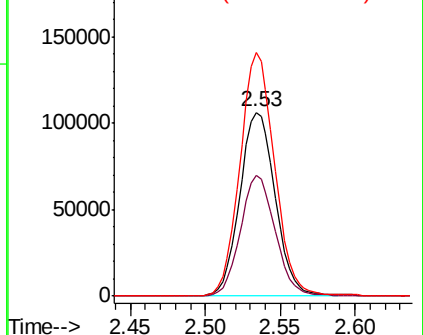
49 132.4 90.4 168.0

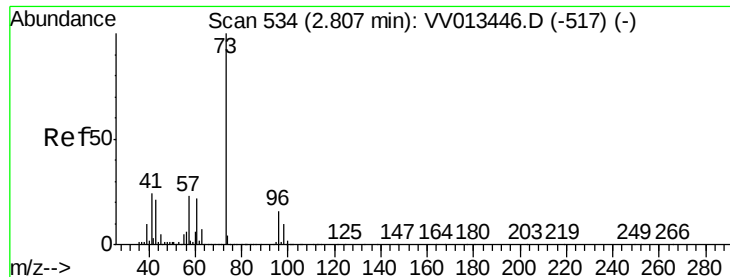


Abundance Ion 84.05 (83.75 to 84.75): VV0

Ion 86.00 (85.70 to 86.70): VV0

Ion 49.10 (48.80 to 49.80): VV0



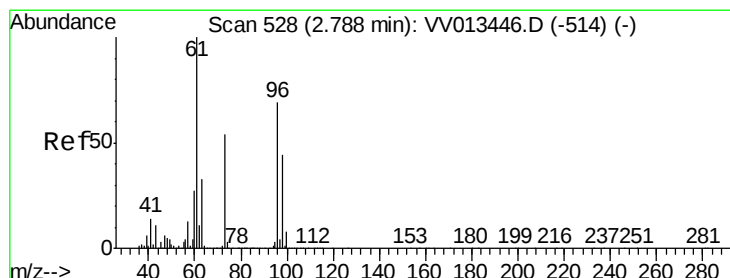
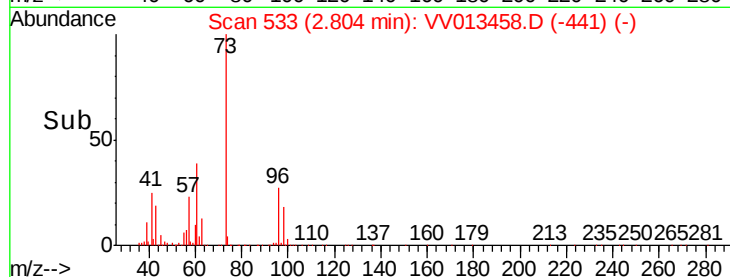
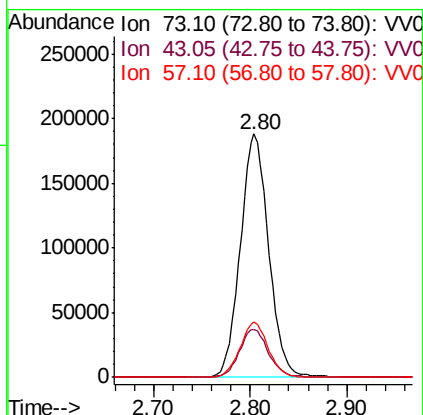
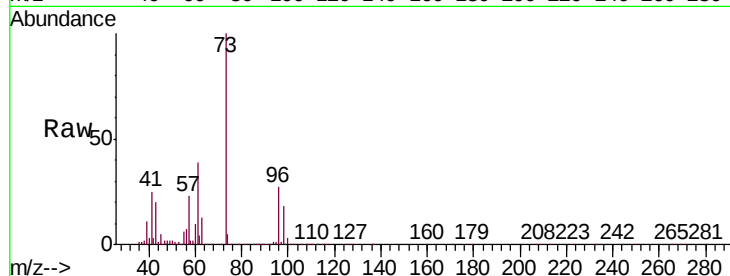


#17

Methyl tert-butyl Ether  
Concen: 5.224 ug/L  
RT: 2.80 min Scan# 533  
Delta R.T. -0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

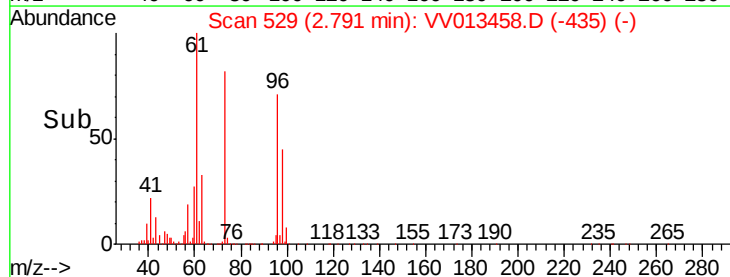
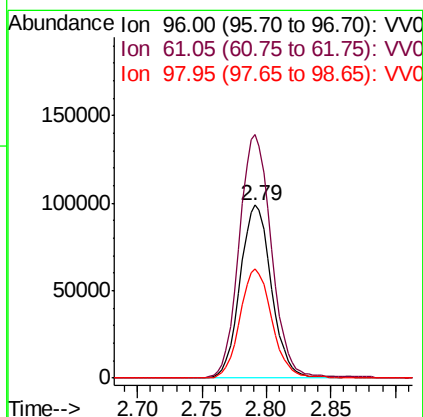
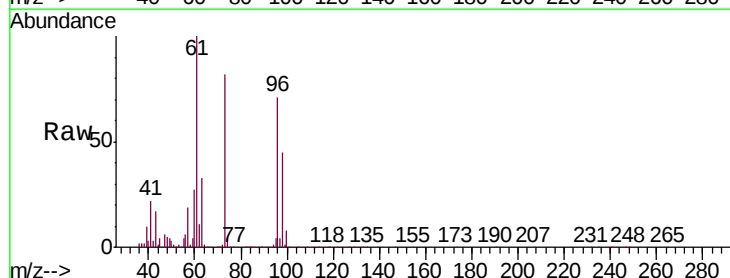
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 73      | 100   |       |       |
| 43      | 20.4  | 15.9  | 23.9  |
| 57      | 22.3  | 18.5  | 27.7  |

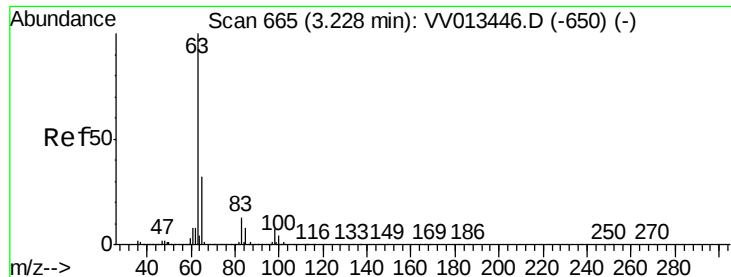


#18

trans-1,2-Dichloroethene  
Concen: 5.143 ug/L  
RT: 2.79 min Scan# 529  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 96      | 100   |       |       |
| 61      | 140.9 | 102.2 | 189.8 |
| 98      | 63.2  | 44.9  | 83.5  |

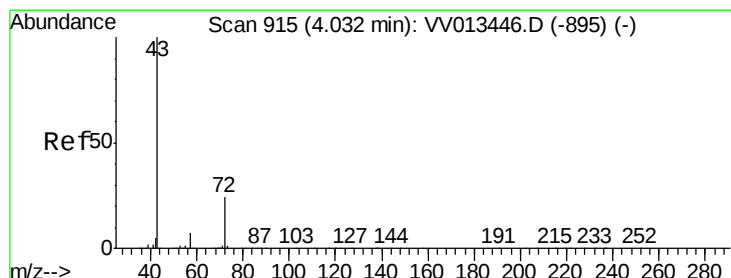
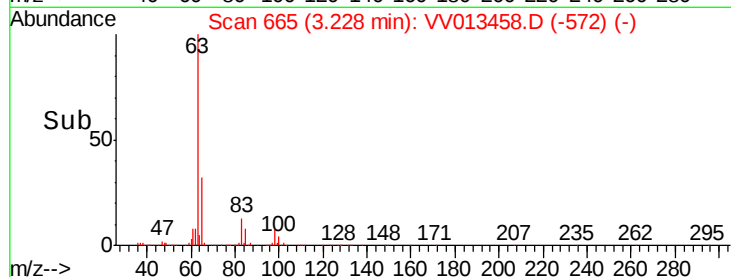
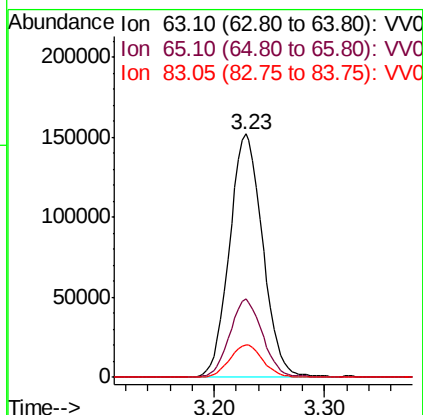
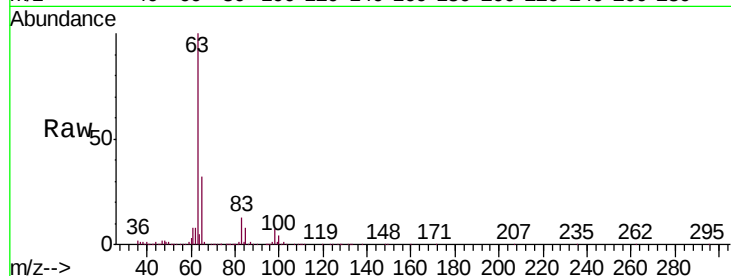




#19  
 1,1-Dichloroethane  
 Concen: 5.315 ug/L  
 RT: 3.23 min Scan# 665  
 Delta R.T. 0.00 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

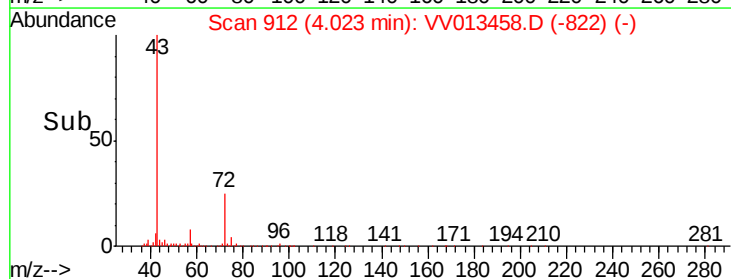
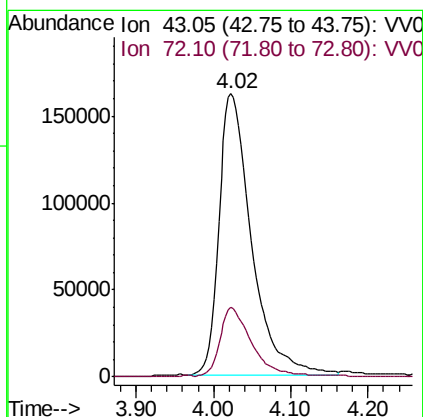
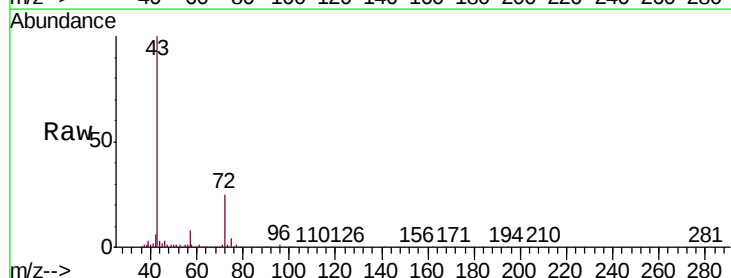
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00543

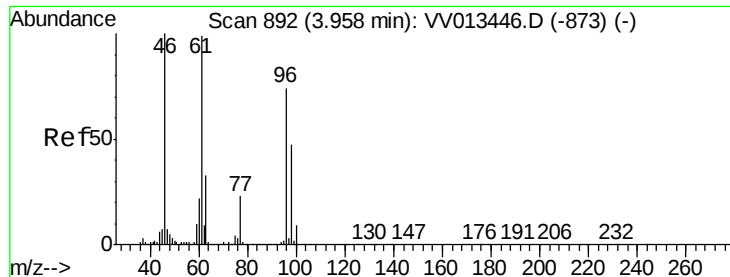
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 65      | 32.1  | 22.5  | 41.7  |
| 83      | 13.3  | 9.1   | 16.9  |



#21  
 2-Butanone  
 Concen: 58.343 ug/L  
 RT: 4.02 min Scan# 912  
 Delta R.T. -0.01 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 23.7  | 10.9  | 32.7  |



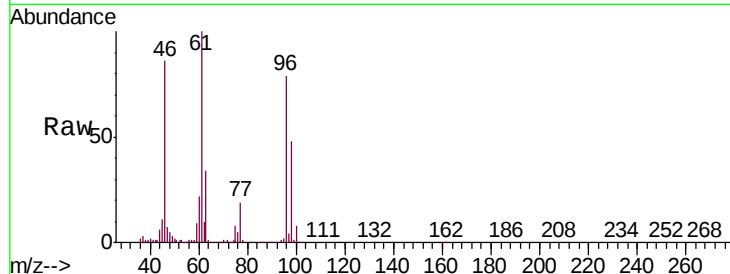


#22

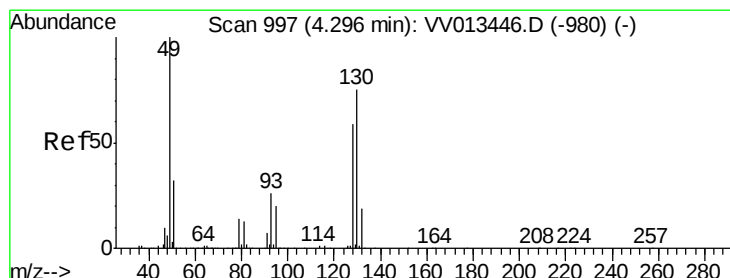
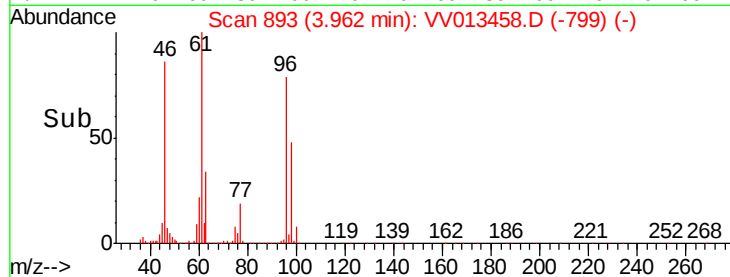
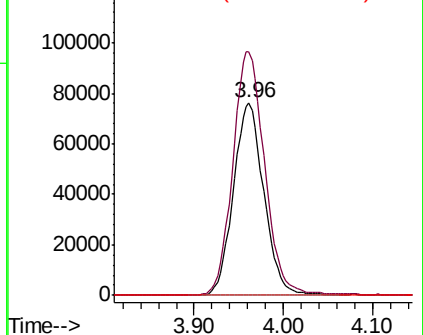
cis-1,2-Dichloroethene  
Concen: 5.260 ug/L  
RT: 3.96 min Scan# 893  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

Tgt Ion: 96 Resp: 180860  
Ion Ratio Lower Upper  
96 100  
61 126.2 94.2 175.0  
68 0.2 0.1 0.3



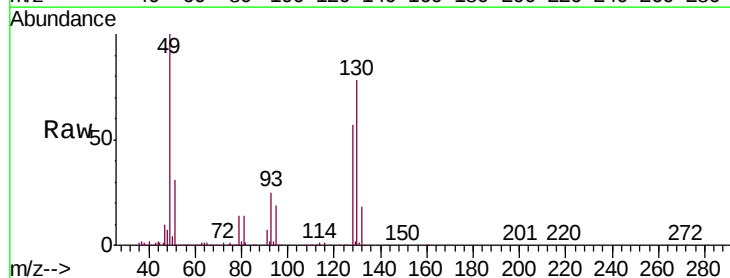
Abundance Ion 96.00 (95.70 to 96.70): VV0  
Ion 61.05 (60.75 to 61.75): VV0  
Ion 68.15 (67.85 to 68.85): VV0



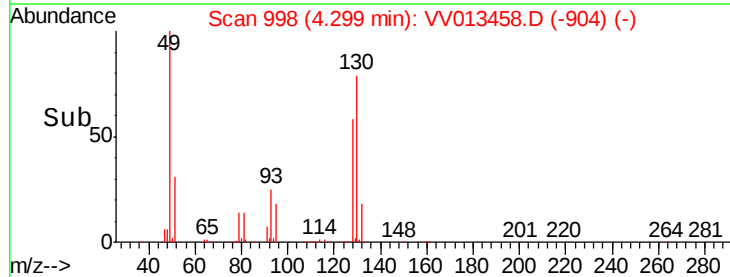
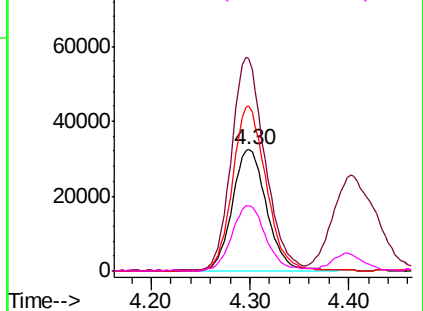
#23

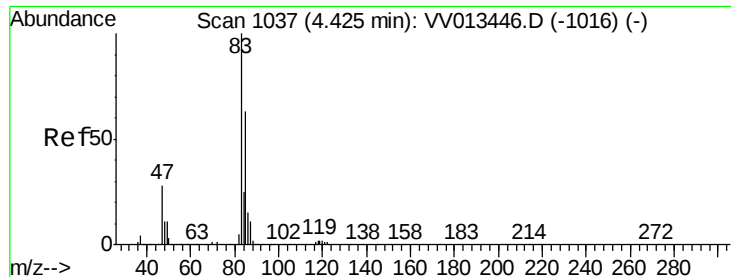
Bromochloromethane  
Concen: 5.132 ug/L  
RT: 4.30 min Scan# 998  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Tgt Ion: 128 Resp: 78810  
Ion Ratio Lower Upper  
128 100  
49 174.9 118.8 220.6  
130 135.9 89.0 165.4  
51 53.9 44.2 66.2



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: 4.970 ug/L

RT: 4.43 min Scan# 1038

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

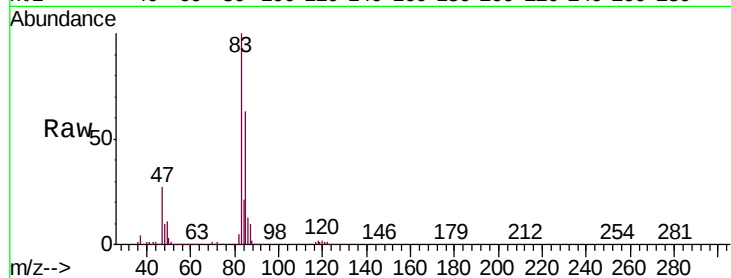
VSTD00543

Tgt Ion: 83 Resp: 326067

Ion Ratio Lower Upper

83 100

85 62.6 44.1 81.9



Abundance Ion 83.05 (82.75 to 83.75): VV0

Ion 85.00 (84.70 to 85.70): VV0

150000

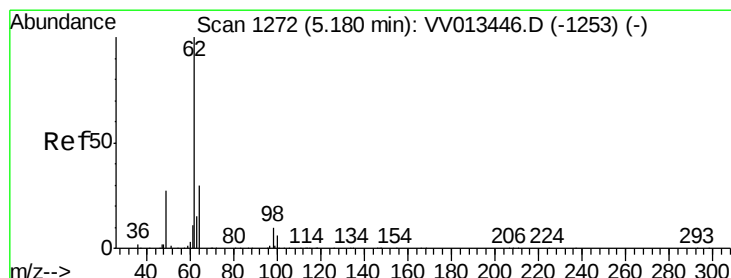
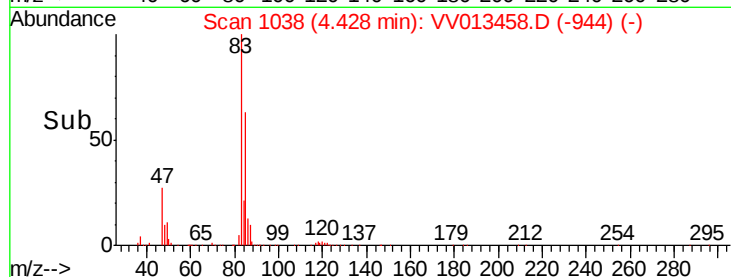
100000

50000

0

4.30 4.40 4.50

Time-->



#27

1,2-Dichloroethane

Concen: 5.345 ug/L

RT: 5.18 min Scan# 1271

Delta R.T. -0.00 min

Lab File: VV013458.D

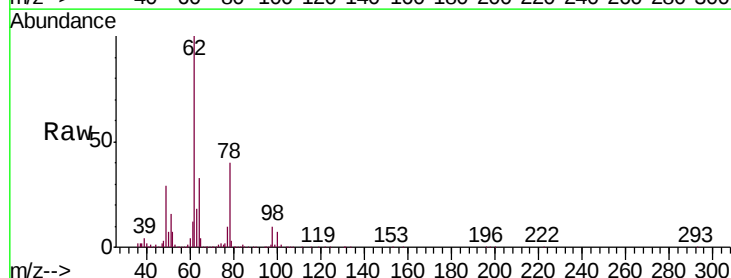
Acq: 31 Oct 2019 20:37

Tgt Ion: 62 Resp: 197299

Ion Ratio Lower Upper

62 100

98 9.9 7.7 11.5



Abundance Ion 62.00 (61.70 to 62.70): VV0

Ion 98.05 (97.75 to 98.75): VV0

100000

80000

60000

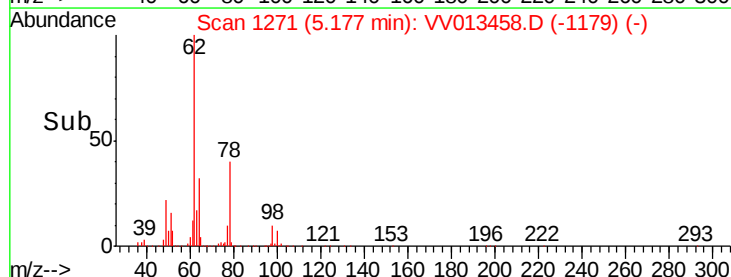
40000

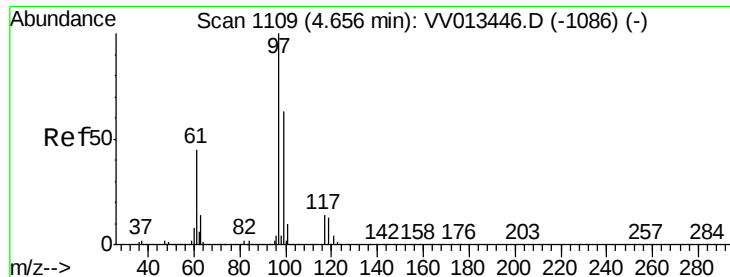
20000

0

5.10 5.20 5.30

Time-->

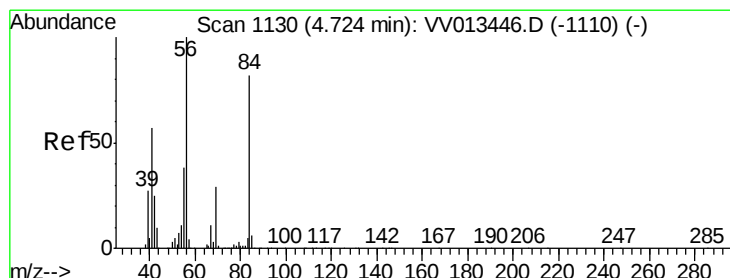
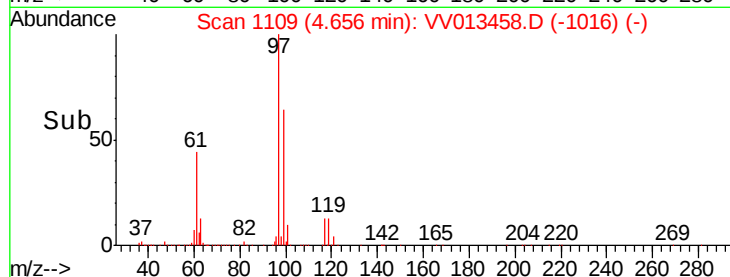
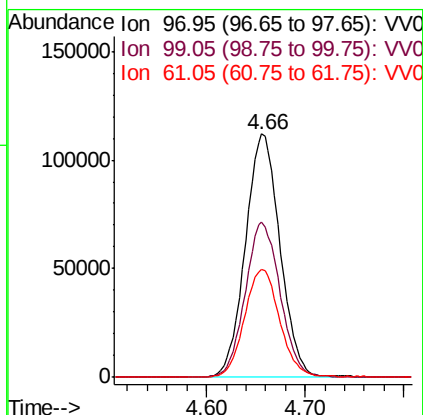
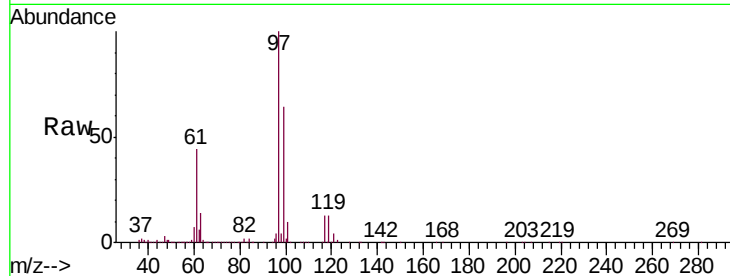




#29  
 1,1,1-Trichloroethane  
 Concen: 5.281 ug/L  
 RT: 4.66 min Scan# 1109  
 Delta R.T. 0.00 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

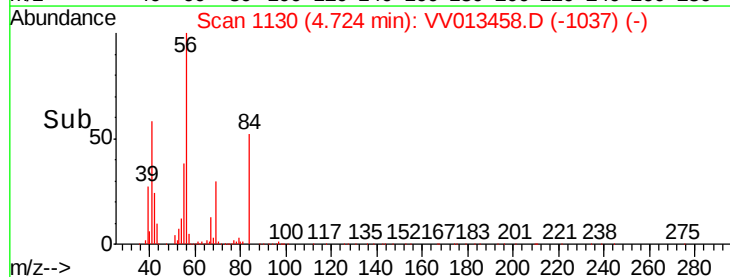
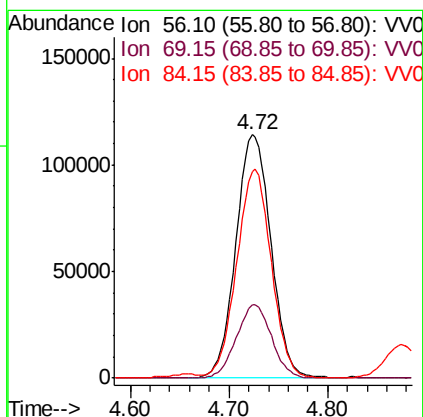
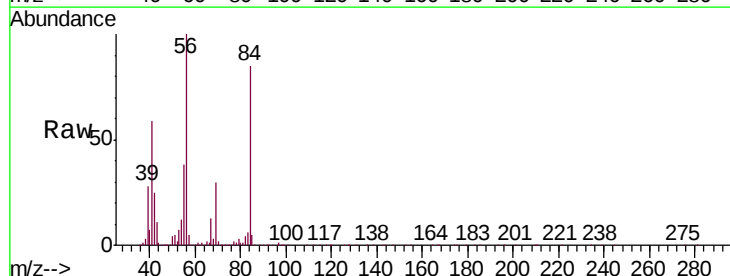
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00543

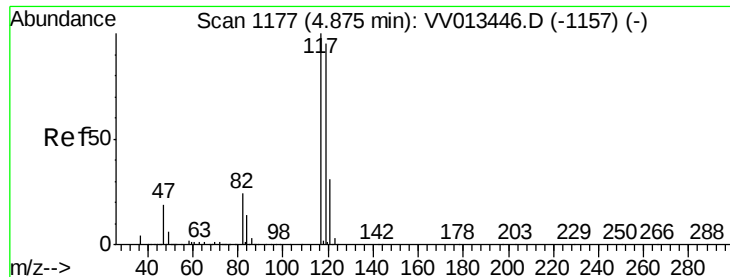
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 64.2  | 51.5  | 77.3  |
| 61      | 45.3  | 35.8  | 53.8  |



#30  
 Cyclohexane  
 Concen: 5.040 ug/L  
 RT: 4.72 min Scan# 1130  
 Delta R.T. 0.00 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 56      | 100   |       |       |
| 69      | 30.4  | 23.0  | 34.6  |
| 84      | 84.4  | 66.6  | 100.0 |





#31

Carbon tetrachloride

Concen: 5.270 ug/L

RT: 4.87 min Scan# 1177

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

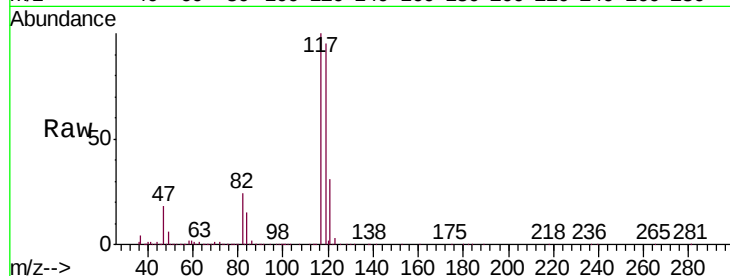
VSTD00543

Tgt Ion:117 Resp: 240938

Ion Ratio Lower Upper

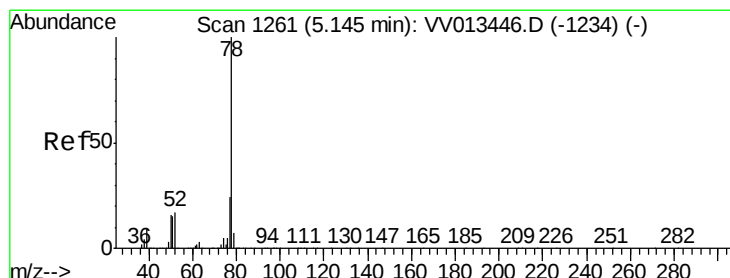
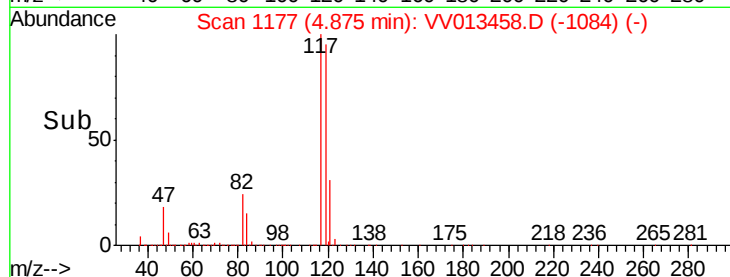
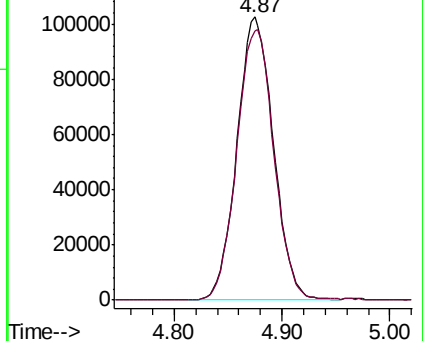
117 100

119 96.9 76.8 115.2



Abundance Ion 116.90 (116.60 to 117.60): V

Ion 118.90 (118.60 to 119.60): V



#33

Benzene

Concen: 5.392 ug/L

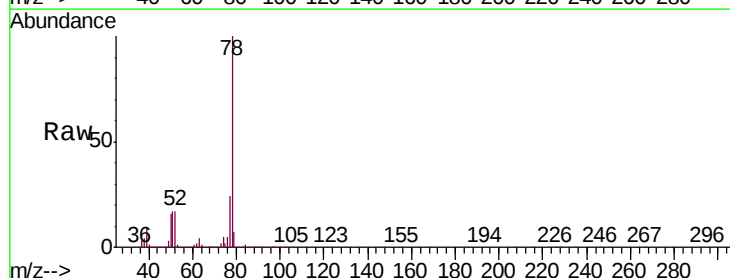
RT: 5.14 min Scan# 1261

Delta R.T. 0.00 min

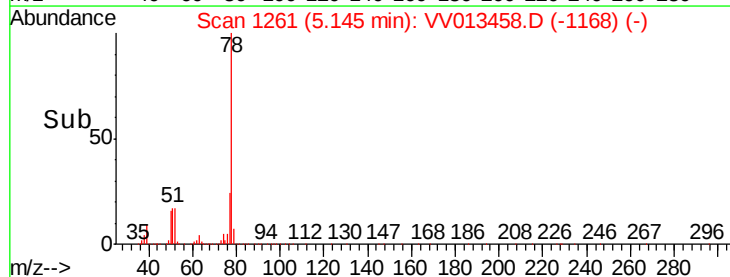
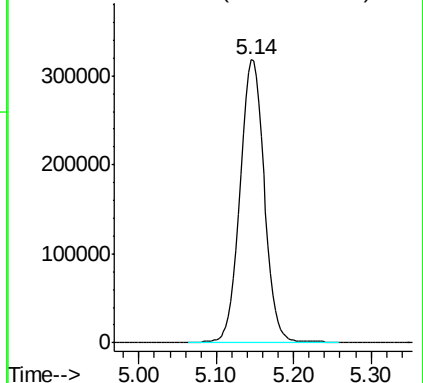
Lab File: VV013458.D

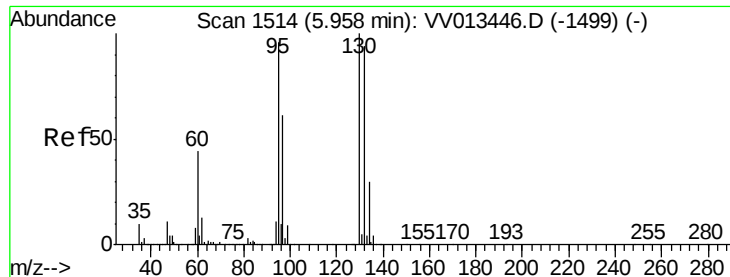
Acq: 31 Oct 2019 20:37

Tgt Ion: 78 Resp: 695008



Abundance Ion 78.10 (77.80 to 78.80): VV0





#34

Trichloroethene

Concen: 5.191 ug/L

RT: 5.96 min Scan# 1514

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00543

Tgt Ion: 95 Resp: 181679

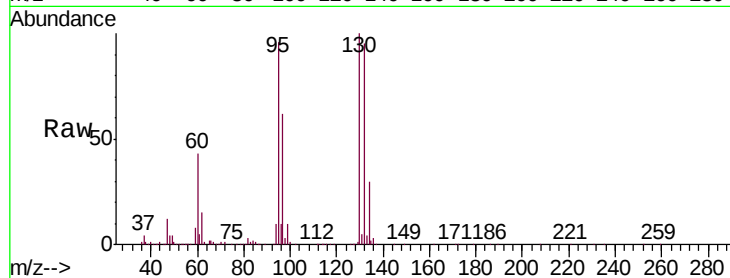
Ion Ratio Lower Upper

95 100

97 64.1 44.2 82.2

132 98.7 68.4 127.0

130 104.2 72.9 135.5

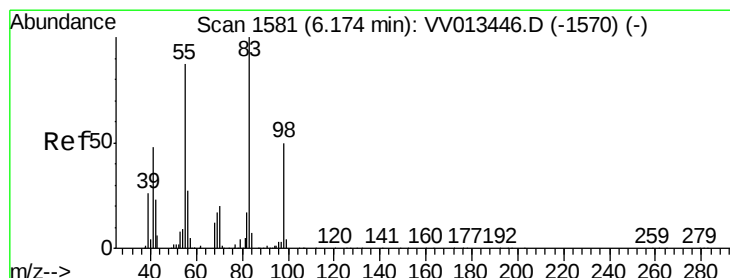
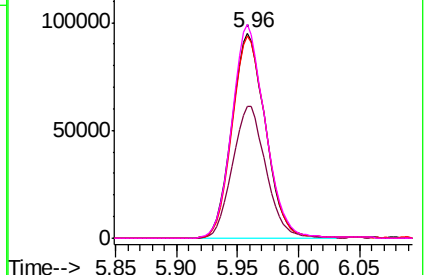
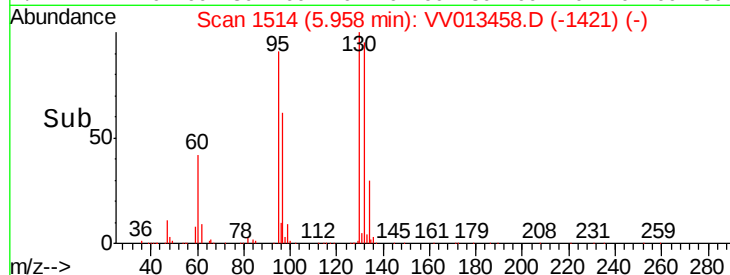


Abundance Ion 95.00 (94.70 to 95.70): VV013458.D (-1421) (-)

Ion 96.95 (96.65 to 97.65): VV013458.D (-1421) (-)

Ion 131.95 (131.65 to 132.65): VV013458.D (-1421) (-)

Ion 129.95 (129.65 to 130.65): VV013458.D (-1421) (-)



#35

Methylcyclohexane

Concen: 5.041 ug/L

RT: 6.17 min Scan# 1581

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

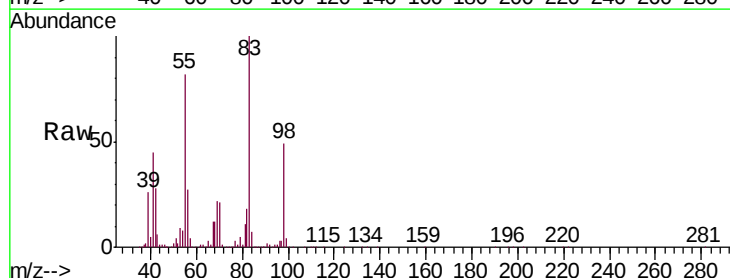
Tgt Ion: 83 Resp: 273584

Ion Ratio Lower Upper

83 100

55 83.4 64.6 96.8

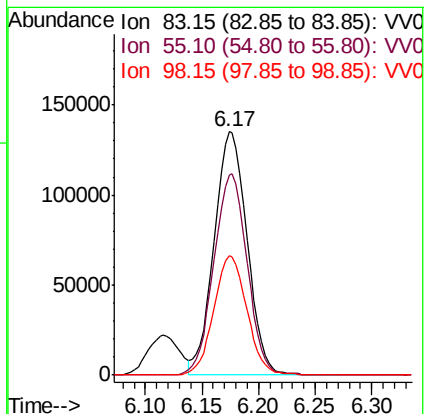
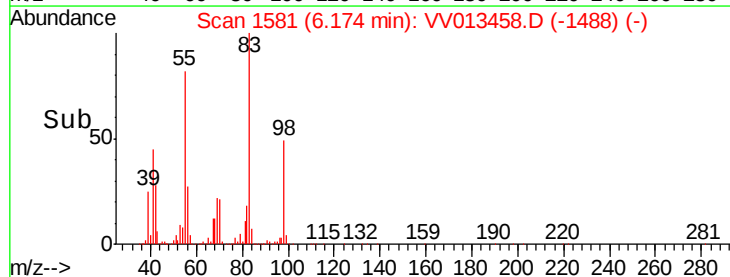
98 49.2 39.1 58.7

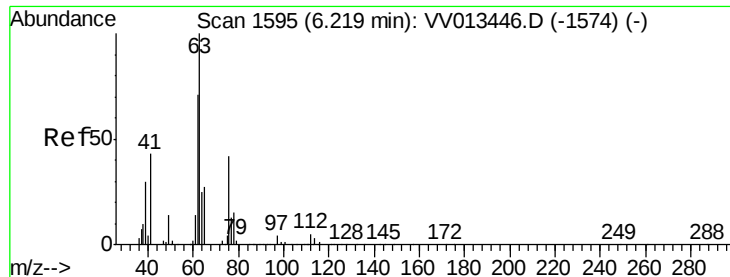


Abundance Ion 83.15 (82.85 to 83.85): VV013458.D (-1488) (-)

Ion 55.10 (54.80 to 55.80): VV013458.D (-1488) (-)

Ion 98.15 (97.85 to 98.85): VV013458.D (-1488) (-)





#37

1,2-Dichloropropane

Concen: 5.440 ug/L

RT: 6.22 min Scan# 1595

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

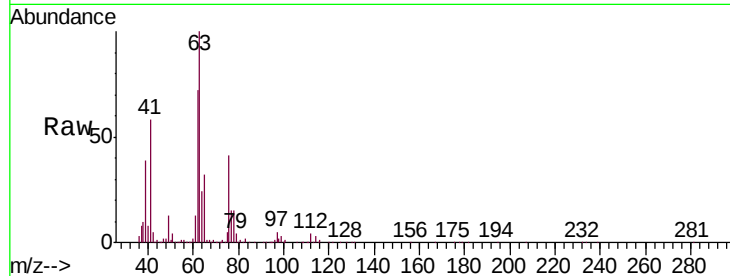
VSTD00543

Tgt Ion: 63 Resp: 175655

Ion Ratio Lower Upper

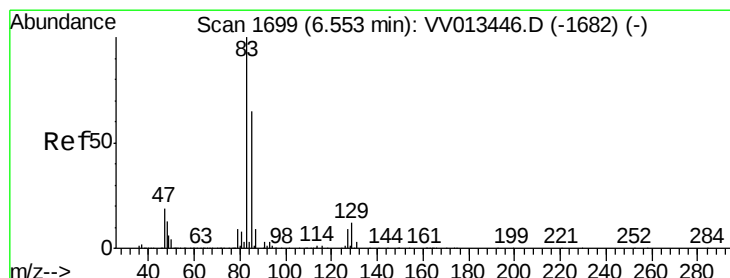
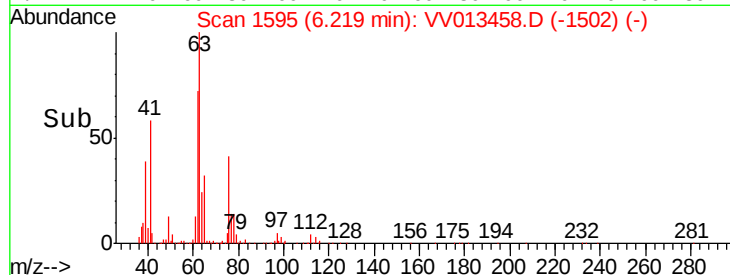
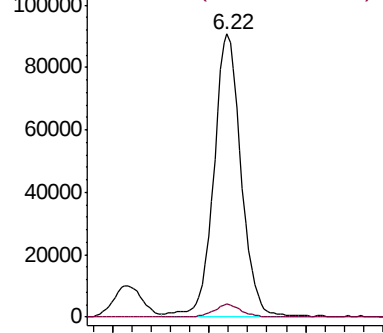
63 100

112 4.8 3.8 5.8



Abundance Ion 63.10 (62.80 to 63.80): VV0

Ion 112.10 (111.80 to 112.80): V



#38

Bromodichloromethane

Concen: 5.177 ug/L

RT: 6.55 min Scan# 1699

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

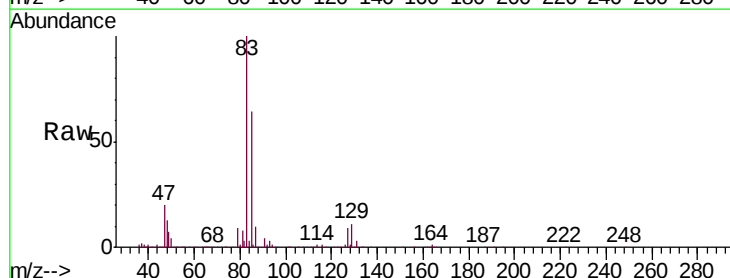
Tgt Ion: 83 Resp: 216371

Ion Ratio Lower Upper

83 100

85 64.5 45.1 83.9

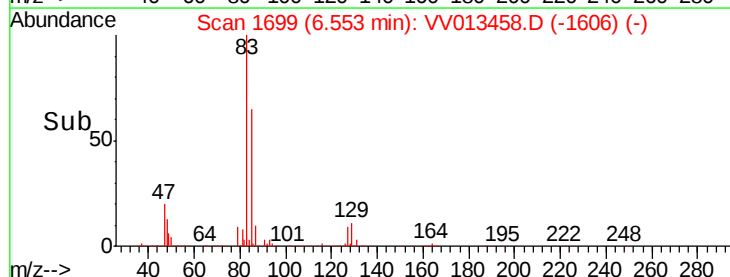
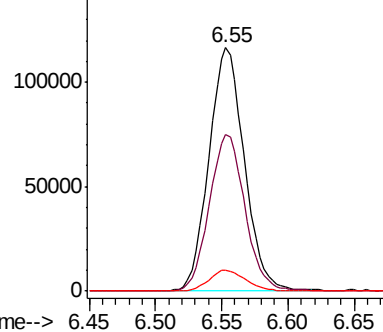
127 8.7 7.0 10.4

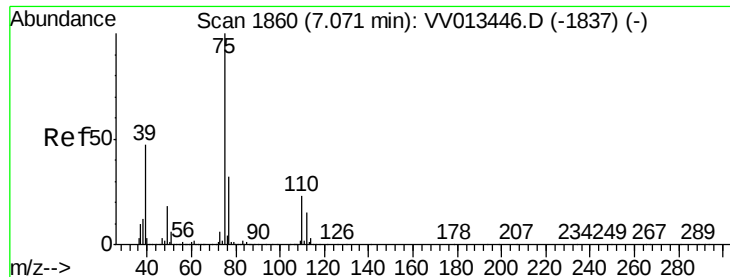


Abundance Ion 82.95 (82.65 to 83.65): VV0

Ion 85.00 (84.70 to 85.70): VV0

Ion 126.90 (126.60 to 127.60): V





#39

cis-1,3-Dichloropropene

Concen: 5.223 ug/L

RT: 7.07 min Scan# 1859

Delta R.T. -0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampled :

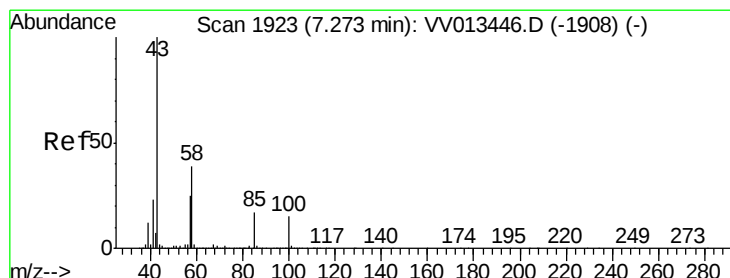
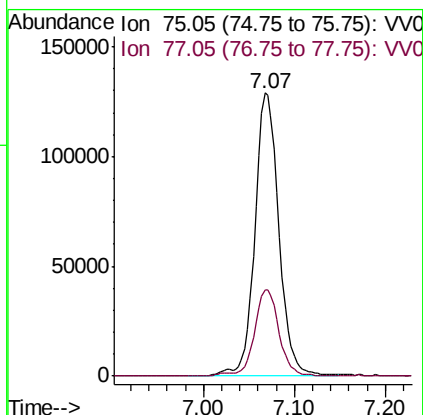
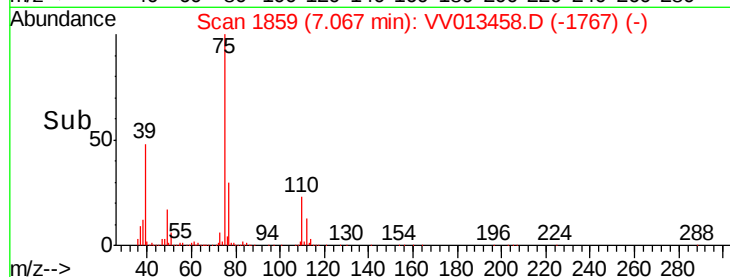
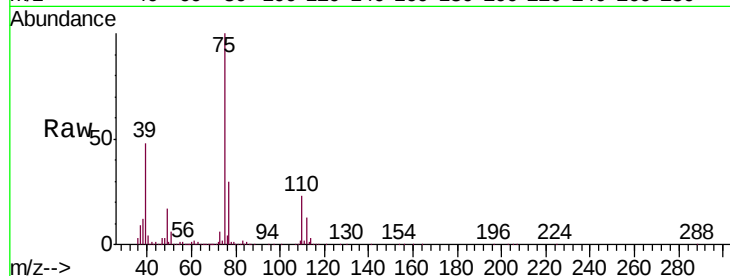
VSTD00543

Tgt Ion: 75 Resp: 236462

Ion Ratio Lower Upper

75 100

77 30.5 22.7 42.1



#40

4-Methyl-2-pentanone

Concen: 55.172 ug/L

RT: 7.27 min Scan# 1922

Delta R.T. -0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

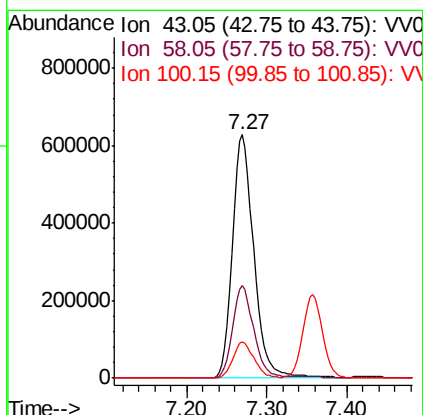
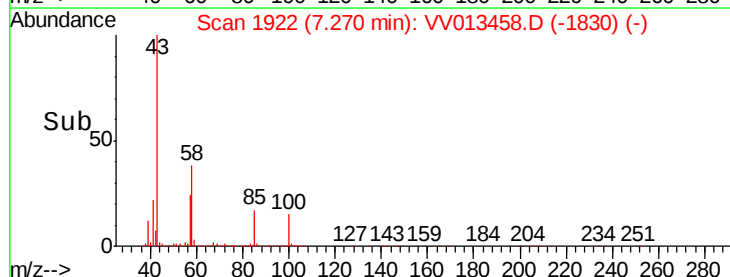
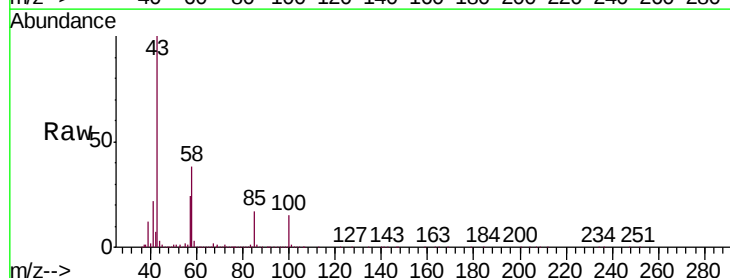
Tgt Ion: 43 Resp: 1138071

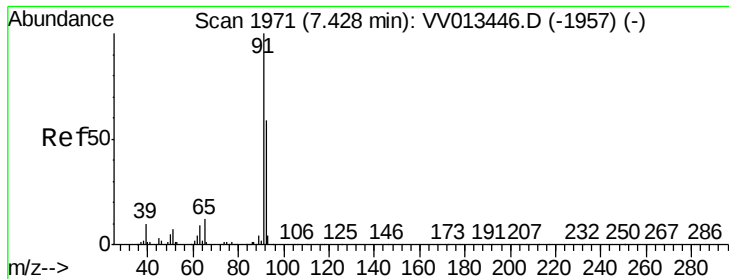
Ion Ratio Lower Upper

43 100

58 37.2 30.9 46.3

100 14.7 11.7 17.5





#42

Toluene

Concen: 5.430 ug/L

RT: 7.43 min Scan# 1971

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

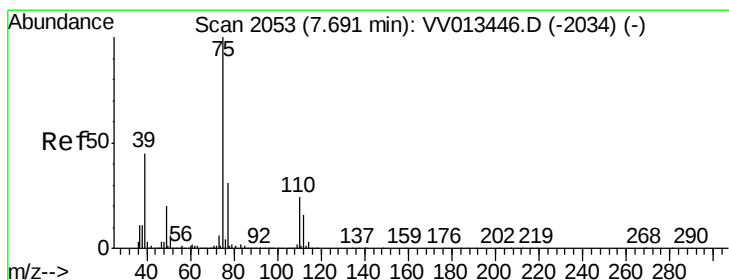
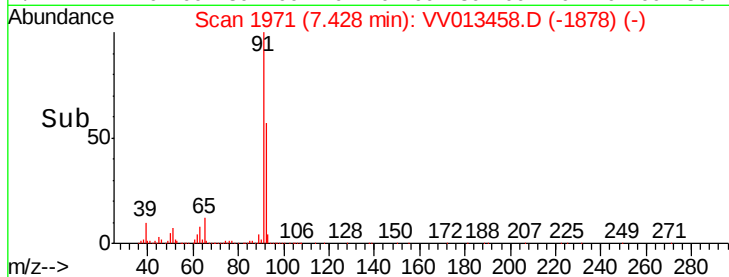
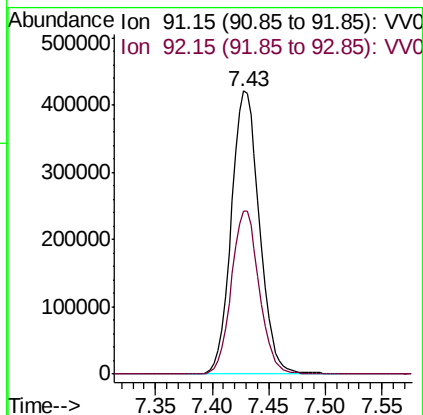
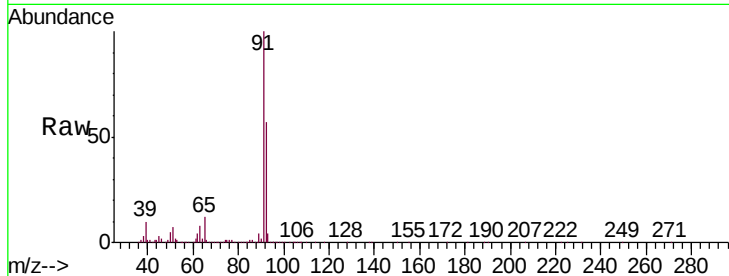
VSTD00543

Tgt Ion: 91 Resp: 727825

Ion Ratio Lower Upper

91 100

92 57.5 41.5 77.1



#44

trans-1,3-Dichloropropene

Concen: 5.142 ug/L

RT: 7.69 min Scan# 2053

Delta R.T. 0.00 min

Lab File: VV013458.D

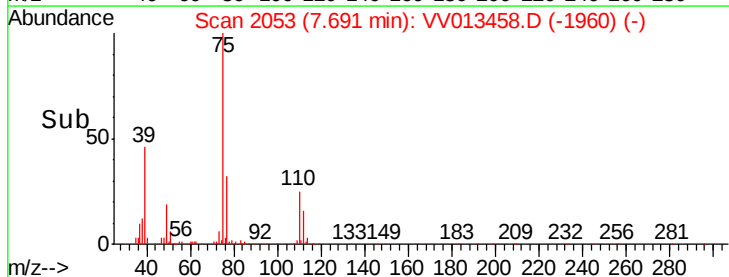
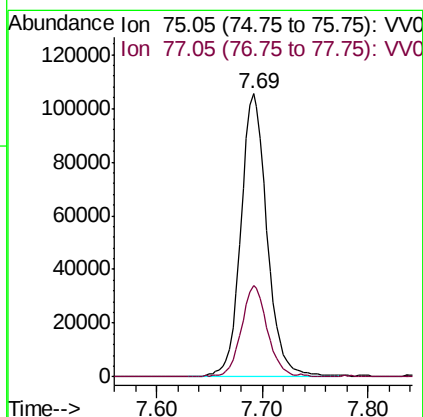
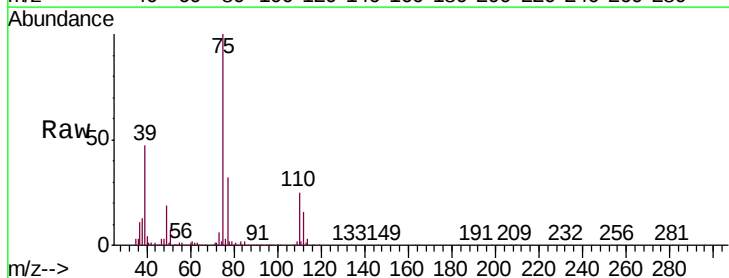
Acq: 31 Oct 2019 20:37

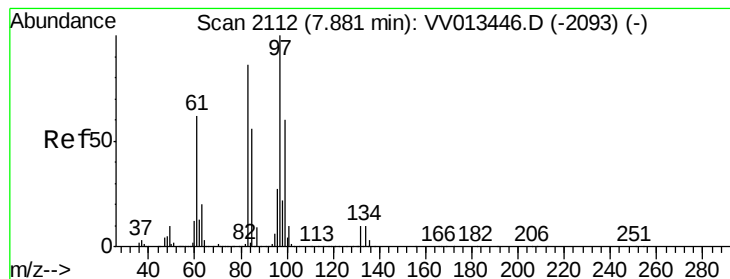
Tgt Ion: 75 Resp: 182090

Ion Ratio Lower Upper

75 100

77 32.5 21.9 40.7





#45

1,1,2-Trichloroethane

Concen: 5.265 ug/L

RT: 7.88 min Scan# 2112

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00543

Tgt Ion: 97 Resp: 120805

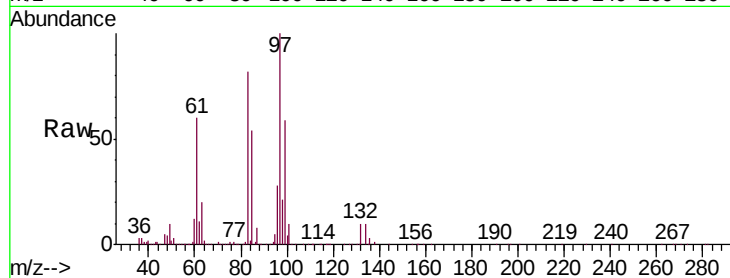
Ion Ratio Lower Upper

97 100

99 59.3 42.3 78.5

83 82.4 60.0 111.4

85 54.2 38.9 72.2

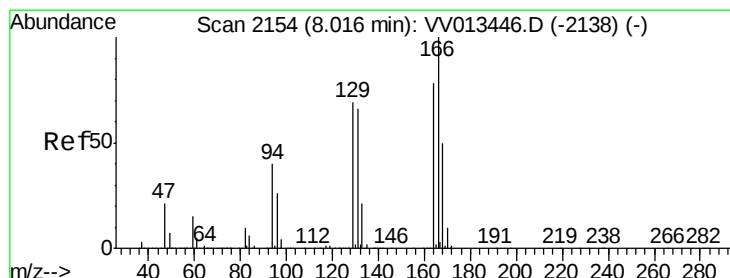
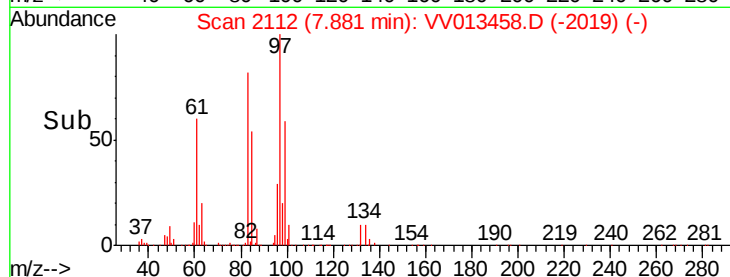
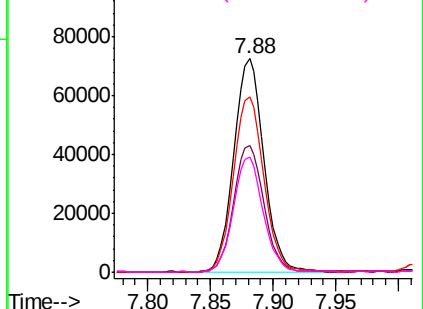


Abundance Ion 96.95 (96.65 to 97.65): VV0

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: 5.160 ug/L

RT: 8.02 min Scan# 2154

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Tgt Ion: 164 Resp: 155104

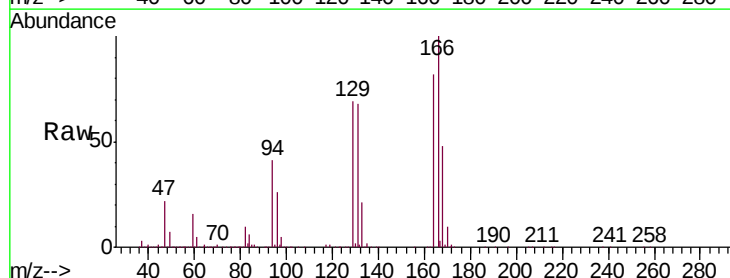
Ion Ratio Lower Upper

164 100

129 84.5 61.7 114.5

131 83.6 59.4 110.2

166 122.3 89.9 166.9

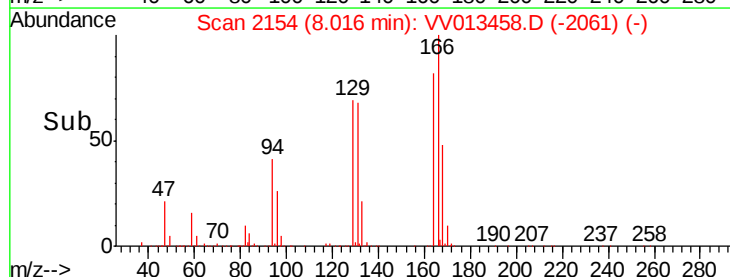
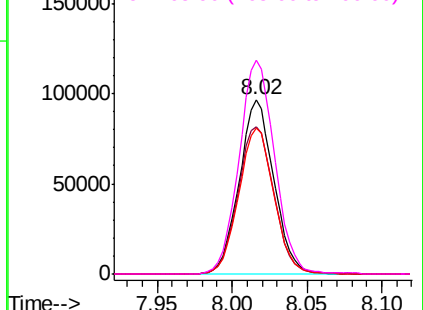


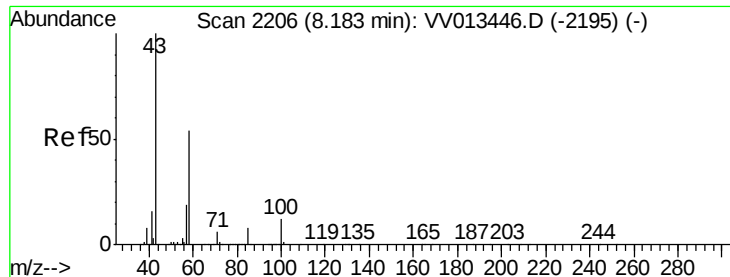
Abundance Ion 163.90 (163.60 to 164.60): V

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

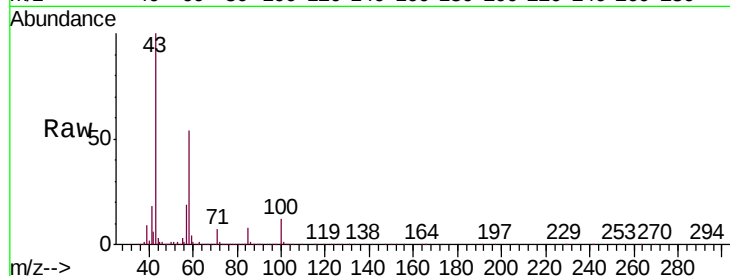




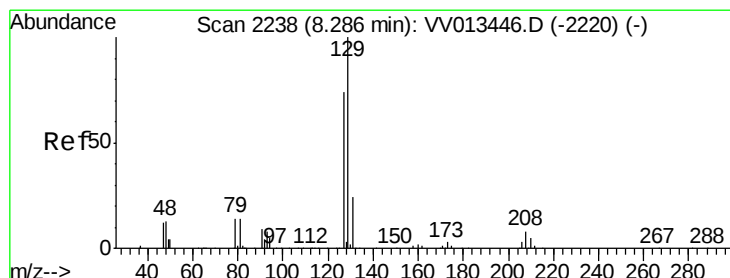
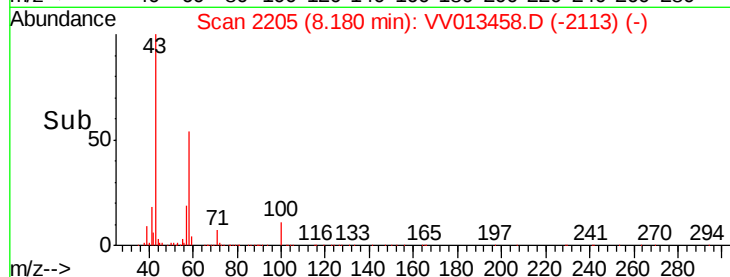
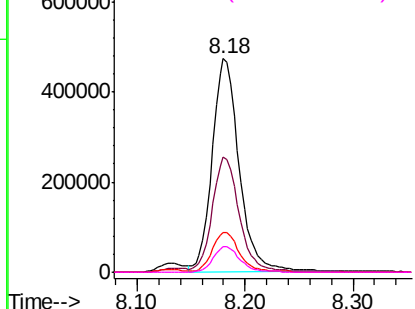
#48  
2-Hexanone  
Concen: 54.886 ug/L  
RT: 8.18 min Scan# 2205  
Delta R.T. -0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

Tgt Ion: 43 Resp: 817483  
Ion Ratio Lower Upper  
43 100  
58 54.6 42.2 63.4  
57 18.9 14.9 22.3  
100 12.0 9.0 13.6

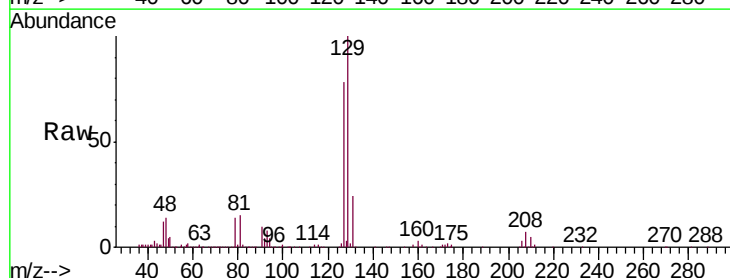


Abundance Ion 43.05 (42.75 to 43.75): VV013446.D (-2195) (-)  
Ion 58.05 (57.75 to 58.75): VV013446.D (-2195) (-)  
Ion 57.20 (56.90 to 57.90): VV013446.D (-2195) (-)  
Ion 100.15 (99.85 to 100.85): VV013446.D (-2195) (-)

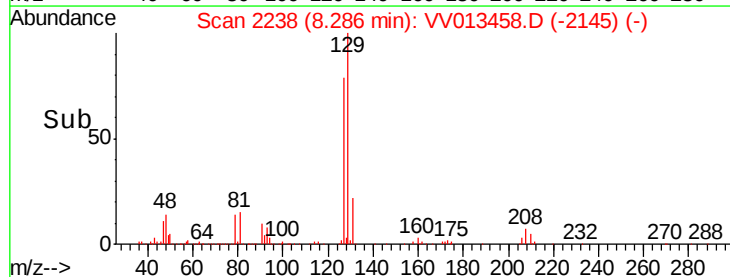
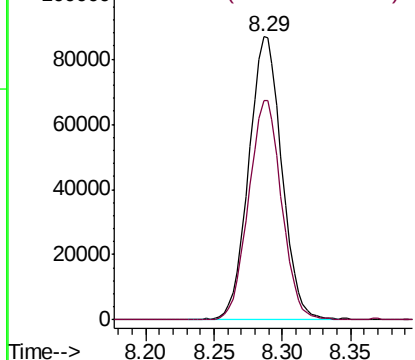


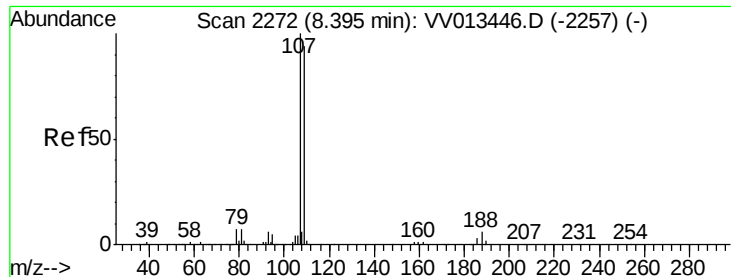
#49  
Dibromochloromethane  
Concen: 5.232 ug/L  
RT: 8.29 min Scan# 2238  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Tgt Ion: 129 Resp: 146197  
Ion Ratio Lower Upper  
129 100  
127 77.6 52.1 96.7



Abundance Ion 128.95 (128.65 to 129.65): VV013446.D (-2220) (-)  
Ion 126.90 (126.60 to 127.60): VV013446.D (-2220) (-)

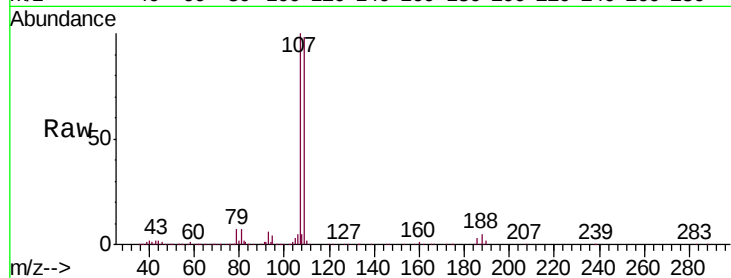




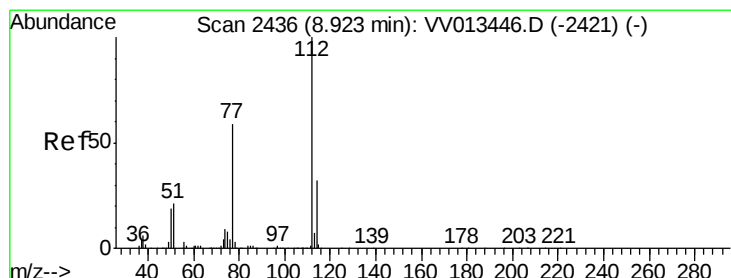
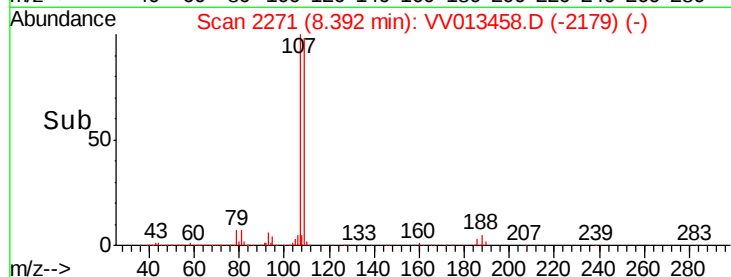
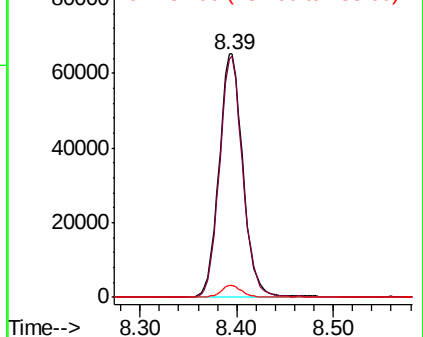
#50  
1,2-Dibromoethane  
Concen: 5.184 ug/L  
RT: 8.39 min Scan# 2271  
Delta R.T. -0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

Tgt Ion:107 Resp: 112116  
Ion Ratio Lower Upper  
107 100  
109 97.9 65.5 121.7  
188 5.0 4.5 6.7

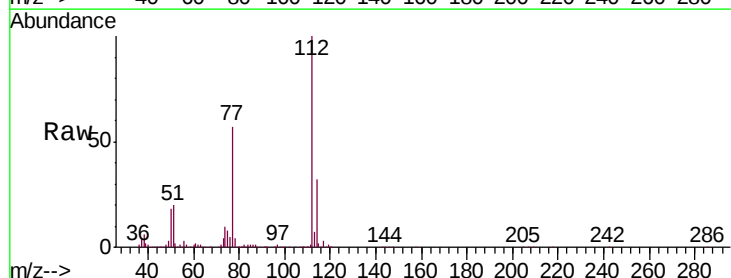


Abundance Ion 106.95 (106.65 to 107.65): V  
Ion 109.00 (108.70 to 109.70): V  
Ion 187.90 (187.60 to 188.60): V

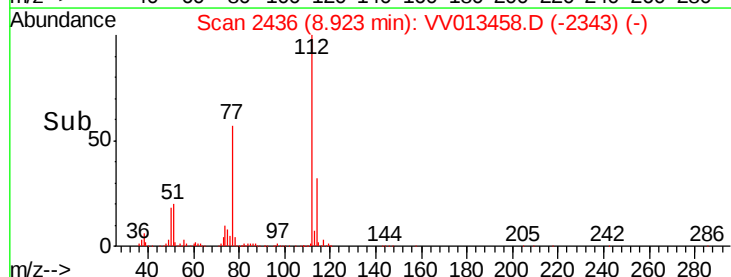
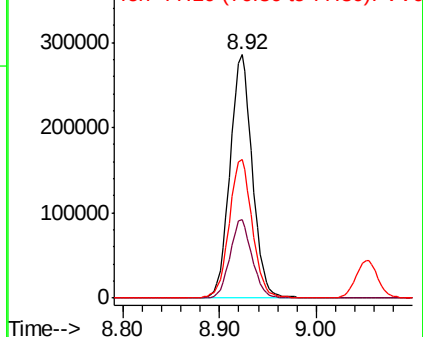


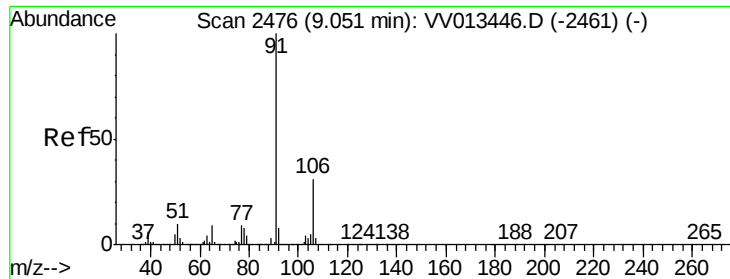
#51  
Chlorobenzene  
Concen: 5.265 ug/L  
RT: 8.92 min Scan# 2436  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Tgt Ion:112 Resp: 458010  
Ion Ratio Lower Upper  
112 100  
114 32.0 22.5 41.7  
77 56.9 47.3 70.9



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: 5.352 ug/L

RT: 9.05 min Scan# 2476

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampled :

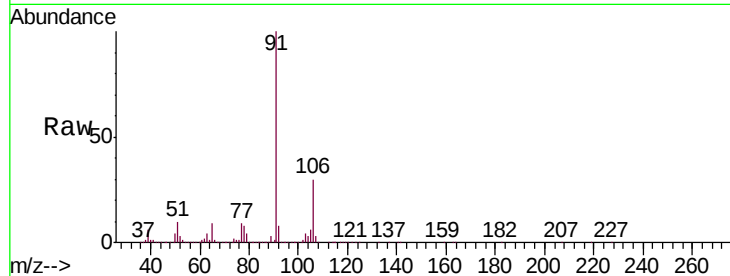
VSTD00543

Tgt Ion: 91 Resp: 762072

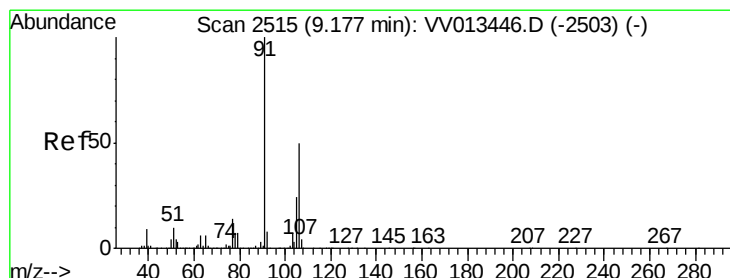
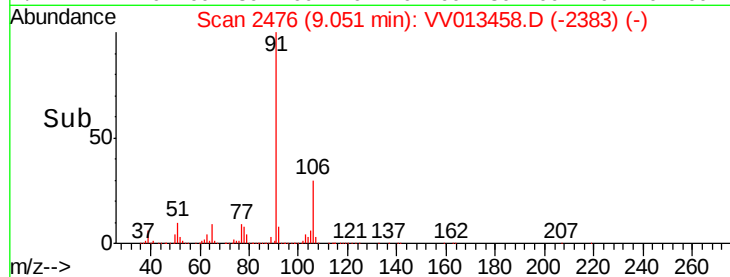
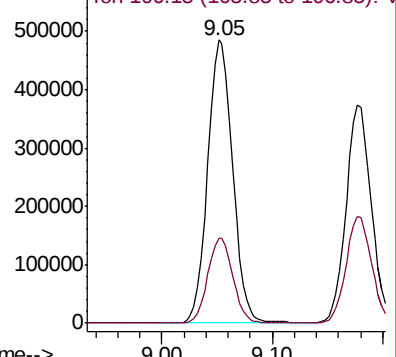
Ion Ratio Lower Upper

91 100

106 30.1 21.5 39.9



Abundance Ion 91.15 (90.85 to 91.85): VV013446.D (-2461) (-)



#53

m,p-xylene

Concen: 5.458 ug/L

RT: 9.18 min Scan# 2515

Delta R.T. 0.00 min

Lab File: VV013458.D

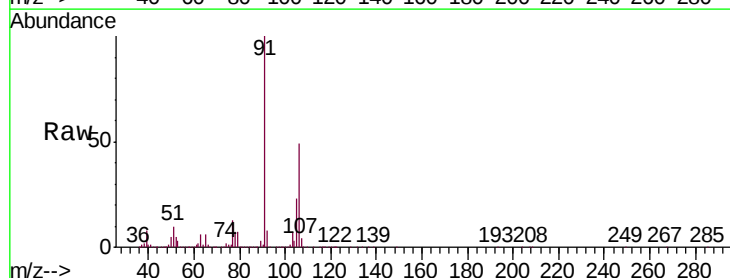
Acq: 31 Oct 2019 20:37

Tgt Ion: 106 Resp: 297459

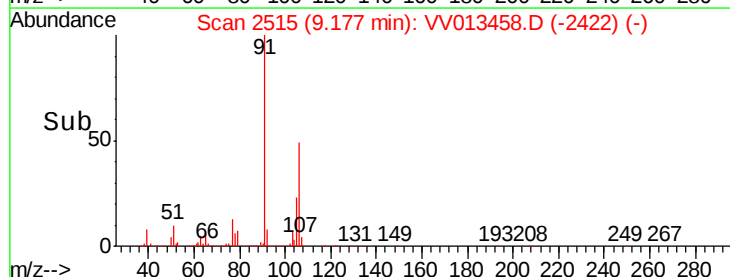
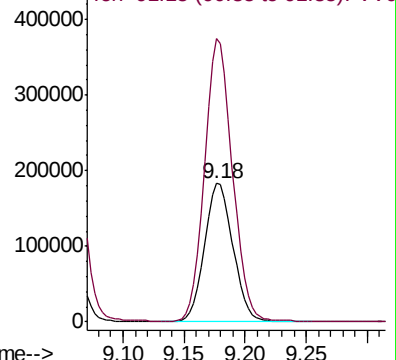
Ion Ratio Lower Upper

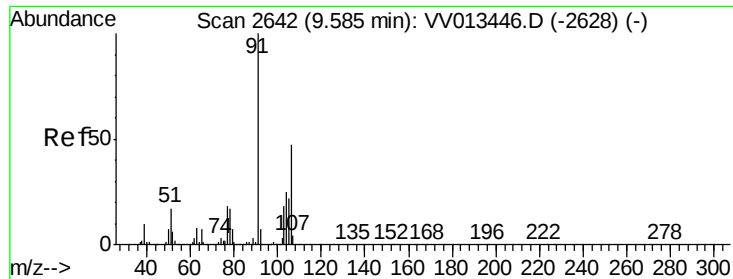
106 100

91 204.3 141.5 262.7



Abundance Ion 106.15 (105.85 to 106.85): VV013446.D (-2503) (-)

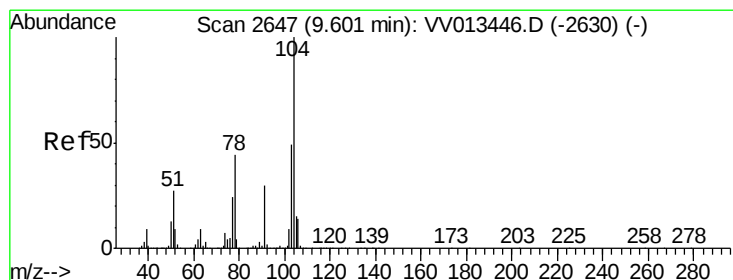
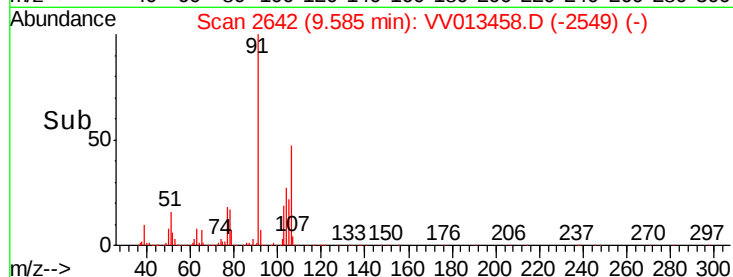
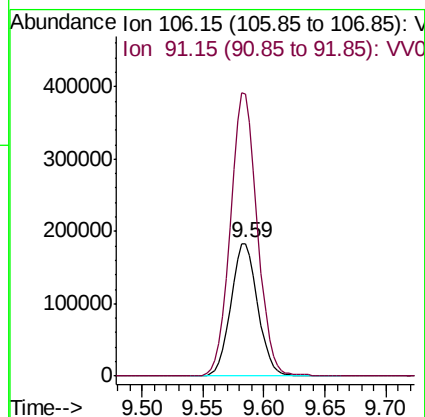
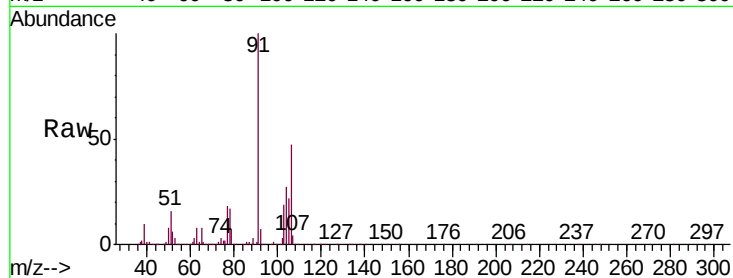




#54  
o-xylene  
Concen: 5.407 ug/L  
RT: 9.59 min Scan# 2642  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

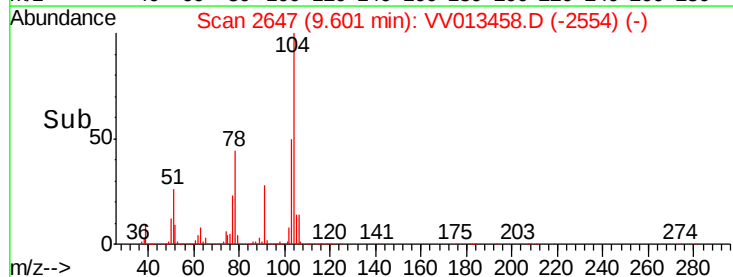
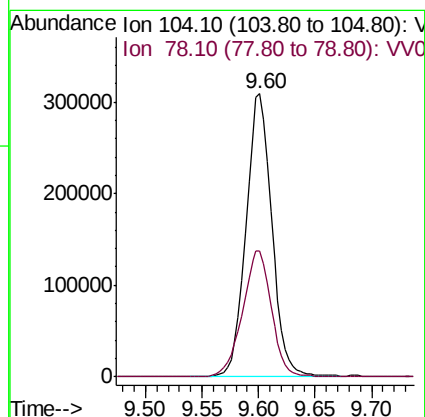
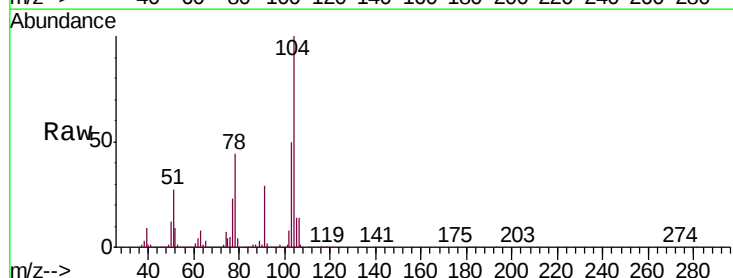
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD00543

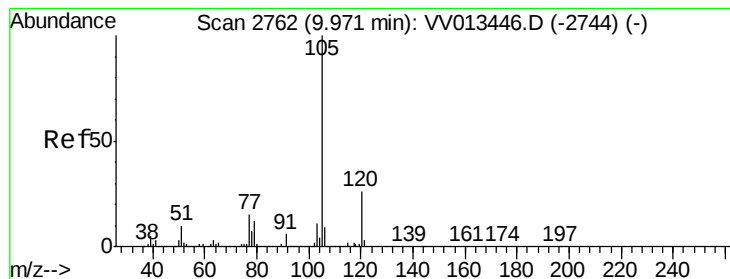
Tgt Ion:106 Resp: 282389  
Ion Ratio Lower Upper  
106 100  
91 212.7 148.3 275.5



#55  
Styrene  
Concen: 5.547 ug/L  
RT: 9.60 min Scan# 2647  
Delta R.T. 0.00 min  
Lab File: VV013458.D  
Acq: 31 Oct 2019 20:37

Tgt Ion:104 Resp: 493068  
Ion Ratio Lower Upper  
104 100  
78 44.3 30.6 56.8





#56

Isopropylbenzene

Concen: 5.434 ug/L

RT: 9.97 min Scan# 2762

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00543

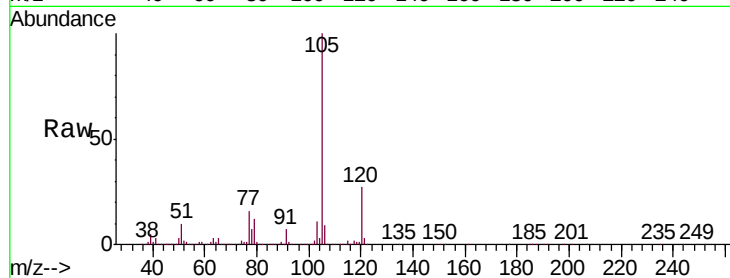
Tgt Ion: 105 Resp: 754278

Ion Ratio Lower Upper

105 100

120 26.3 21.1 31.7

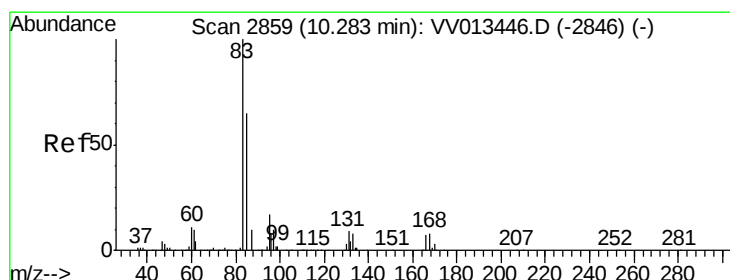
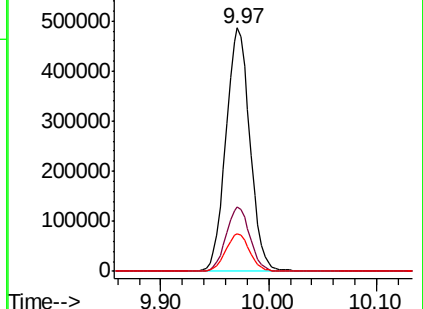
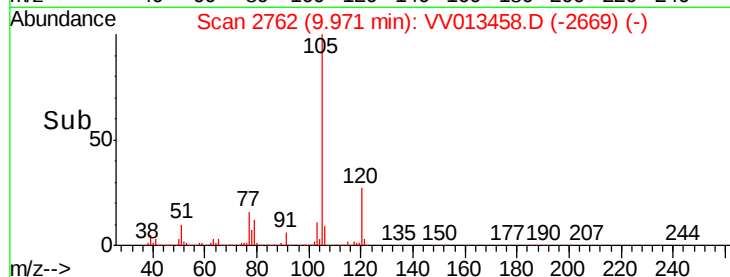
77 15.3 12.2 18.4



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: 5.102 ug/L

RT: 10.28 min Scan# 2859

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

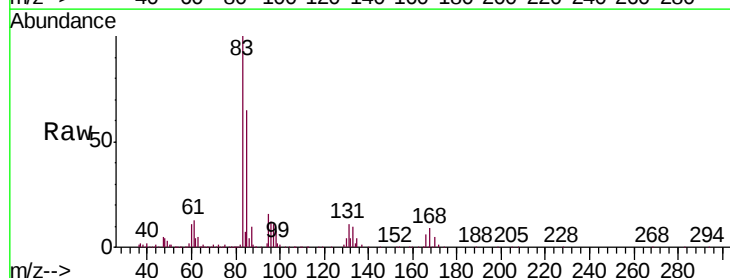
Tgt Ion: 83 Resp: 135263

Ion Ratio Lower Upper

83 100

85 65.0 45.8 85.0

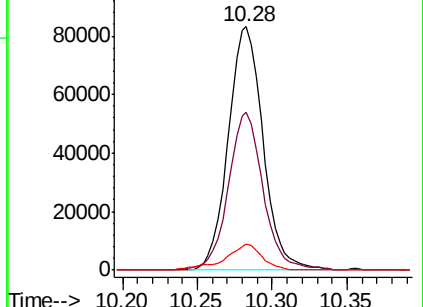
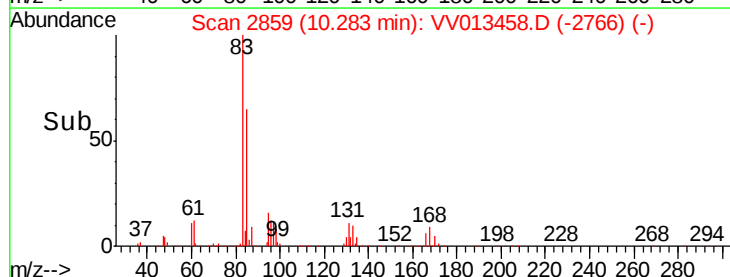
131 10.8 7.6 11.4

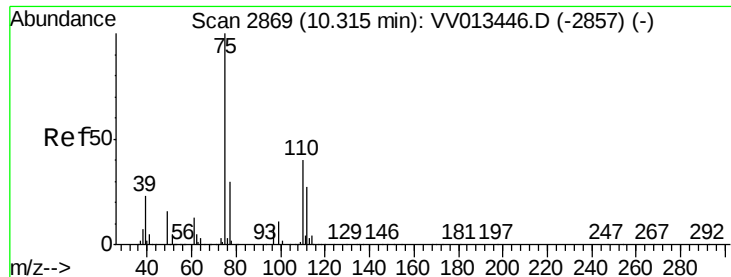


Abundance Ion 82.95 (82.65 to 83.65): VV0

Ion 85.00 (84.70 to 85.70): VV0

Ion 130.95 (130.65 to 131.65): V





#59

1,2,3-Trichloropropane

Concen: 4.998 ug/L

RT: 10.31 min Scan# 2869

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

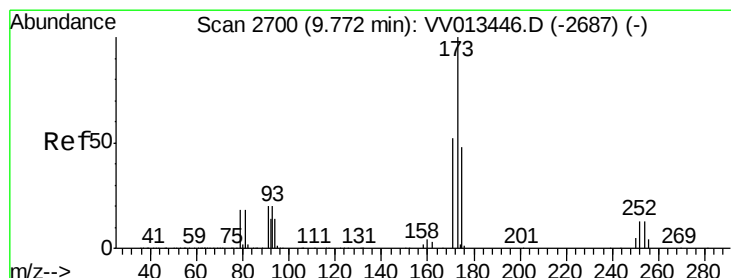
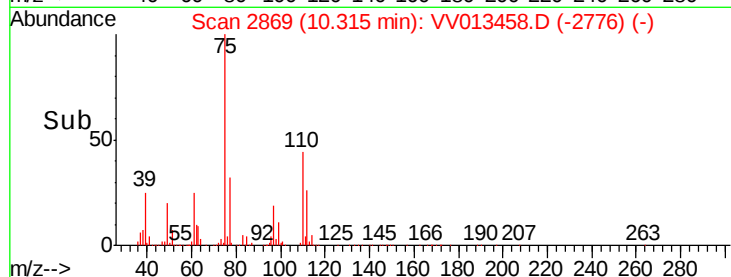
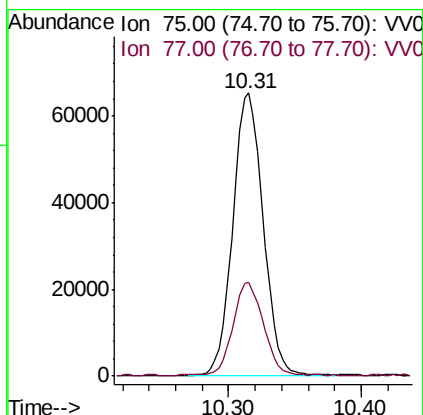
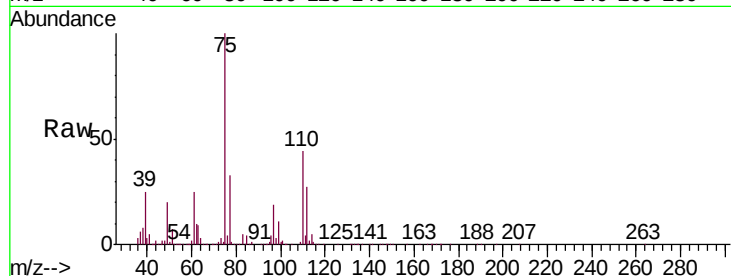
VSTD00543

Tgt Ion: 75 Resp: 104487

Ion Ratio Lower Upper

75 100

77 32.1 24.4 36.6



#61

Bromoform

Concen: 4.900 ug/L

RT: 9.77 min Scan# 2700

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

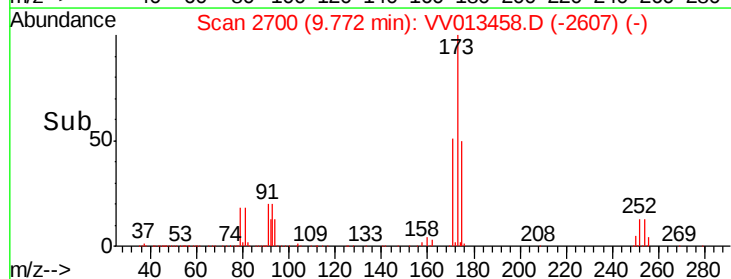
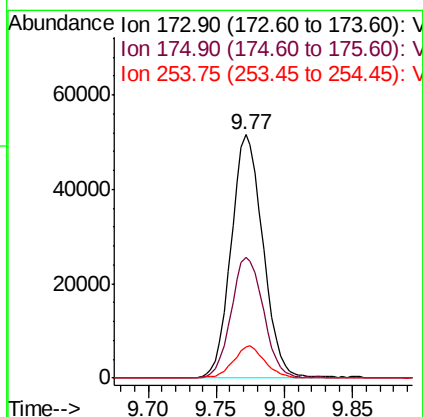
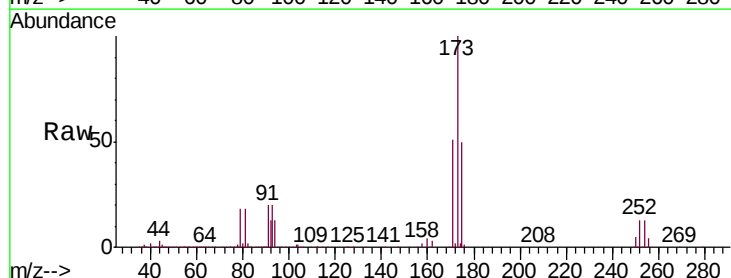
Tgt Ion: 173 Resp: 83853

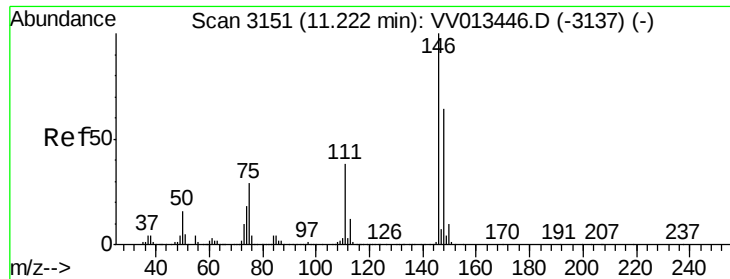
Ion Ratio Lower Upper

173 100

175 50.0 38.6 58.0

254 13.1 10.1 15.1





#62

1,3-Dichlorobenzene

Concen: 5.155 ug/L

RT: 11.22 min Scan# 3151

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00543

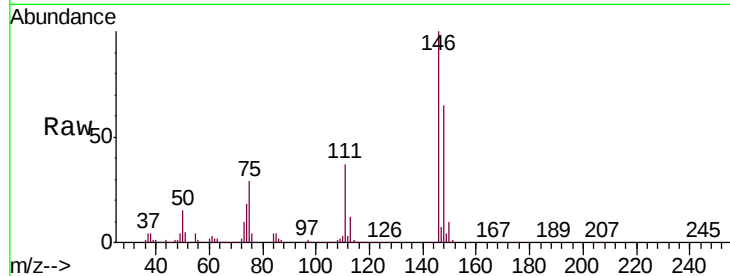
Tgt Ion:146 Resp: 387864

Ion Ratio Lower Upper

146 100

111 36.9 26.2 48.8

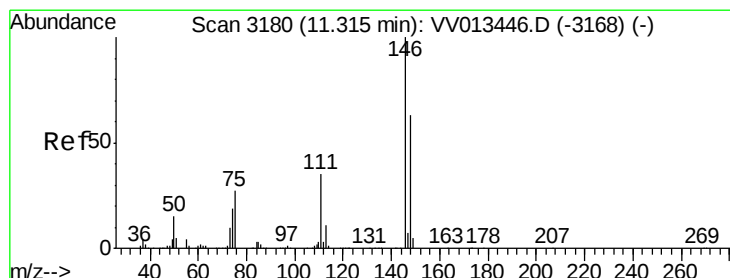
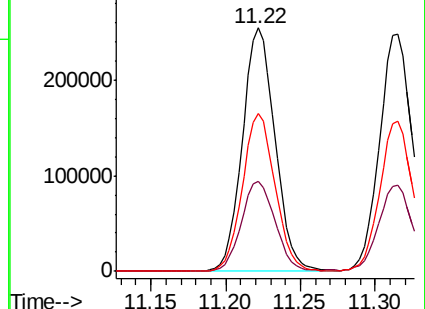
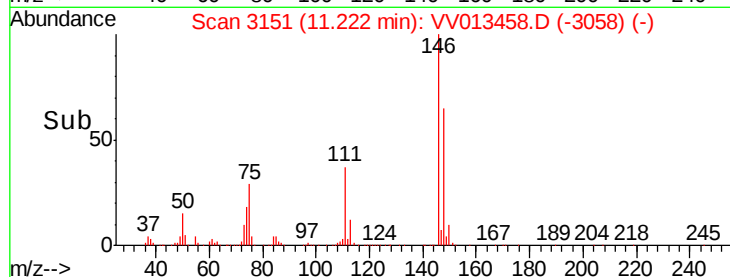
148 64.6 44.9 83.5



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: 5.058 ug/L

RT: 11.31 min Scan# 3180

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

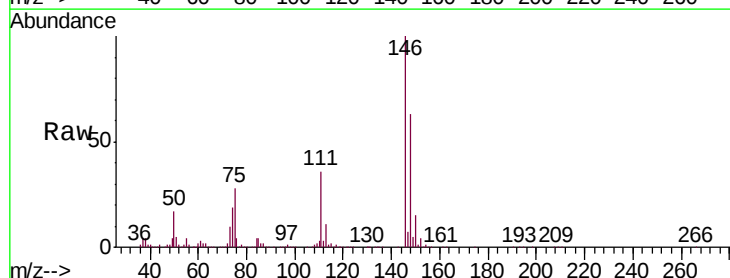
Tgt Ion:146 Resp: 386183

Ion Ratio Lower Upper

146 100

111 36.1 24.7 45.9

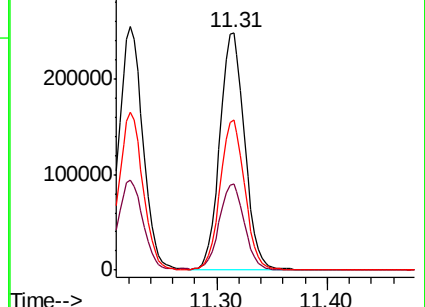
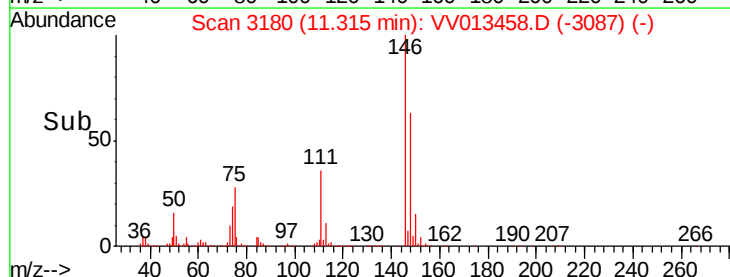
148 63.0 44.2 82.0

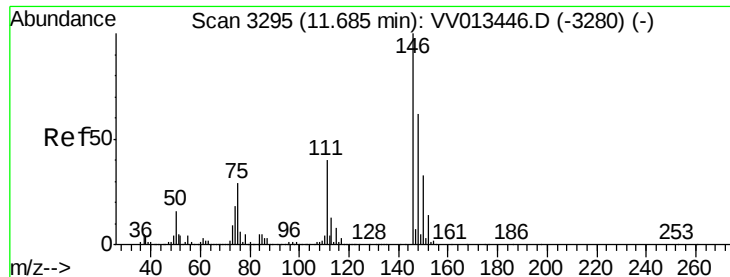


Abundance Ion 145.95 (145.65 to 146.65): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V





#65

1,2-Dichlorobenzene

Concen: 5.047 ug/L

RT: 11.68 min Scan# 3295

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampleId :

VSTD00543

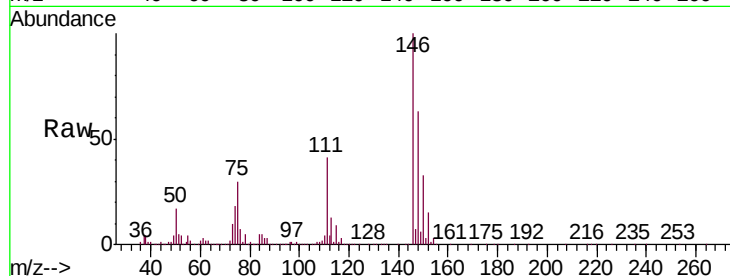
Tgt Ion:146 Resp: 350916

Ion Ratio Lower Upper

146 100

111 40.8 31.8 47.6

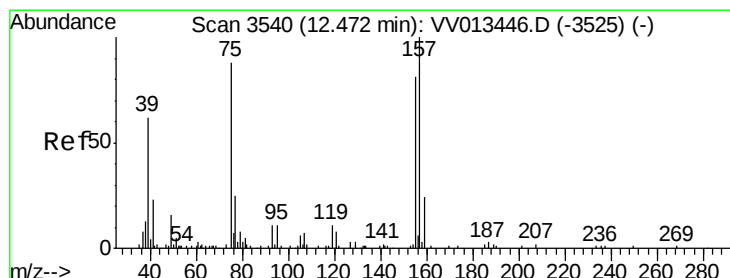
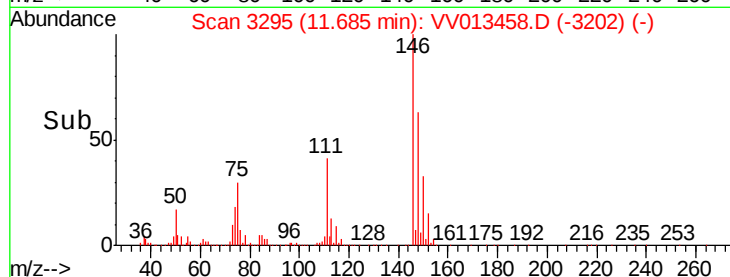
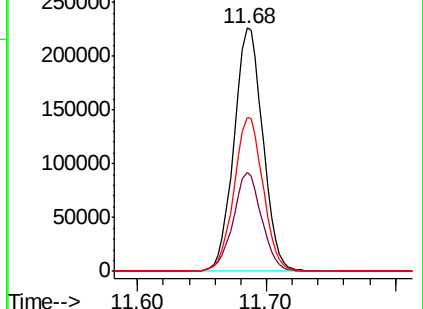
148 63.2 49.5 74.3



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: 4.801 ug/L

RT: 12.47 min Scan# 3540

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

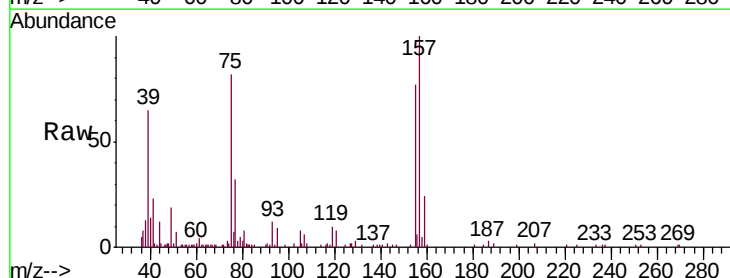
Tgt Ion: 75 Resp: 20307

Ion Ratio Lower Upper

75 100

155 93.6 73.5 110.3

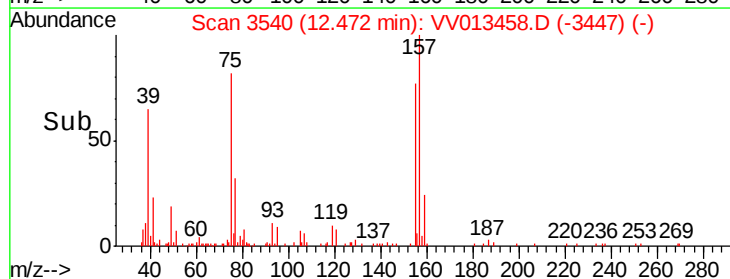
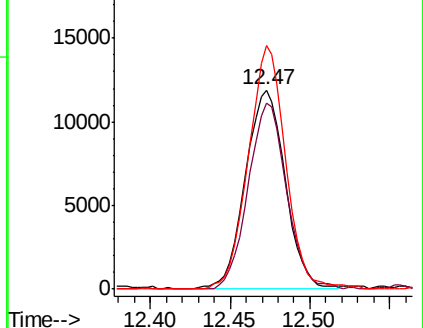
157 122.4 90.4 135.6

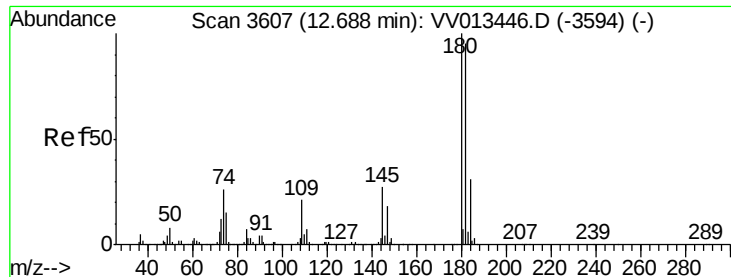


Abundance Ion 75.05 (74.75 to 75.75): VV0

Ion 154.95 (154.65 to 155.65): V

Ion 156.90 (156.60 to 157.60): V

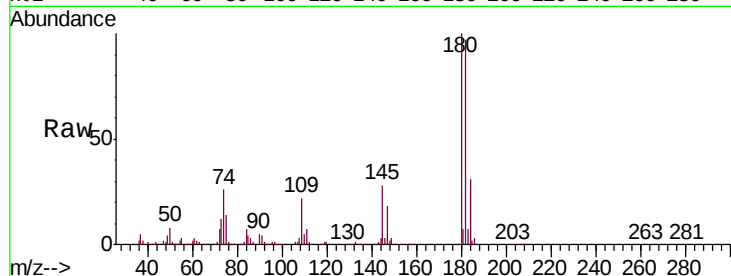




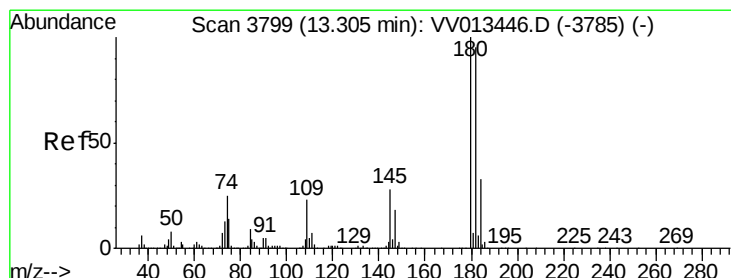
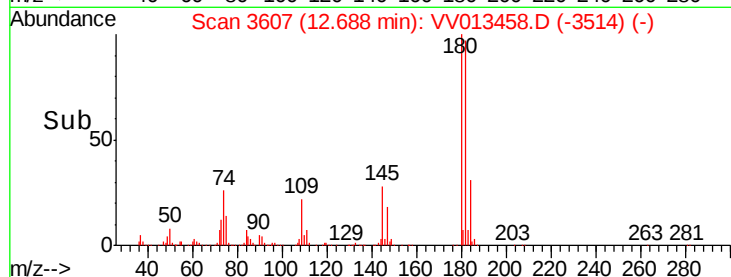
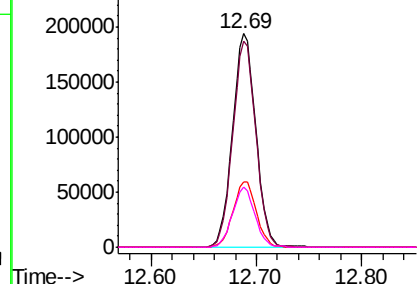
#67  
 1,3,5-Trichlorobenzene  
 Concen: 4.878 ug/L  
 RT: 12.69 min Scan# 3607  
 Delta R.T. 0.00 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD00543

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 180   | Resp: | 295553 |
| Ion      | Ratio | Lower | Upper  |
| 180      | 100   |       |        |
| 182      | 95.4  | 76.1  | 114.1  |
| 184      | 30.7  | 24.5  | 36.7   |
| 145      | 27.1  | 21.4  | 32.2   |

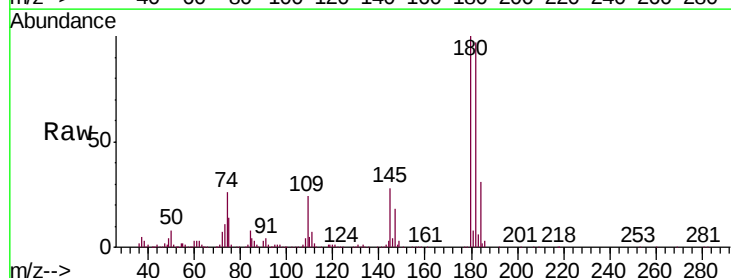


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

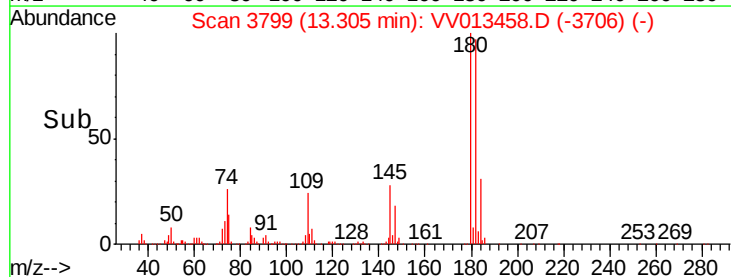
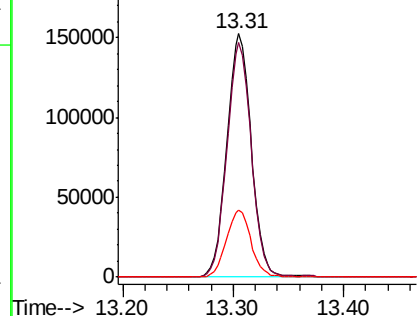


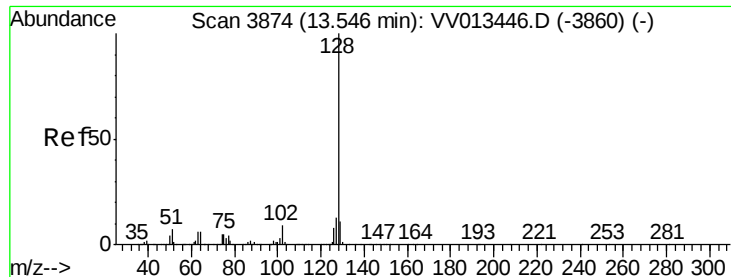
#68  
 1,2,4-trichlorobenzene  
 Concen: 4.635 ug/L  
 RT: 13.31 min Scan# 3799  
 Delta R.T. 0.00 min  
 Lab File: VV013458.D  
 Acq: 31 Oct 2019 20:37

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 180   | Resp: | 234412 |
| Ion      | Ratio | Lower | Upper  |
| 180      | 100   |       |        |
| 182      | 95.5  | 76.1  | 114.1  |
| 145      | 27.9  | 22.1  | 33.1   |



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: 4.555 ug/L

RT: 13.55 min Scan# 3874

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

Instrument :

MSVOA\_V

ClientSampled :

VSTD00543

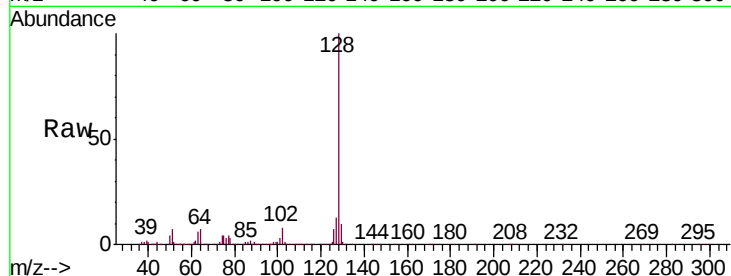
Tgt Ion:128 Resp: 337818

Ion Ratio Lower Upper

128 100

129 10.3 8.4 12.6

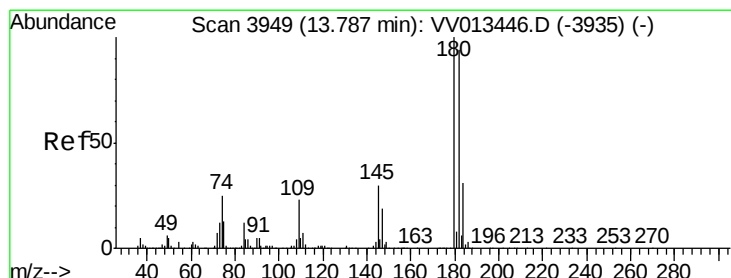
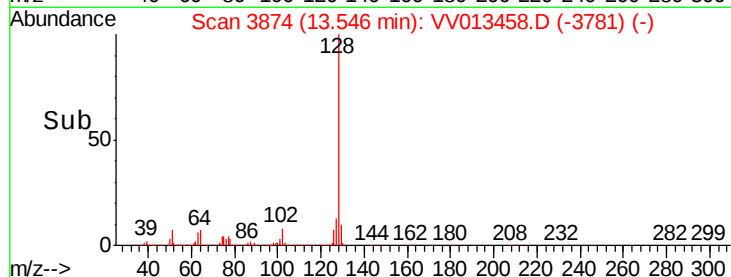
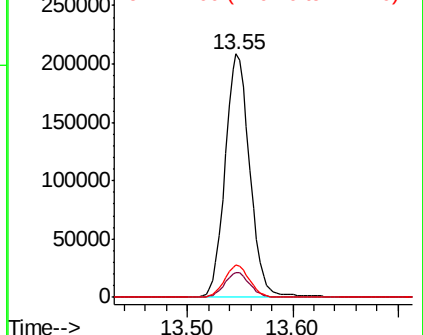
127 13.2 10.7 16.1



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: 4.815 ug/L

RT: 13.79 min Scan# 3949

Delta R.T. 0.00 min

Lab File: VV013458.D

Acq: 31 Oct 2019 20:37

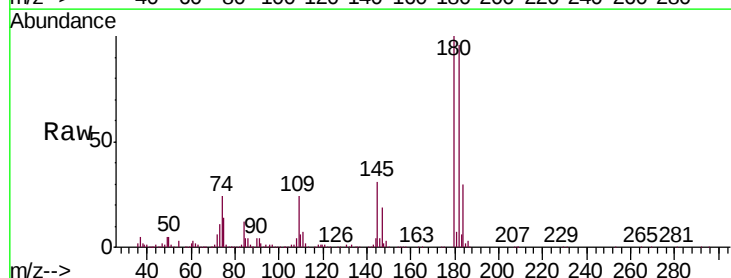
Tgt Ion:180 Resp: 224361

Ion Ratio Lower Upper

180 100

182 96.1 77.4 116.2

145 30.1 24.1 36.1



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

