

Data File : VV009298.D  
Acq On : 13 Feb 2019 18:10  
Operator : SY/MD  
Sample : VSTDCCC025EC  
Misc : 5.00G/10ML/MSVOA\_V/SOIL  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

Quant Time: Feb 14 02:56:02 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOM2VLM021319S.M  
Quant Title : VOC Analysis  
QLast Update : Wed Feb 13 15:25:45 2019  
Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 5.66  | 114  | 340210   | 25.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 8.90  | 117  | 322111   | 25.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.30 | 152  | 153543   | 25.00 | ug/L  | 0.00     |

#### System Monitoring Compounds

|                                |        |       |          |          |      |        |
|--------------------------------|--------|-------|----------|----------|------|--------|
| 4) Vinyl Chloride-d3           | 1.32   | 65    | 101428   | 18.76    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 75.04% |
| 7) Chloroethane-d5             | 1.57   | 69    | 59378    | 14.45    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 57.80% |
| 10) 1,1-Dichloroethene-d2      | 2.13   | 63    | 215439   | 20.10    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 45 - 110 | Recovery | =    | 80.40% |
| 20) 2-Butanone-d5              | 3.94   | 46    | 64740    | 31.02    | ug/L | 0.00   |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 62.04% |
| 24) Chloroform-d               | 4.40   | 84    | 199895   | 20.33    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 40 - 150 | Recovery | =    | 81.32% |
| 26) 1,2-Dichloroethane-d4      | 5.08   | 65    | 113354   | 19.32    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 70 - 130 | Recovery | =    | 77.28% |
| 29) Benzene-d6                 | 5.10   | 84    | 381775   | 20.87    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 20 - 135 | Recovery | =    | 83.48% |
| 33) 1,2-Dichloropropane-d6     | 6.12   | 67    | 115514   | 19.59    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 70 - 120 | Recovery | =    | 78.36% |
| 37) Toluene-d8                 | 7.36   | 98    | 350824   | 20.51    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 30 - 130 | Recovery | =    | 82.04% |
| 38) trans-1,3-Dichloropropene- | 7.66   | 79    | 52580    | 20.15    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 30 - 135 | Recovery | =    | 80.60% |
| 39) 2-Hexanone-d5              | 8.14   | 63    | 41438    | 29.95    | ug/L | 0.00   |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 59.90% |
| 48) 1,1,2,2-Tetrachloroethane- | 10.26  | 84    | 100316   | 17.67    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 45 - 120 | Recovery | =    | 70.68% |
| 61) 1,2-Dichlorobenzene-d4     | 11.67  | 152   | 121122   | 19.53    | ug/L | 0.00   |
| Spiked Amount                  | 25.000 | Range | 75 - 120 | Recovery | =    | 78.12% |

#### Target Compounds

|                                |      |     |        |        |      | Qvalue |
|--------------------------------|------|-----|--------|--------|------|--------|
| 2) Dichlorodifluoromethane     | 1.14 | 85  | 112503 | 20.484 | ug/L | 100    |
| 3) Chloromethane               | 1.25 | 50  | 126469 | 20.288 | ug/L | 100    |
| 5) Vinyl chloride              | 1.32 | 62  | 129374 | 22.443 | ug/L | 99     |
| 6) Bromomethane                | 1.53 | 94  | 56258  | 21.689 | ug/L | 98     |
| 8) Chloroethane                | 1.59 | 64  | 73673  | 20.255 | ug/L | 97     |
| 9) Trichlorofluoromethane      | 1.77 | 101 | 191440 | 22.939 | ug/L | 99     |
| 11) 1,1,2-Trichloro-1,2,2-trif | 2.14 | 101 | 107381 | 23.171 | ug/L | 98     |
| 12) 1,1-Dichloroethene         | 2.14 | 96  | 94227  | 22.359 | ug/L | 97     |
| 13) Acetone                    | 2.20 | 43  | 108908 | 35.554 | ug/L | 100    |
| 14) Carbon disulfide           | 2.32 | 76  | 358526 | 22.173 | ug/L | 99     |
| 15) Methyl Acetate             | 2.46 | 43  | 63568  | 15.442 | ug/L | 99     |
| 16) Methylene chloride         | 2.53 | 84  | 122136 | 17.500 | ug/L | 99     |
| 17) Methyl tert-butyl Ether    | 2.81 | 73  | 266908 | 21.720 | ug/L | 98     |
| 18) trans-1,2-Dichloroethene   | 2.79 | 96  | 110265 | 22.409 | ug/L | 97     |
| 19) 1,1-Dichloroethane         | 3.23 | 63  | 219667 | 23.236 | ug/L | 96     |
| 21) 2-Butanone                 | 4.03 | 43  | 106012 | 35.552 | ug/L | 96     |
| 22) cis-1,2-Dichloroethene     | 3.96 | 96  | 119253 | 22.872 | ug/L | 97     |

Data File : VV009298.D  
Acq On : 13 Feb 2019 18:10  
Operator : SY/MD  
Sample : VSTDCCC025EC  
Misc : 5.00G/10ML/MSVOA\_V/SOIL  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

Quant Time: Feb 14 02:56:02 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_V\METHOD\SOM2VLM021319S.M  
Quant Title : VOC Analysis  
QLast Update : Wed Feb 13 15:25:45 2019  
Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|--------------------------------|-------|------|----------|--------|-------|----------|
| 23) Bromochloromethane         | 4.30  | 128  | 51822    | 22.080 | ug/L  | 97       |
| 25) Chloroform                 | 4.42  | 83   | 216193   | 22.771 | ug/L  | 99       |
| 27) 1,2-Dichloroethane         | 5.18  | 62   | 156170   | 22.060 | ug/L  | 99       |
| 30) Cyclohexane                | 4.72  | 56   | 210778   | 24.353 | ug/L  | 99       |
| 31) 1,1,1-Trichloroethane      | 4.66  | 97   | 195638   | 24.735 | ug/L  | 97       |
| 32) Carbon tetrachloride       | 4.87  | 117  | 167929   | 24.106 | ug/L  | 99       |
| 34) Benzene                    | 5.15  | 78   | 460063   | 23.851 | ug/L  | 100      |
| 35) Trichloroethene            | 5.96  | 95   | 123294   | 24.011 | ug/L  | 99       |
| 36) Methylcyclohexane          | 6.18  | 83   | 200781   | 24.008 | ug/L  | 99       |
| 40) 1,2-Dichloropropane        | 6.22  | 63   | 124994   | 23.912 | ug/L  | 100      |
| 41) Bromodichloromethane       | 6.55  | 83   | 154522   | 23.503 | ug/L  | 98       |
| 42) cis-1,3-Dichloropropene    | 7.07  | 75   | 180175   | 23.638 | ug/L  | 100      |
| 43) 4-Methyl-2-pentanone       | 7.28  | 43   | 174225   | 36.603 | ug/L  | 99       |
| 44) Toluene                    | 7.43  | 91   | 491334   | 23.998 | ug/L  | 100      |
| 45) trans-1,3-Dichloropropene  | 7.69  | 75   | 155471   | 23.794 | ug/L  | 99       |
| 46) 1,1,2-Trichloroethane      | 7.88  | 97   | 87476    | 21.869 | ug/L  | 98       |
| 47) Tetrachloroethene          | 8.02  | 164  | 93997    | 23.282 | ug/L  | 95       |
| 49) 2-Hexanone                 | 8.19  | 43   | 145250   | 37.033 | ug/L  | 98       |
| 50) Dibromochloromethane       | 8.29  | 129  | 104587   | 22.598 | ug/L  | 97       |
| 51) 1,2-Dibromoethane          | 8.40  | 107  | 84525    | 21.500 | ug/L  | 96       |
| 52) Chlorobenzene              | 8.93  | 112  | 303411   | 23.061 | ug/L  | 99       |
| 53) Ethylbenzene               | 9.05  | 91   | 548791   | 24.068 | ug/L  | 100      |
| 54) m,p-Xylene                 | 9.18  | 106  | 204649   | 24.397 | ug/L  | 98       |
| 55) o-xylene                   | 9.59  | 106  | 191659   | 24.311 | ug/L  | 95       |
| 56) Styrene                    | 9.60  | 104  | 327010   | 24.211 | ug/L  | 100      |
| 57) Isopropylbenzene           | 9.98  | 105  | 530589   | 24.169 | ug/L  | 99       |
| 58) 1,1,2,2-Tetrachloroethane  | 10.29 | 83   | 111215   | 19.259 | ug/L  | 98       |
| 59) 1,2,3-Trichloropropane     | 10.32 | 75   | 84773    | 18.896 | ug/L  | 99       |
| 62) Bromoform                  | 9.78  | 173  | 57810    | 21.032 | ug/L  | 99       |
| 63) 1,3-Dichlorobenzene        | 11.23 | 146  | 231796   | 23.158 | ug/L  | 99       |
| 64) 1,4-Dichlorobenzene        | 11.32 | 146  | 234462   | 22.877 | ug/L  | 99       |
| 65) 1,2-Dichlorobenzene        | 11.69 | 146  | 218829   | 22.656 | ug/L  | 98       |
| 66) 1,2-Dibromo-3-chloropropan | 12.48 | 75   | 19379    | 17.248 | ug/L  | 98       |
| 67) 1,3,5-Trichlorobenzene     | 12.69 | 180  | 175288   | 23.357 | ug/L  | 99       |
| 68) 1,2,4-trichlorobenzene     | 13.31 | 180  | 140491   | 23.574 | ug/L  | 99       |
| 69) Naphthalene                | 13.55 | 128  | 252082   | 19.922 | ug/L  | 100      |
| 70) 1,2,3-Trichlorobenzene     | 13.79 | 180  | 128476   | 22.542 | ug/L  | 99       |

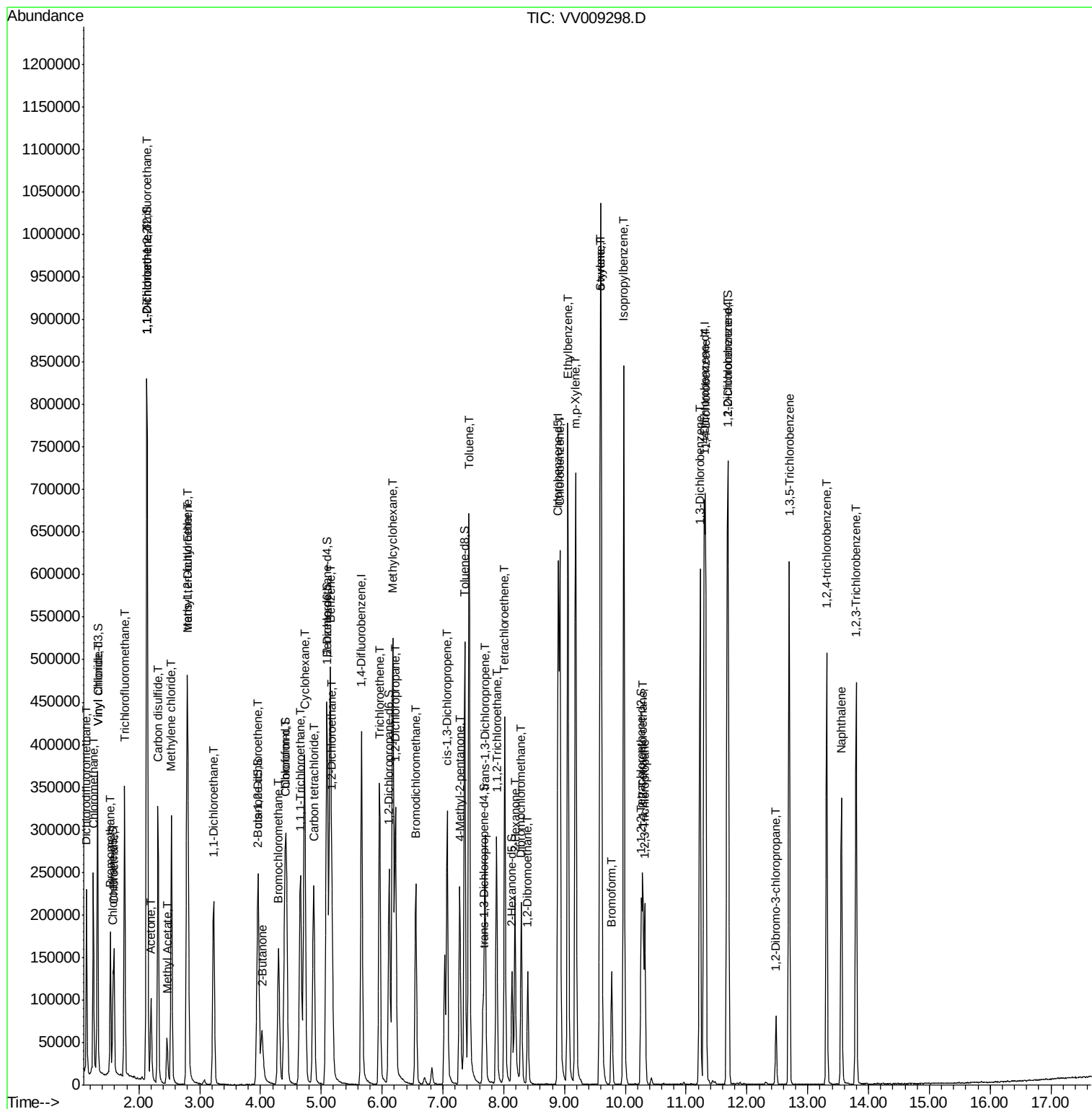
(#) = qualifier out of range (m) = manual integration (+) = signals summed

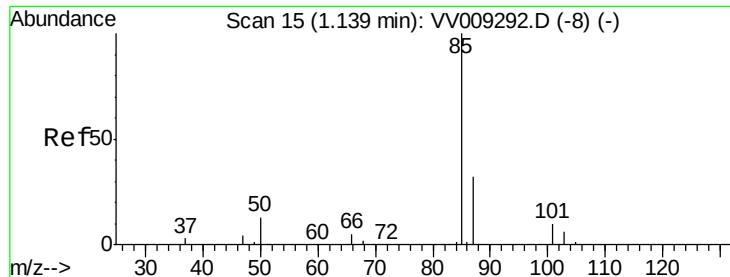
Data File : VV009298.D

```
Acq On       : 13 Feb 2019   18:10
Operator     : SY/MD
Sample       : VSTDCCC025EC
Misc         : 5.00G/10ML/MSV0A_V/SOIL
ALS Vial     : 1      Sample Multiplier: 1
```

**Instrument :**  
MSVOA\_V  
**ClientSampleId :**  
VSTD02567

Quant Time: Feb 14 02:56:02 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSV0A\_V\METHOD\SOM2VLM021319S.M  
Quant Title : VOC Analysis  
QLast Update : Wed Feb 13 15:25:45 2019  
Response via : Initial Calibration





#2

Dichlorodifluoromethane

Concen: 20.484 ug/L

RT: 1.14 min Scan# 15

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

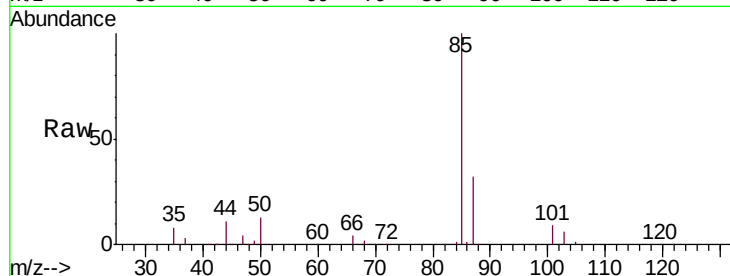
VSTD02567

Tgt Ion: 85 Resp: 112503

Ion Ratio Lower Upper

85 100

87 31.9 22.2 41.2



Abundance Ion 85.00 (84.70 to 85.70): VV009298.D (-8) (-)

Ion 87.00 (86.70 to 87.70): VV009298.D (-8) (-)

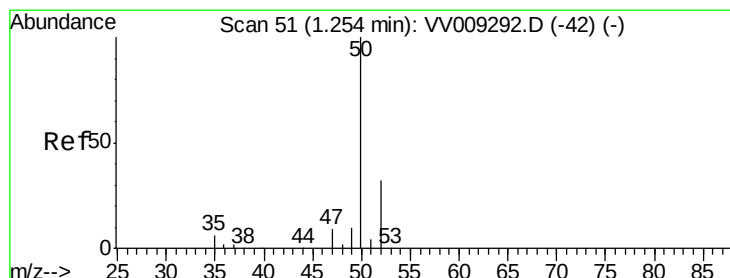
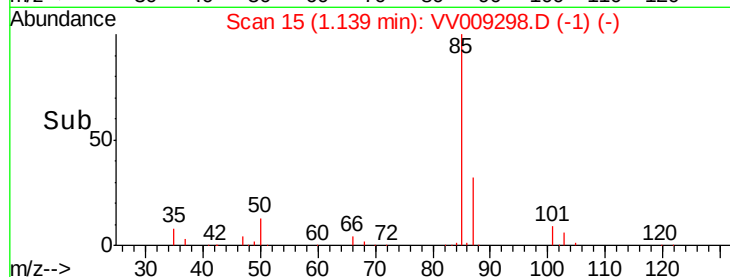
1.14

100000

50000

0

Time-->



#3

Chloromethane

Concen: 20.288 ug/L

RT: 1.25 min Scan# 50

Delta R.T. -0.00 min

Lab File: VV009298.D

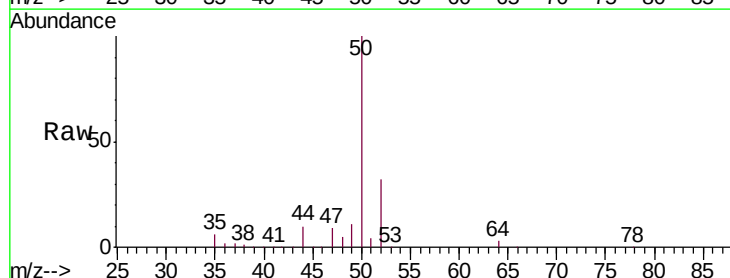
Acq: 13 Feb 2019 18:10

Tgt Ion: 50 Resp: 126469

Ion Ratio Lower Upper

50 100

52 31.7 22.3 41.5



Abundance Ion 50.00 (49.70 to 50.70): VV009298.D (-42) (-)

Ion 52.00 (51.70 to 52.70): VV009298.D (-42) (-)

1.25

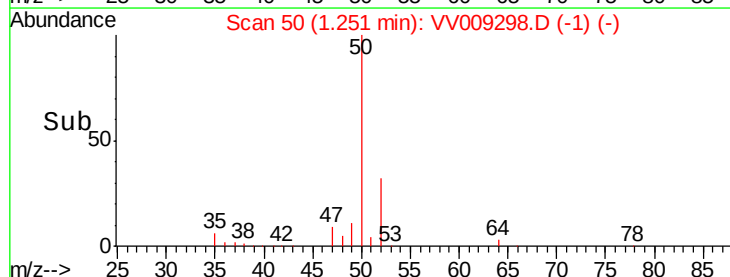
150000

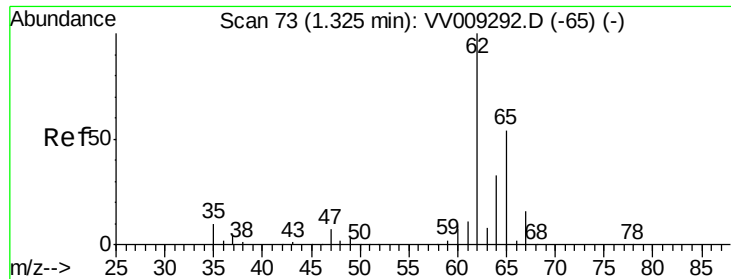
100000

50000

0

Time-->





#5

Vinyl chloride

Concen: 22.443 ug/L

RT: 1.32 min Scan# 72

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

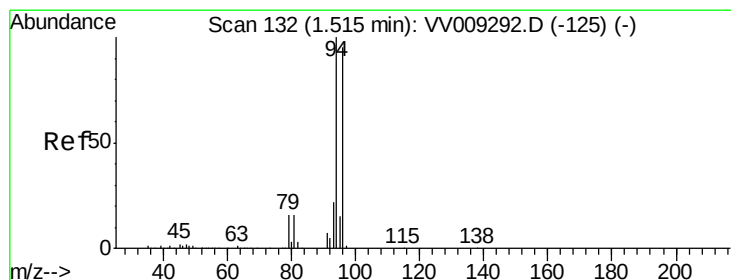
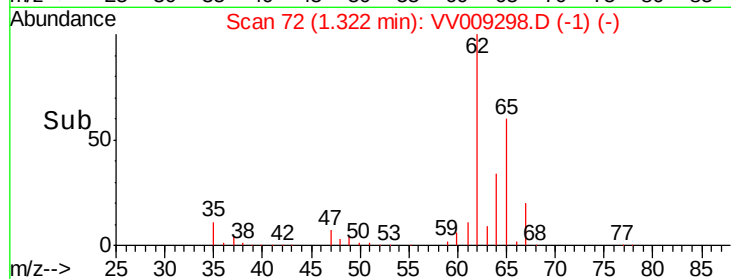
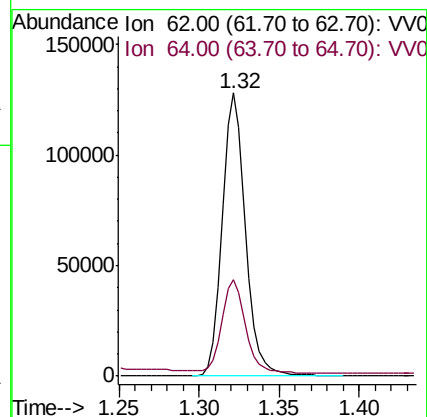
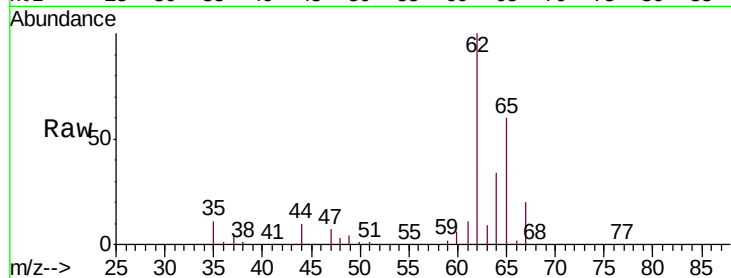
VSTD02567

Tgt Ion: 62 Resp: 129374

Ion Ratio Lower Upper

62 100

64 34.2 24.2 45.0



#6

Bromomethane

Concen: 21.689 ug/L

RT: 1.53 min Scan# 137

Delta R.T. 0.02 min

Lab File: VV009298.D

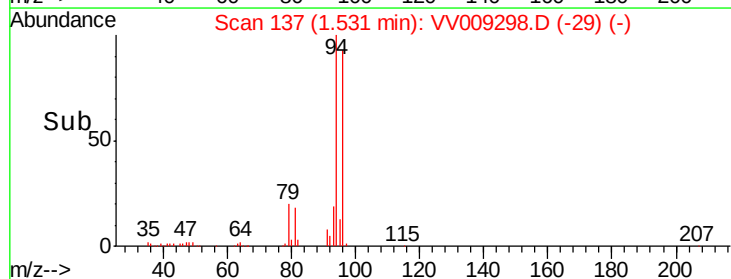
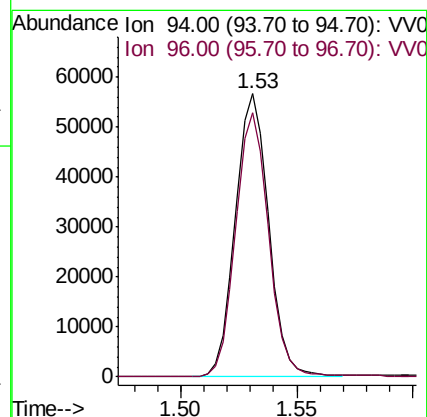
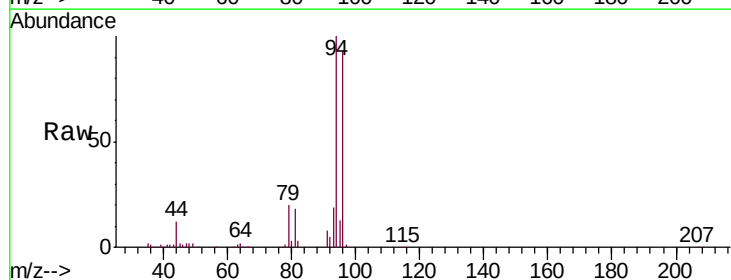
Acq: 13 Feb 2019 18:10

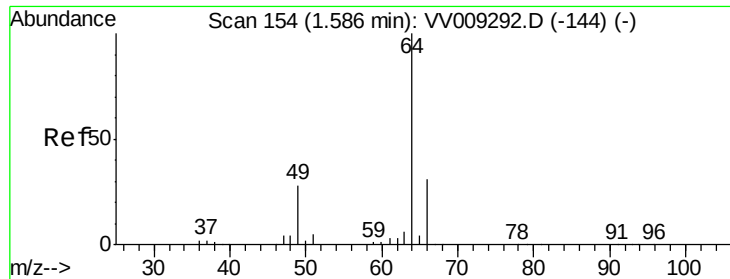
Tgt Ion: 94 Resp: 56258

Ion Ratio Lower Upper

94 100

96 93.5 9.6 182.0





#8

Chloroethane

Concen: 20.255 ug/L

RT: 1.59 min Scan# 156

Delta R.T. 0.01 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

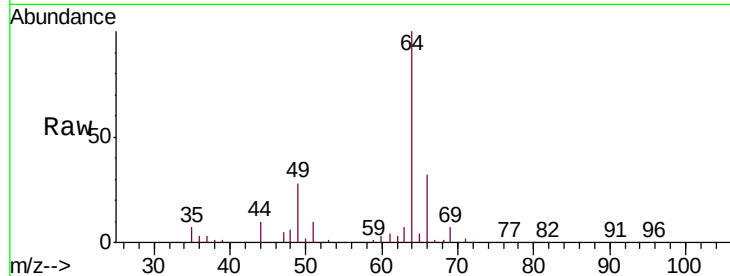
VSTD02567

Tgt Ion: 64 Resp: 73673

Ion Ratio Lower Upper

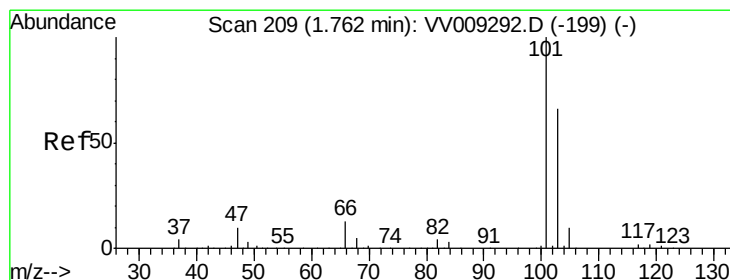
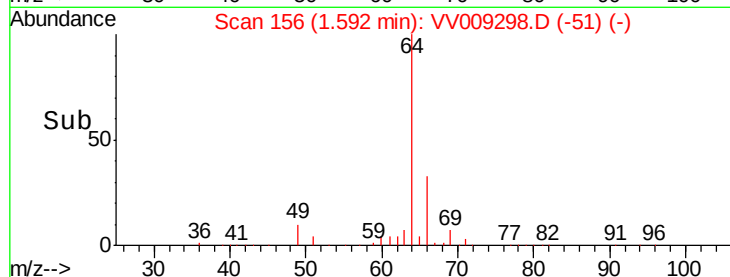
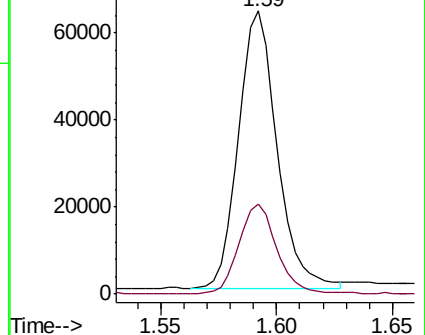
64 100

66 31.7 21.1 39.3



Abundance Ion 64.00 (63.70 to 64.70): VV009292.D (-144) (-)

Ion 66.00 (65.70 to 66.70): VV009292.D (-144) (-)



#9

Trichlorofluoromethane

Concen: 22.939 ug/L

RT: 1.77 min Scan# 210

Delta R.T. 0.00 min

Lab File: VV009298.D

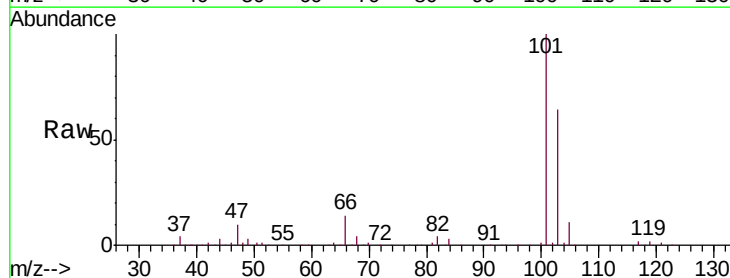
Acq: 13 Feb 2019 18:10

Tgt Ion: 101 Resp: 191440

Ion Ratio Lower Upper

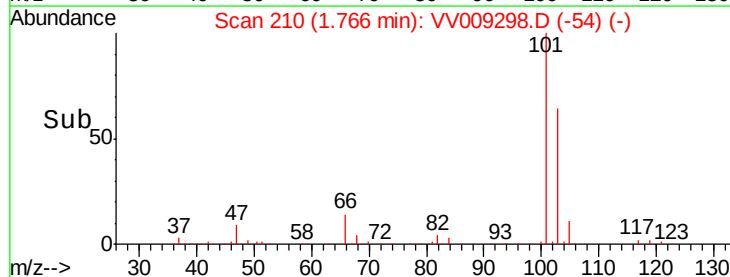
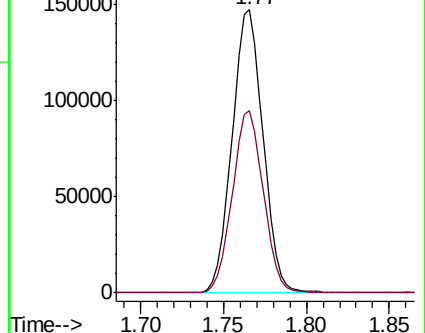
101 100

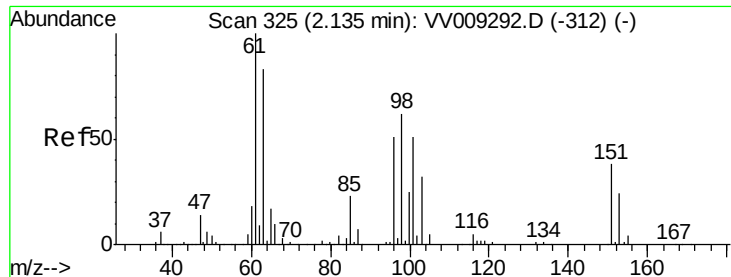
103 64.7 45.8 85.2



Abundance Ion 101.00 (100.70 to 101.70): VV009292.D (-199) (-)

Ion 103.00 (102.70 to 103.70): VV009292.D (-199) (-)





#11

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

Concen: 23.171 ug/L

RT: 2.14 min Scan# 325

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

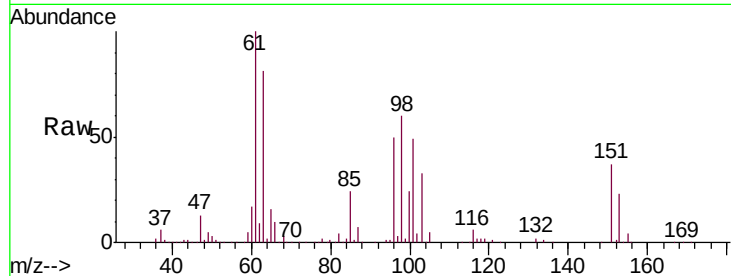
Tgt Ion: 101 Resp: 107381

Ion Ratio Lower Upper

101 100

85 47.0 36.2 54.2

151 73.1 59.9 89.9

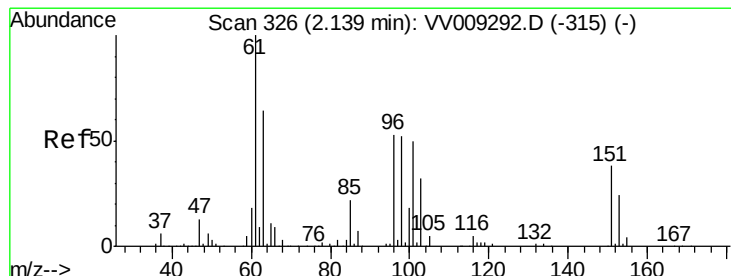
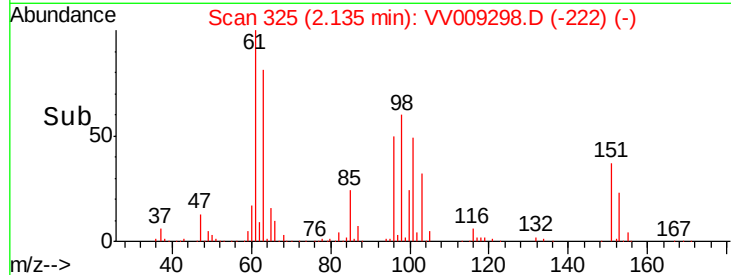


Abundance Ion 101.00 (100.70 to 101.70): VV009298.D (-222) (-)

Ion 85.00 (84.70 to 85.70): VV009298.D (-222) (-)

Ion 151.00 (150.70 to 151.70): VV009298.D (-222) (-)

Time-->



#12

1,1-Dichloroethene

Concen: 22.359 ug/L

RT: 2.14 min Scan# 326

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

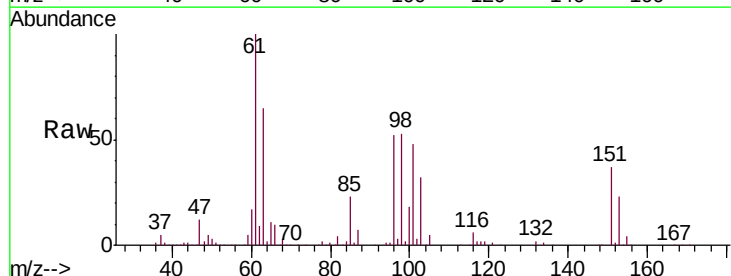
Tgt Ion: 96 Resp: 94227

Ion Ratio Lower Upper

96 100

61 194.0 131.8 244.8

63 125.3 88.8 165.0

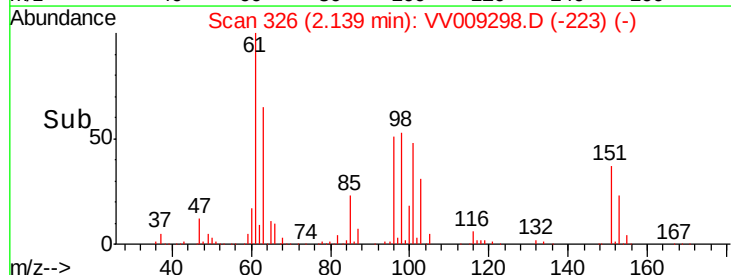


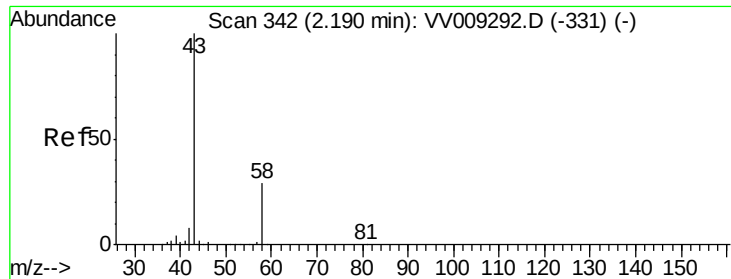
Abundance Ion 96.00 (95.70 to 96.70): VV009298.D (-223) (-)

Ion 61.00 (60.70 to 61.70): VV009298.D (-223) (-)

Ion 63.00 (62.70 to 63.70): VV009298.D (-223) (-)

Time-->





#13

Acetone

Concen: 35.554 ug/L

RT: 2.20 min Scan# 345

Delta R.T. 0.01 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

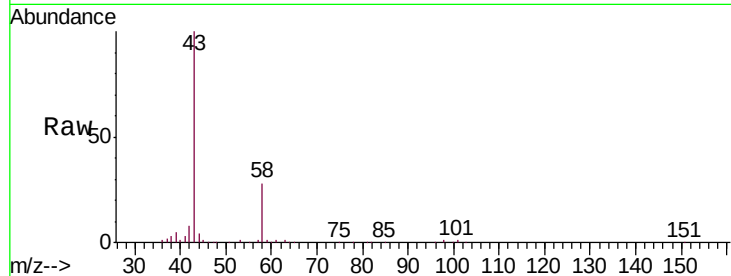
VSTD02567

Tgt Ion: 43 Resp: 108908

Ion Ratio Lower Upper

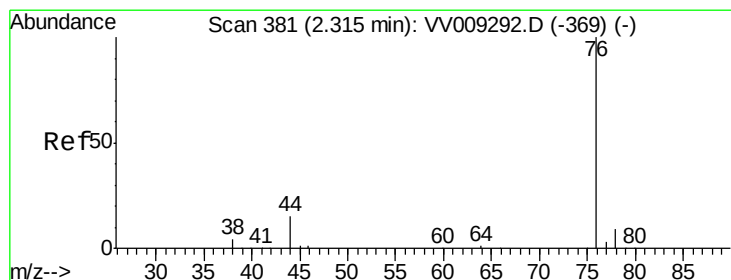
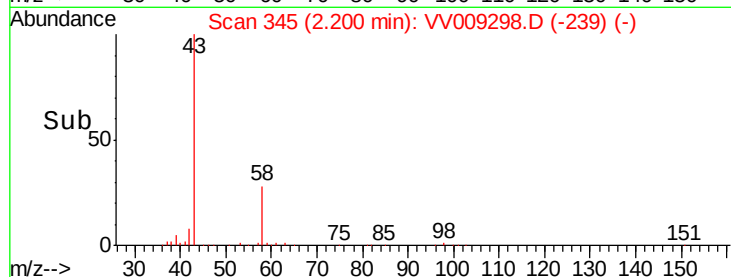
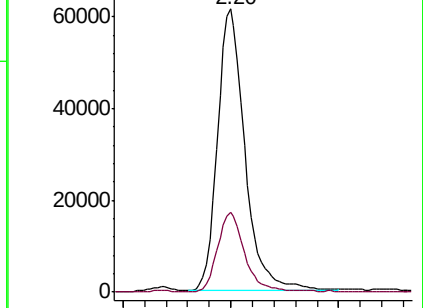
43 100

58 28.6 0.0 57.2



Abundance Ion 43.00 (42.70 to 43.70): VV009292.D (-331) (-)

Ion 58.00 (57.70 to 58.70): VV009292.D (-331) (-)



#14

Carbon disulfide

Concen: 22.173 ug/L

RT: 2.32 min Scan# 381

Delta R.T. -0.00 min

Lab File: VV009298.D

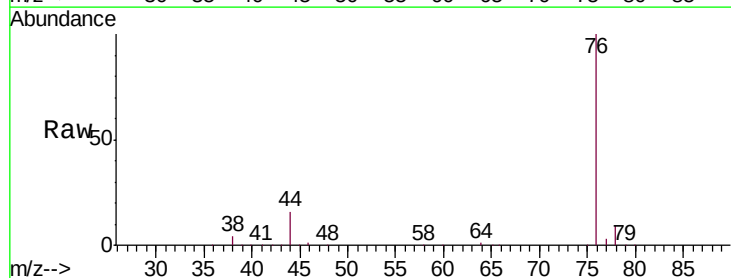
Acq: 13 Feb 2019 18:10

Tgt Ion: 76 Resp: 358526

Ion Ratio Lower Upper

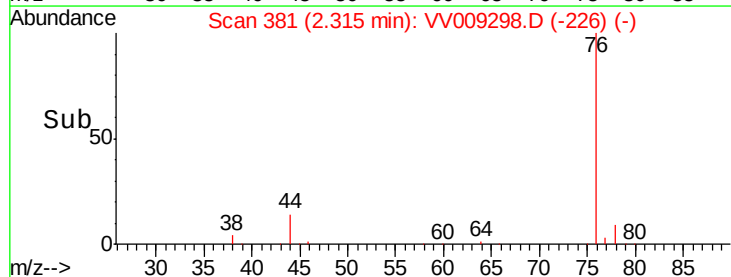
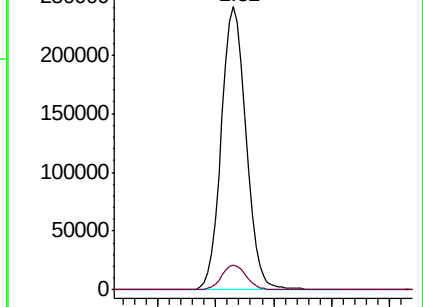
76 100

78 8.7 7.3 10.9

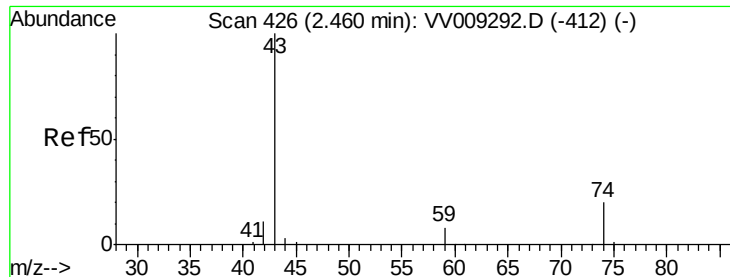


Abundance Ion 76.00 (75.70 to 76.70): VV009292.D (-369) (-)

Ion 78.00 (77.70 to 78.70): VV009292.D (-369) (-)



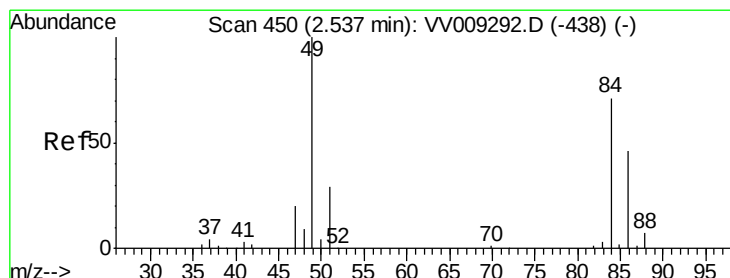
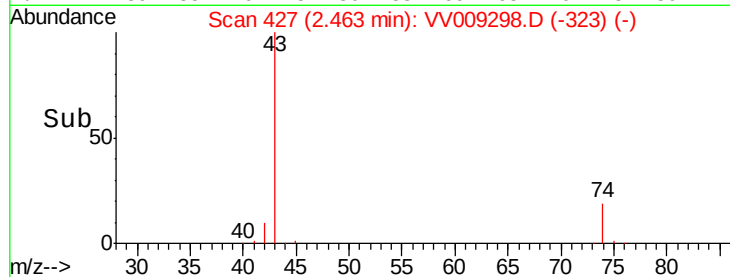
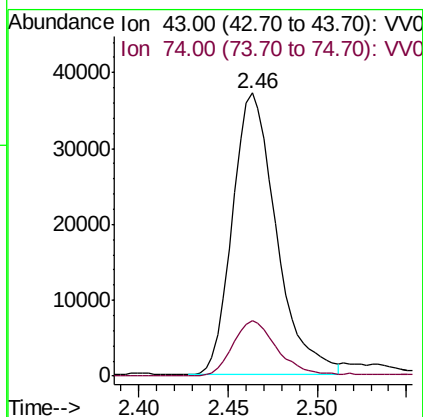
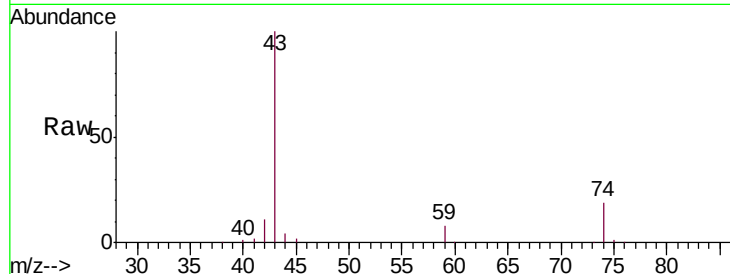




#15  
Methyl Acetate  
Concen: 15.442 ug/L  
RT: 2.46 min Scan# 427  
Delta R.T. 0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

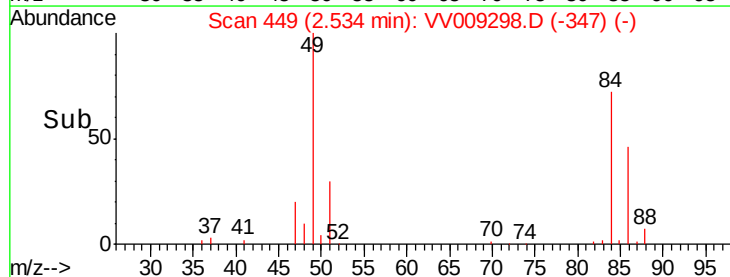
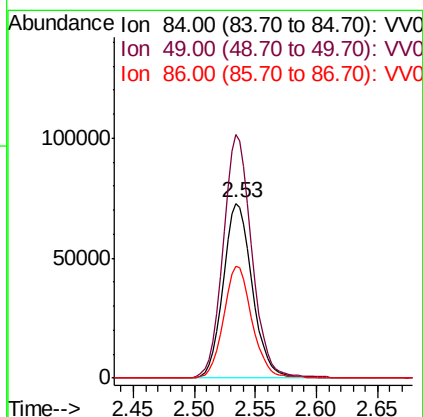
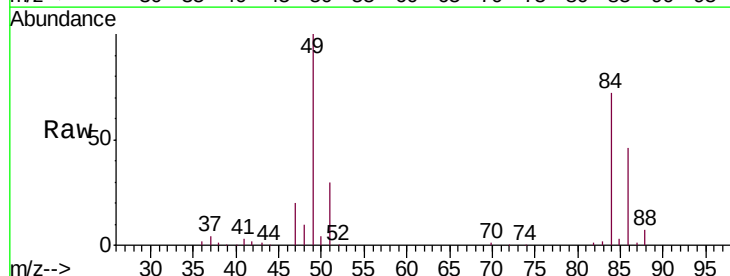
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

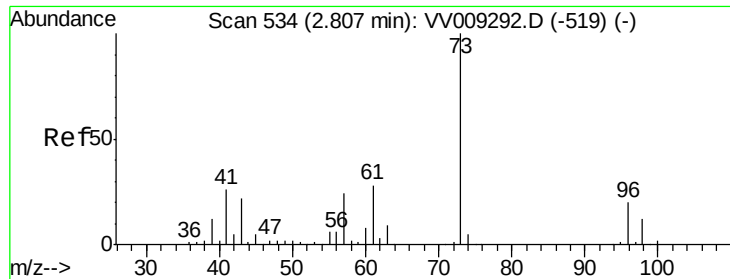
Tgt Ion: 43 Resp: 63568  
Ion Ratio Lower Upper  
43 100  
74 19.7 16.3 24.5



#16  
Methylene chloride  
Concen: 17.500 ug/L  
RT: 2.53 min Scan# 449  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Tgt Ion: 84 Resp: 122136  
Ion Ratio Lower Upper  
84 100  
49 139.4 98.4 182.8  
86 64.4 45.1 83.7

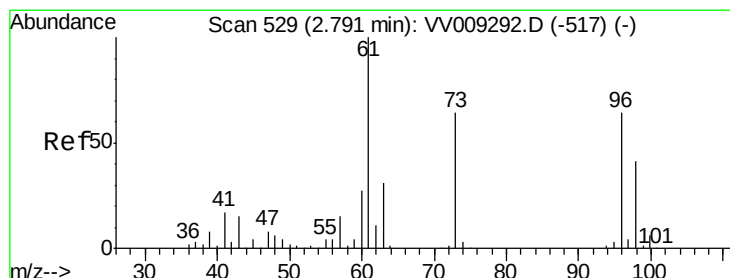
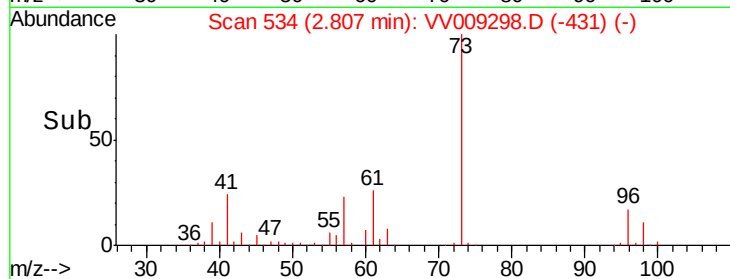
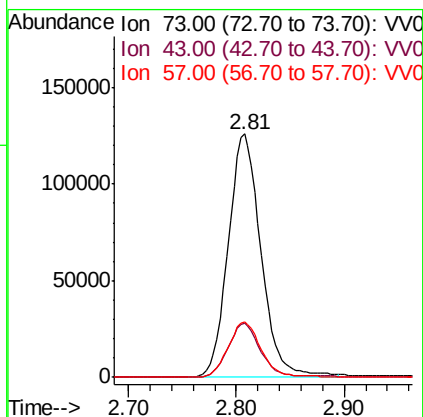
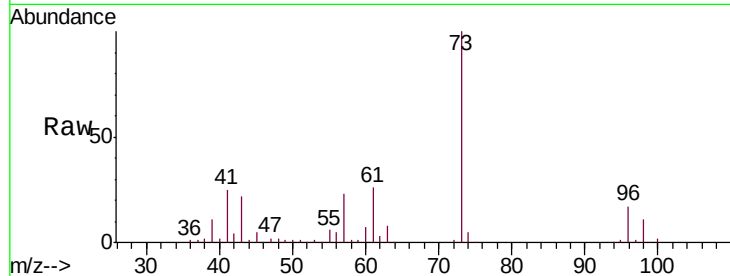




#17  
Methyl tert-butyl Ether  
Concen: 21.720 ug/L  
RT: 2.81 min Scan# 534  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

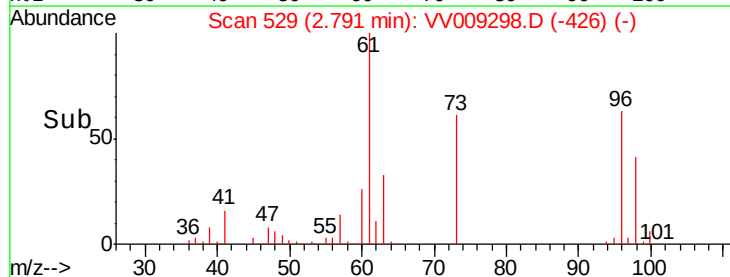
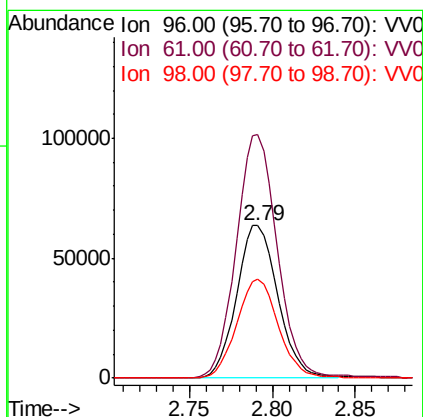
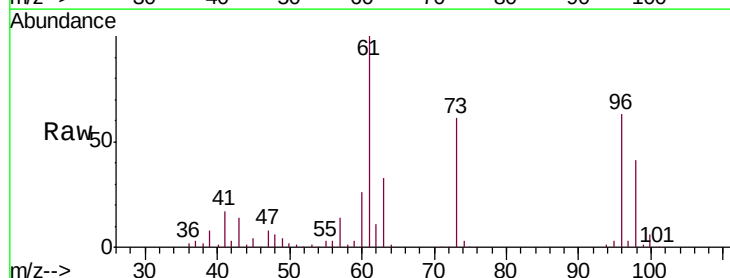
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

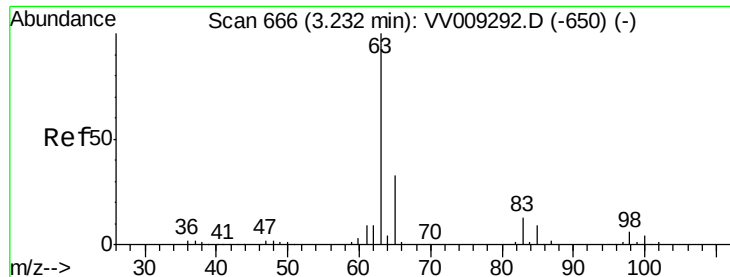
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 73    | Resp: | 266908 |
| Ion      | Ratio | Lower | Upper  |
| 73       | 100   |       |        |
| 43       | 21.7  | 18.2  | 27.4   |
| 57       | 22.6  | 19.0  | 28.4   |



#18  
trans-1,2-Dichloroethene  
Concen: 22.409 ug/L  
RT: 2.79 min Scan# 529  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 96    | Resp: | 110265 |
| Ion      | Ratio | Lower | Upper  |
| 96       | 100   |       |        |
| 61       | 159.6 | 109.0 | 202.4  |
| 98       | 65.1  | 44.3  | 82.3   |

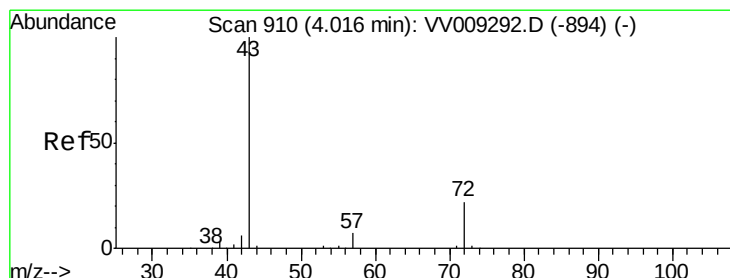
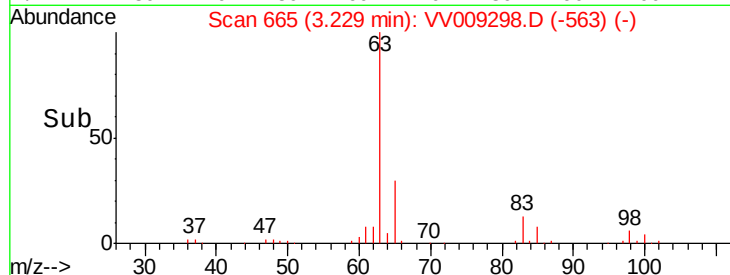
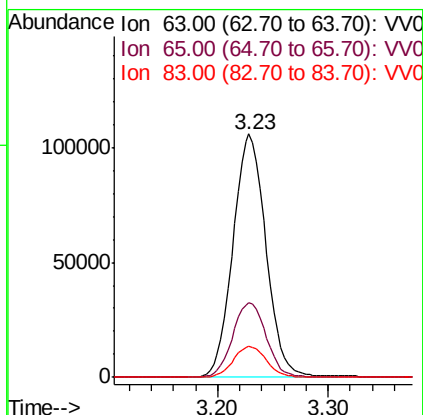
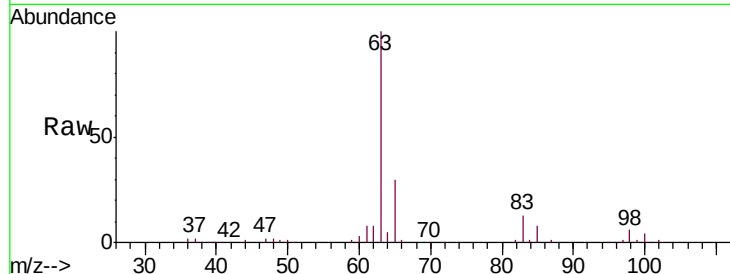




#19  
 1,1-Dichloroethane  
 Concen: 23.236 ug/L  
 RT: 3.23 min Scan# 665  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

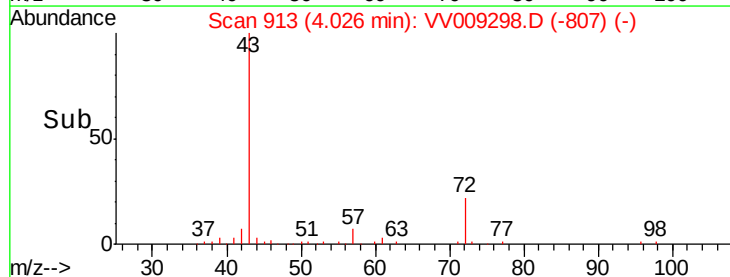
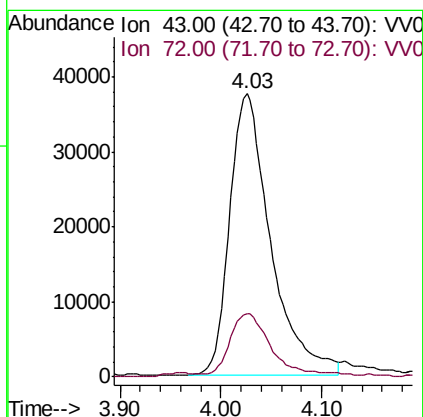
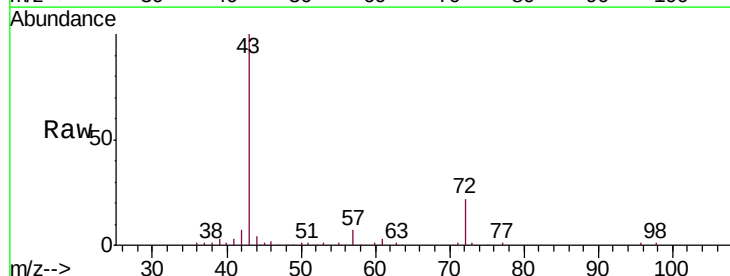
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

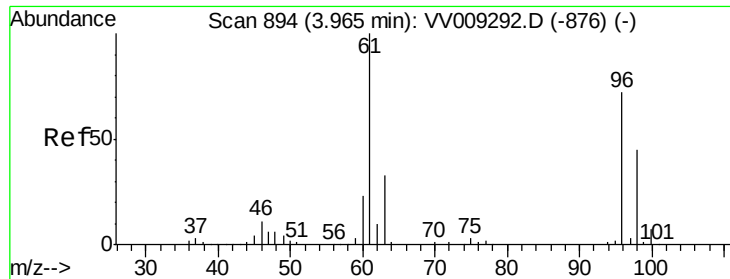
Tgt Ion: 63 Resp: 219667  
 Ion Ratio Lower Upper  
 63 100  
 65 30.4 23.3 43.3  
 83 12.6 9.1 16.9



#21  
 2-Butanone  
 Concen: 35.552 ug/L  
 RT: 4.03 min Scan# 913  
 Delta R.T. 0.01 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Tgt Ion: 43 Resp: 106012  
 Ion Ratio Lower Upper  
 43 100  
 72 20.5 11.3 33.8



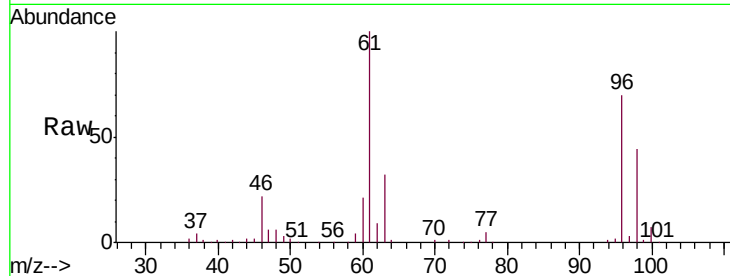


#22

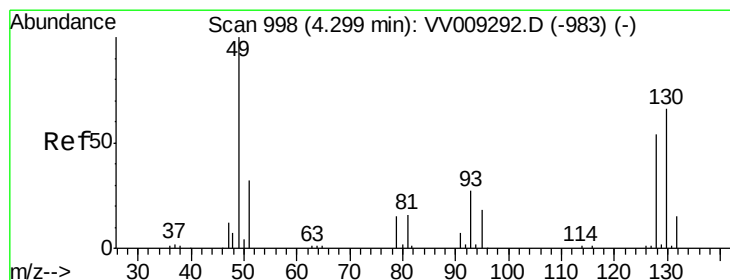
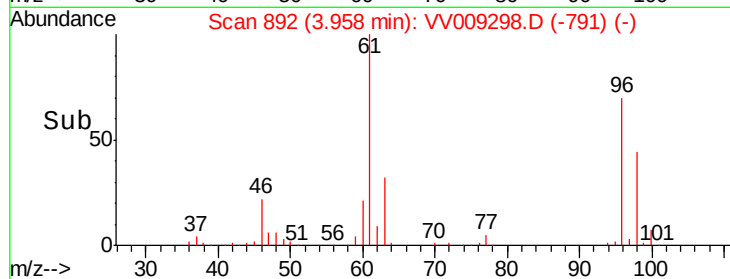
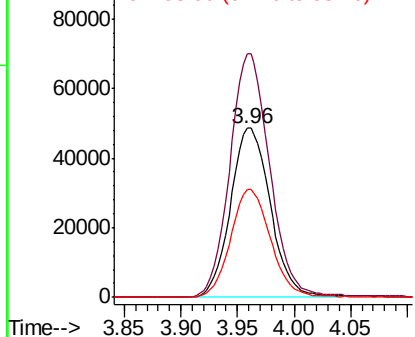
cis-1,2-Dichloroethene  
 Concen: 22.872 ug/L  
 RT: 3.96 min Scan# 892  
 Delta R.T. -0.01 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

Tgt Ion: 96 Resp: 119253  
 Ion Ratio Lower Upper  
 96 100  
 61 143.7 96.9 179.9  
 98 63.5 44.0 81.8



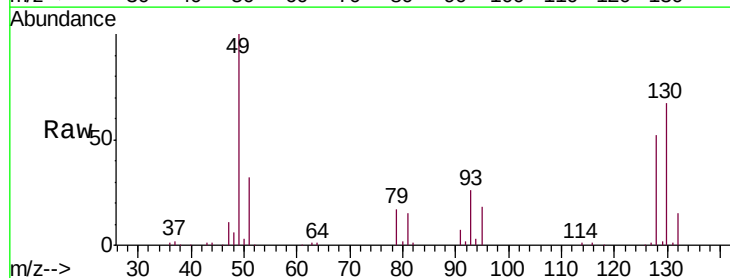
Abundance Ion 96.00 (95.70 to 96.70): VV0  
 Ion 61.00 (60.70 to 61.70): VV0  
 Ion 98.00 (97.70 to 98.70): VV0



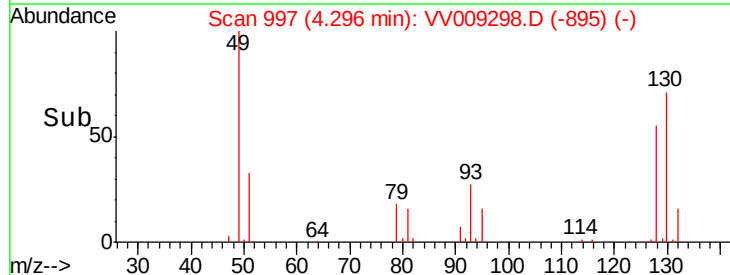
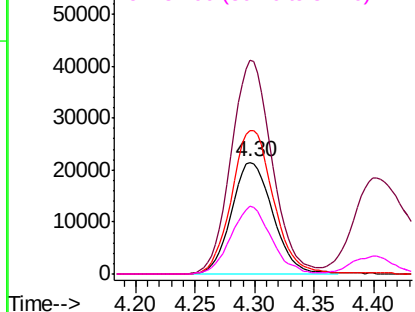
#23

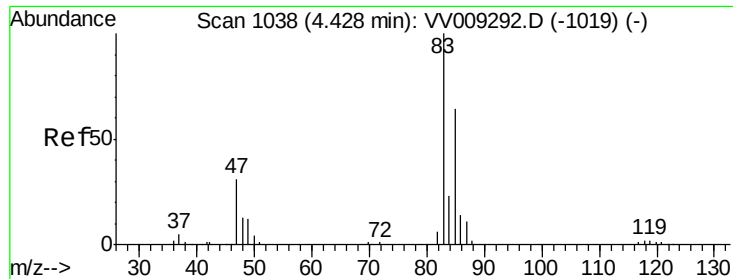
Bromochloromethane  
 Concen: 22.080 ug/L  
 RT: 4.30 min Scan# 997  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Tgt Ion: 128 Resp: 51822  
 Ion Ratio Lower Upper  
 128 100  
 49 191.1 130.6 242.6  
 130 128.2 85.9 159.5  
 51 60.3 47.2 70.8



Abundance Ion 128.00 (127.70 to 128.70): V  
 Ion 49.00 (48.70 to 49.70): VV0  
 Ion 130.00 (129.70 to 130.70): V  
 Ion 51.00 (50.70 to 51.70): VV0

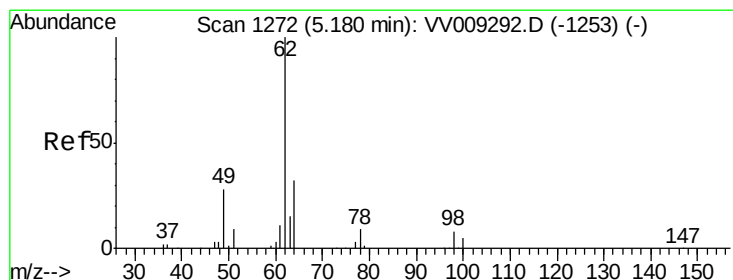
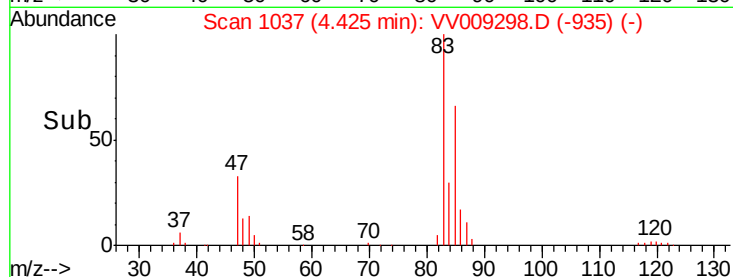
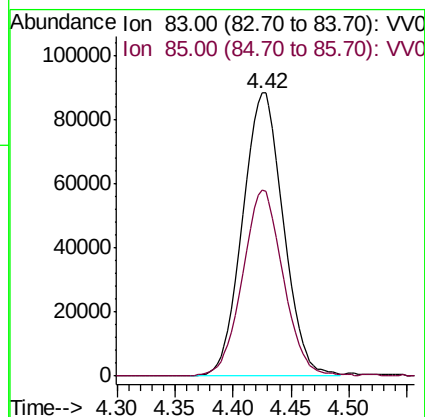
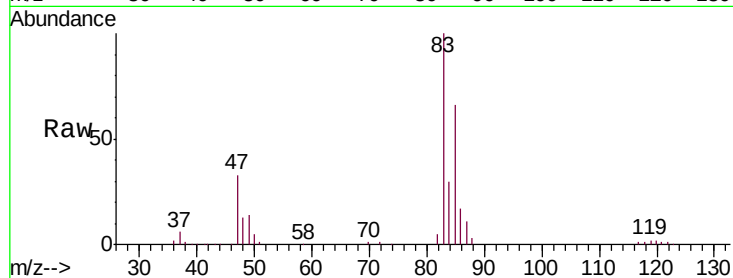




#25  
Chloroform  
Concen: 22.771 ug/L  
RT: 4.42 min Scan# 1037  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

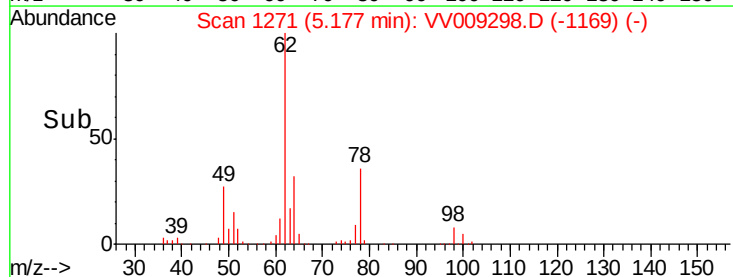
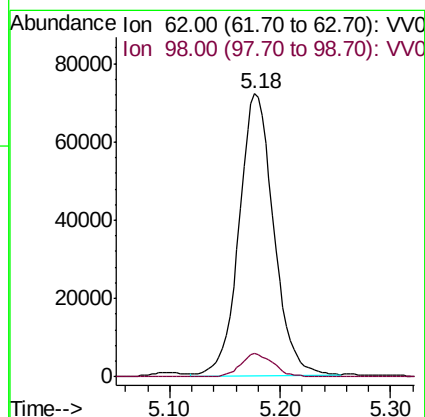
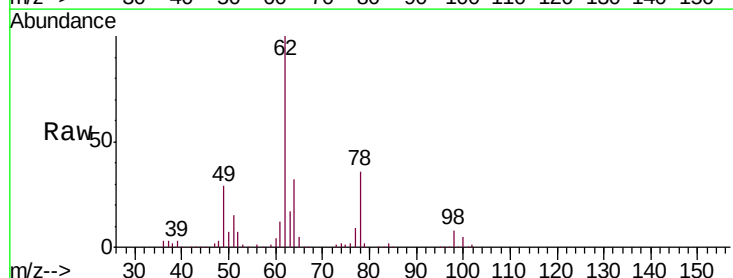
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

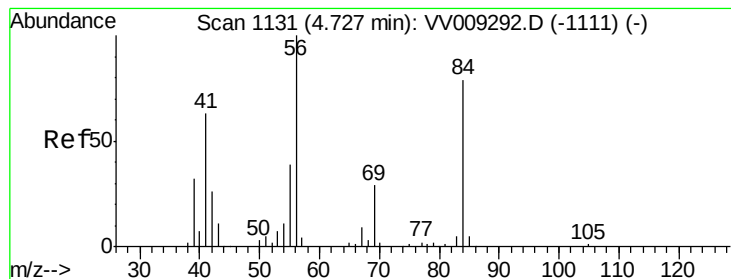
Tgt Ion: 83 Resp: 216193  
Ion Ratio Lower Upper  
83 100  
85 65.6 45.6 84.6



#27  
1,2-Dichloroethane  
Concen: 22.060 ug/L  
RT: 5.18 min Scan# 1271  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Tgt Ion: 62 Resp: 156170  
Ion Ratio Lower Upper  
62 100  
98 8.1 6.2 9.4





#30

Cyclohexane

Concen: 24.353 ug/L

RT: 4.72 min Scan# 1130

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

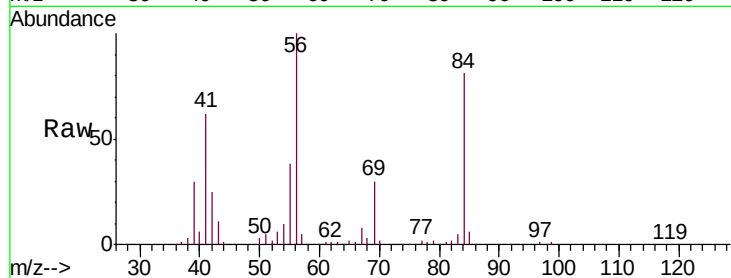
Tgt Ion: 56 Resp: 210778

Ion Ratio Lower Upper

56 100

69 29.5 23.5 35.3

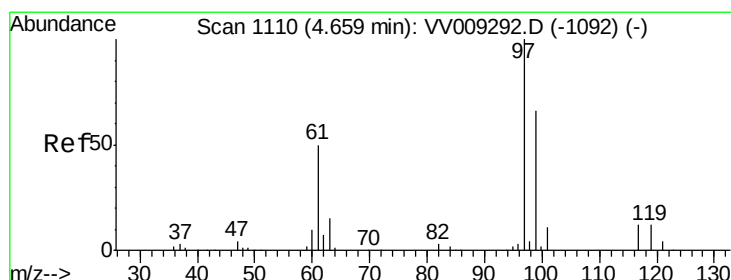
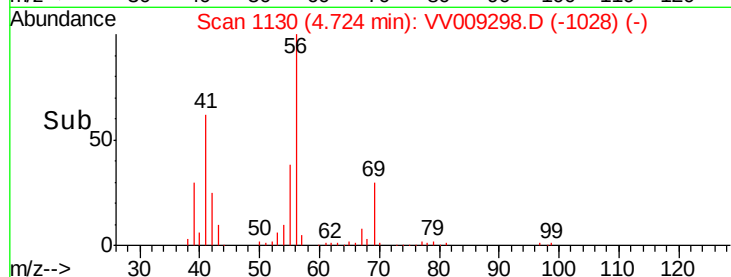
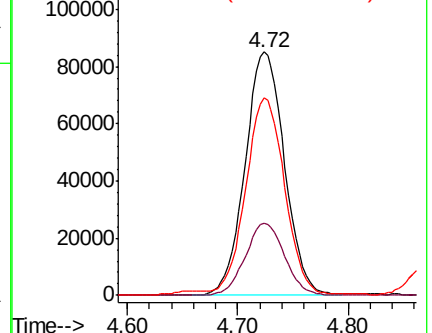
84 79.2 62.2 93.2



Abundance Ion 56.00 (55.70 to 56.70): VV0

Ion 69.00 (68.70 to 69.70): VV0

Ion 84.00 (83.70 to 84.70): VV0



#31

1,1,1-Trichloroethane

Concen: 24.735 ug/L

RT: 4.66 min Scan# 1109

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

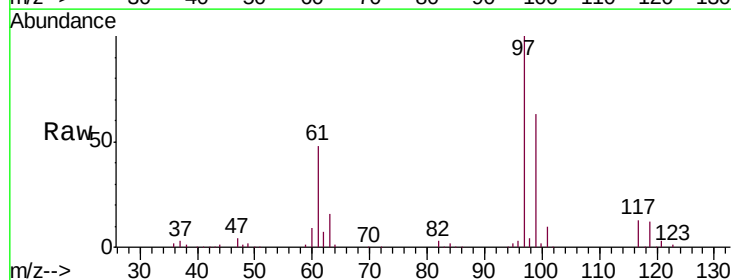
Tgt Ion: 97 Resp: 195638

Ion Ratio Lower Upper

97 100

99 62.9 51.7 77.5

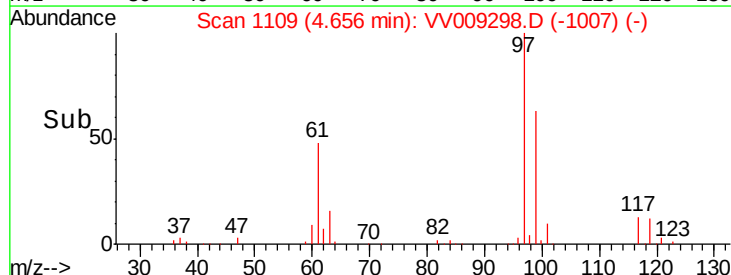
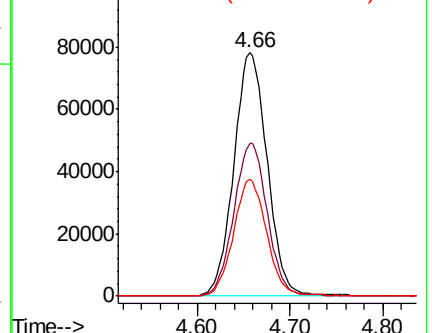
61 47.2 39.4 59.2

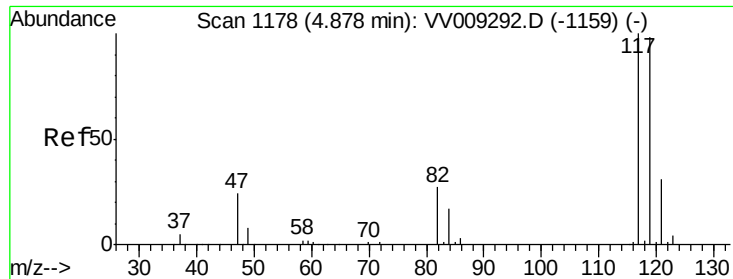


Abundance Ion 97.00 (96.70 to 97.70): VV0

Ion 99.00 (98.70 to 99.70): VV0

Ion 61.00 (60.70 to 61.70): VV0





#32

Carbon tetrachloride

Concen: 24.106 ug/L

RT: 4.87 min Scan# 1177

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

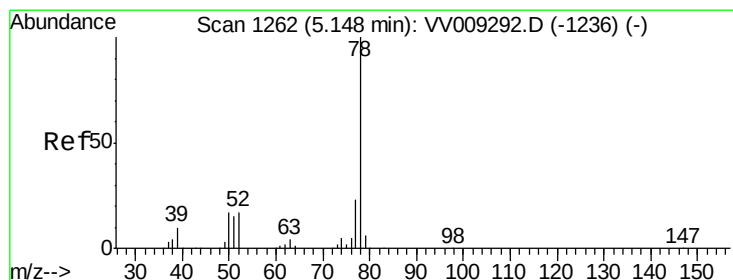
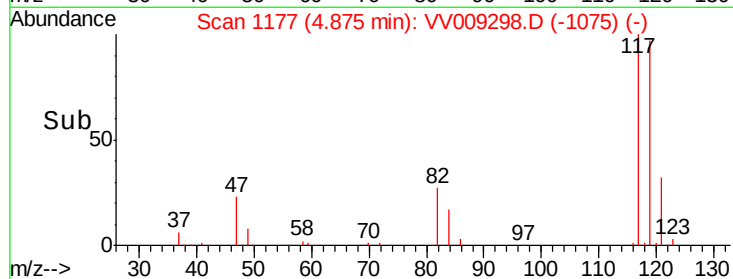
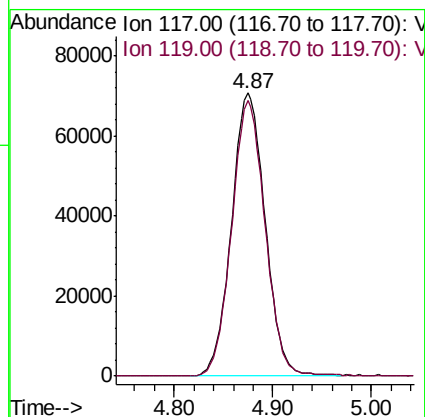
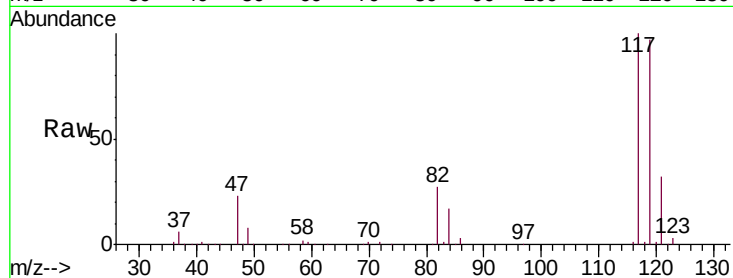
VSTD02567

Tgt Ion:117 Resp: 167929

Ion Ratio Lower Upper

117 100

119 96.1 77.5 116.3



#34

Benzene

Concen: 23.851 ug/L

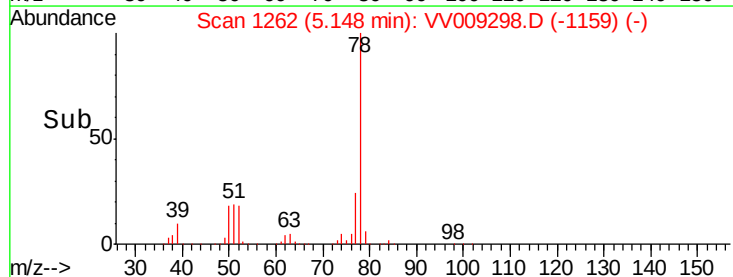
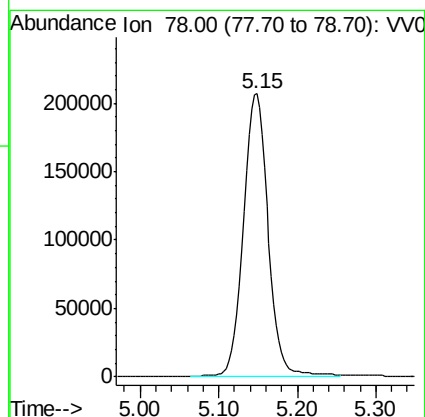
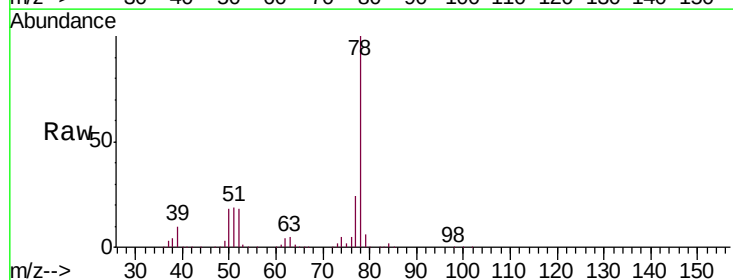
RT: 5.15 min Scan# 1262

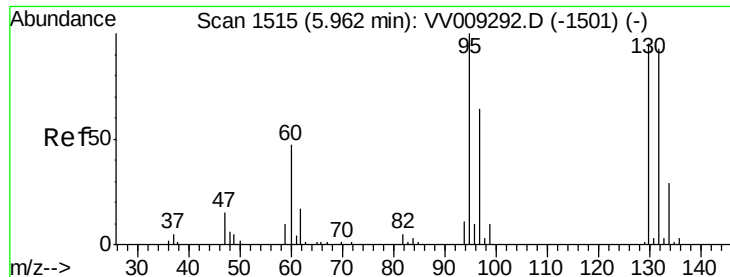
Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Tgt Ion: 78 Resp: 460063





#35

Trichloroethene

Concen: 24.011 ug/L

RT: 5.96 min Scan# 1514

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

Tgt Ion: 95 Resp: 123294

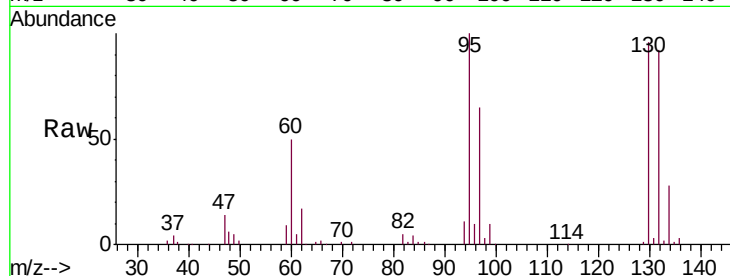
Ion Ratio Lower Upper

95 100

97 64.9 44.4 82.5

132 94.1 65.9 122.5

130 95.3 65.8 122.2

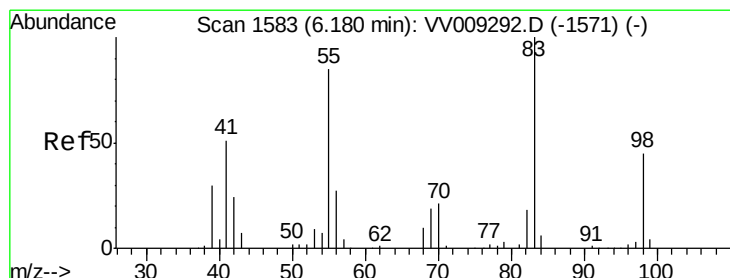
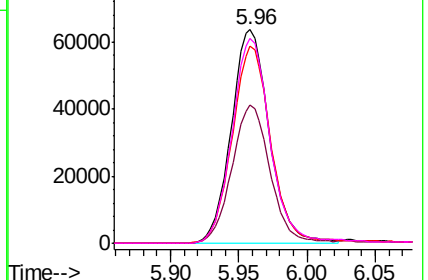
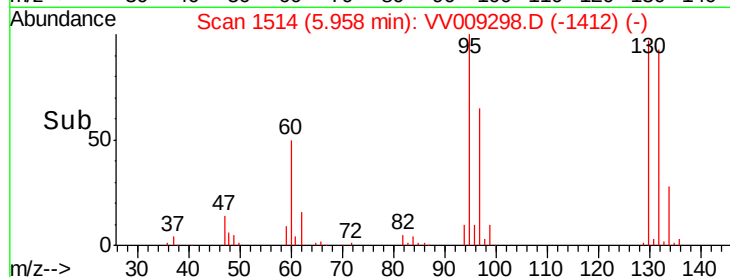


Abundance Ion 95.00 (94.70 to 95.70): VV009292.D (-1501) (-)

Ion 97.00 (96.70 to 97.70): VV009292.D (-1501) (-)

Ion 132.00 (131.70 to 132.70): VV009292.D (-1501) (-)

Ion 130.00 (129.70 to 130.70): VV009292.D (-1501) (-)



#36

Methylcyclohexane

Concen: 24.008 ug/L

RT: 6.18 min Scan# 1582

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

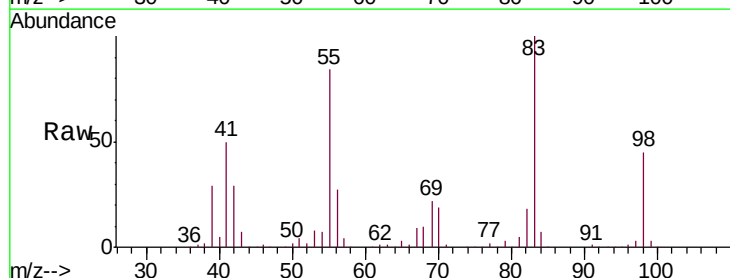
Tgt Ion: 83 Resp: 200781

Ion Ratio Lower Upper

83 100

55 88.3 70.6 105.8

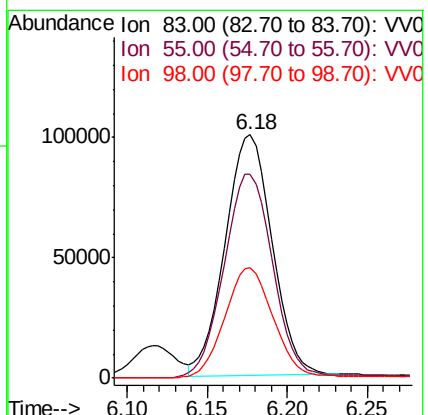
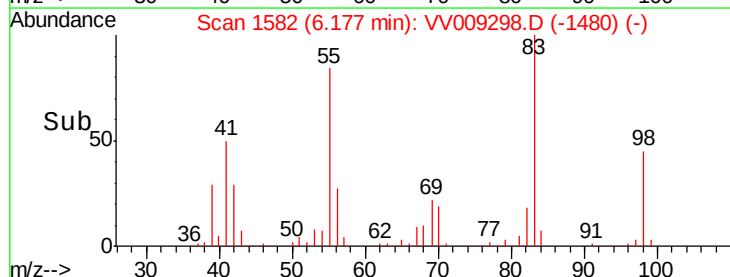
98 47.2 36.7 55.1



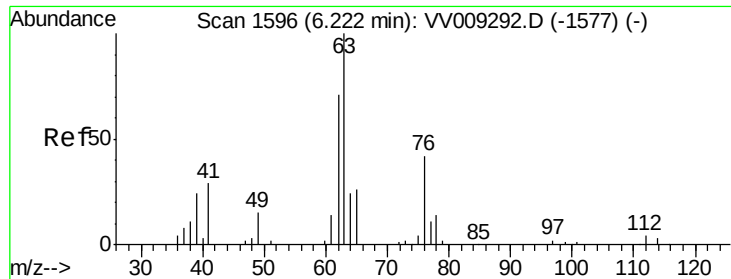
Abundance Ion 83.00 (82.70 to 83.70): VV009292.D (-1571) (-)

Ion 55.00 (54.70 to 55.70): VV009292.D (-1571) (-)

Ion 98.00 (97.70 to 98.70): VV009292.D (-1571) (-)



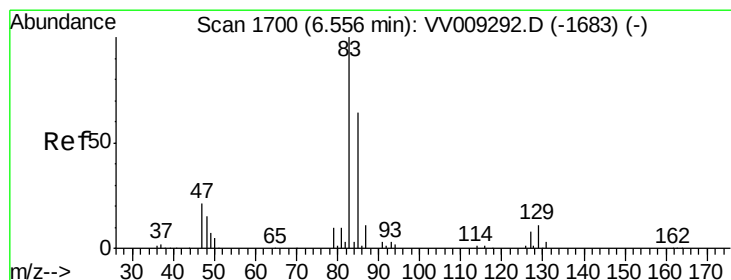
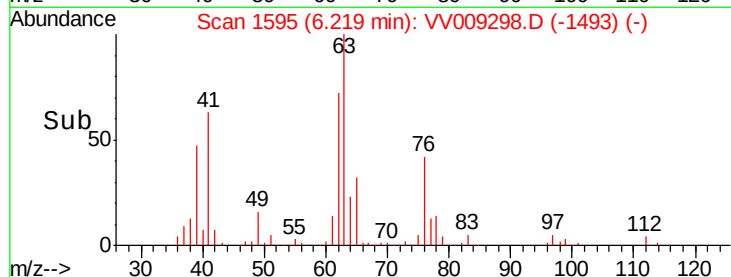
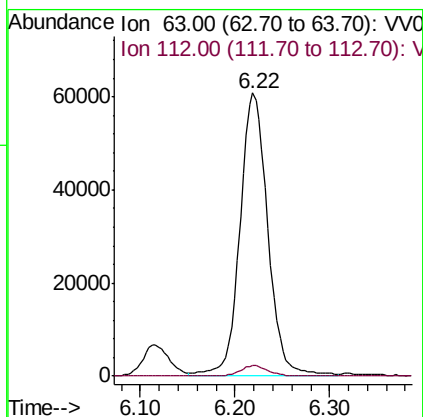
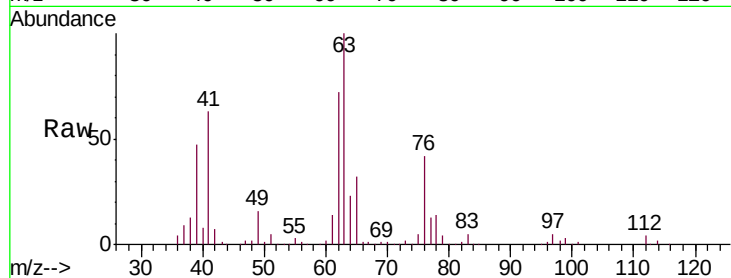




#40  
 1,2-Dichloropropane  
 Concen: 23.912 ug/L  
 RT: 6.22 min Scan# 1595  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

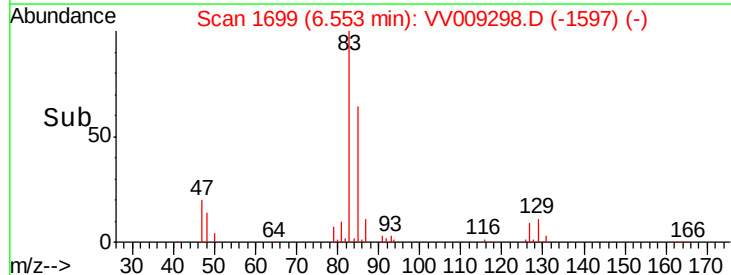
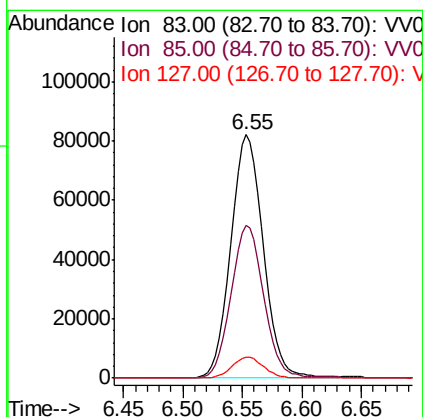
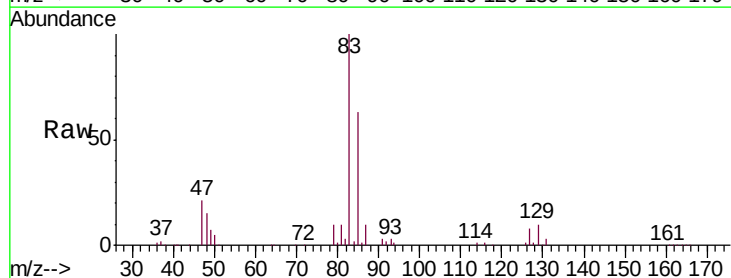
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

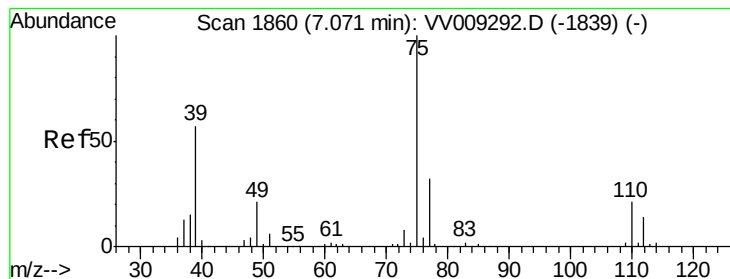
Tgt Ion: 63 Resp: 124994  
 Ion Ratio Lower Upper  
 63 100  
 112 3.7 3.0 4.4



#41  
 Bromodichloromethane  
 Concen: 23.503 ug/L  
 RT: 6.55 min Scan# 1699  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Tgt Ion: 83 Resp: 154522  
 Ion Ratio Lower Upper  
 83 100  
 85 62.9 45.0 83.6  
 127 8.4 6.4 9.6



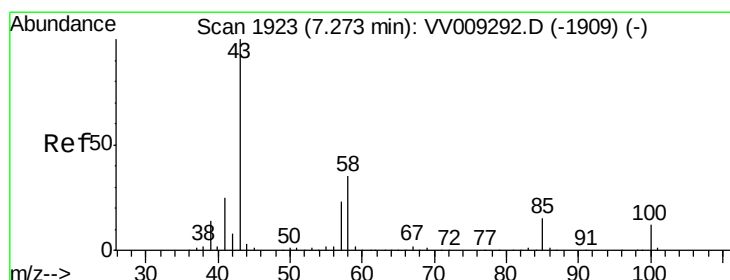
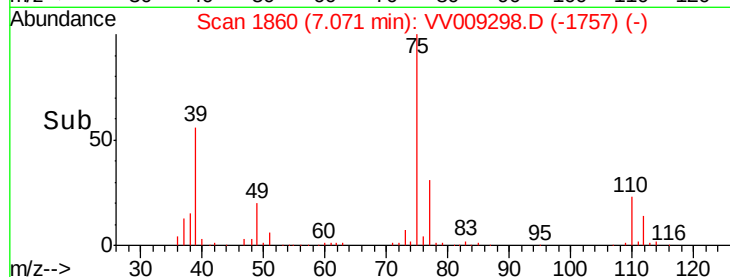
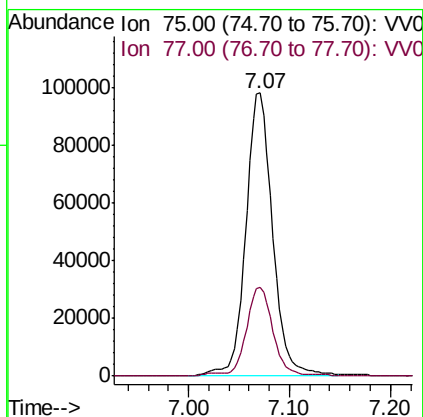
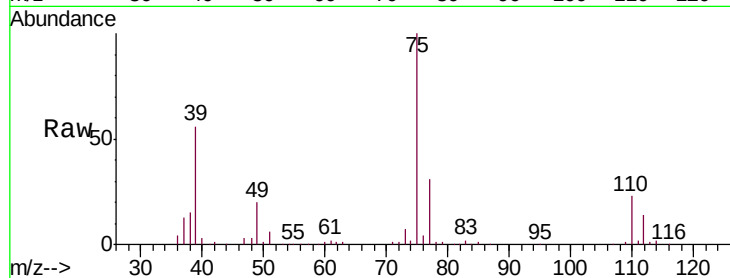


#42

cis-1,3-Dichloropropene  
Concen: 23.638 ug/L  
RT: 7.07 min Scan# 1860  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

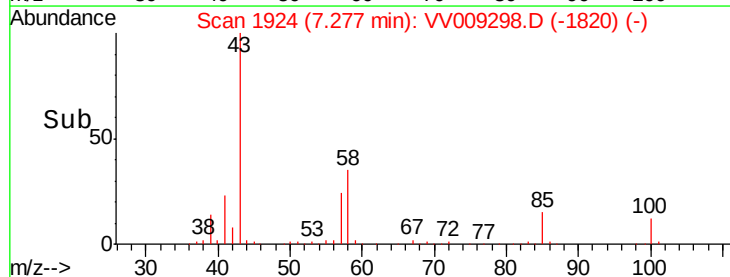
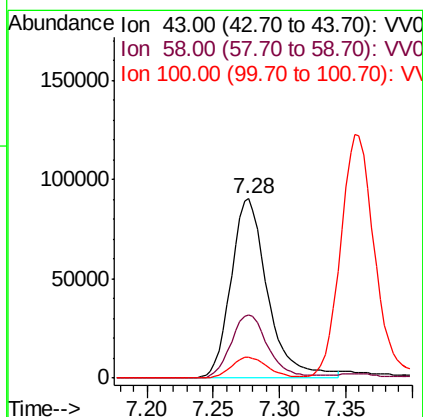
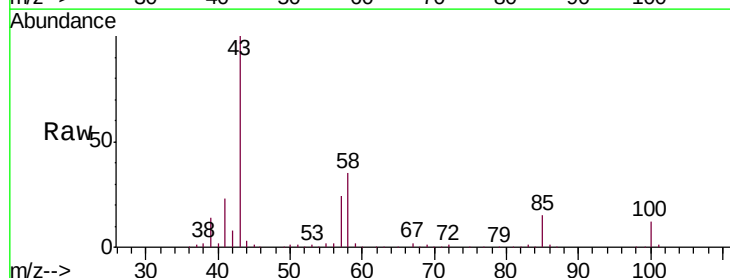
Tgt Ion: 75 Resp: 180175  
Ion Ratio Lower Upper  
75 100  
77 31.5 22.2 41.2

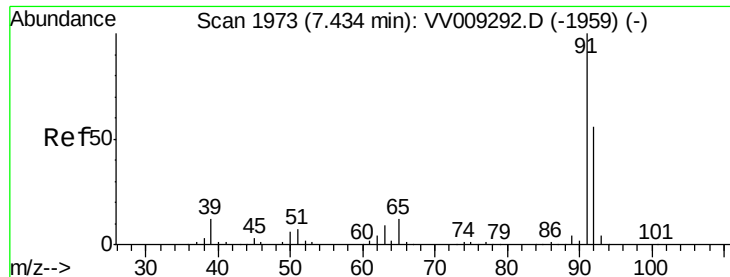


#43

4-Methyl-2-pentanone  
Concen: 36.603 ug/L  
RT: 7.28 min Scan# 1924  
Delta R.T. 0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Tgt Ion: 43 Resp: 174225  
Ion Ratio Lower Upper  
43 100  
58 35.7 28.4 42.6  
100 11.6 9.6 14.4





#44

Toluene

Concen: 23.998 ug/L

RT: 7.43 min Scan# 1972

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

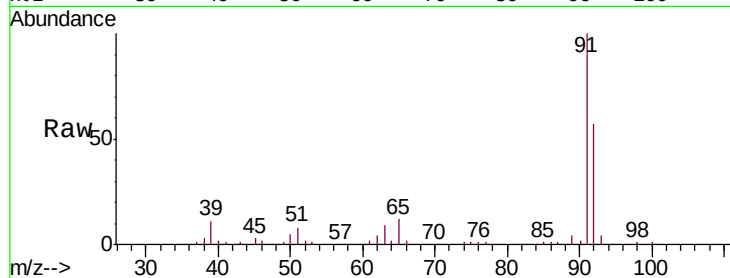
VSTD02567

Tgt Ion: 91 Resp: 491334

Ion Ratio Lower Upper

91 100

92 56.7 39.5 73.3



Abundance Ion 91.00 (90.70 to 91.70): VV009292.D (-1959) (-)

Ion 92.00 (91.70 to 92.70): VV009292.D (-1959) (-)

7.43

300000

250000

200000

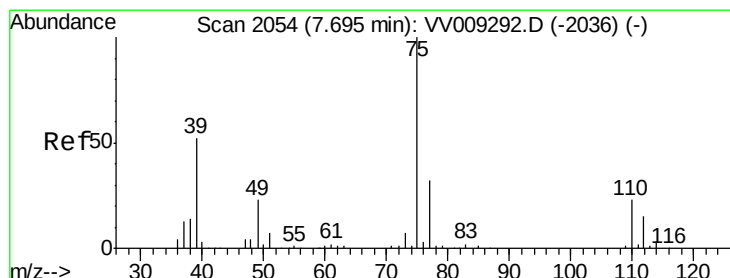
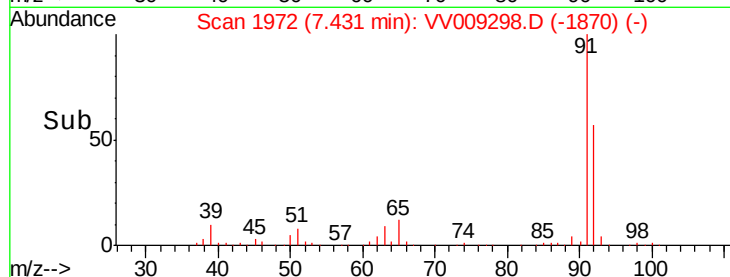
150000

100000

50000

0

Time--> 7.30 7.40 7.50 7.60



#45

trans-1,3-Dichloropropene

Concen: 23.794 ug/L

RT: 7.69 min Scan# 2053

Delta R.T. -0.00 min

Lab File: VV009298.D

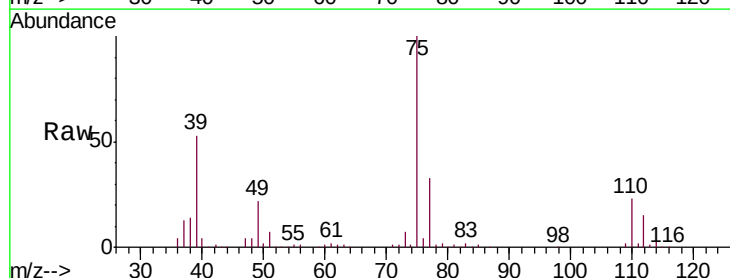
Acq: 13 Feb 2019 18:10

Tgt Ion: 75 Resp: 155471

Ion Ratio Lower Upper

75 100

77 32.8 22.5 41.9



Abundance Ion 75.00 (74.70 to 75.70): VV009292.D (-2036) (-)

Ion 77.00 (76.70 to 77.70): VV009292.D (-2036) (-)

7.69

100000

80000

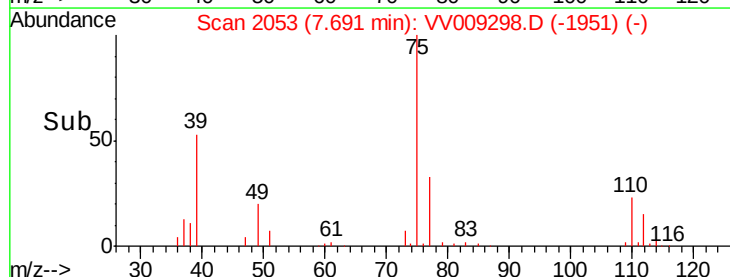
60000

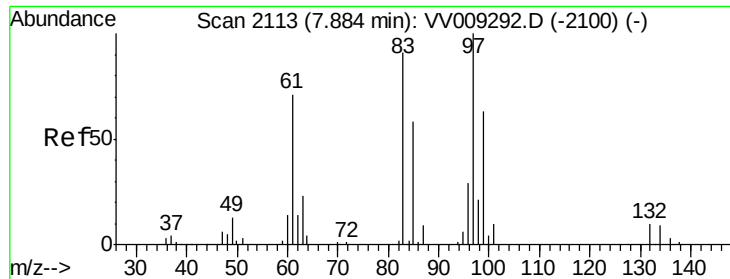
40000

20000

0

Time--> 7.60 7.70 7.80

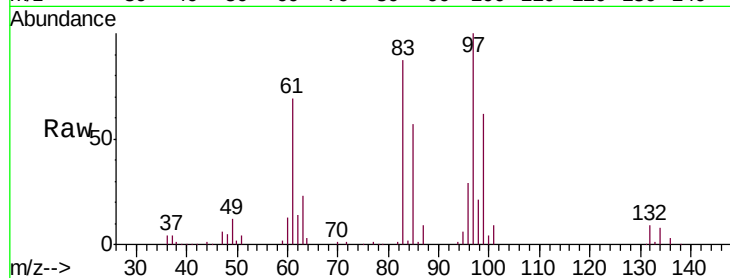




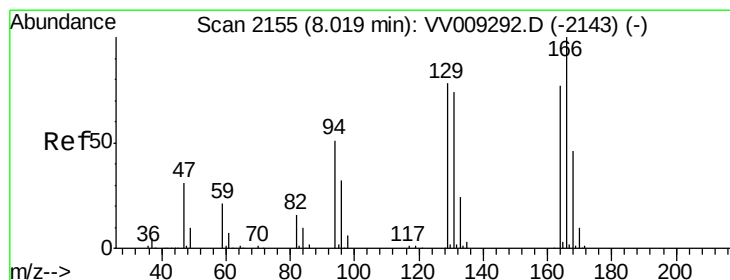
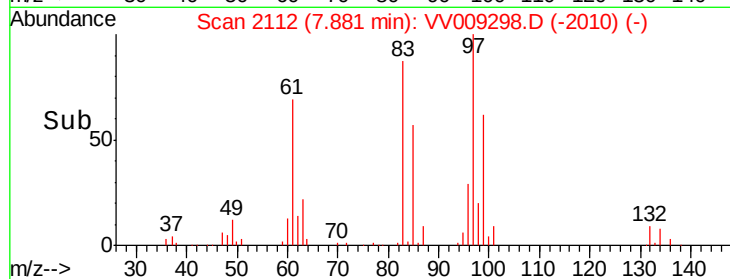
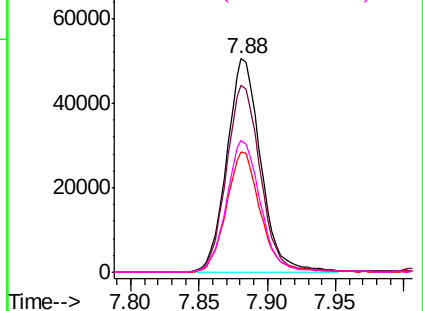
#46  
 1,1,2-Trichloroethane  
 Concen: 21.869 ug/L  
 RT: 7.88 min Scan# 2112  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

Tgt Ion: 97 Resp: 87476  
 Ion Ratio Lower Upper  
 97 100  
 83 87.4 63.4 117.8  
 85 56.5 40.7 75.7  
 99 62.0 43.8 81.4

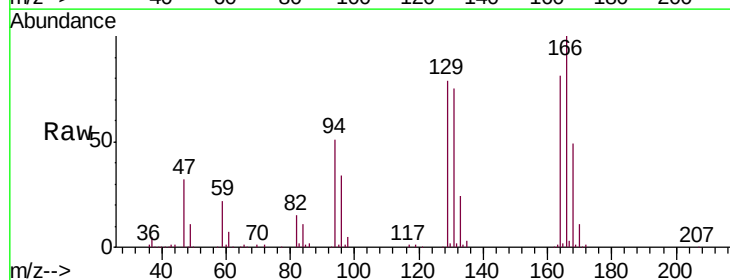


Abundance Ion 97.00 (96.70 to 97.70): VV0  
 Ion 83.00 (82.70 to 83.70): VV0  
 Ion 85.00 (84.70 to 85.70): VV0  
 Ion 99.00 (98.70 to 99.70): VV0

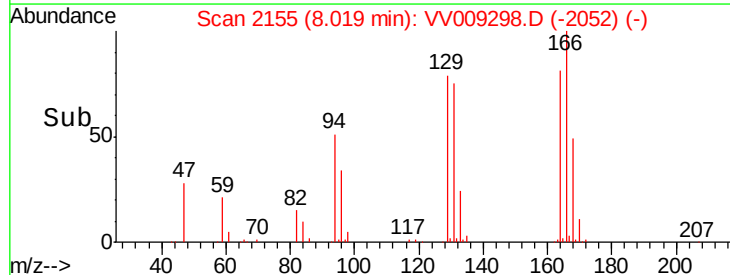
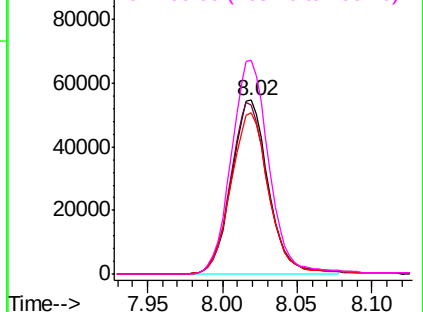


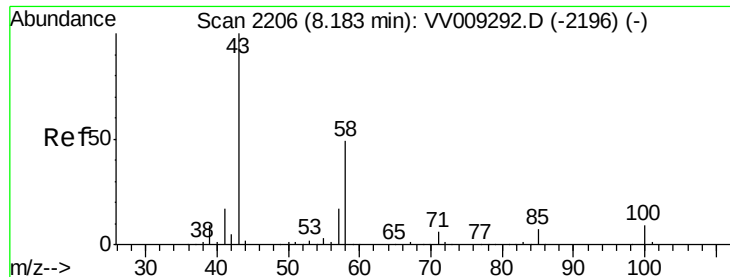
#47  
 Tetrachloroethene  
 Concen: 23.282 ug/L  
 RT: 8.02 min Scan# 2155  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Tgt Ion: 164 Resp: 93997  
 Ion Ratio Lower Upper  
 164 100  
 129 97.1 71.1 132.1  
 131 92.7 67.4 125.2  
 166 123.1 91.4 169.8



Abundance Ion 164.00 (163.70 to 164.70): V  
 Ion 129.00 (128.70 to 129.70): V  
 Ion 131.00 (130.70 to 131.70): V  
 Ion 166.00 (165.70 to 166.70): V

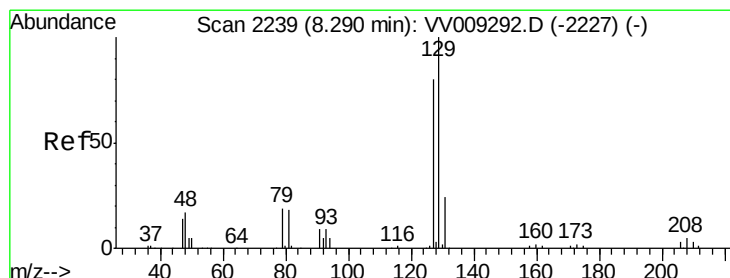
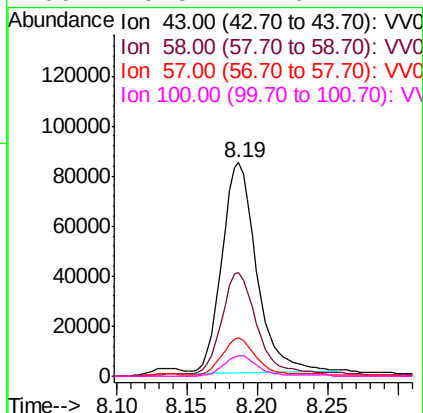
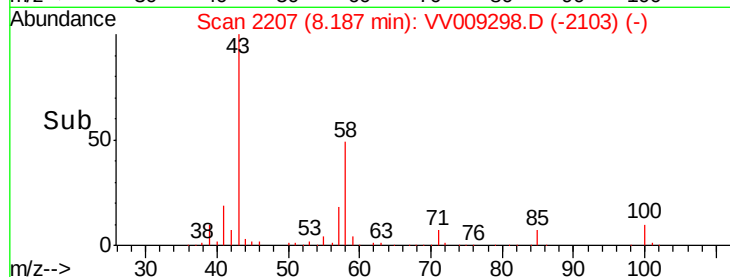
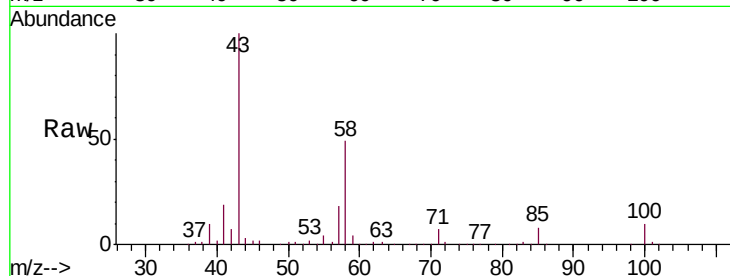




#49  
2-Hexanone  
Concen: 37.033 ug/L  
RT: 8.19 min Scan# 2207  
Delta R.T. 0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

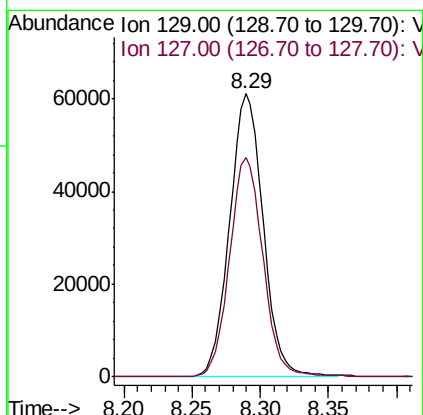
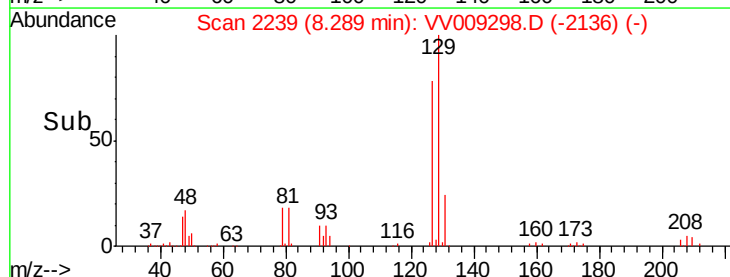
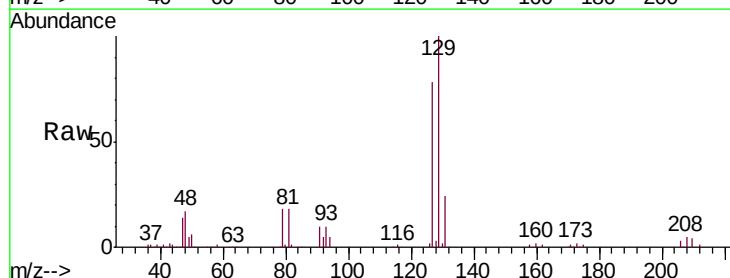
Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

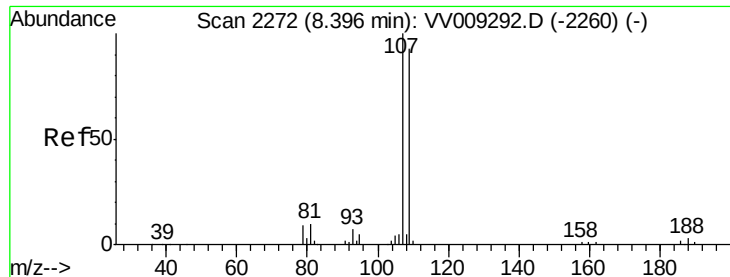
Tgt Ion: 43 Resp: 145250  
Ion Ratio Lower Upper  
43 100  
58 48.7 40.6 61.0  
57 17.3 14.1 21.1  
100 9.8 7.6 11.4



#50  
Dibromochloromethane  
Concen: 22.598 ug/L  
RT: 8.29 min Scan# 2239  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Tgt Ion: 129 Resp: 104587  
Ion Ratio Lower Upper  
129 100  
127 77.6 56.2 104.4





#51

1,2-Dibromoethane

Concen: 21.500 ug/L

RT: 8.40 min Scan# 2272

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

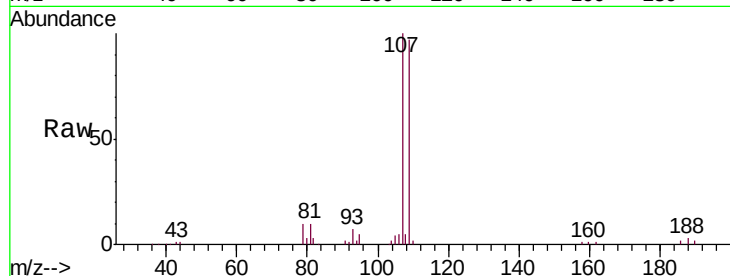
Tgt Ion:107 Resp: 84525

Ion Ratio Lower Upper

107 100

109 97.0 65.2 121.2

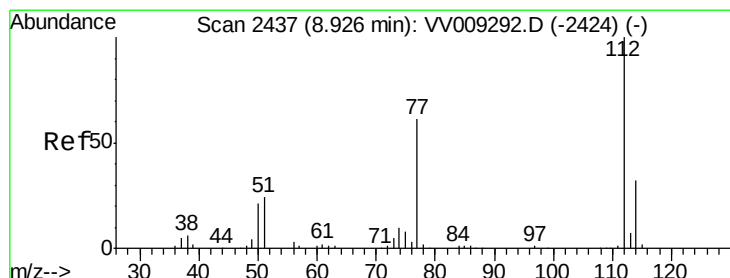
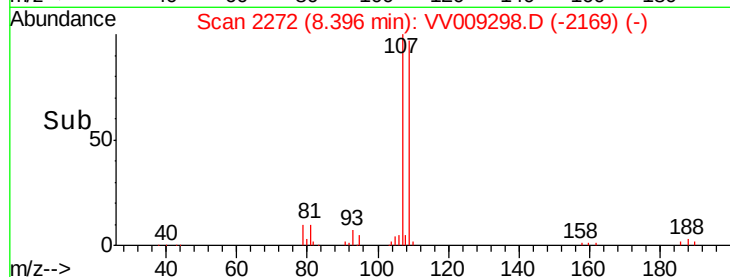
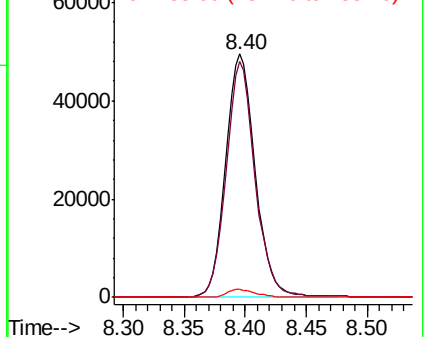
188 3.4 2.8 4.2



Abundance Ion 107.00 (106.70 to 107.70): V

Ion 109.00 (108.70 to 109.70): V

Ion 188.00 (187.70 to 188.70): V



#52

Chlorobenzene

Concen: 23.061 ug/L

RT: 8.93 min Scan# 2437

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

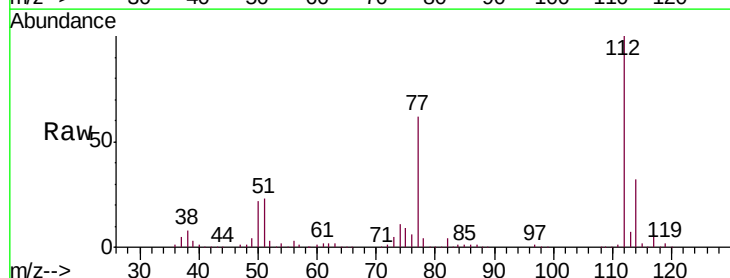
Tgt Ion:112 Resp: 303411

Ion Ratio Lower Upper

112 100

77 61.9 48.9 73.3

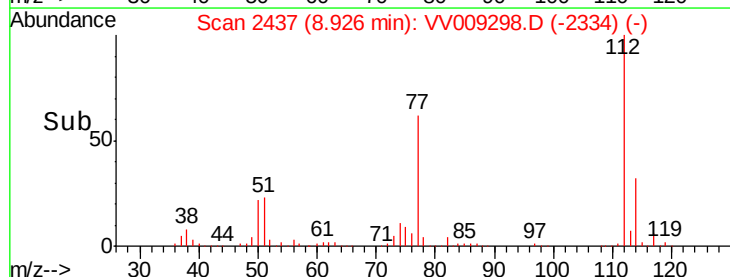
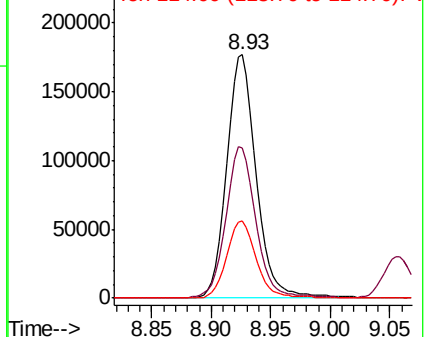
114 31.5 22.0 41.0

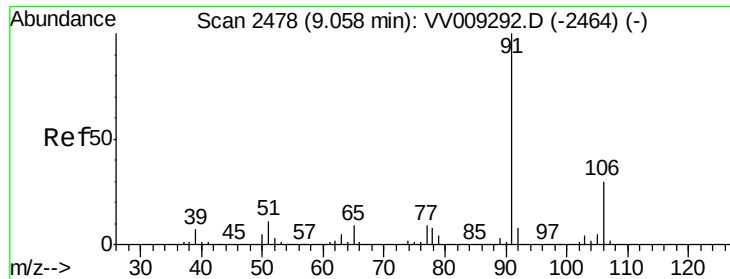


Abundance Ion 112.00 (111.70 to 112.70): V

Ion 77.00 (76.70 to 77.70): V

Ion 114.00 (113.70 to 114.70): V





#53

Ethylbenzene

Concen: 24.068 ug/L

RT: 9.05 min Scan# 2477

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

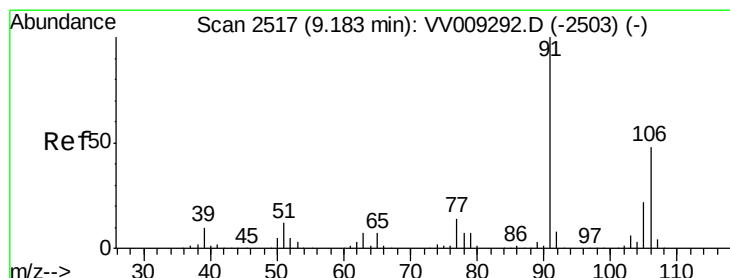
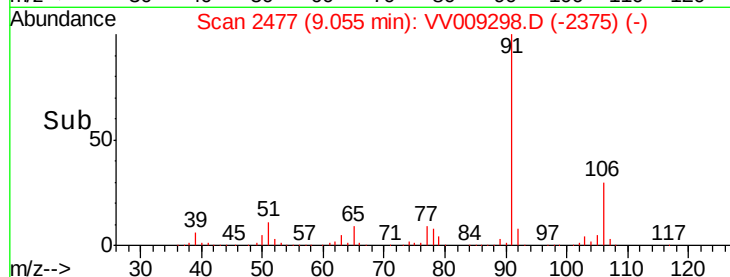
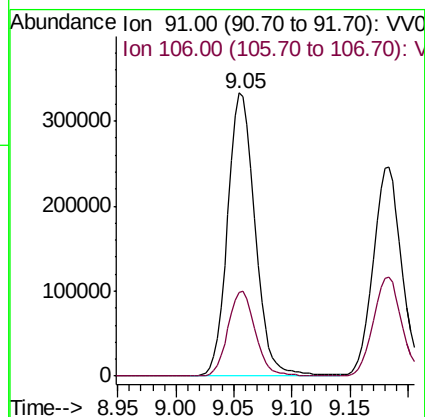
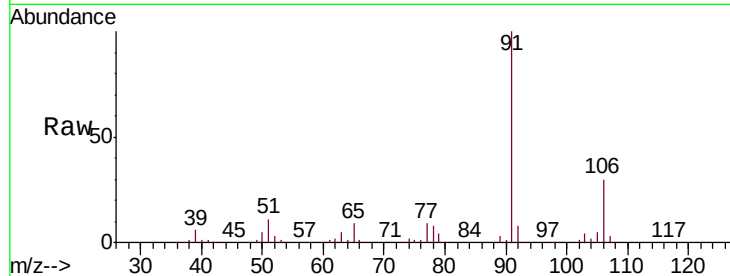
VSTD02567

Tgt Ion: 91 Resp: 548791

Ion Ratio Lower Upper

91 100

106 29.8 20.7 38.5



#54

m,p-Xylene

Concen: 24.397 ug/L

RT: 9.18 min Scan# 2517

Delta R.T. -0.00 min

Lab File: VV009298.D

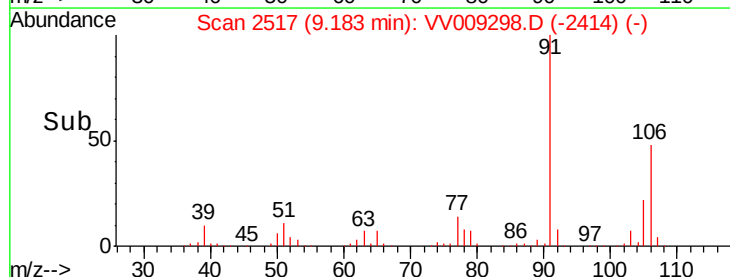
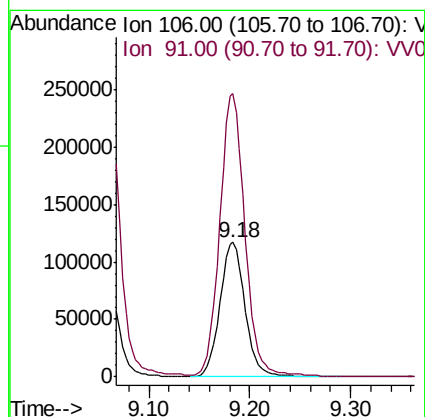
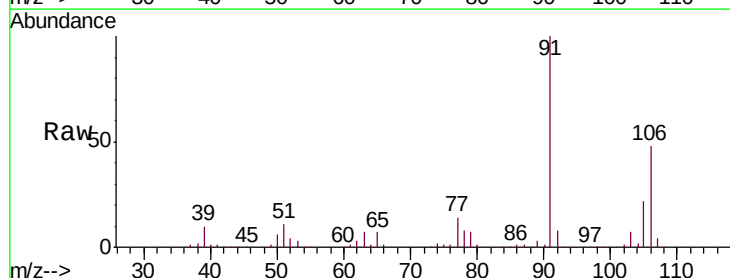
Acq: 13 Feb 2019 18:10

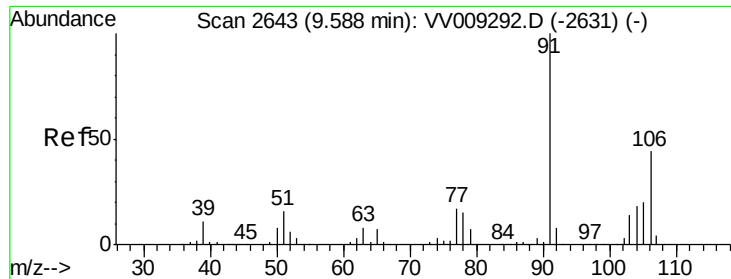
Tgt Ion: 106 Resp: 204649

Ion Ratio Lower Upper

106 100

91 210.0 145.3 269.9

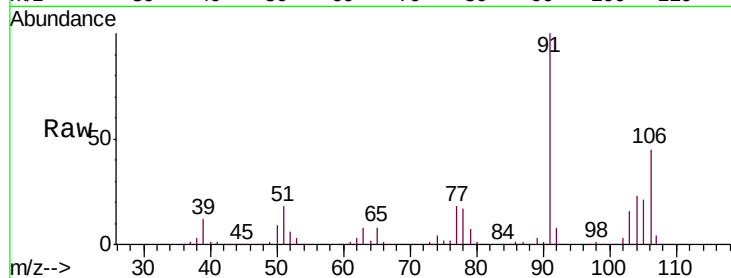




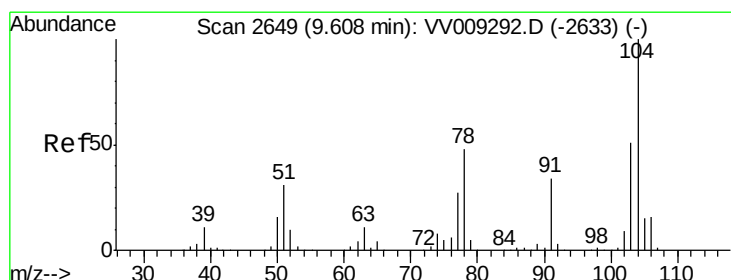
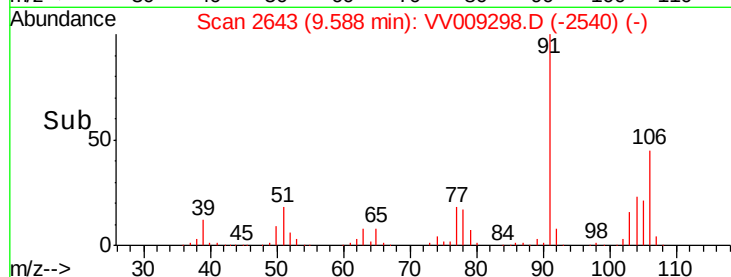
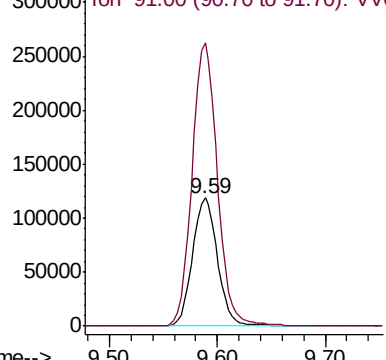
#55  
o-xylene  
Concen: 24.311 ug/L  
RT: 9.59 min Scan# 2643  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

Instrument :  
MSVOA\_V  
ClientSampleId :  
VSTD02567

Tgt Ion:106 Resp: 191659  
Ion Ratio Lower Upper  
106 100  
91 220.5 159.6 296.4

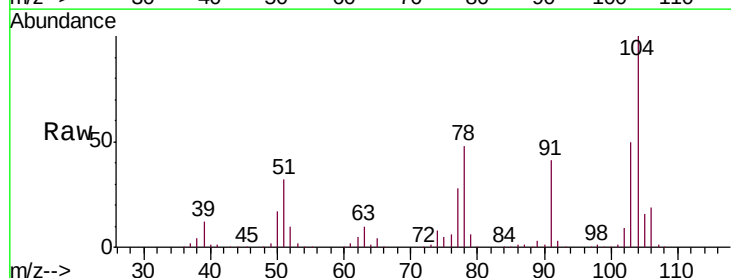


Abundance Ion 106.00 (105.70 to 106.70): V  
Ion 91.00 (90.70 to 91.70): VV0

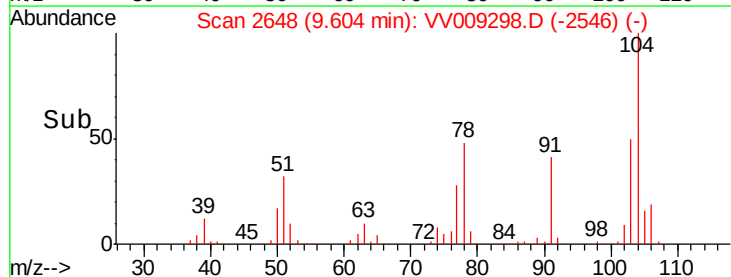
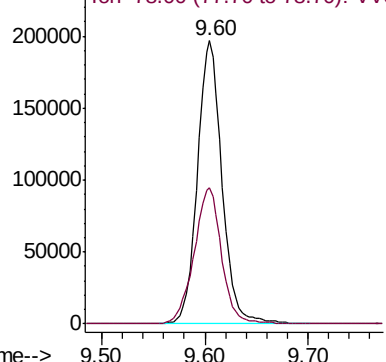


#56  
Styrene  
Concen: 24.211 ug/L  
RT: 9.60 min Scan# 2648  
Delta R.T. -0.00 min  
Lab File: VV009298.D  
Acq: 13 Feb 2019 18:10

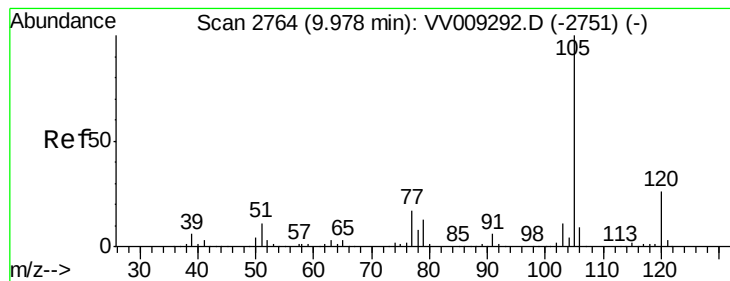
Tgt Ion:104 Resp: 327010  
Ion Ratio Lower Upper  
104 100  
78 48.3 33.6 62.4



Abundance Ion 104.00 (103.70 to 104.70): V  
Ion 78.00 (77.70 to 78.70): VV0







#57

Isopropylbenzene

Concen: 24.169 ug/L

RT: 9.98 min Scan# 2764

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

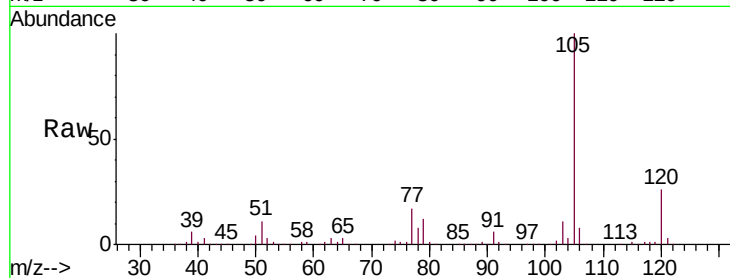
Tgt Ion: 105 Resp: 530589

Ion Ratio Lower Upper

105 100

120 26.0 21.1 31.7

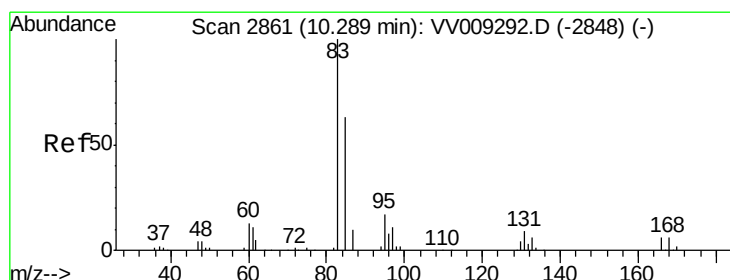
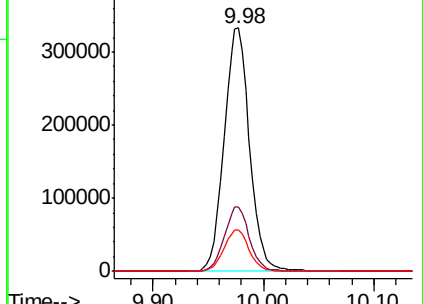
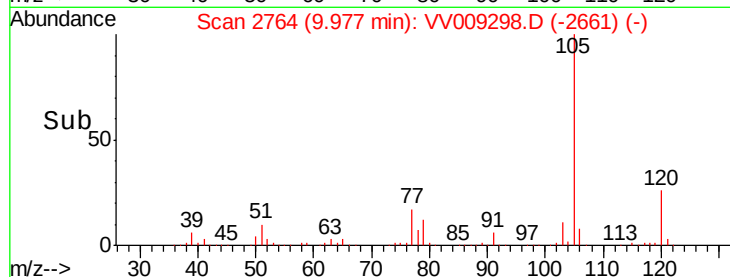
77 17.1 13.8 20.8



Abundance Ion 105.00 (104.70 to 105.70): VV009292.D (-2751) (-)

Ion 120.00 (119.70 to 120.70): VV009292.D (-2751) (-)

Ion 77.00 (76.70 to 77.70): VV009292.D (-2751) (-)



#58

1,1,2,2-Tetrachloroethane

Concen: 19.259 ug/L

RT: 10.29 min Scan# 2860

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

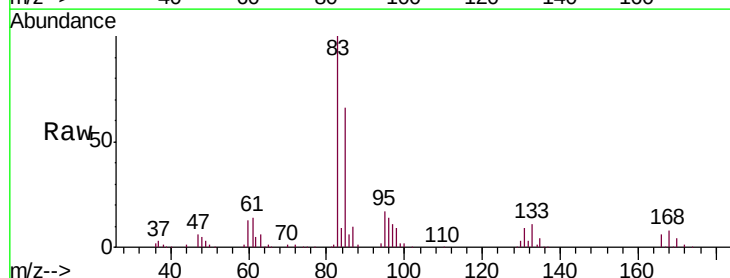
Tgt Ion: 83 Resp: 111215

Ion Ratio Lower Upper

83 100

85 65.7 44.7 82.9

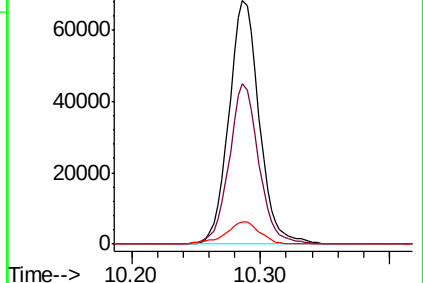
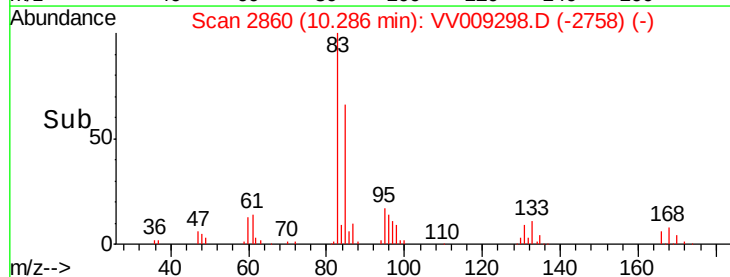
131 9.2 7.8 11.6

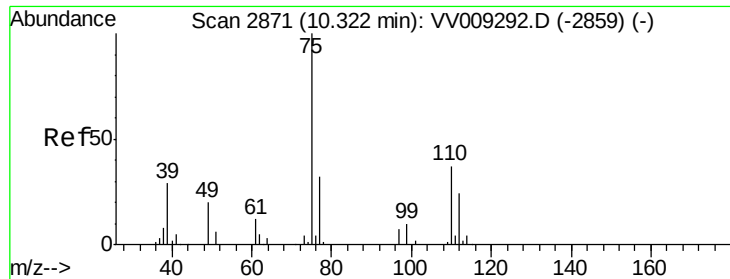


Abundance Ion 83.00 (82.70 to 83.70): VV009298.D (-2758) (-)

Ion 85.00 (84.70 to 85.70): VV009298.D (-2758) (-)

Ion 131.00 (130.70 to 131.70): VV009298.D (-2758) (-)





#59

1,2,3-Trichloropropane

Concen: 18.896 ug/L

RT: 10.32 min Scan# 2870

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

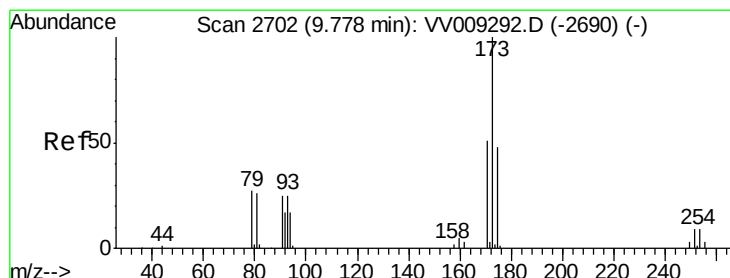
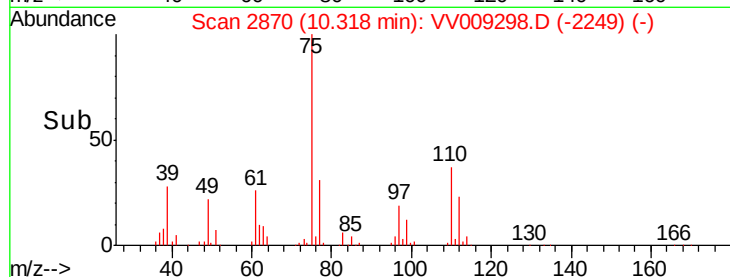
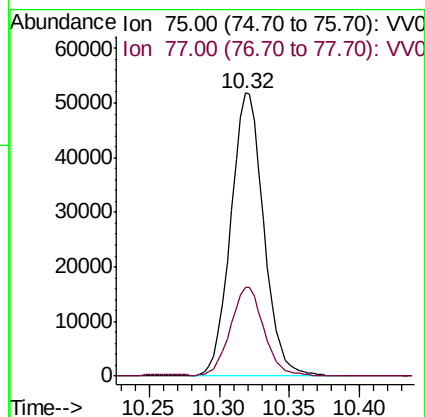
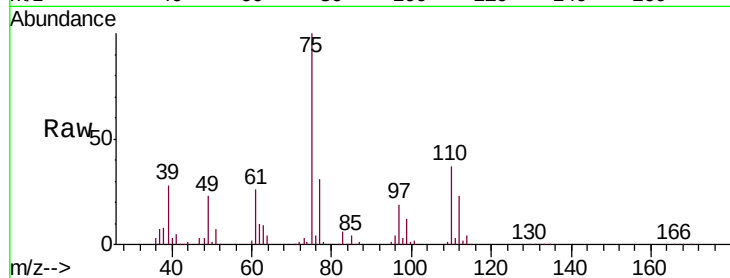
VSTD02567

Tgt Ion: 75 Resp: 84773

Ion Ratio Lower Upper

75 100

77 32.0 26.2 39.2



#62

Bromoform

Concen: 21.032 ug/L

RT: 9.78 min Scan# 2702

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

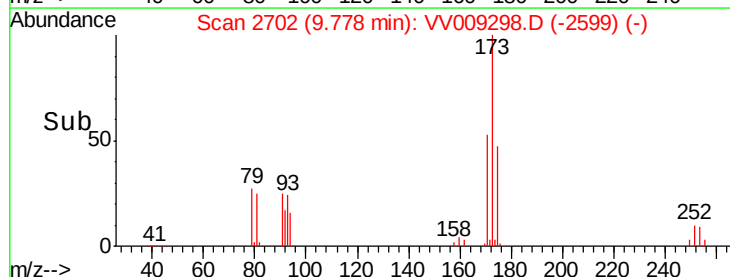
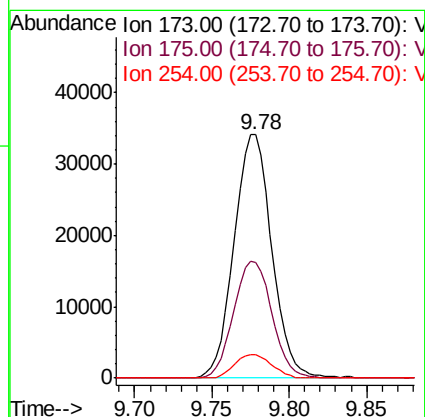
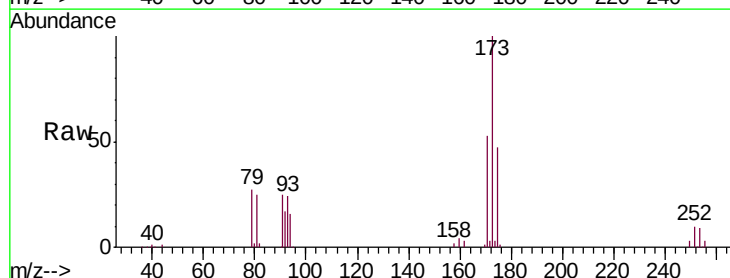
Tgt Ion: 173 Resp: 57810

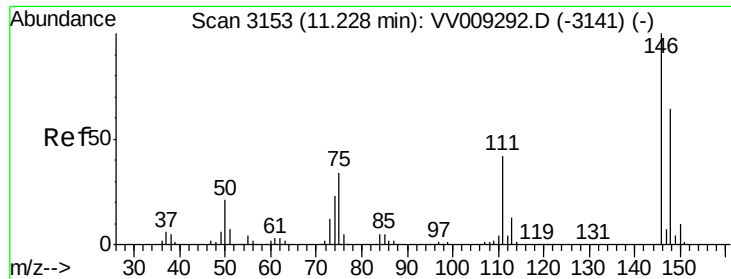
Ion Ratio Lower Upper

173 100

175 49.0 39.9 59.9

254 9.4 6.9 10.3

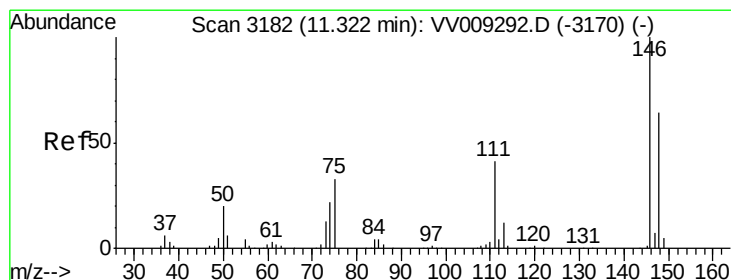
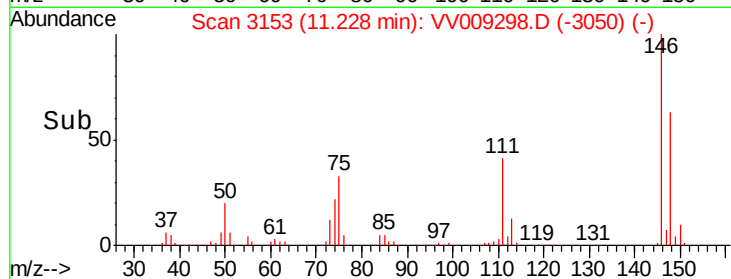
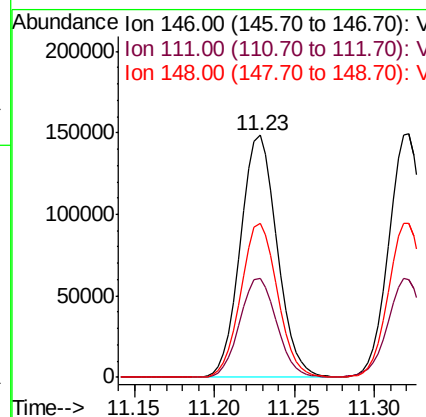
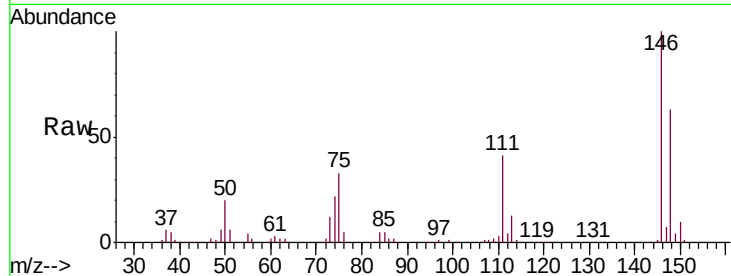




#63  
 1,3-Dichlorobenzene  
 Concen: 23.158 ug/L  
 RT: 11.23 min Scan# 3153  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

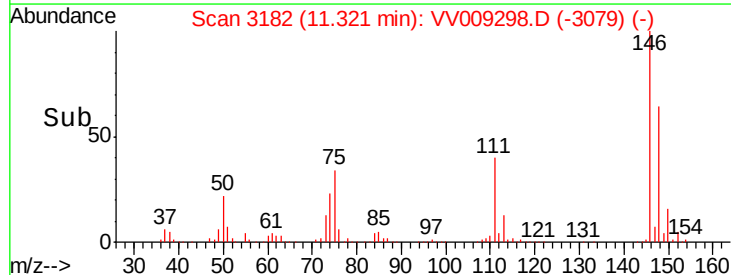
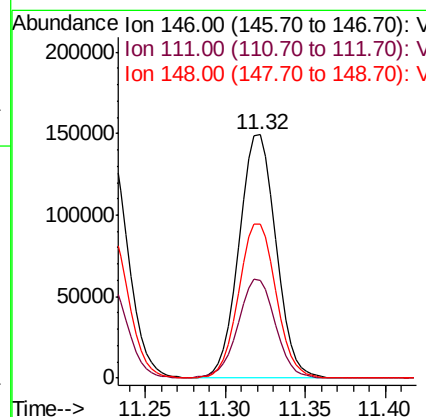
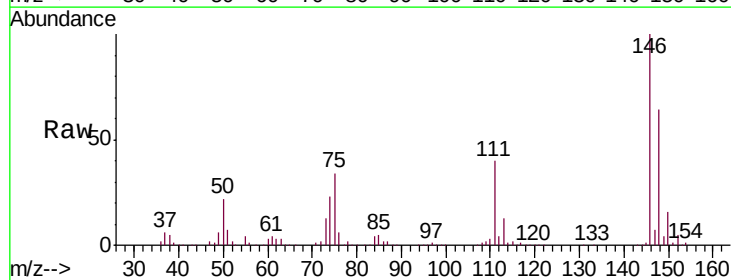
Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

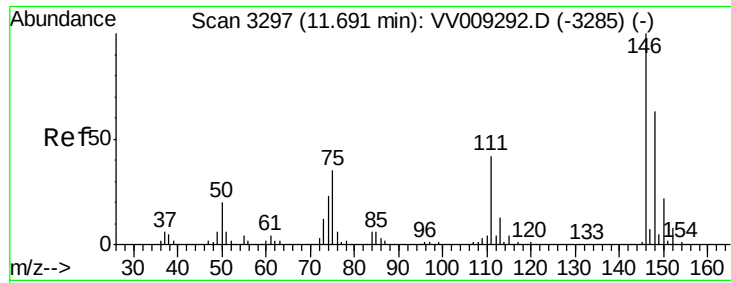
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 40.7  | 29.5  | 54.7  |
| 148     | 63.5  | 44.5  | 82.7  |



#64  
 1,4-Dichlorobenzene  
 Concen: 22.877 ug/L  
 RT: 11.32 min Scan# 3182  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 146     | 100   |       |       |
| 111     | 40.3  | 28.6  | 53.0  |
| 148     | 63.5  | 45.1  | 83.7  |





#65

1,2-Dichlorobenzene

Concen: 22.656 ug/L

RT: 11.69 min Scan# 3297

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

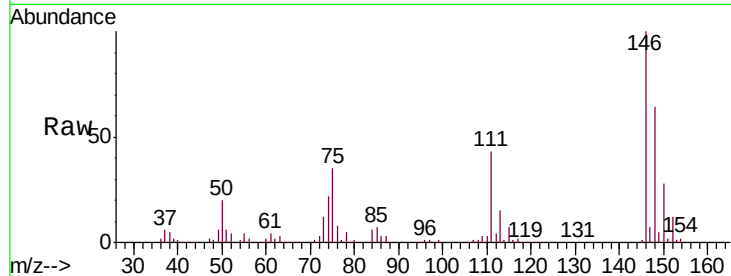
Tgt Ion: 146 Resp: 218829

Ion Ratio Lower Upper

146 100

111 43.0 33.8 50.8

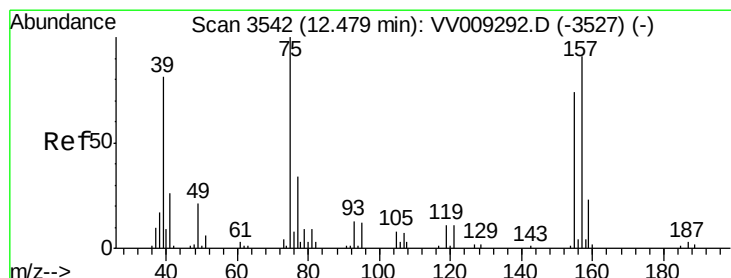
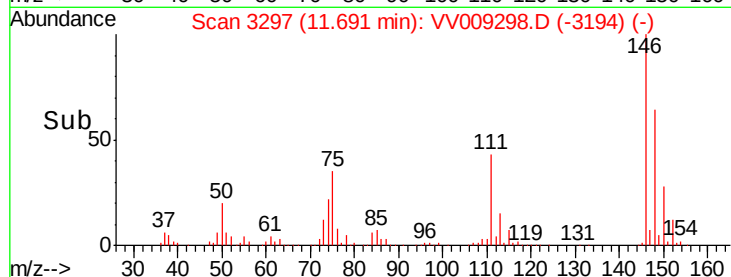
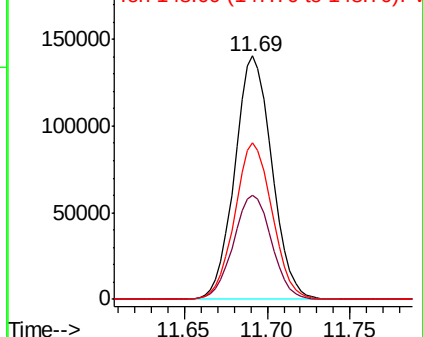
148 64.4 50.1 75.1



Abundance Ion 146.00 (145.70 to 146.70): 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: 17.248 ug/L

RT: 12.48 min Scan# 3542

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

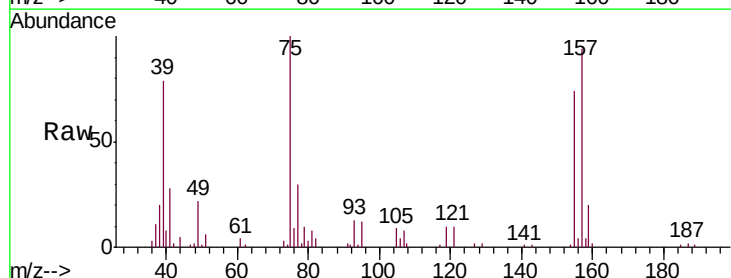
Tgt Ion: 75 Resp: 19379

Ion Ratio Lower Upper

75 100

157 94.1 72.6 109.0

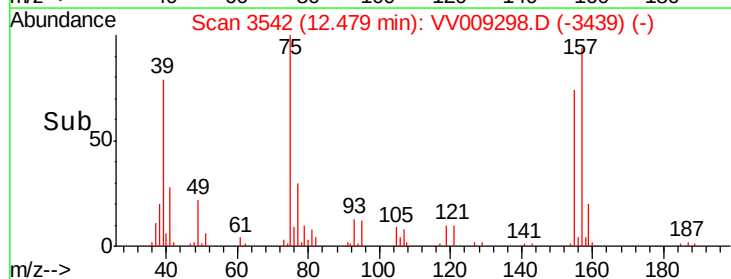
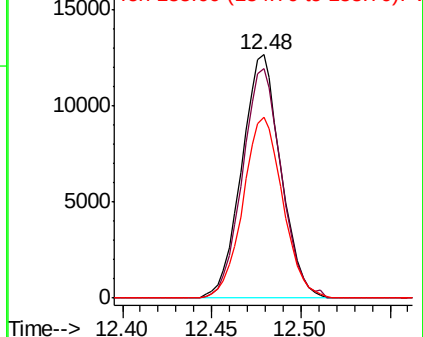
155 74.2 59.0 88.6

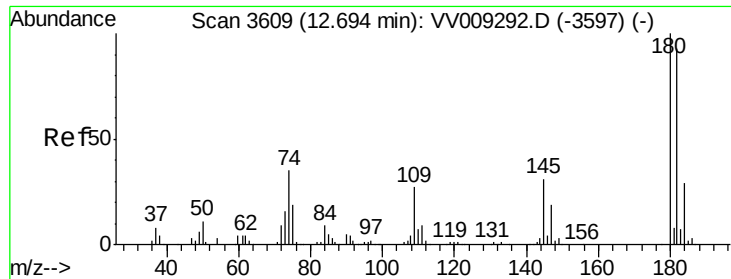


Abundance Ion 75.00 (74.70 to 75.70): VV0

Ion 157.00 (156.70 to 157.70): V

Ion 155.00 (154.70 to 155.70): V

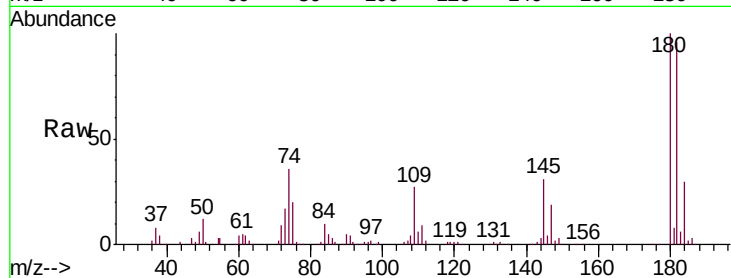




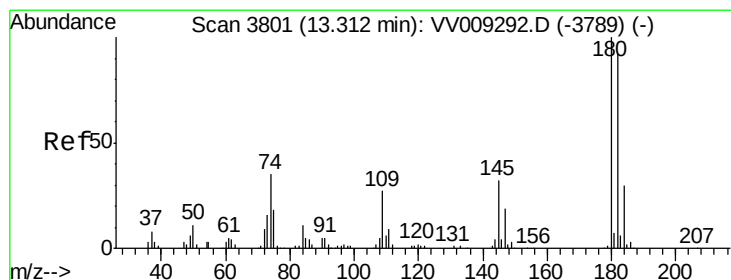
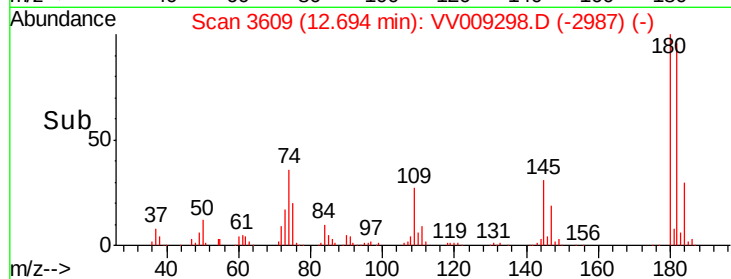
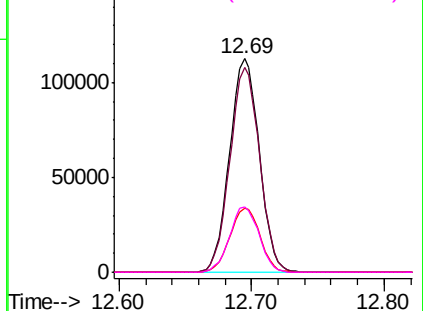
#67  
 1,3,5-Trichlorobenzene  
 Concen: 23.357 ug/L  
 RT: 12.69 min Scan# 3609  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Instrument :  
 MSVOA\_V  
 ClientSampleId :  
 VSTD02567

Tgt Ion:180 Resp: 175288  
 Ion Ratio Lower Upper  
 180 100  
 182 95.6 75.5 113.3  
 184 30.5 23.8 35.6  
 145 30.4 24.5 36.7

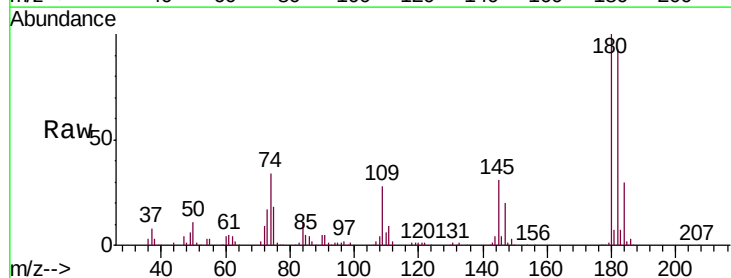


Abundance Ion 180.00 (179.70 to 180.70): V  
 Ion 182.00 (181.70 to 182.70): V  
 Ion 184.00 (183.70 to 184.70): V  
 Ion 145.00 (144.70 to 145.70): V

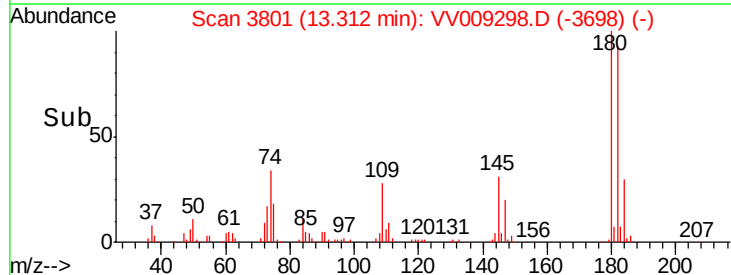
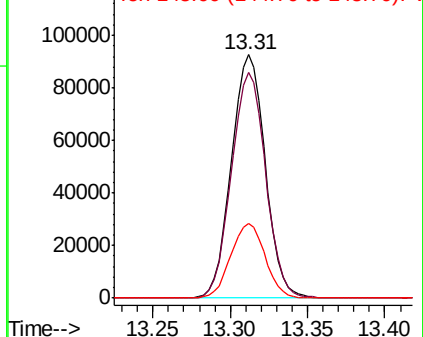


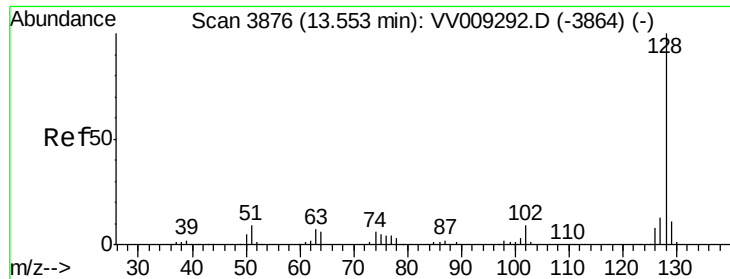
#68  
 1,2,4-trichlorobenzene  
 Concen: 23.574 ug/L  
 RT: 13.31 min Scan# 3801  
 Delta R.T. -0.00 min  
 Lab File: VV009298.D  
 Acq: 13 Feb 2019 18:10

Tgt Ion:180 Resp: 140491  
 Ion Ratio Lower Upper  
 180 100  
 182 93.7 74.1 111.1  
 145 31.0 25.4 38.2



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





#69

Naphthalene

Concen: 19.922 ug/L

RT: 13.55 min Scan# 3876

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

Instrument :

MSVOA\_V

ClientSampleId :

VSTD02567

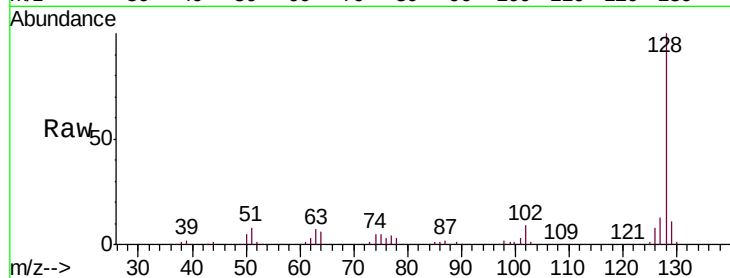
Tgt Ion:128 Resp: 252082

Ion Ratio Lower Upper

128 100

129 10.6 8.8 13.2

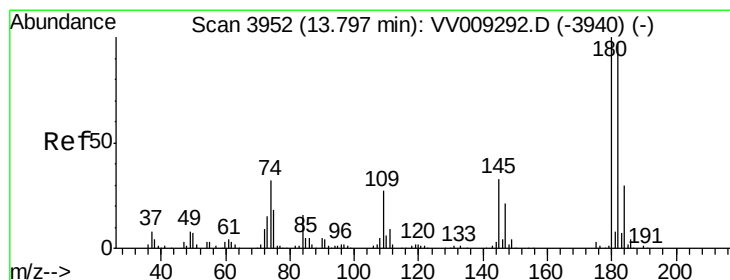
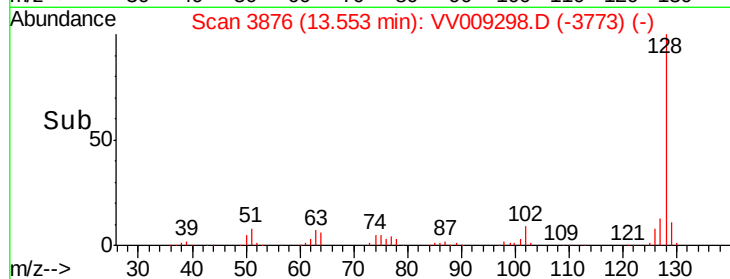
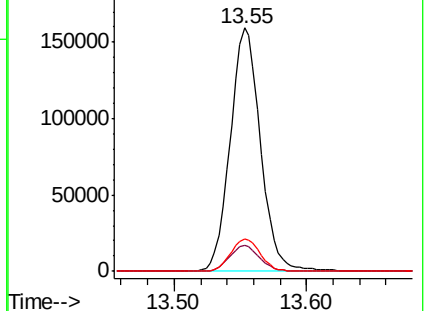
127 13.2 10.6 15.8



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: 22.542 ug/L

RT: 13.79 min Scan# 3951

Delta R.T. -0.00 min

Lab File: VV009298.D

Acq: 13 Feb 2019 18:10

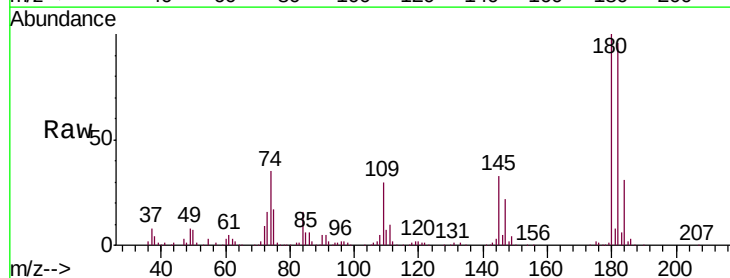
Tgt Ion:180 Resp: 128476

Ion Ratio Lower Upper

180 100

182 96.4 77.7 116.5

145 32.8 26.9 40.3



Abundance Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

Ion 145.00 (144.70 to 145.70): V

