

Data Path : Z:\VOASRV\HPCHEM1\MSVOA Y\DATA\VY120920\  
 Data File : VY003695.D  
 Acq On : 09 Dec 2020 13:09  
 Operator : SY/MD  
 Sample : L4979-07MS  
 Misc : 5.77G/10ML/MSVOA Y/SOIL  
 ALS Vial : 7 Sample Multiplier: 1

Instrument :  
 MSVOA\_Y  
 ClientSampleId :  
 GB1F8

Quant Time: Dec 10 02:29:18 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_Y\METHODS\SOM2YLM120420S.M  
 Quant Title : VOC Analysis  
 QLast Update : Thu Dec 10 02:27:01 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 8.70  | 114  | 167365   | 25.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 11.49 | 117  | 106118   | 25.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 13.43 | 152  | 19373    | 25.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |        |       |          |          |      |          |
|--------------------------------|--------|-------|----------|----------|------|----------|
| 4) Vinyl Chloride-d3           | 2.25   | 65    | 50788    | 21.46    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 85.84%   |
| 7) Chloroethane-d5             | 2.77   | 69    | 41790    | 23.40    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 150 | Recovery | =    | 93.60%   |
| 10) 1,1-Dichloroethene-d2      | 3.87   | 63    | 104614   | 23.49    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 45 - 110 | Recovery | =    | 93.96%   |
| 20) 2-Butanone-d5              | 6.90   | 46    | 32493    | 38.51    | ug/L | 0.00     |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 77.02%   |
| 24) Chloroform-d               | 7.49   | 84    | 99103    | 23.01    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 40 - 150 | Recovery | =    | 92.04%   |
| 26) 1,2-Dichloroethane-d4      | 8.15   | 65    | 52321    | 21.59    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 70 - 130 | Recovery | =    | 86.36%   |
| 29) Benzene-d6                 | 8.12   | 84    | 209578   | 34.11    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 20 - 135 | Recovery | =    | 136.44%# |
| 33) 1,2-Dichloropropane-d6     | 9.13   | 67    | 59054    | 32.48    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 70 - 120 | Recovery | =    | 129.92%# |
| 37) Toluene-d8                 | 10.18  | 98    | 159781   | 29.01    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 130 | Recovery | =    | 116.04%  |
| 38) trans-1,3-Dichloropropene- | 10.44  | 79    | 23158    | 26.65    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 30 - 135 | Recovery | =    | 106.60%  |
| 39) 2-Hexanone-d5              | 10.79  | 63    | 21506    | 47.22    | ug/L | 0.00     |
| Spiked Amount                  | 50.000 | Range | 20 - 135 | Recovery | =    | 94.44%   |
| 48) 1,1,2,2-Tetrachloroethane- | 12.56  | 84    | 25759    | 15.90    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 45 - 120 | Recovery | =    | 63.60%   |
| 61) 1,2-Dichlorobenzene-d4     | 13.73  | 152   | 14957    | 21.25    | ug/L | 0.00     |
| Spiked Amount                  | 25.000 | Range | 75 - 120 | Recovery | =    | 85.00%   |

## Target Compounds

|                                |       |     |        |              | Ovalue |
|--------------------------------|-------|-----|--------|--------------|--------|
| 3) Chloromethane               | 2.13  | 50  | 524    | 0.257 ug/L   | 97     |
| 11) 1,1,2-Trichloro-1,2,2-trif | 3.88  | 101 | 419    | 0.197 ug/L # | 17     |
| 12) 1,1-Dichloroethene         | 3.89  | 96  | 55244  | 27.582 ug/L  | 91     |
| 13) Acetone                    | 3.96  | 43  | 14360  | 23.217 ug/L  | 99     |
| 14) Carbon disulfide           | 4.21  | 76  | 3189   | 0.478 ug/L # | 93     |
| 16) Methylene chloride         | 4.72  | 84  | 2827   | 0.962 ug/L   | 94     |
| 21) 2-Butanone                 | 7.00  | 43  | 2714   | 2.485 ug/L   | 77     |
| 34) Benzene                    | 8.17  | 78  | 222076 | 36.583 ug/L  | 100    |
| 35) Trichloroethene            | 8.95  | 95  | 49736  | 29.842 ug/L  | 98     |
| 36) Methylcyclohexane          | 9.19  | 83  | 1643   | 0.643 ug/L # | 82     |
| 40) 1,2-Dichloropropane        | 9.22  | 63  | 321    | 0.211 ug/L # | 86     |
| 42) cis-1,3-Dichloropropene    | 9.90  | 75  | 1684   | 0.703 ug/L # | 66     |
| 44) Toluene                    | 10.25 | 91  | 212204 | 33.138 ug/L  | 100    |
| 52) Chlorobenzene              | 11.52 | 112 | 94963  | 22.534 ug/L  | 97     |
| 53) Ethylbenzene               | 11.59 | 91  | 14452  | 2.068 ug/L   | 99     |
| 54) m,p-Xylene                 | 11.70 | 106 | 1589   | 0.589 ug/L   | 68     |
| 55) o-xylene                   | 12.03 | 106 | 863    | 0.334 ug/L   | 83     |

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ALS Vial : 7 Sample Multiplier: 1

Instrument :  
MSVOA\_Y  
ClientSampleId :  
GB1F8

Quant Time: Dec 10 02:29:18 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_Y\METHODS\SOM2YLM120420S.M  
Quant Title : VOC Analysis  
QLast Update : Thu Dec 10 02:27:01 2020  
Response via : Initial Calibration

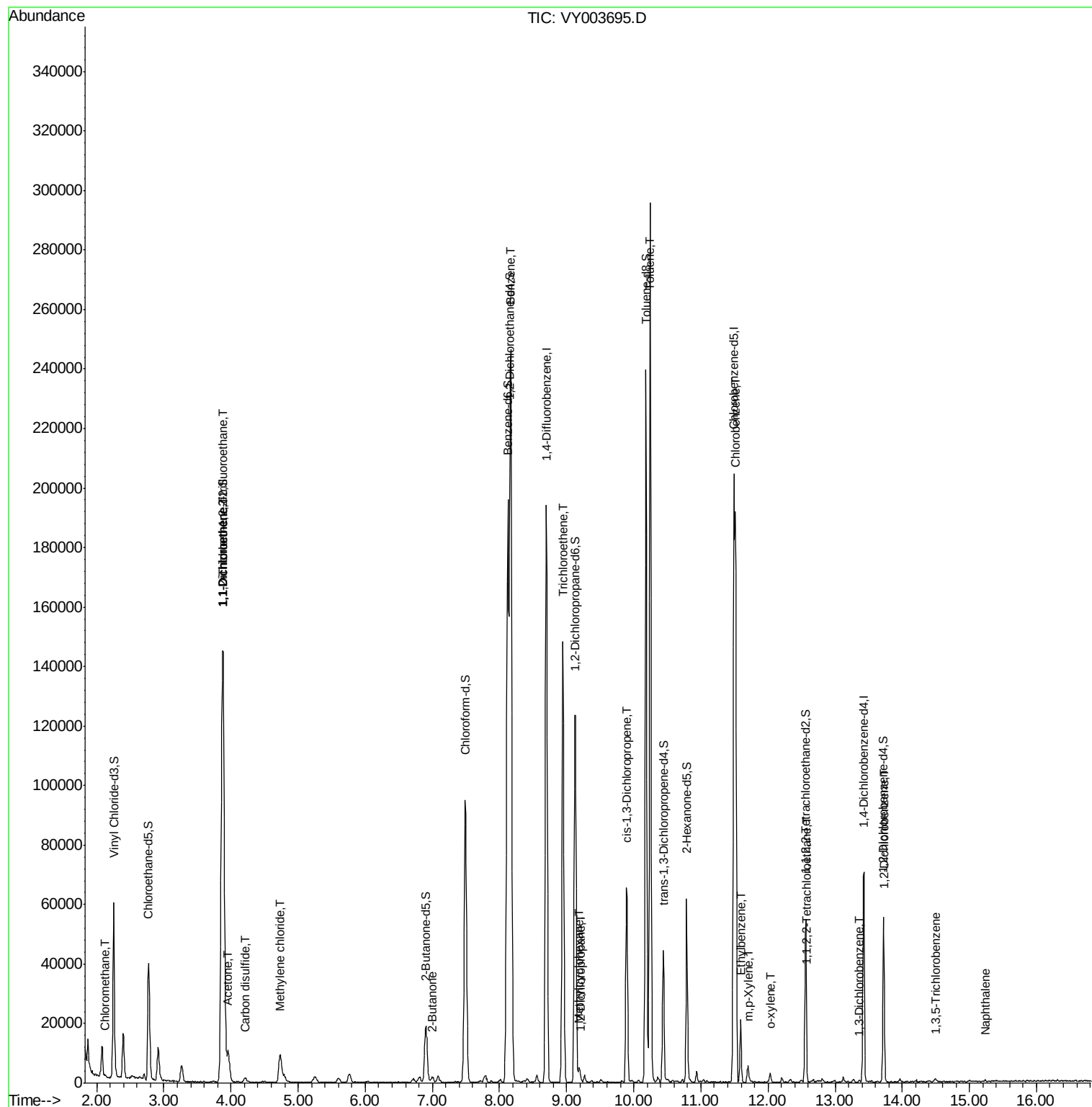
| Internal Standards            | R.T.  | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|-------|------|----------|-------|--------|----------|
| 58) 1,1,2,2-Tetrachloroethane | 12.58 | 83   | 251      | 0.178 | ug/L # | 76       |
| 63) 1,3-Dichlorobenzene       | 13.37 | 146  | 406      | 0.352 | ug/L   | 84       |
| 65) 1,2-Dichlorobenzene       | 13.73 | 146  | 322      | 0.305 | ug/L # | 61       |
| 67) 1,3,5-Trichlorobenzene    | 14.51 | 180  | 467      | 0.573 | ug/L # | 71       |
| 69) Naphthalene               | 15.23 | 128  | 438      | 0.301 | ug/L # | 83       |

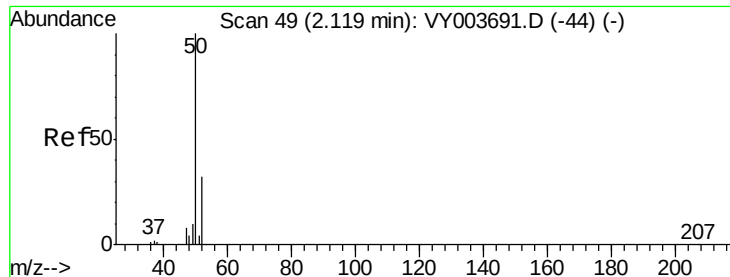
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\V0ASRV\HPCHEM1\MSVOA Y\DATA\VY120920\  
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Quant Title : VOC Analysis  
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Response via : Initial Calibration





#3

Chloromethane

Concen: 0.257 ug/L

RT: 2.13 min Scan# 50

Delta R.T. 0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampleId :

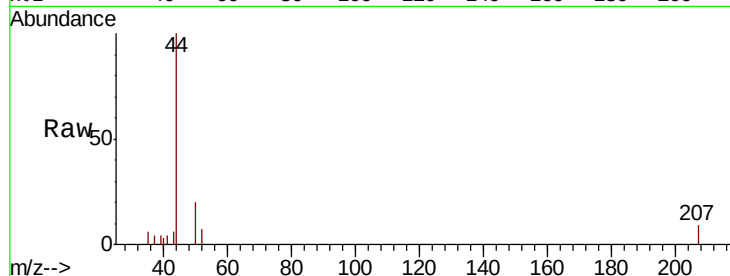
GB1F8

Tot Ion: 50 Resp: 524

Ion Ratio Lower Upper

50 100

52 34.5 23.1 42.9



Abundance Ion 50.00 (49.70 to 50.70): VY003695.D (-1) (-)

Ion 52.00 (51.70 to 52.70): VY003695.D (-1) (-)

2.13

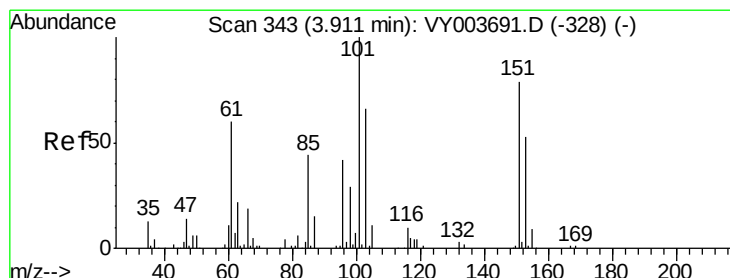
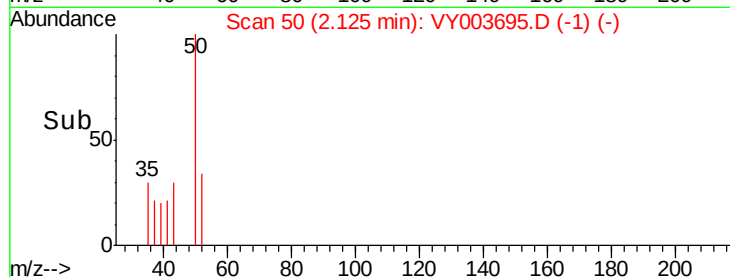
300

200

100

0

Time--> 2.08 2.10 2.12 2.14



#11

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

Concen: 0.197 ug/L

RT: 3.88 min Scan# 338

Delta R.T. -0.03 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

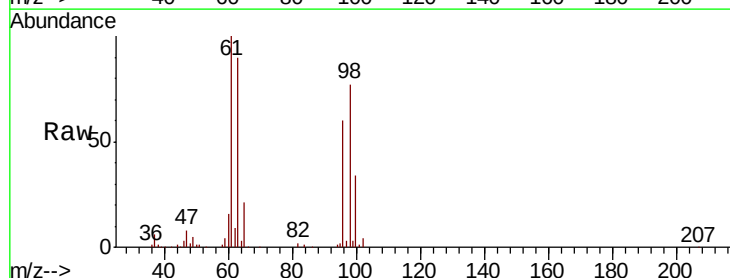
Tgt Ion: 101 Resp: 419

Ion Ratio Lower Upper

101 100

85 0.0 33.9 50.9#

151 0.0 65.0 97.4#



Abundance Ion 101.00 (100.70 to 101.70): VY003695.D (-289) (-)

Ion 85.00 (84.70 to 85.70): VY003695.D (-289) (-)

Ion 151.00 (150.70 to 151.70): VY003695.D (-289) (-)

3.88

400

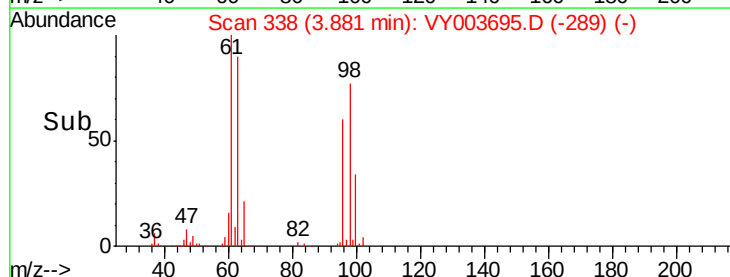
300

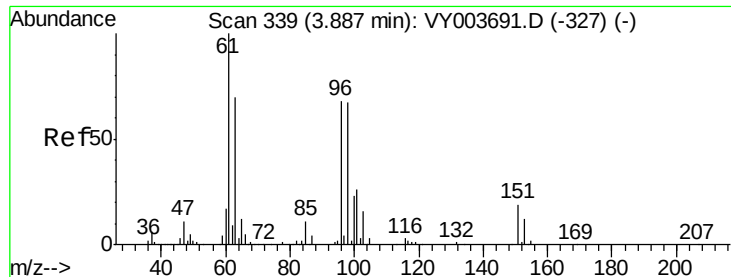
200

100

0

Time--> 3.86 3.88 3.90 3.92 3.94

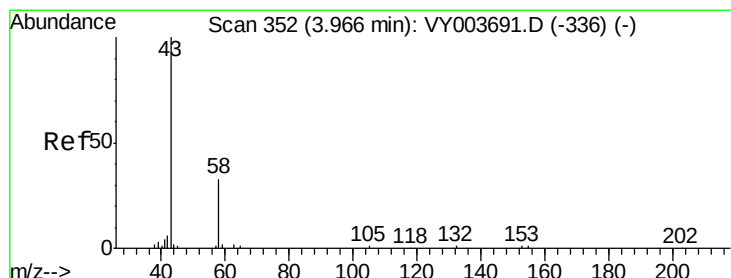
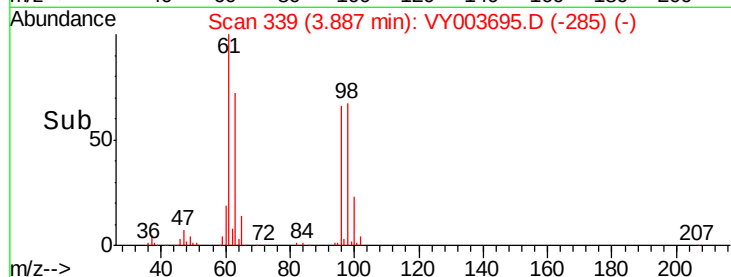
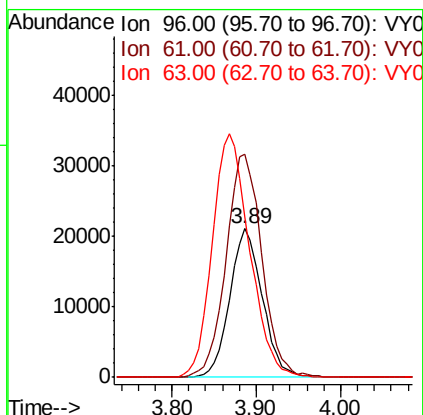
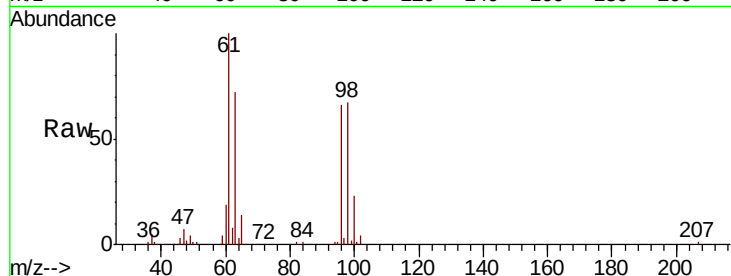




#12  
 1,1-Dichloroethene  
 Concen: 27.582 ug/L  
 RT: 3.89 min Scan# 339  
 Delta R.T. 0.00 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

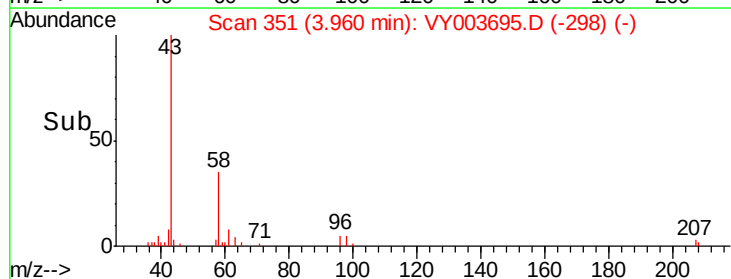
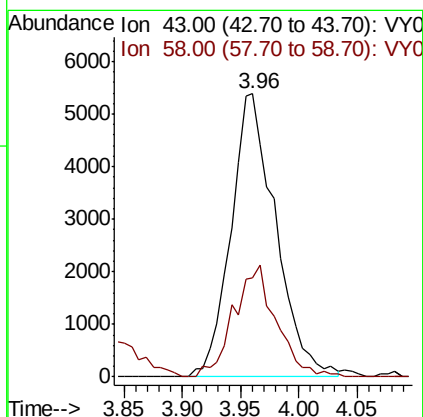
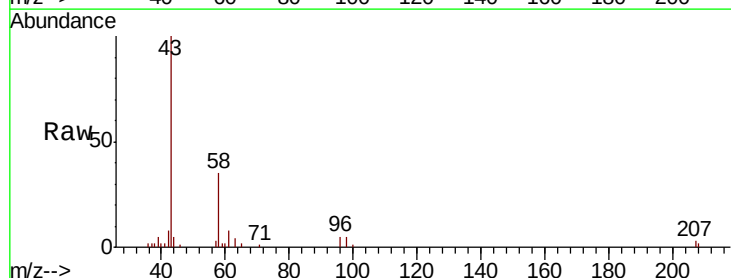
Instrument :  
 MSVOA\_Y  
 ClientSampleId :  
 GB1F8

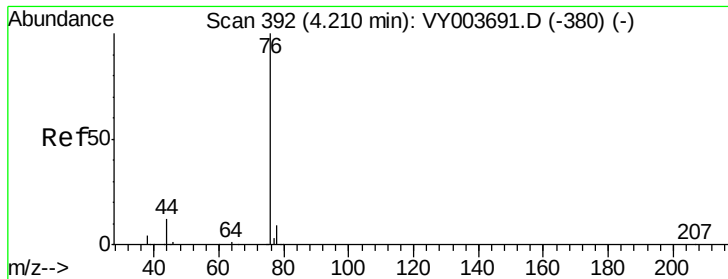
Tot Ion: 96 Resp: 55244  
 Ion Ratio Lower Upper  
 96 100  
 61 150.6 108.5 201.5  
 63 108.2 87.8 163.0



#13  
 Acetone  
 Concen: 23.217 ug/L  
 RT: 3.96 min Scan# 351  
 Delta R.T. -0.01 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

Tgt Ion: 43 Resp: 14360  
 Ion Ratio Lower Upper  
 43 100  
 58 34.0 0.0 68.8





#14

Carbon disulfide

Concen: 0.478 ug/L

RT: 4.21 min Scan# 392

Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampled :

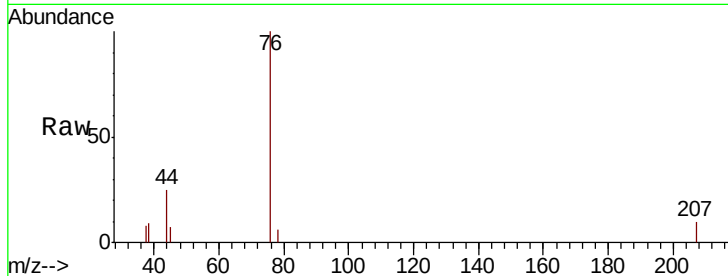
GB1F8

Tot Ion: 76 Resp: 3189

Ion Ratio Lower Upper

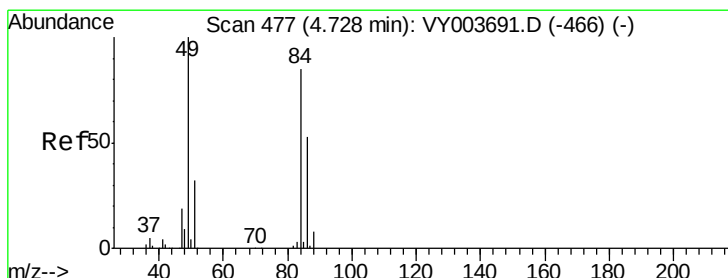
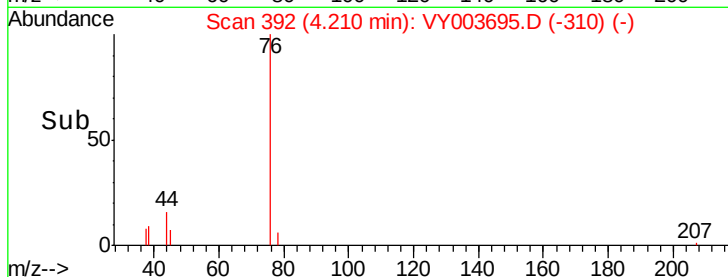
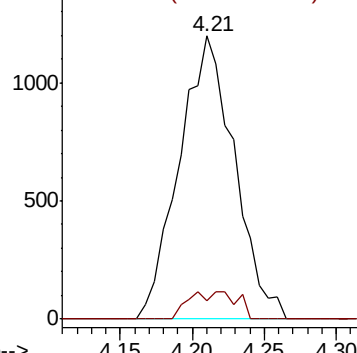
76 100

78 6.4 7.0 10.6#



Abundance Ion 76.00 (75.70 to 76.70): VY0

Ion 78.00 (77.70 to 78.70): VY0



#16

Methylene chloride

Concen: 0.962 ug/L

RT: 4.72 min Scan# 476

Delta R.T. -0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

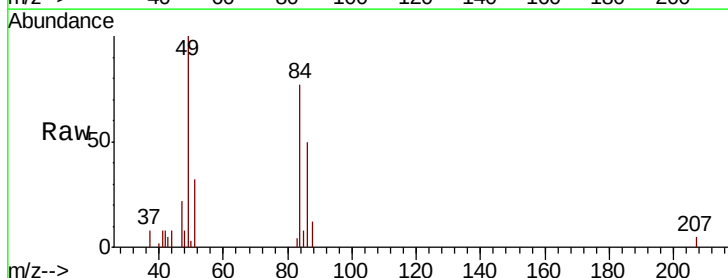
Tgt Ion: 84 Resp: 2827

Ion Ratio Lower Upper

84 100

49 129.3 83.7 155.4

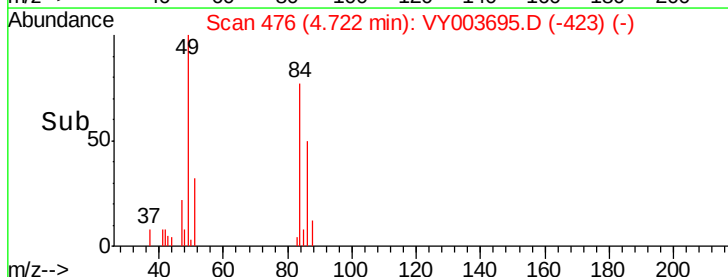
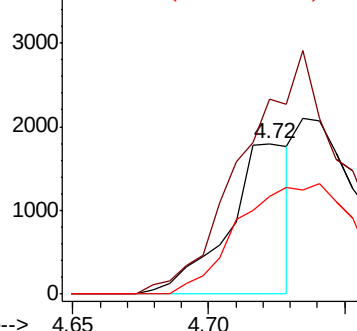
86 64.5 45.0 83.6

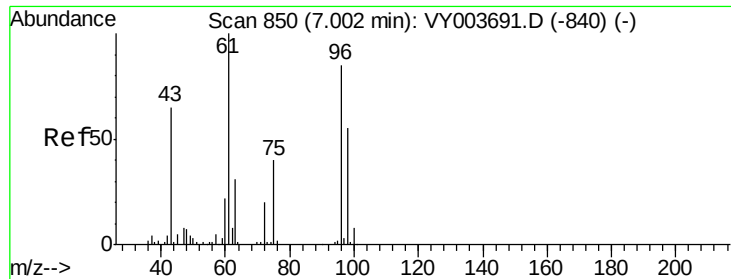


Abundance Ion 84.00 (83.70 to 84.70): VY0

Ion 49.00 (48.70 to 49.70): VY0

Ion 86.00 (85.70 to 86.70): VY0





#21

2-Butanone

Concen: 2.485 ug/L

RT: 7.00 min Scan# 849

Delta R.T. -0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampled :

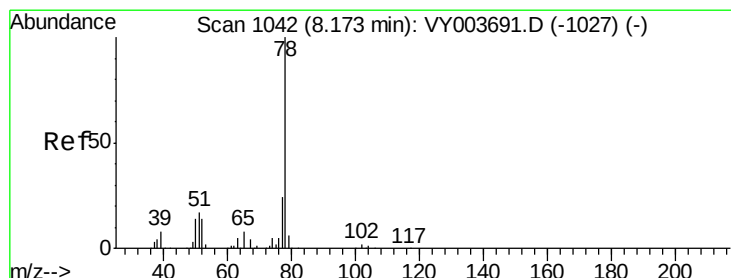
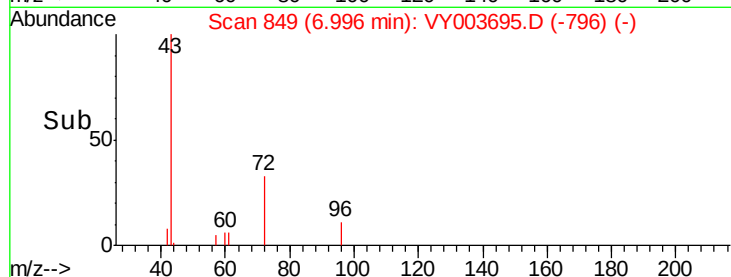
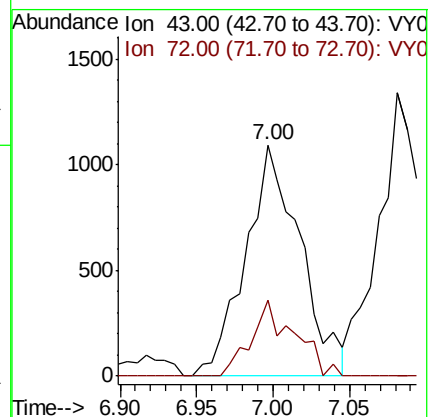
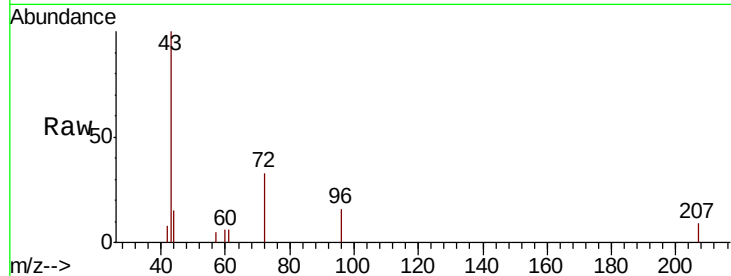
GB1F8

Tot Ion: 43 Resp: 2714

Ion Ratio Lower Upper

43 100

72 14.8 13.3 39.9



#34

Benzene

Concen: 36.583 ug/L

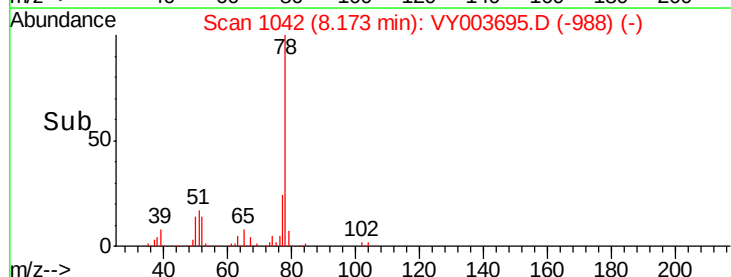
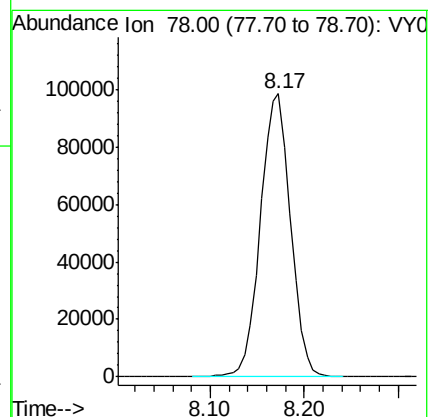
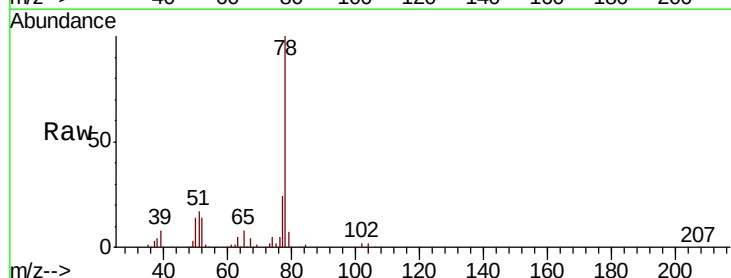
RT: 8.17 min Scan# 1042

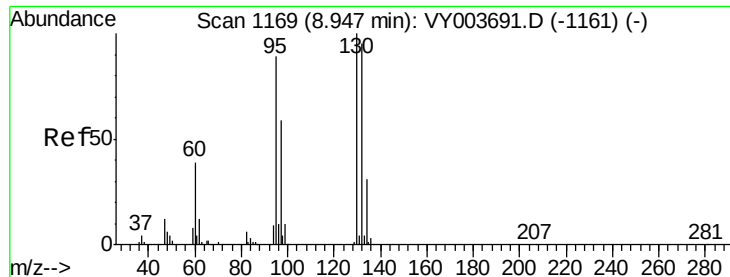
Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Tgt Ion: 78 Resp: 222076





#35

Trichloroethene

Concen: 29.842 ug/L

RT: 8.95 min Scan# 1169

Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampled :

GB1F8

Tot Ion: 95 Resp: 49736

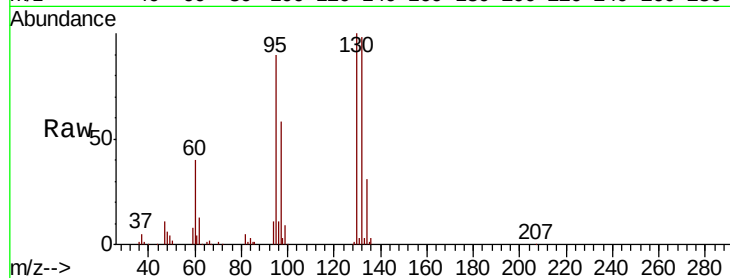
Ion Ratio Lower Upper

95 100

97 64.4 45.8 85.0

132 102.3 74.2 137.8

130 110.5 76.2 141.6

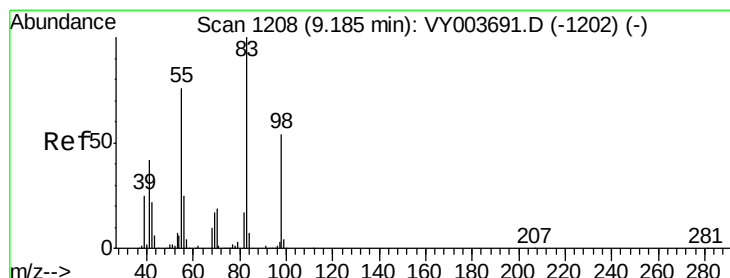
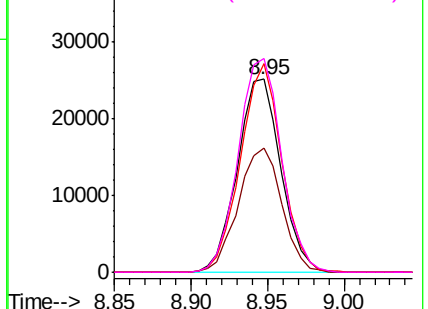
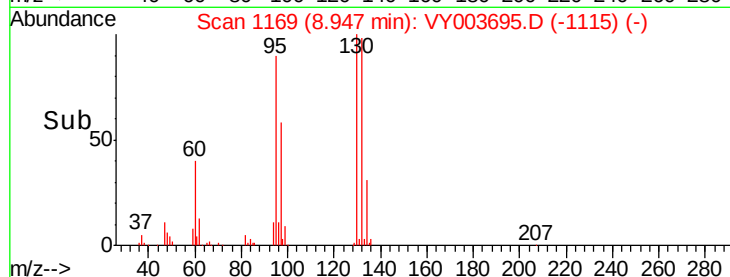


Abundance Ion 95.00 (94.70 to 95.70): VY0

Ion 97.00 (96.70 to 97.70): VY0

Ion 132.00 (131.70 to 132.70): VY0

Ion 130.00 (129.70 to 130.70): VY0



#36

Methylcyclohexane

Concen: 0.643 ug/L

RT: 9.19 min Scan# 1209

Delta R.T. 0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

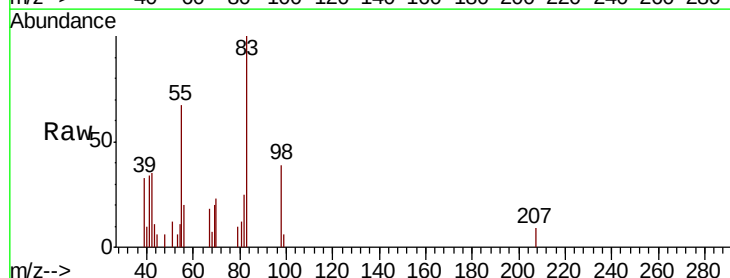
Tgt Ion: 83 Resp: 1643

Ion Ratio Lower Upper

83 100

55 90.4 56.4 84.6#

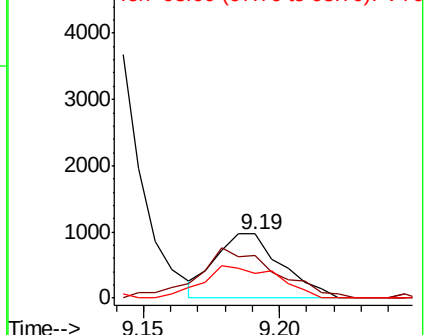
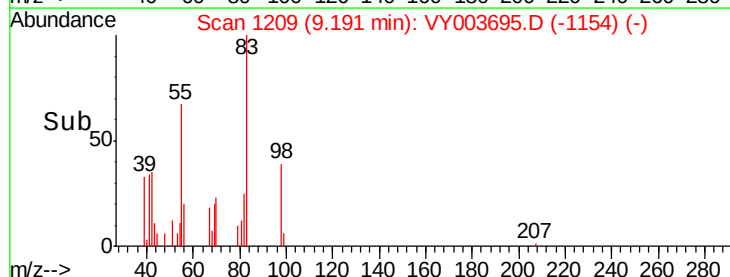
98 57.1 40.3 60.5



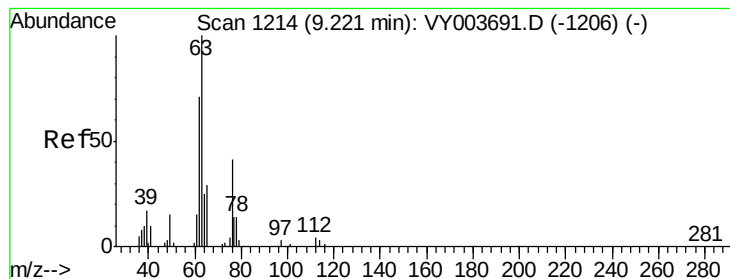
Abundance Ion 83.00 (82.70 to 83.70): VY0

Ion 55.00 (54.70 to 55.70): VY0

Ion 98.00 (97.70 to 98.70): VY0







#40

1,2-Dichloropropane

Concen: 0.211 ug/L

RT: 9.22 min Scan# 1213

Delta R.T. -0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampleId :

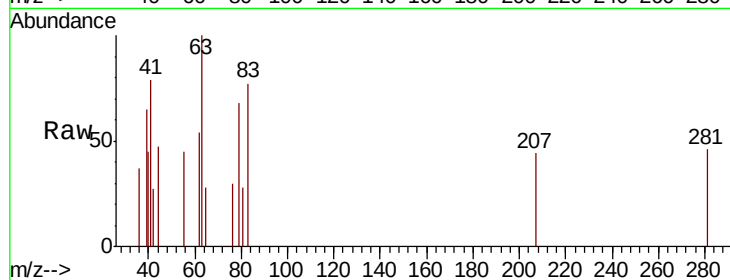
GB1F8

Tot Ion: 63 Resp: 321

Ion Ratio Lower Upper

63 100

112 0.0 3.7 5.5#



Abundance Ion 63.00 (62.70 to 63.70): VY0

Ion 112.00 (111.70 to 112.70): V

9.22

200

150

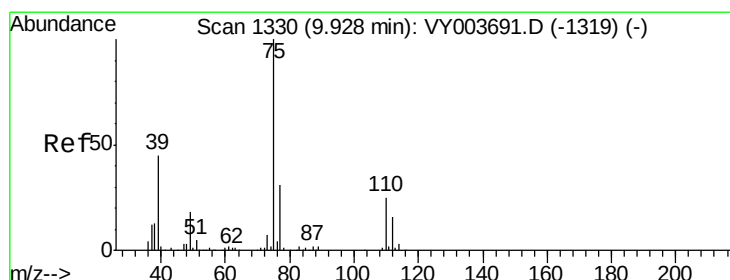
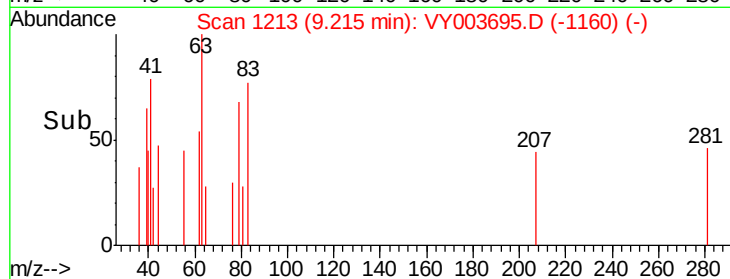
100

50

0

9.18 9.20 9.22 9.24 9.26

Time-->



#42

cis-1,3-Dichloropropene

Concen: 0.703 ug/L

RT: 9.90 min Scan# 1325

Delta R.T. -0.03 min

Lab File: VY003695.D

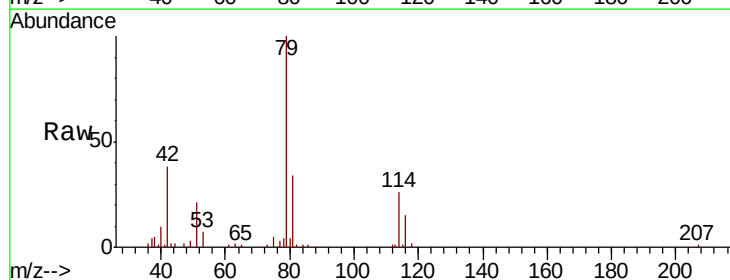
Acq: 09 Dec 2020 13:09

Tgt Ion: 75 Resp: 1684

Ion Ratio Lower Upper

75 100

77 49.1 21.3 39.6#



Abundance Ion 75.00 (74.70 to 75.70): VY0

Ion 77.00 (76.70 to 77.70): VY0

9.90

1200

1000

800

600

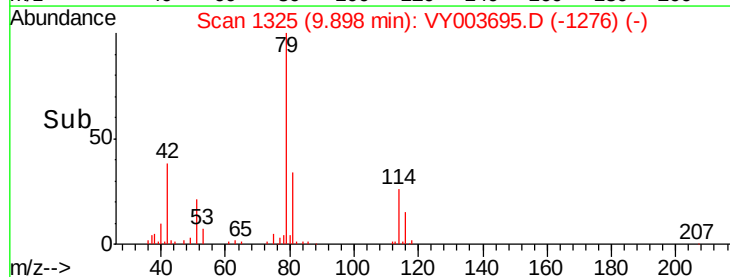
400

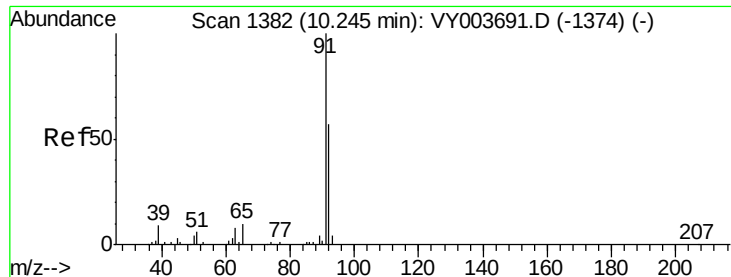
200

0

9.85 9.90

Time-->





#44

Toluene

Concen: 33.138 ug/L

RT: 10.25 min Scan# 1382

Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampleId :

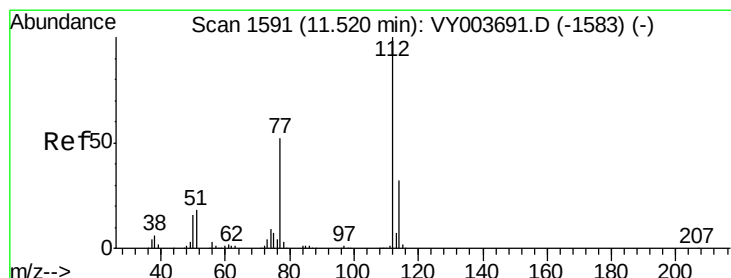
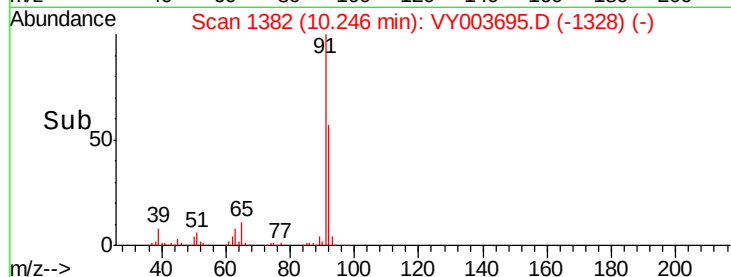
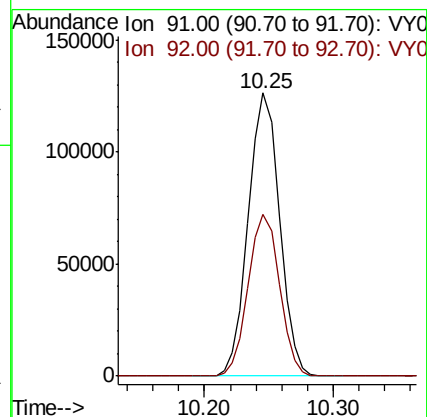
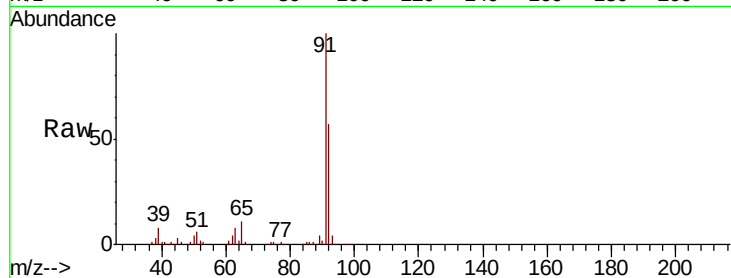
GB1F8

Tot Ion: 91 Resp: 212204

Ion Ratio Lower Upper

91 100

92 57.0 39.8 73.8



#52

Chlorobenzene

Concen: 22.534 ug/L

RT: 11.52 min Scan# 1591

Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

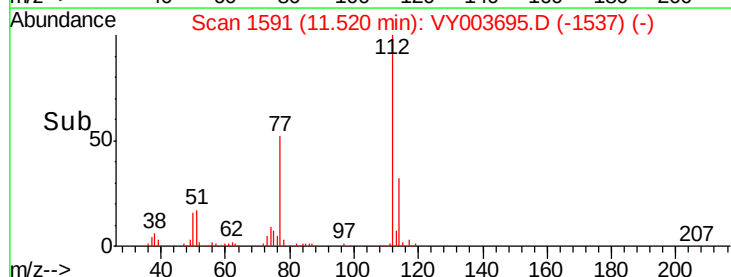
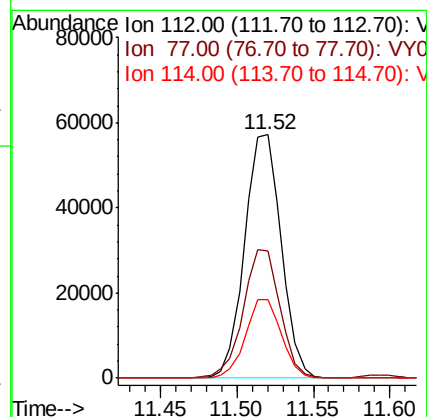
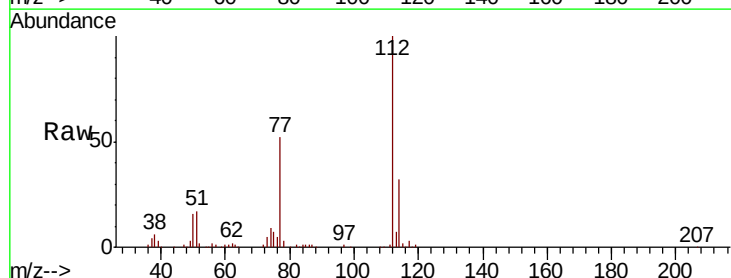
Tgt Ion: 112 Resp: 94963

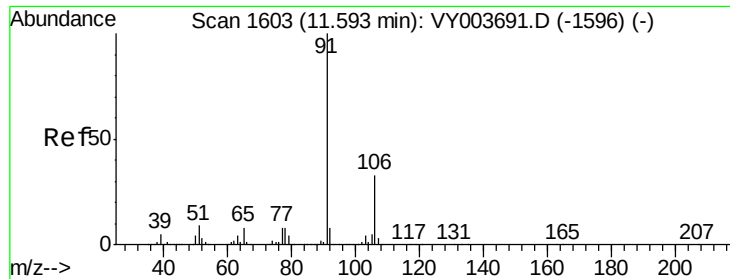
Ion Ratio Lower Upper

112 100

77 52.3 44.4 66.6

114 32.3 22.4 41.6





#53

Ethylbenzene

Concen: 2.068 ug/L

RT: 11.59 min Scan# 1603

Delta R.T. 0.00 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampled :

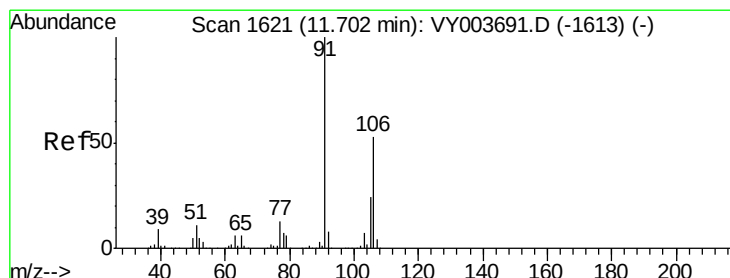
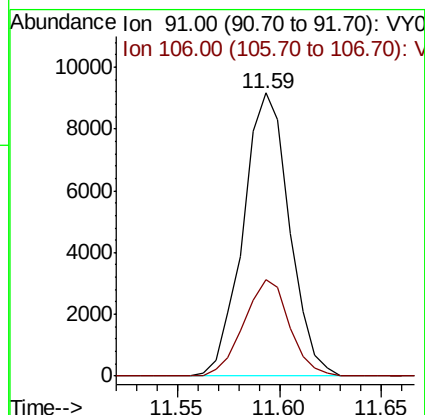
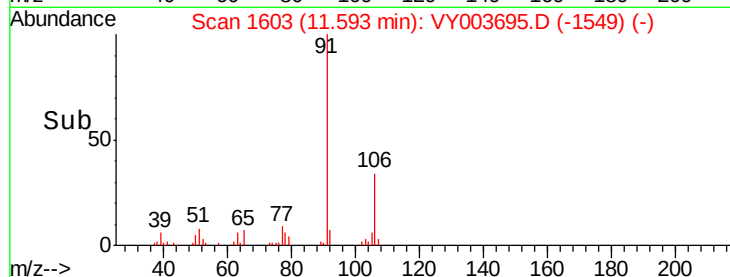
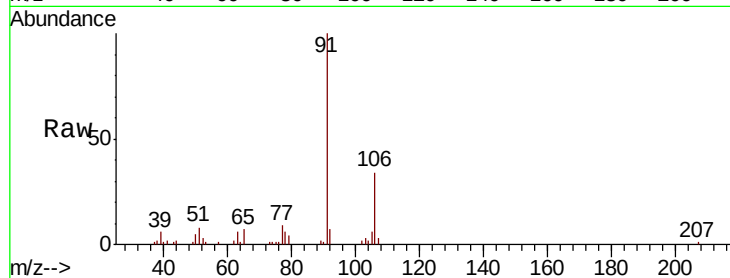
GB1F8

Tot Ion: 91 Resp: 14452

Ion Ratio Lower Upper

91 100

106 34.1 23.3 43.3



#54

m,p-Xylene

Concen: 0.589 ug/L

RT: 11.70 min Scan# 1621

Delta R.T. 0.00 min

Lab File: VY003695.D

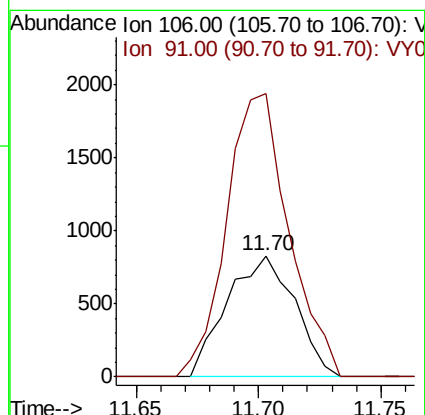
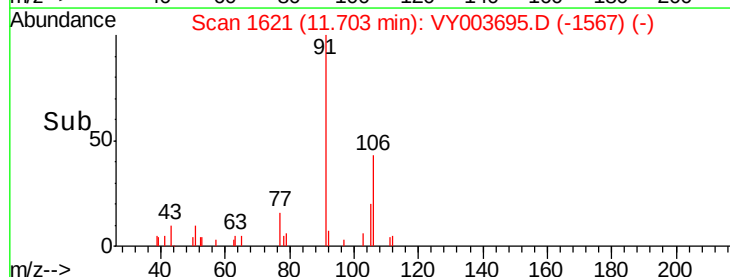
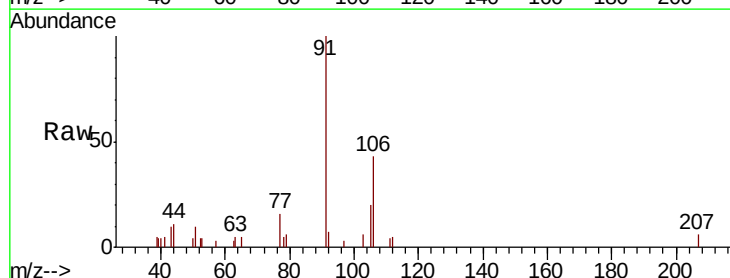
Acq: 09 Dec 2020 13:09

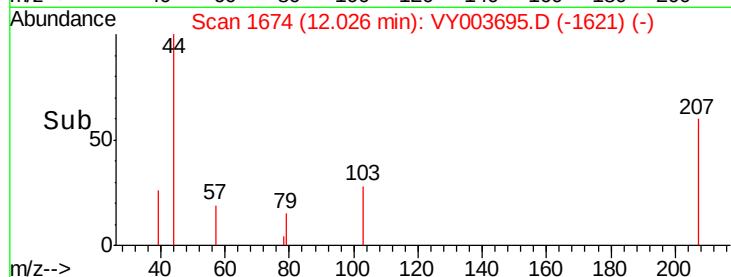
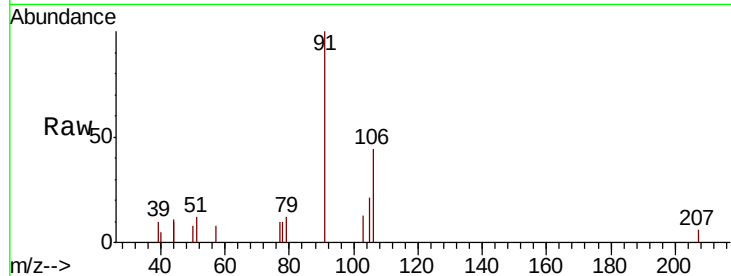
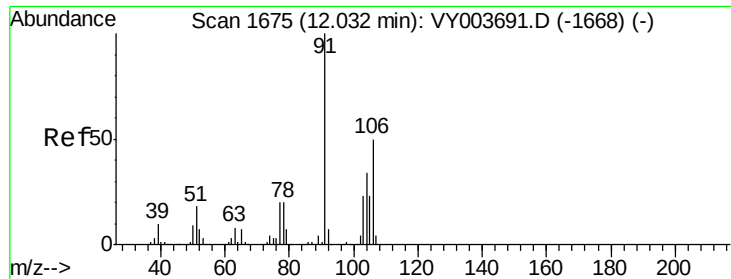
Tgt Ion: 106 Resp: 1589

Ion Ratio Lower Upper

106 100

91 233.5 131.3 243.9





#55

o-xylene

Concen: 0.334 ug/L

RT: 12.03 min Scan# 1674

Delta R.T. -0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

Instrument :

MSVOA\_Y

ClientSampled :

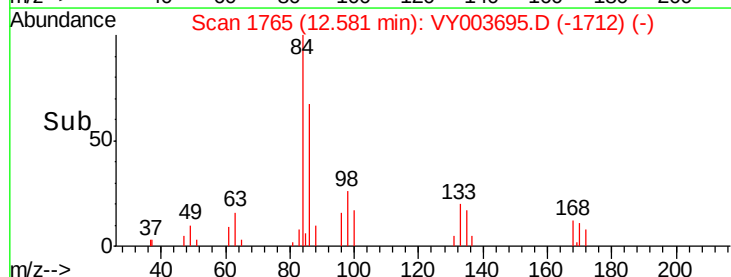
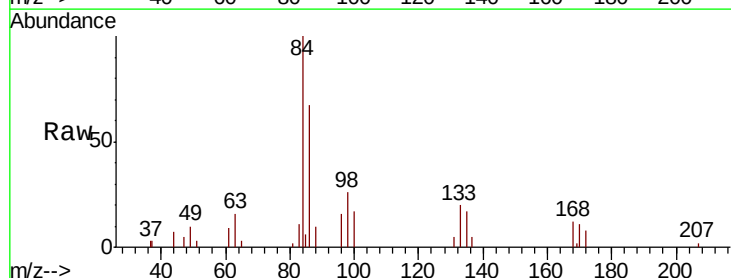
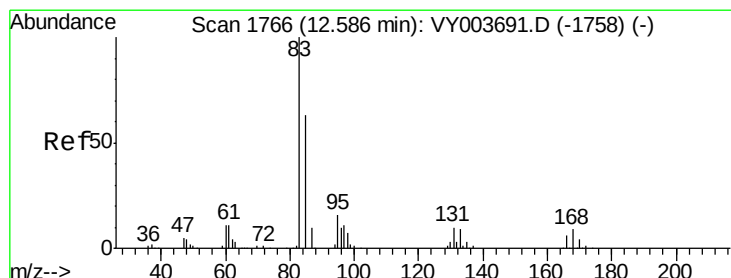
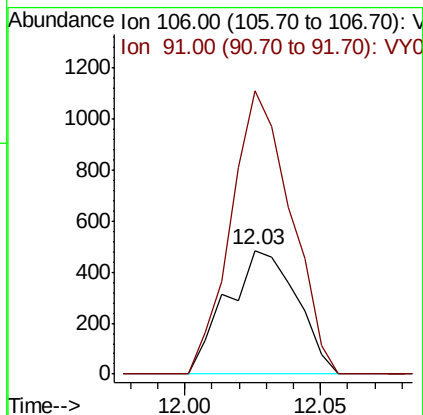
GB1F8

Tot Ion:106 Resp: 863

Ion Ratio Lower Upper

106 100

91 228.2 141.7 263.3



#58

1,1,2,2-Tetrachloroethane

Concen: 0.178 ug/L

RT: 12.58 min Scan# 1765

Delta R.T. -0.01 min

Lab File: VY003695.D

Acq: 09 Dec 2020 13:09

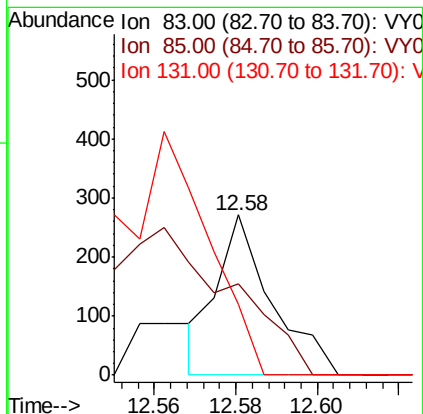
Tgt Ion: 83 Resp: 251

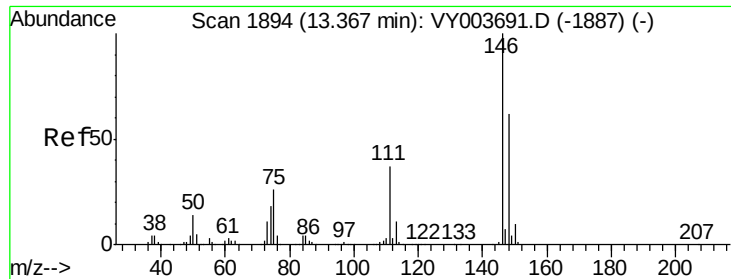
Ion Ratio Lower Upper

83 100

85 56.8 47.2 87.6

131 44.6 8.4 12.6#

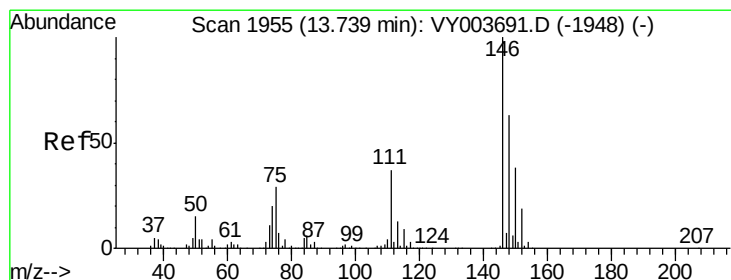
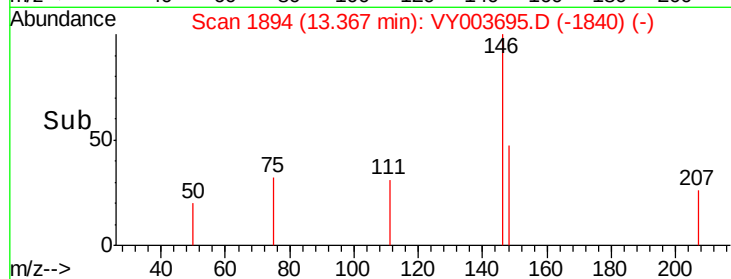
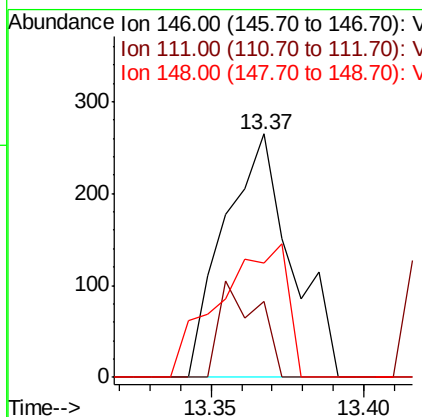
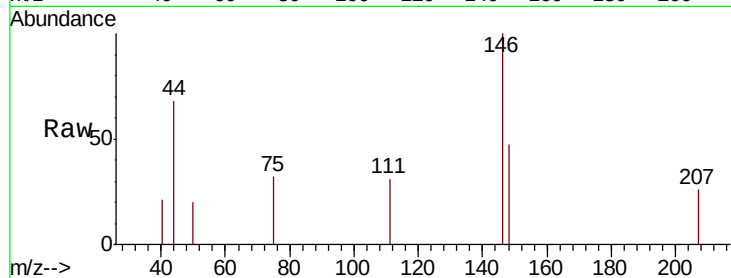




#63  
 1,3-Dichlorobenzene  
 Concen: 0.352 ug/L  
 RT: 13.37 min Scan# 1894  
 Delta R.T. 0.00 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

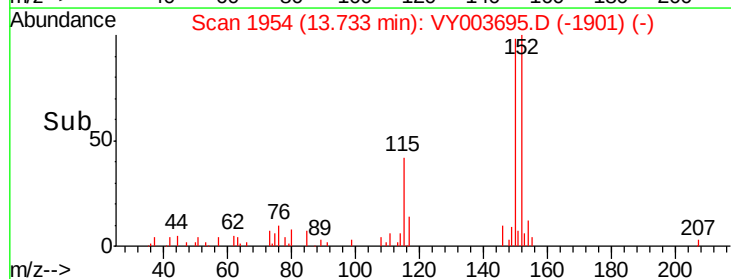
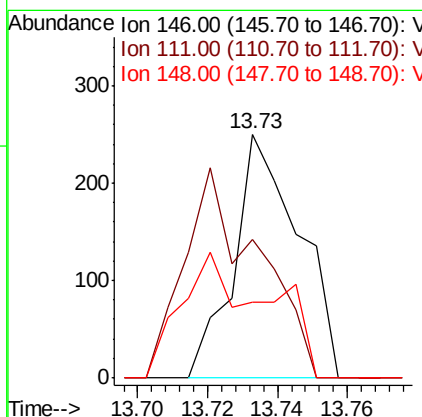
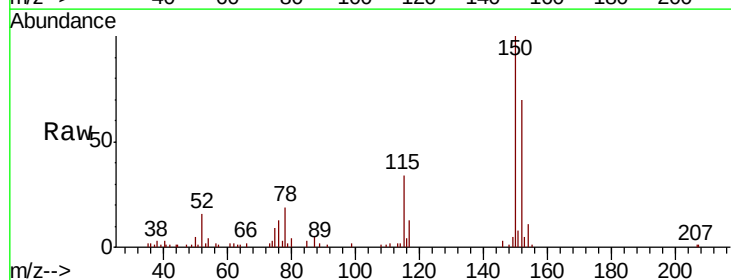
Instrument :  
 MSVOA\_Y  
 ClientSampleId :  
 GB1F8

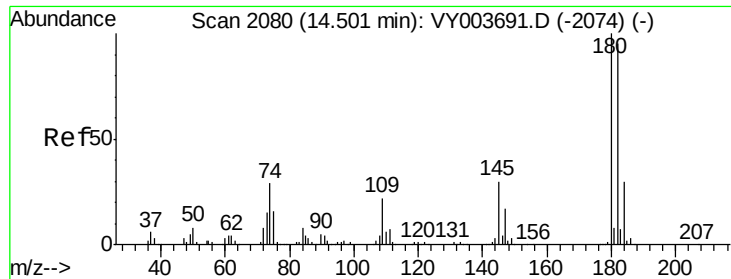
Tot Ion:146 Resp: 406  
 Ion Ratio Lower Upper  
 146 100  
 111 31.3 26.0 48.4  
 148 47.2 43.7 81.1



#65  
 1,2-Dichlorobenzene  
 Concen: 0.305 ug/L  
 RT: 13.73 min Scan# 1954  
 Delta R.T. -0.01 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

Tgt Ion:146 Resp: 322  
 Ion Ratio Lower Upper  
 146 100  
 111 56.8 30.0 45.0#  
 148 30.8 51.8 77.8#

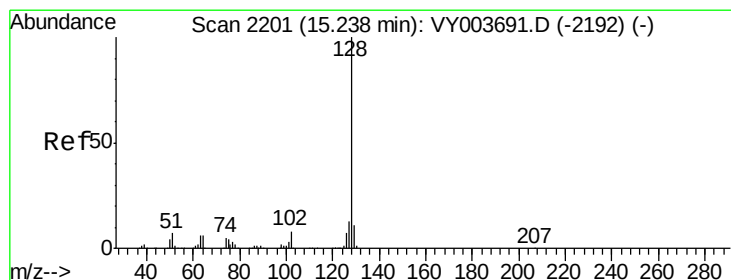
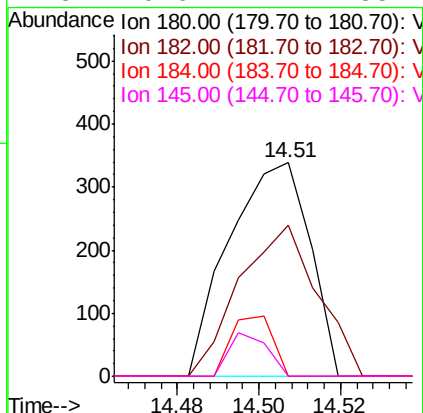
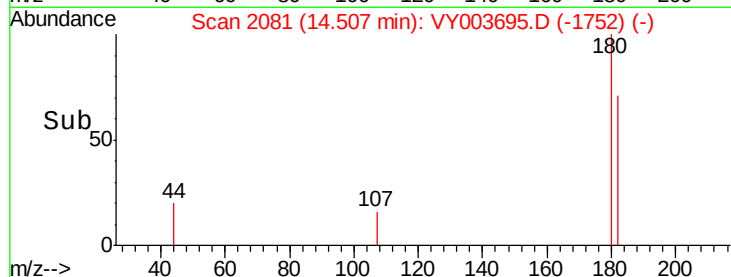
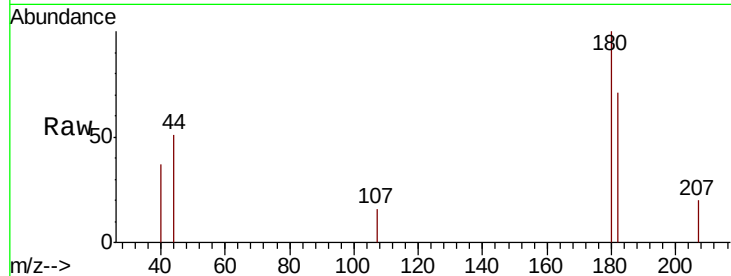




#67  
 1,3,5-Trichlorobenzene  
 Concen: 0.573 ug/L  
 RT: 14.51 min Scan# 2081  
 Delta R.T. 0.01 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

Instrument :  
 MSVOA\_Y  
 ClientSampled :  
 GB1F8

Tot Ion:180 Resp: 467  
 Ion Ratio Lower Upper  
 180 100  
 182 68.3 76.0 114.0#  
 184 14.3 24.2 36.2#  
 145 9.6 22.2 33.2#



#69  
 Naphthalene  
 Concen: 0.301 ug/L  
 RT: 15.23 min Scan# 2200  
 Delta R.T. -0.01 min  
 Lab File: VY003695.D  
 Acq: 09 Dec 2020 13:09

Tgt Ion:128 Resp: 438  
 Ion Ratio Lower Upper  
 128 100  
 129 0.0 8.7 13.1#  
 127 9.8 10.2 15.4#

