

Data Path : Z:\VOASRV\HPCHEM1\MSVOA U\DATA\VU042920\  
 Data File : VU037902.D  
 Acq On : 29 Apr 2020 09:46  
 Operator : JC/MD  
 Sample : VSTDCCC050  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Apr 30 01:07:27 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM042320WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Wed Apr 29 15:53:29 2020  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) 1,4-Difluorobenzene     | 6.28  | 114  | 626819   | 50.00 | ug/L  | 0.00     |
| 28) Chlorobenzene-d5       | 9.44  | 117  | 615055   | 50.00 | ug/L  | 0.00     |
| 60) 1,4-Dichlorobenzene-d4 | 11.83 | 152  | 297858   | 50.00 | ug/L  | 0.00     |

## System Monitoring Compounds

|                                |         |       |          |          |      |         |
|--------------------------------|---------|-------|----------|----------|------|---------|
| 4) Vinyl Chloride-d3           | 1.61    | 65    | 230024   | 42.00    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 135 | Recovery | =    | 84.00%  |
| 7) Chloroethane-d5             | 1.93    | 69    | 207733   | 48.94    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 130 | Recovery | =    | 97.88%  |
| 11) 1,1-Dichloroethene-d2      | 2.59    | 63    | 422573   | 47.67    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 95.34%  |
| 21) 2-Butanone-d5              | 4.66    | 46    | 448494   | 103.35   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 40 - 130 | Recovery | =    | 103.35% |
| 24) Chloroform-d               | 5.10    | 84    | 434652   | 52.10    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 104.20% |
| 26) 1,2-Dichloroethane-d4      | 5.74    | 65    | 293923   | 50.88    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 101.76% |
| 32) Benzene-d6                 | 5.76    | 84    | 876736   | 50.41    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 125 | Recovery | =    | 100.82% |
| 36) 1,2-Dichloropropane-d6     | 6.72    | 67    | 295541   | 50.80    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 70 - 120 | Recovery | =    | 101.60% |
| 41) Toluene-d8                 | 7.93    | 98    | 801052   | 50.11    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 100.22% |
| 43) trans-1,3-Dichloropropene- | 8.20    | 79    | 146740   | 49.01    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 60 - 125 | Recovery | =    | 98.02%  |
| 47) 2-Hexanone-d5              | 8.65    | 63    | 331933   | 104.82   | ug/L | 0.00    |
| Spiked Amount                  | 100.000 | Range | 45 - 130 | Recovery | =    | 104.82% |
| 57) 1,1,2,2-Tetrachloroethane- | 10.77   | 84    | 450219   | 55.62    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 65 - 120 | Recovery | =    | 111.24% |
| 64) 1,2-Dichlorobenzene-d4     | 12.21   | 152   | 305667   | 52.74    | ug/L | 0.00    |
| Spiked Amount                  | 50.000  | Range | 80 - 120 | Recovery | =    | 105.48% |

## Target Compounds

|                                |      |     |        |         | Ovalue   |
|--------------------------------|------|-----|--------|---------|----------|
| 2) Dichlorodifluoromethane     | 1.39 | 85  | 242153 | 46.826  | ug/L 100 |
| 3) Chloromethane               | 1.53 | 50  | 290838 | 51.601  | ug/L 99  |
| 5) Vinyl chloride              | 1.62 | 62  | 304755 | 49.006  | ug/L 98  |
| 6) Bromomethane                | 1.86 | 94  | 159680 | 62.055  | ug/L 97  |
| 8) Chloroethane                | 1.95 | 64  | 184587 | 52.829  | ug/L 98  |
| 9) Trichlorofluoromethane      | 2.16 | 101 | 330511 | 49.987  | ug/L 99  |
| 10) 1,1,2-Trichloro-1,2,2-trif | 2.60 | 101 | 209516 | 54.376  | ug/L 98  |
| 12) 1,1-Dichloroethene         | 2.60 | 96  | 201307 | 52.899  | ug/L 92  |
| 13) Acetone                    | 2.65 | 43  | 294869 | 113.889 | ug/L 100 |
| 14) Carbon disulfide           | 2.82 | 76  | 631343 | 46.389  | ug/L 99  |
| 15) Methyl Acetate             | 2.98 | 43  | 294951 | 47.133  | ug/L 96  |
| 16) Methylene chloride         | 3.08 | 84  | 243539 | 53.858  | ug/L 94  |
| 17) trans-1,2-Dichloroethene   | 3.39 | 96  | 220489 | 51.819  | ug/L 94  |
| 18) Methyl tert-butyl Ether    | 3.40 | 73  | 767889 | 52.391  | ug/L 98  |
| 19) 1,1-Dichloroethane         | 3.91 | 63  | 447981 | 52.230  | ug/L 100 |
| 20) cis-1,2-Dichloroethene     | 4.71 | 96  | 248639 | 53.370  | ug/L 96  |
| 22) 2-Butanone                 | 4.74 | 43  | 451323 | 99.551  | ug/L 97  |

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 Operator : JC/MD  
 Sample : VSTDCCC050  
 Misc : 5.0mL/MSVOA U/WATER  
 ALS Vial : 1 Sample Multiplier: 1

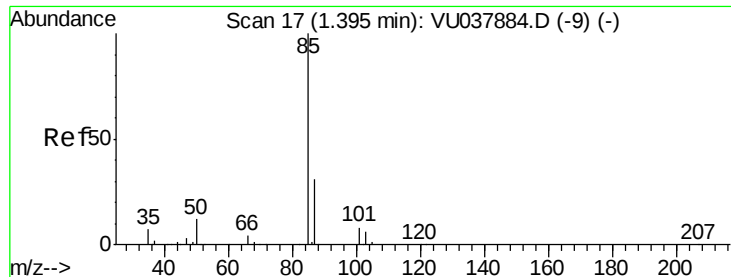
Instrument :  
 MSVOA\_U  
 ClientSampleId :

Quant Time: Apr 30 01:07:27 2020  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_U\METHOD\SOMULM042320WMA.M  
 Quant Title : VOC Analysis  
 QLast Update : Wed Apr 29 15:53:29 2020  
 Response via : Initial Calibration

| Internal Standards              | R.T.  | QIon | Response | Conc   | Units | Dev(Min) |
|---------------------------------|-------|------|----------|--------|-------|----------|
| 23) Bromochloromethane          | 5.01  | 128  | 116876   | 51.918 | uq/L  | 96       |
| 25) Chloroform                  | 5.13  | 83   | 434286   | 54.113 | uq/L  | 100      |
| 27) 1,2-Dichloroethane          | 5.83  | 62   | 353679   | 51.455 | uq/L  | 100      |
| 29) Cyclohexane                 | 5.42  | 56   | 411159   | 47.784 | uq/L  | 95       |
| 30) 1,1,1-Trichloroethane       | 5.35  | 97   | 353471   | 51.460 | uq/L  | 99       |
| 31) Carbon tetrachloride        | 5.56  | 117  | 283004   | 50.967 | uq/L  | 99       |
| 33) Benzene                     | 5.81  | 78   | 971456   | 52.038 | uq/L  | 100      |
| 34) Trichloroethene             | 6.57  | 95   | 237015   | 51.760 | uq/L  | 98       |
| 35) Methylcyclohexane           | 6.79  | 83   | 404704   | 50.473 | uq/L  | 97       |
| 37) 1,2-Dichloropropane         | 6.82  | 63   | 262424   | 51.469 | uq/L  | 99       |
| 38) Bromodichloromethane        | 7.13  | 83   | 320349   | 52.003 | uq/L  | 97       |
| 39) cis-1,3-Dichloropropene     | 7.63  | 75   | 420673   | 51.531 | uq/L  | 99       |
| 40) 4-Methyl-2-pentanone        | 7.82  | 43   | 837963   | 94.503 | uq/L  | 96       |
| 42) Toluene                     | 8.00  | 91   | 1035412  | 52.901 | uq/L  | 99       |
| 44) trans-1,3-Dichloropropene   | 8.23  | 75   | 401710   | 50.979 | uq/L  | 98       |
| 45) 1,1,2-Trichloroethane       | 8.42  | 97   | 238426   | 53.604 | uq/L  | 99       |
| 46) Tetrachloroethene           | 8.57  | 164  | 162131   | 48.441 | uq/L  | 95       |
| 48) 2-Hexanone                  | 8.71  | 43   | 674189   | 96.162 | uq/L  | 96       |
| 49) Dibromochloromethane        | 8.84  | 129  | 239681   | 51.605 | uq/L  | 97       |
| 50) 1,2-Dibromoethane           | 8.95  | 107  | 252102   | 52.324 | uq/L  | 97       |
| 51) Chlorobenzene               | 9.47  | 112  | 642594   | 52.783 | uq/L  | 99       |
| 52) Ethylbenzene                | 9.59  | 91   | 1165179  | 53.159 | uq/L  | 99       |
| 53) m,p-Xylene                  | 9.71  | 106  | 443169   | 53.701 | uq/L  | 100      |
| 54) o-xylene                    | 10.12 | 106  | 434410   | 53.824 | uq/L  | 99       |
| 55) Styrene                     | 10.13 | 104  | 753757   | 54.305 | uq/L  | 99       |
| 56) Isopropylbenzene            | 10.50 | 105  | 1137967  | 53.275 | uq/L  | 100      |
| 58) 1,1,1,2,2-Tetrachloroethane | 10.80 | 83   | 426189   | 53.876 | uq/L  | 99       |
| 59) 1,2,3-Trichloropropane      | 10.84 | 75   | 358121   | 52.286 | uq/L  | 99       |
| 61) Bromoform                   | 10.31 | 173  | 167793   | 50.056 | uq/L  | 99       |
| 62) 1,3-Dichlorobenzene         | 11.76 | 146  | 492333   | 52.792 | uq/L  | 98       |
| 63) 1,4-Dichlorobenzene         | 11.85 | 146  | 497816   | 52.887 | uq/L  | 98       |
| 65) 1,2-Dichlorobenzene         | 12.23 | 146  | 494328   | 54.548 | uq/L  | 99       |
| 66) 1,2-Dibromo-3-chloropropan  | 13.02 | 75   | 103175   | 51.085 | uq/L  | 100      |
| 67) 1,3,5-Trichlorobenzene      | 13.24 | 180  | 353768   | 52.198 | uq/L  | 100      |
| 68) 1,2,4-trichlorobenzene      | 13.87 | 180  | 337120   | 51.144 | uq/L  | 99       |
| 69) Naphthalene                 | 14.12 | 128  | 1298263  | 54.926 | uq/L  | 100      |
| 70) 1,2,3-Trichlorobenzene      | 14.37 | 180  | 338940   | 52.074 | uq/L  | 98       |

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





#2

Dichlorodifluoromethane

Concen: 46.826 ug/L

RT: 1.39 min Scan# 17

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

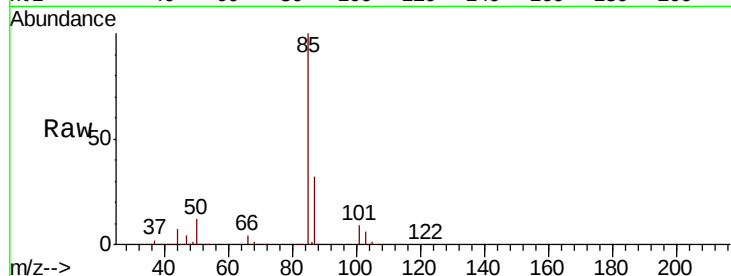
ClientSampled :

Tot Ion: 85 Resp: 242153

Ion Ratio Lower Upper

85 100

87 32.0 25.8 38.6



Abundance Ion 85.00 (84.70 to 85.70): VU037884.D (-9) (-)

Ion 87.00 (86.70 to 87.70): VU037884.D (-9) (-)

1.39

250000

200000

150000

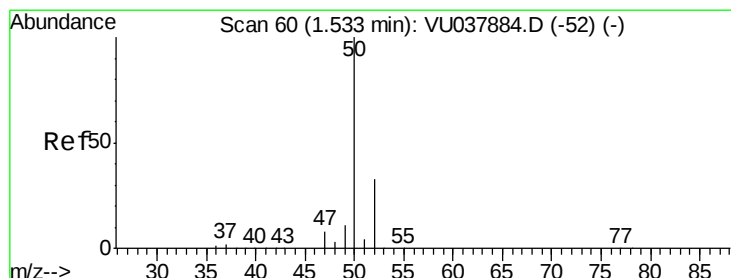
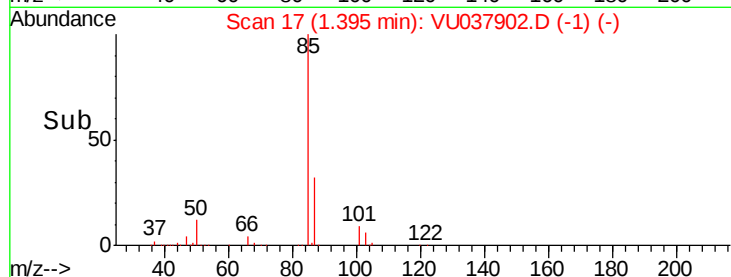
100000

50000

0

1.35 1.40 1.45

Time-->



#3

Chloromethane

Concen: 51.601 ug/L

RT: 1.53 min Scan# 60

Delta R.T. 0.00 min

Lab File: VU037902.D

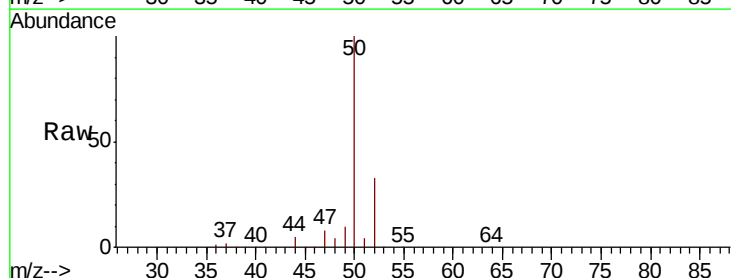
Acq: 29 Apr 2020 09:46

Tgt Ion: 50 Resp: 290838

Ion Ratio Lower Upper

50 100

52 32.7 23.1 42.9



Abundance Ion 50.00 (49.70 to 50.70): VU037884.D (-52) (-)

Ion 52.00 (51.70 to 52.70): VU037884.D (-52) (-)

1.53

300000

250000

200000

150000

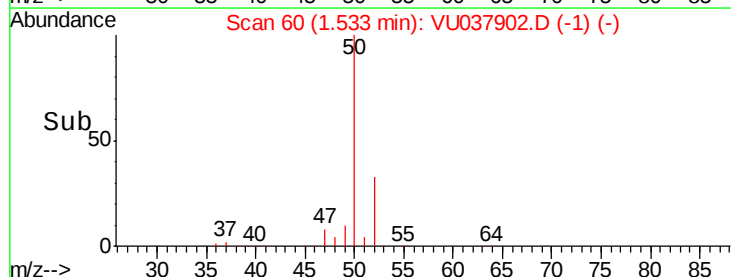
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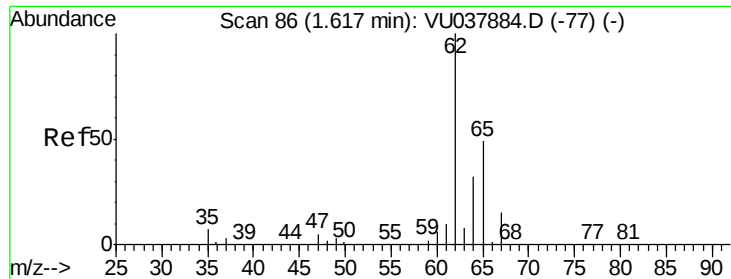
50000

0

1.50 1.55 1.60

Time-->





#5

Vinyl chloride

Concen: 49.006 ug/L

RT: 1.62 min Scan# 86

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

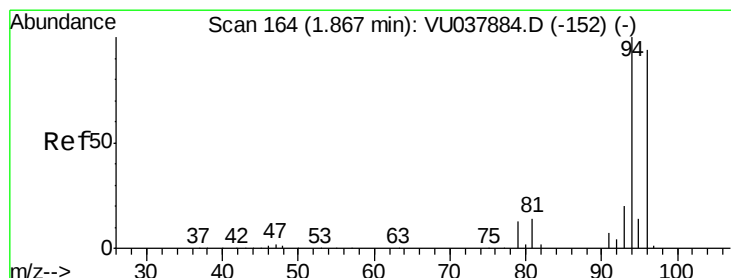
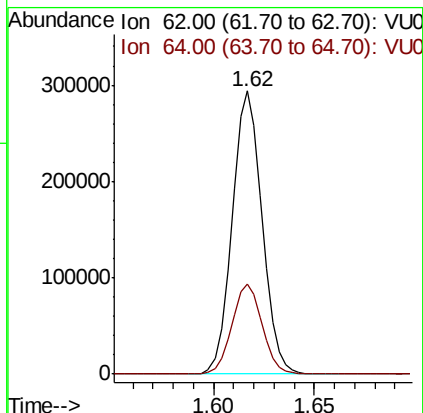
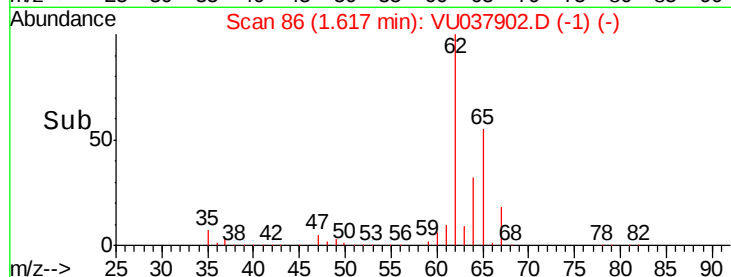
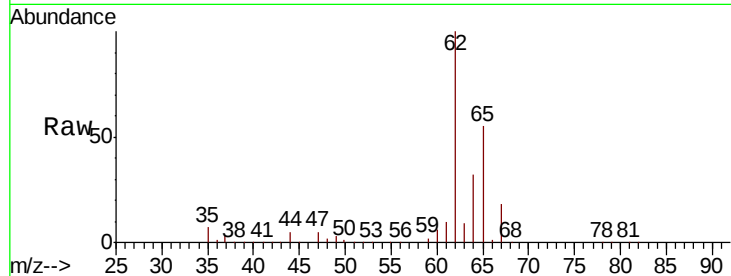
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 62 Resp: 304755

Ion Ratio Lower Upper

62 100

64 31.8 23.2 43.0



#6

Bromomethane

Concen: 62.055 ug/L

RT: 1.86 min Scan# 163

Delta R.T. -0.00 min

Lab File: VU037902.D

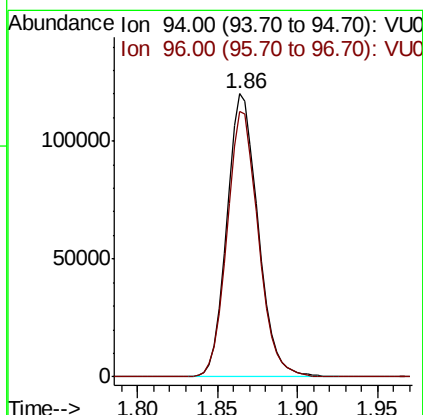
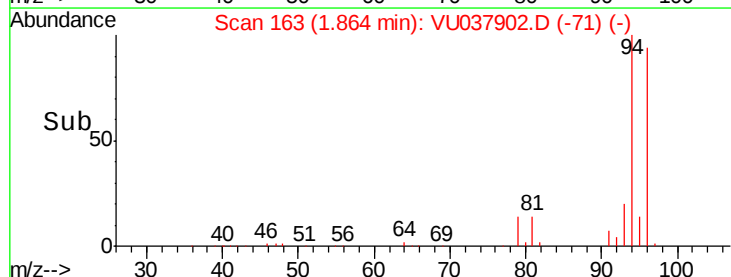
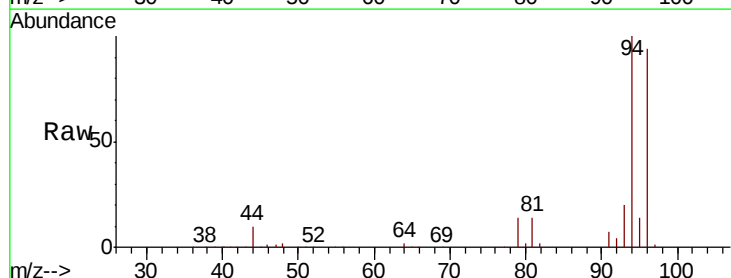
Acq: 29 Apr 2020 09:46

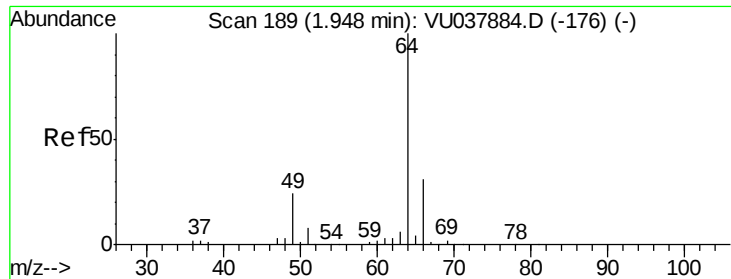
Tgt Ion: 94 Resp: 159680

Ion Ratio Lower Upper

94 100

96 93.9 63.9 118.7

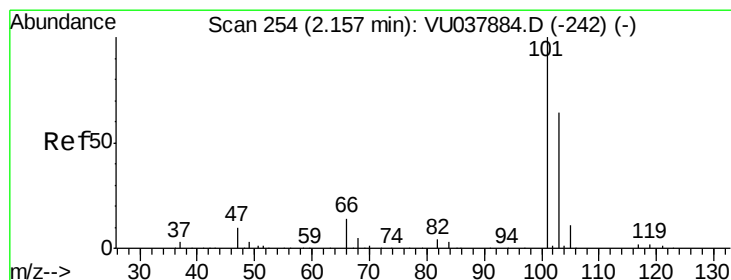
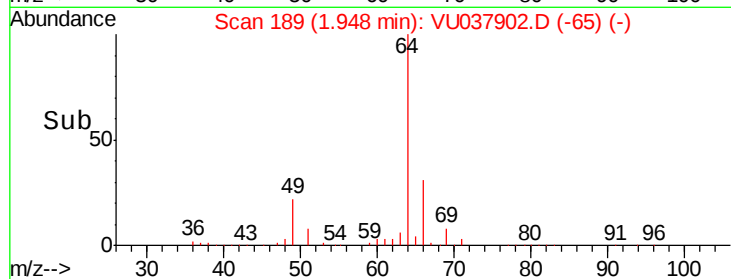
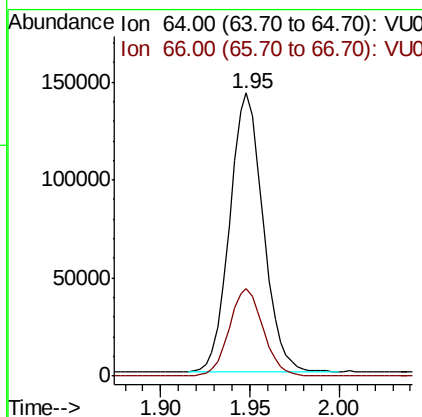
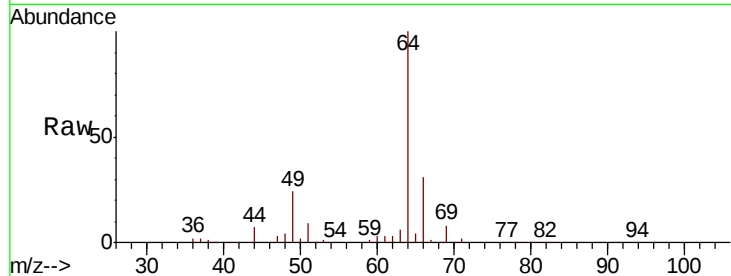




#8  
Chloroethane  
Concen: 52.829 ug/L  
RT: 1.95 min Scan# 189  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

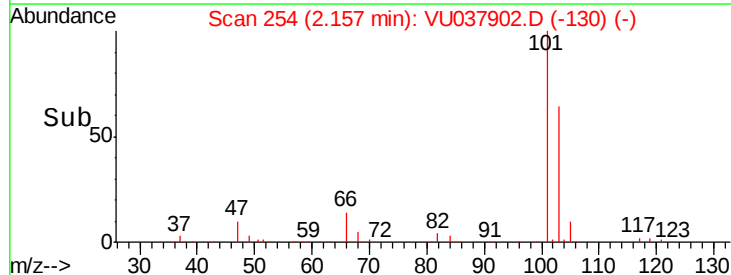
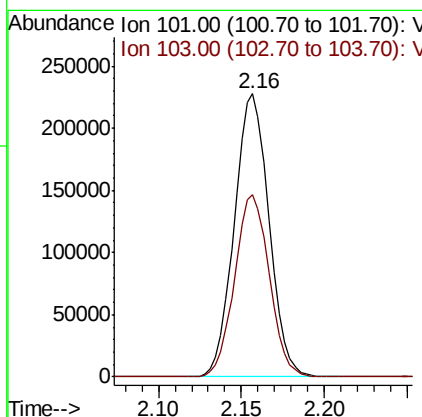
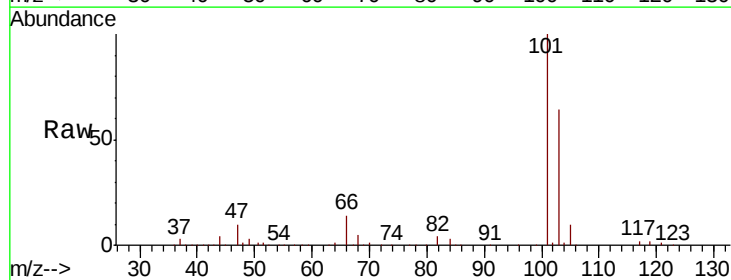
Instrument :  
MSVOA\_U  
ClientSampleId :

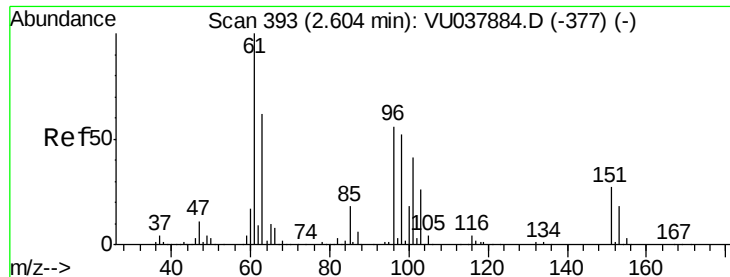
Tot Ion: 64 Resp: 184587  
Ion Ratio Lower Upper  
64 100  
66 30.9 22.3 41.3



#9  
Trichlorofluoromethane  
Concen: 49.987 ug/L  
RT: 2.16 min Scan# 254  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion:101 Resp: 330511  
Ion Ratio Lower Upper  
101 100  
103 64.6 52.2 78.4





#10

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

Concen: 54.376 ug/L

RT: 2.60 min Scan# 393

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

ClientSampled :

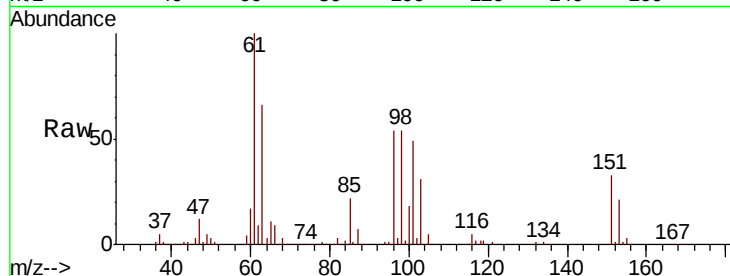
Tot Ion:101 Resp: 209516

Ion Ratio Lower Upper

101 100

85 44.7 36.2 54.4

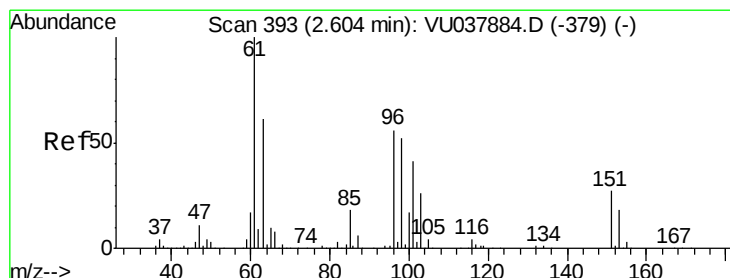
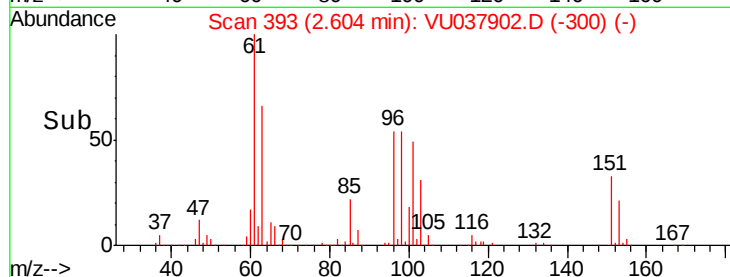
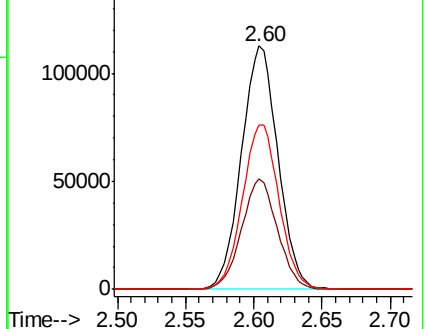
151 67.7 55.5 83.3



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 85.00 (84.70 to 85.70): VU0

Ion 151.00 (150.70 to 151.70): V



#12

1,1-Dichloroethene

Concen: 52.899 ug/L

RT: 2.60 min Scan# 393

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

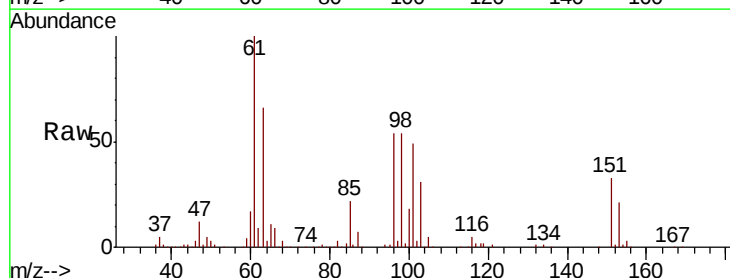
Tgt Ion: 96 Resp: 201307

Ion Ratio Lower Upper

96 100

61 185.1 134.1 249.0

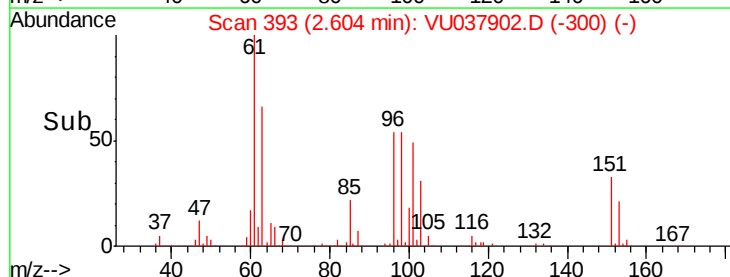
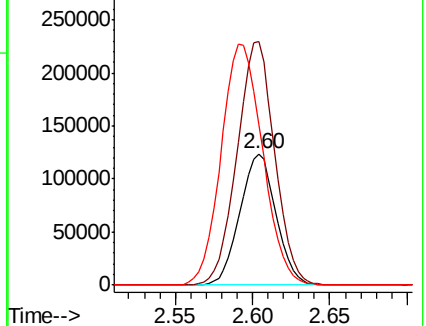
63 122.3 96.5 179.1

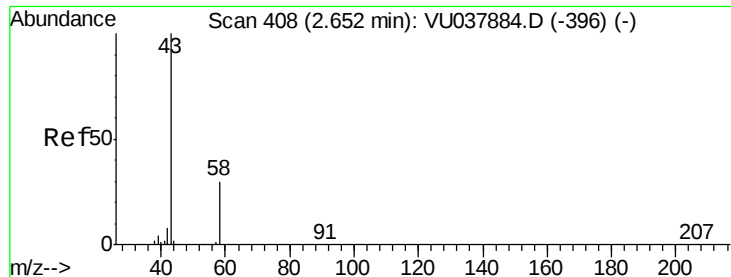


Abundance Ion 96.00 (95.70 to 96.70): VU0

Ion 61.00 (60.70 to 61.70): VU0

Ion 63.00 (62.70 to 63.70): VU0





#13

Acetone

Concen: 113.889 ug/L

RT: 2.65 min Scan# 407

Delta R.T. -0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

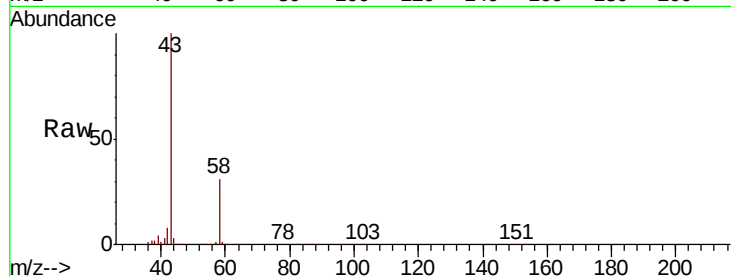
ClientSampleId :

Tot Ion: 43 Resp: 294869

Ion Ratio Lower Upper

43 100

58 31.3 0.0 62.0



Abundance Ion 43.00 (42.70 to 43.70): VU037884.D (-396) (-)

Ion 58.00 (57.70 to 58.70): VU037884.D (-396) (-)

200000

150000

100000

50000

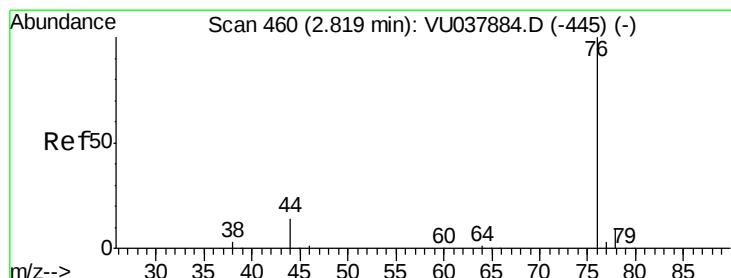
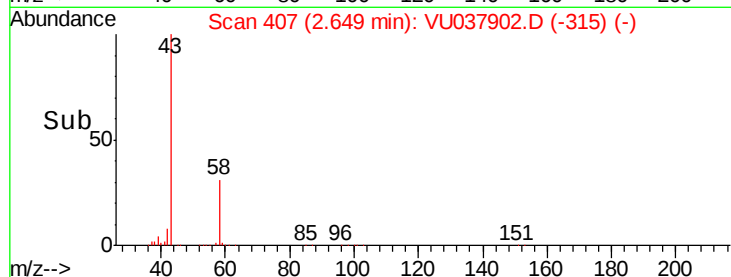
0

2.50

2.60

2.70

Time-->



#14

Carbon disulfide

Concen: 46.389 ug/L

RT: 2.82 min Scan# 460

Delta R.T. 0.00 min

Lab File: VU037902.D

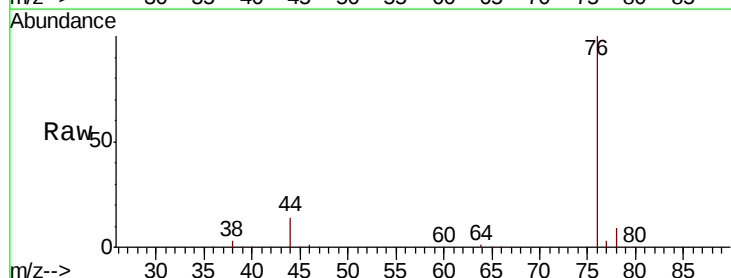
Acq: 29 Apr 2020 09:46

Tgt Ion: 76 Resp: 631343

Ion Ratio Lower Upper

76 100

78 9.0 7.4 11.0



Abundance Ion 76.00 (75.70 to 76.70): VU037884.D (-445) (-)

Ion 78.00 (77.70 to 78.70): VU037884.D (-445) (-)

400000

300000

200000

100000

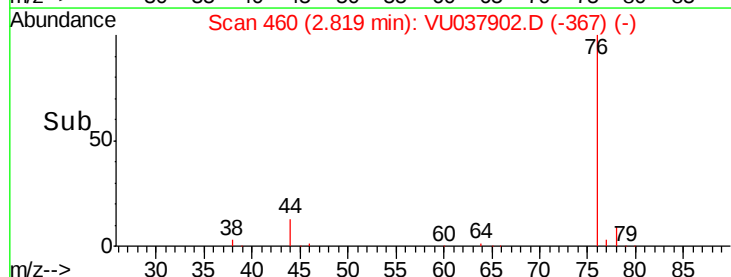
0

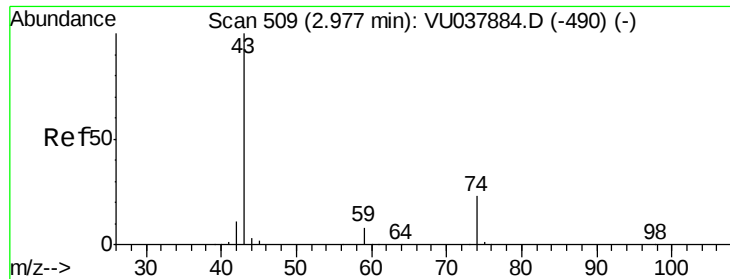
2.75

2.80

2.85

Time-->

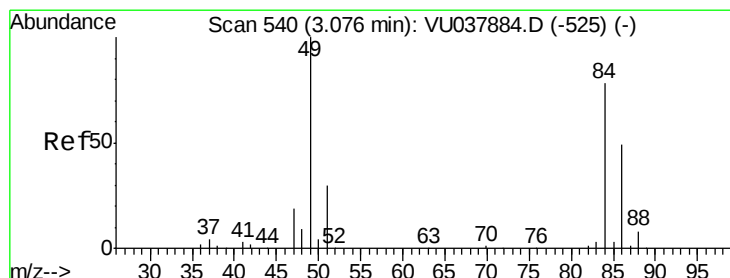
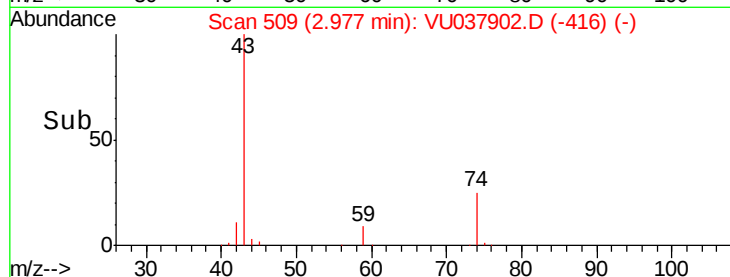
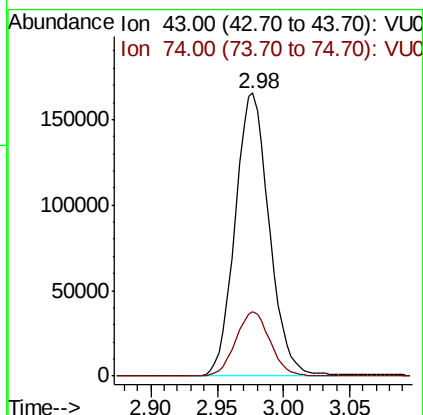
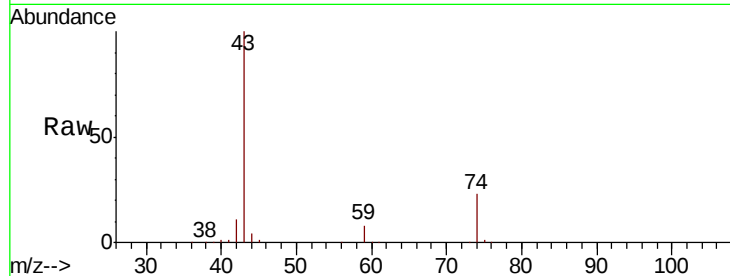




#15  
Methvl Acetate  
Concen: 47.133 ug/L  
RT: 2.98 min Scan# 509  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

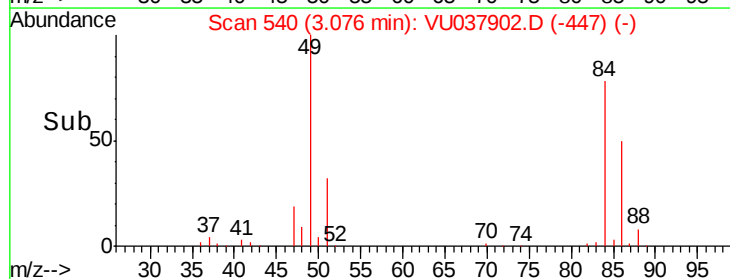
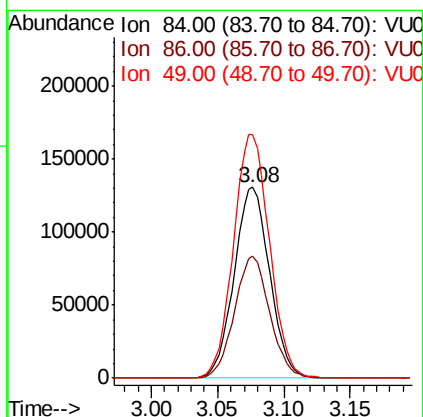
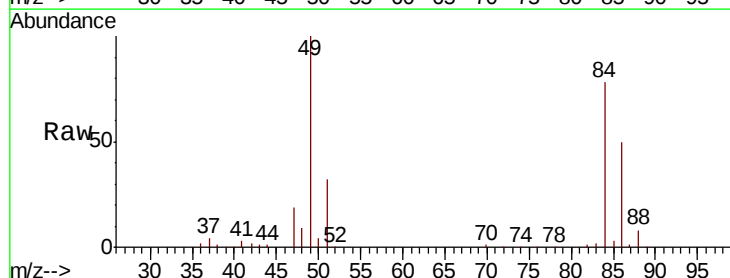
Instrument :  
MSVOA\_U  
ClientSampleId :

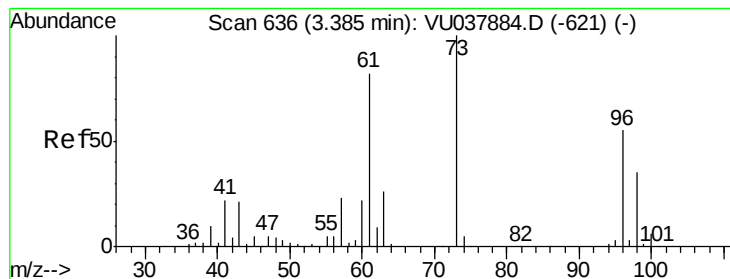
Tot Ion: 43 Resp: 294951  
Ion Ratio Lower Upper  
43 100  
74 23.1 17.0 25.4



#16  
Methylene chloride  
Concen: 53.858 ug/L  
RT: 3.08 min Scan# 540  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion: 84 Resp: 243539  
Ion Ratio Lower Upper  
84 100  
86 64.3 43.5 80.7  
49 127.6 95.1 176.7





#17

trans-1,2-Dichloroethene

Concen: 51.819 ug/L

RT: 3.39 min Scan# 636

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :  
MSVOA\_U  
ClientSampled :

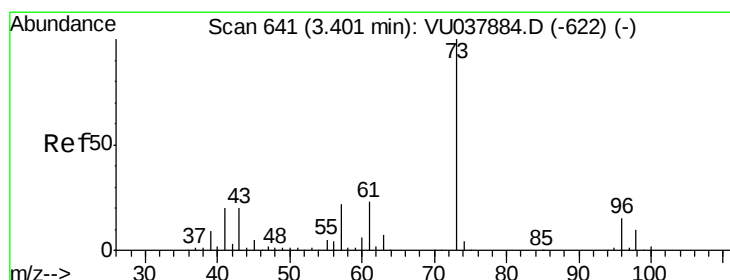
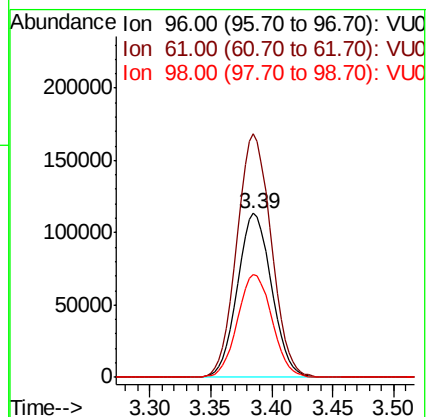
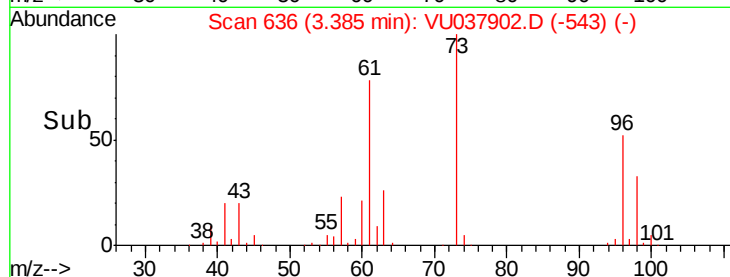
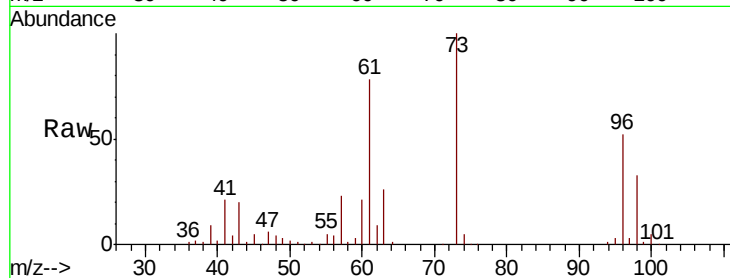
Tot Ion: 96 Resp: 220489

Ion Ratio Lower Upper

96 100

61 148.5 111.4 207.0

98 62.9 43.9 81.5



#18

Methyl tert-butyl Ether

Concen: 52.391 ug/L

RT: 3.40 min Scan# 640

Delta R.T. -0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

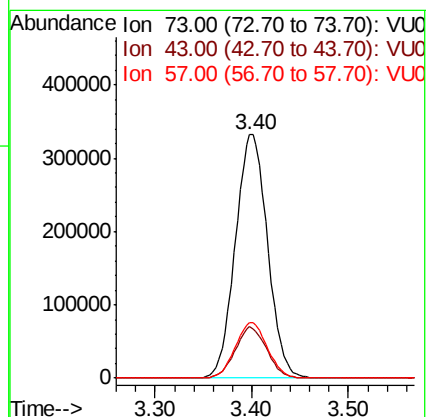
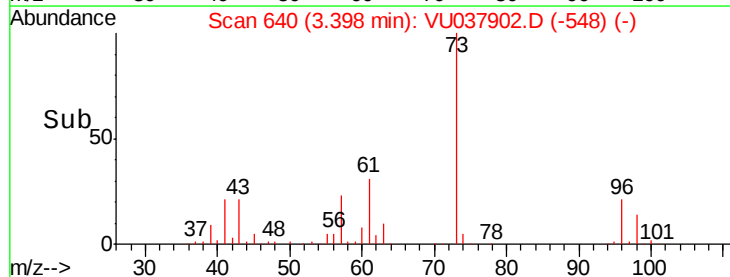
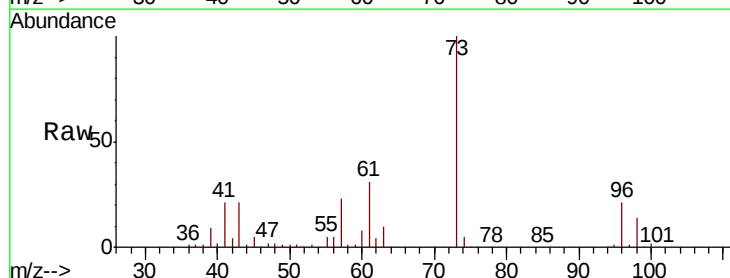
Tgt Ion: 73 Resp: 767889

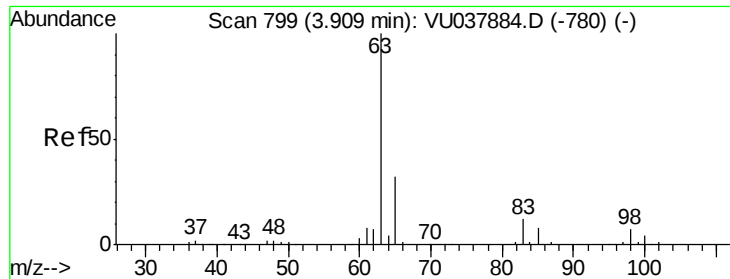
Ion Ratio Lower Upper

73 100

43 20.4 17.0 25.6

57 22.8 18.7 28.1





#19

1,1-Dichloroethane

Concen: 52.230 ug/L

RT: 3.91 min Scan# 799

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

ClientSampled :

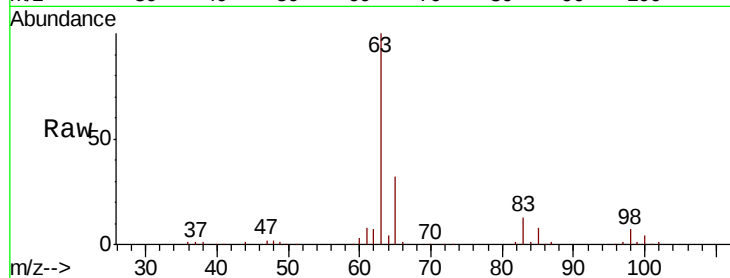
Tot Ion: 63 Resp: 447981

Ion Ratio Lower Upper

63 100

65 31.9 22.2 41.2

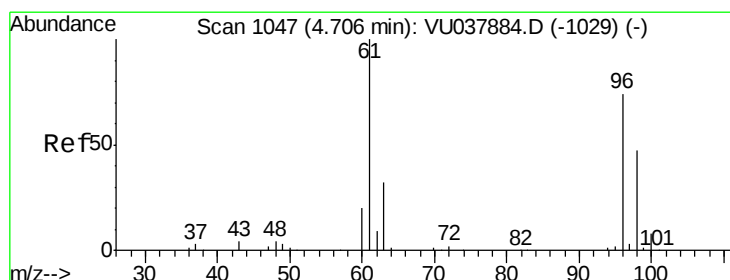
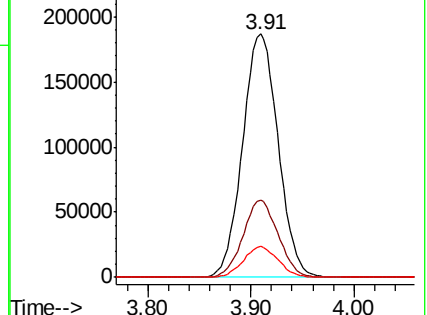
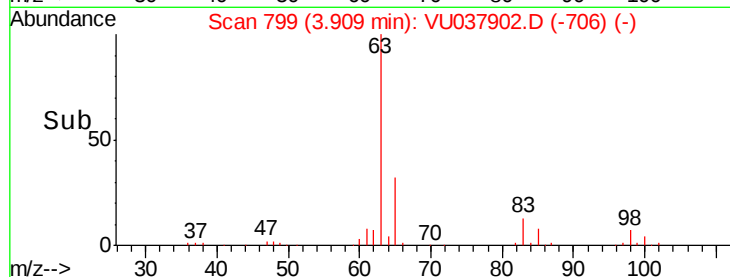
83 12.6 8.6 16.0



Abundance Ion 63.00 (62.70 to 63.70): VU037902.D (-954) (-)

Ion 65.00 (64.70 to 65.70): VU037902.D (-954) (-)

Ion 83.00 (82.70 to 83.70): VU037902.D (-954) (-)



#20

cis-1,2-Dichloroethene

Concen: 53.370 ug/L

RT: 4.71 min Scan# 1047

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

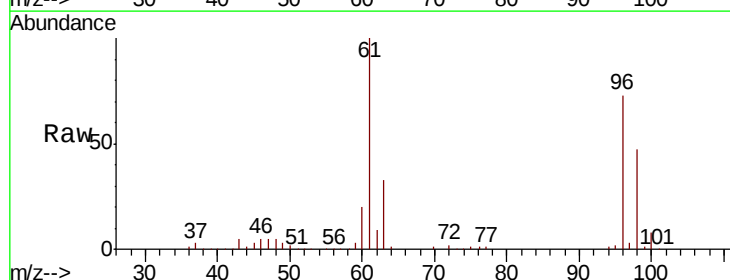
Tgt Ion: 96 Resp: 248639

Ion Ratio Lower Upper

96 100

61 137.9 100.4 186.4

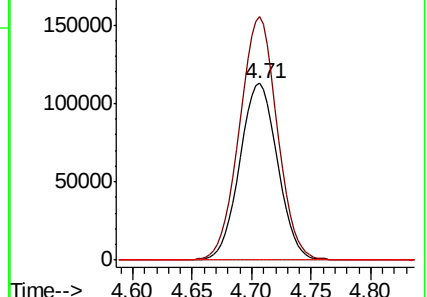
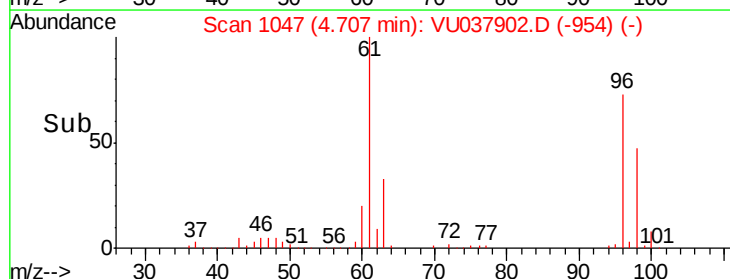
68 0.0 0.0 0.0

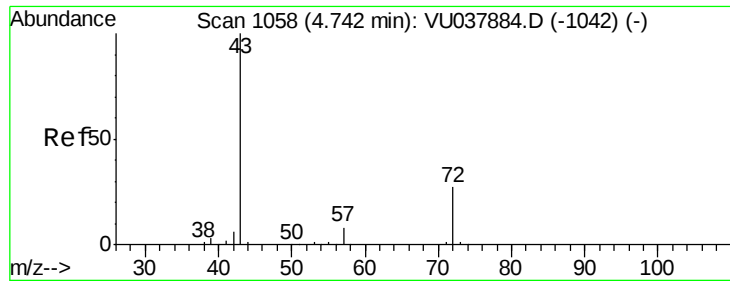


Abundance Ion 96.00 (95.70 to 96.70): VU037902.D (-954) (-)

Ion 61.00 (60.70 to 61.70): VU037902.D (-954) (-)

Ion 68.00 (67.70 to 68.70): VU037902.D (-954) (-)





#22

2-Butanone

Concen: 99.551 ug/L

RT: 4.74 min Scan# 1058

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

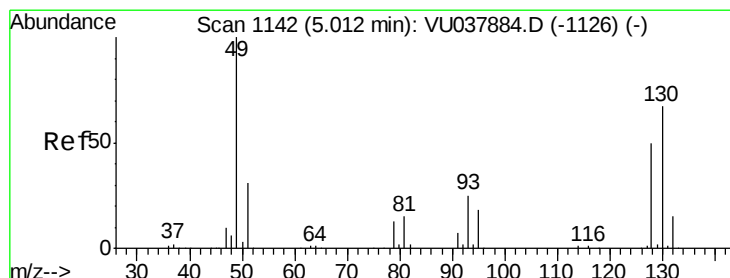
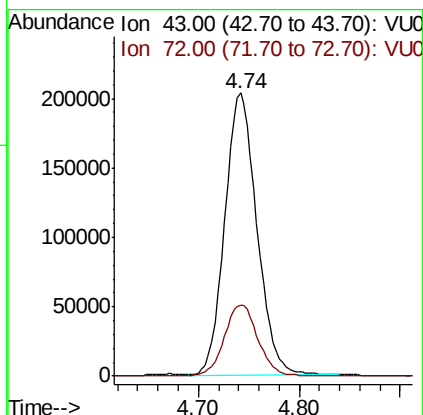
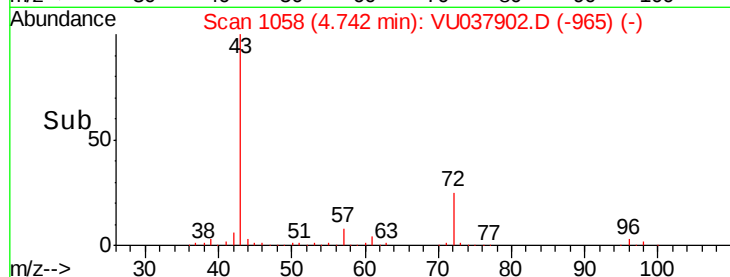
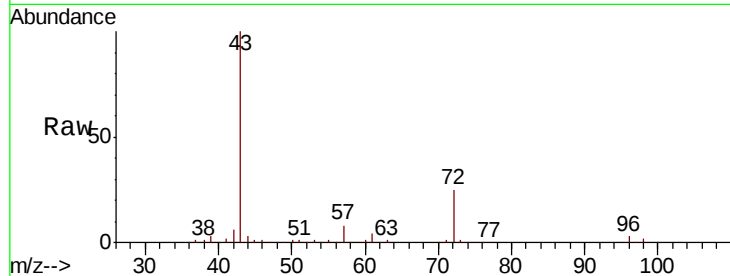
Instrument :  
MSVOA\_U  
ClientSampleId :

Tot Ion: 43 Resp: 451323

Ion Ratio Lower Upper

43 100

72 26.6 12.6 37.6



#23

Bromochloromethane

Concen: 51.918 ug/L

RT: 5.01 min Scan# 1142

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Tgt Ion: 128 Resp: 116876

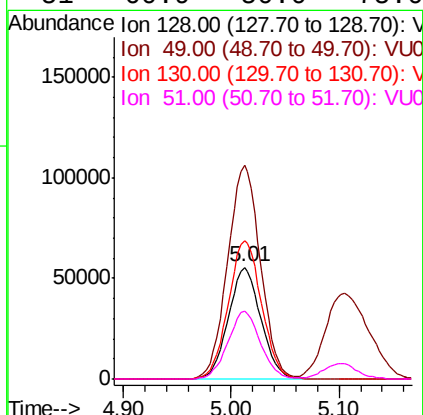
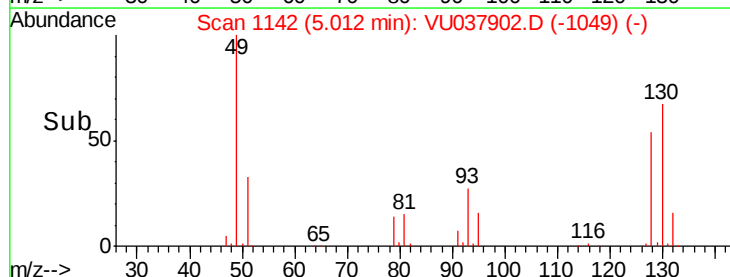
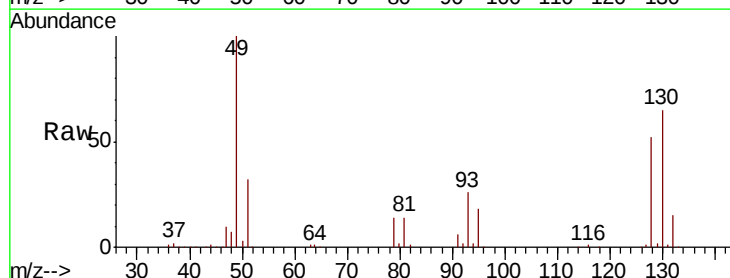
Ion Ratio Lower Upper

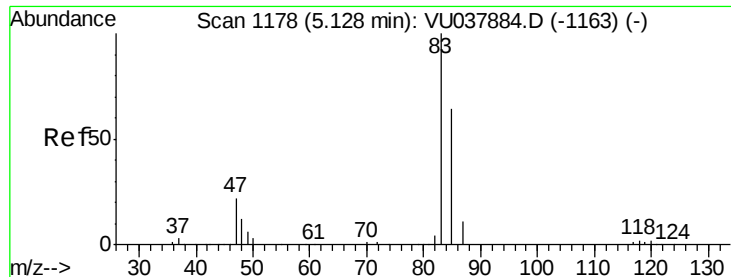
128 100

49 191.7 140.9 261.7

130 124.1 88.6 164.6

51 60.9 50.0 75.0

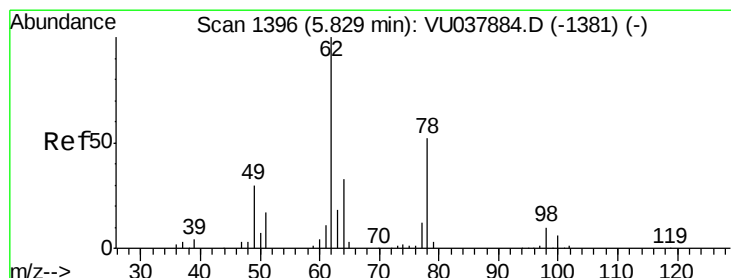
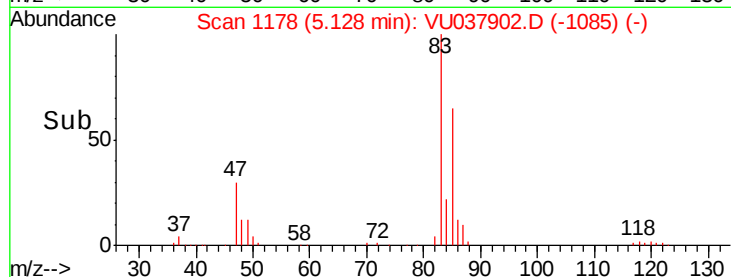
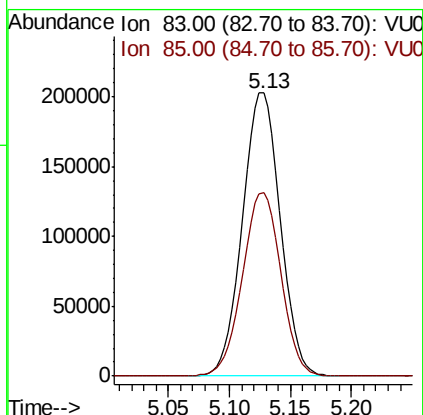
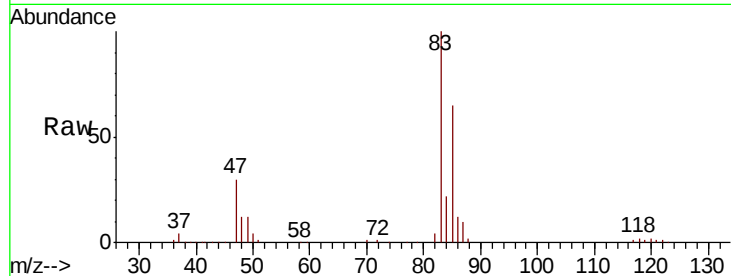




#25  
Chloroform  
Concen: 54.113 ug/L  
RT: 5.13 min Scan# 1178  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

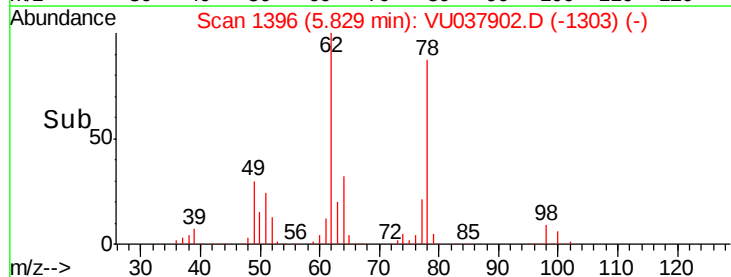
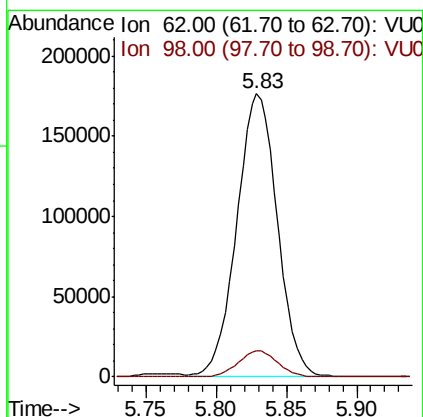
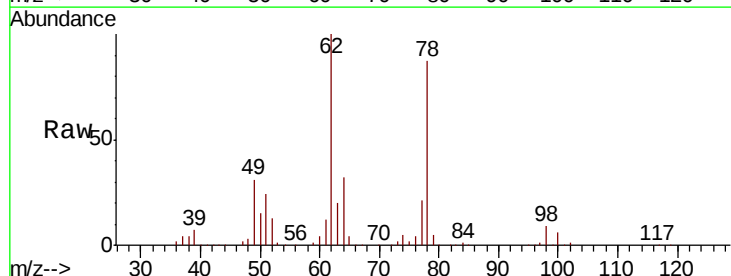
Instrument :  
MSVOA\_U  
ClientSampleId :

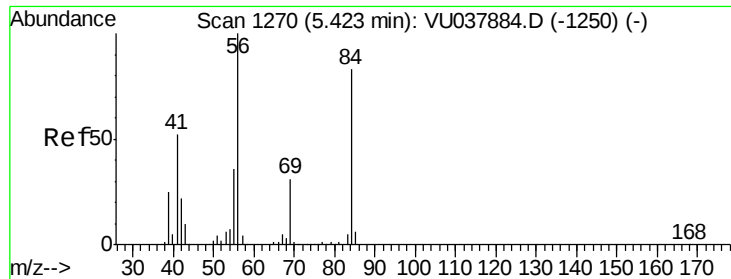
Tot Ion: 83 Resp: 434286  
Ion Ratio Lower Upper  
83 100  
85 64.9 45.1 83.9



#27  
1,2-Dichloroethane  
Concen: 51.455 ug/L  
RT: 5.83 min Scan# 1396  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion: 62 Resp: 353679  
Ion Ratio Lower Upper  
62 100  
98 9.2 7.3 10.9

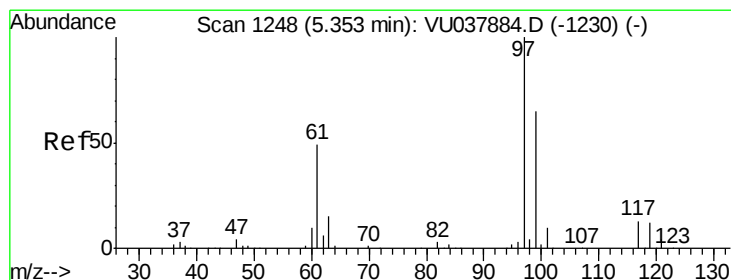
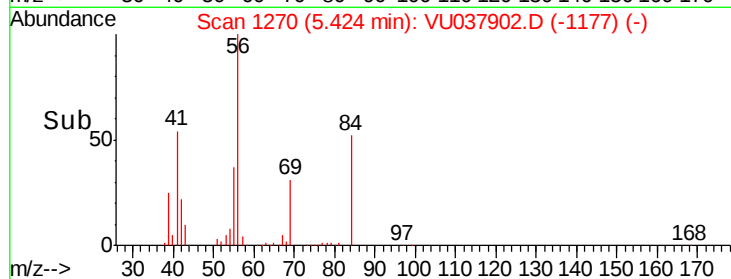
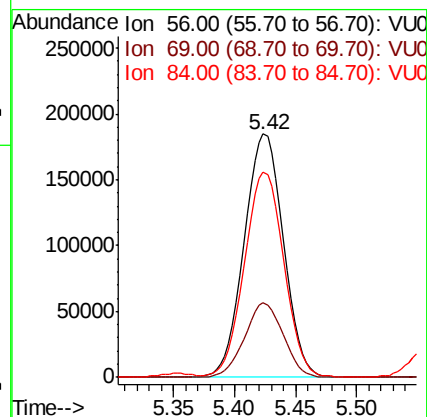
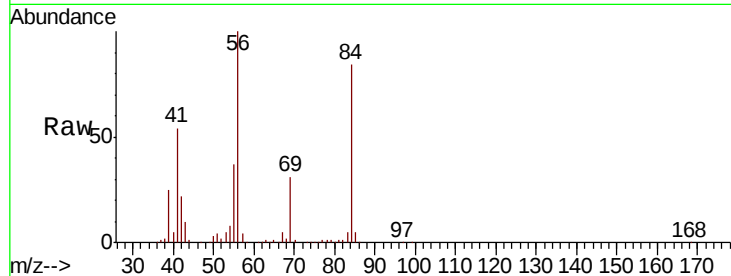




#29  
Cyclohexane  
Concen: 47.784 ug/L  
RT: 5.42 min Scan# 1270  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

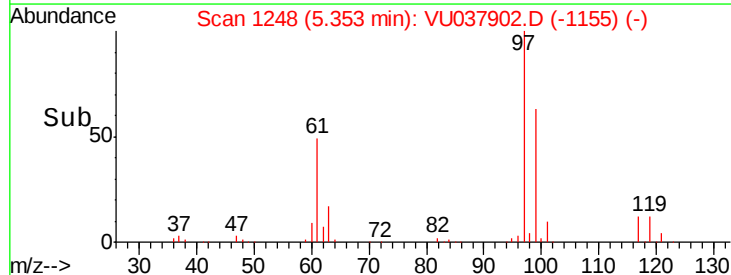
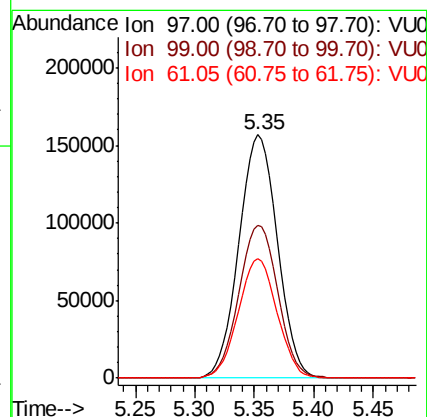
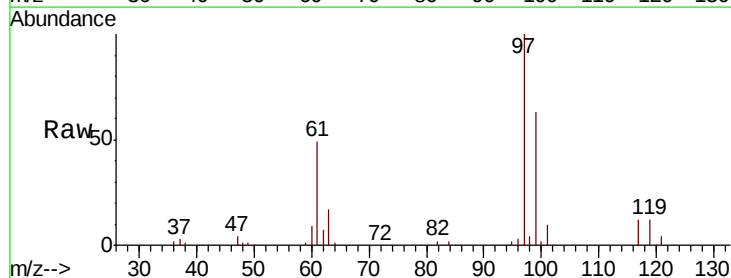
Instrument :  
MSVOA\_U  
ClientSampled :

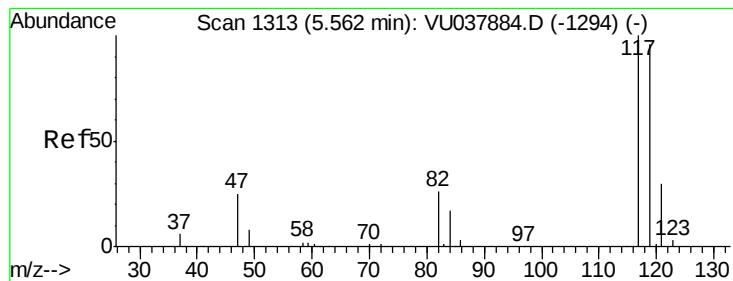
Tot Ion: 56 Resp: 411159  
Ion Ratio Lower Upper  
56 100  
69 30.1 22.9 34.3  
84 84.6 63.6 95.4



#30  
1,1,1-Trichloroethane  
Concen: 51.460 ug/L  
RT: 5.35 min Scan# 1248  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion: 97 Resp: 353471  
Ion Ratio Lower Upper  
97 100  
99 63.5 50.7 76.1  
61 49.3 38.9 58.3





#31

Carbon tetrachloride

Concen: 50.967 ug/L

RT: 5.56 min Scan# 1312

Delta R.T. -0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

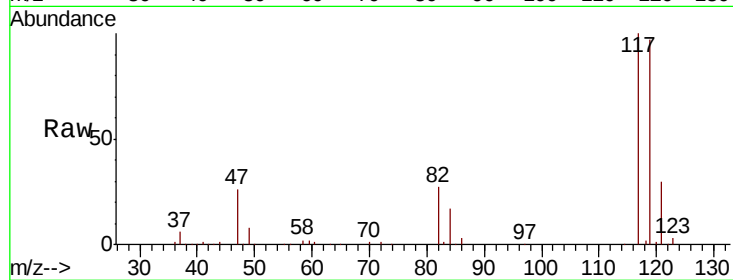
ClientSampled :

Tot Ion:117 Resp: 283004

Ion Ratio Lower Upper

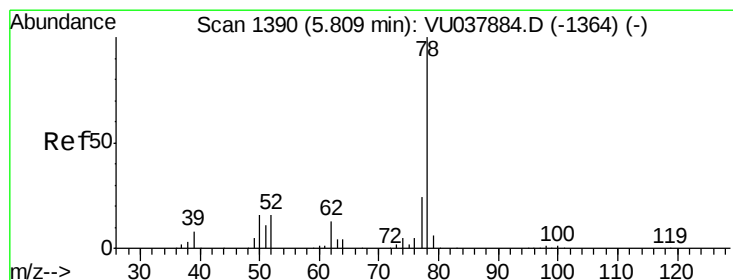
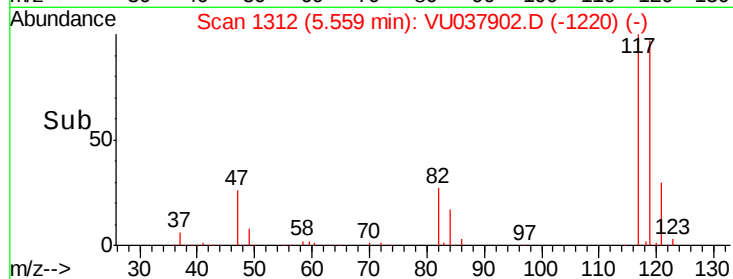
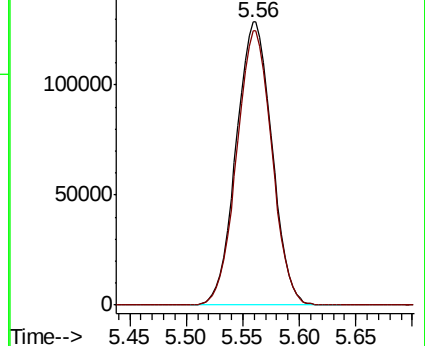
117 100

119 95.4 76.7 115.1



Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V



#33

Benzene

Concen: 52.038 ug/L

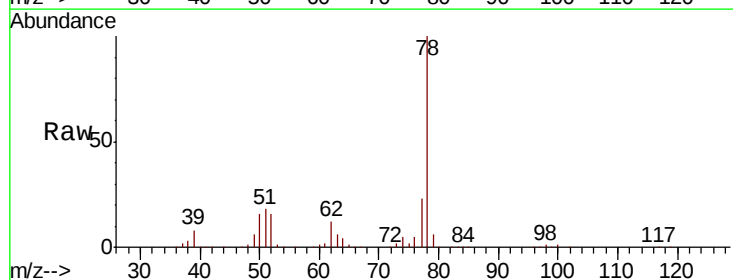
RT: 5.81 min Scan# 1390

Delta R.T. 0.00 min

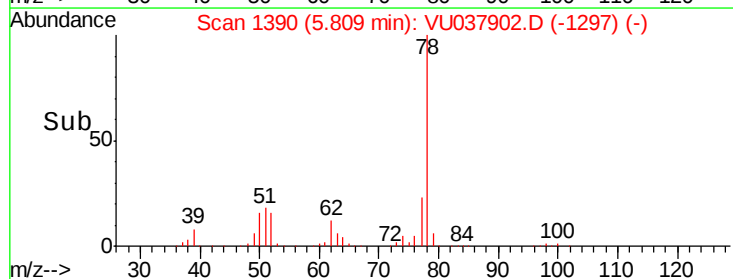
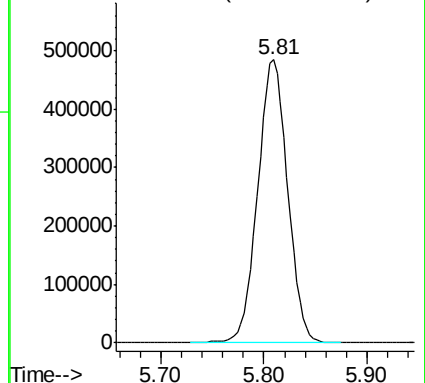
Lab File: VU037902.D

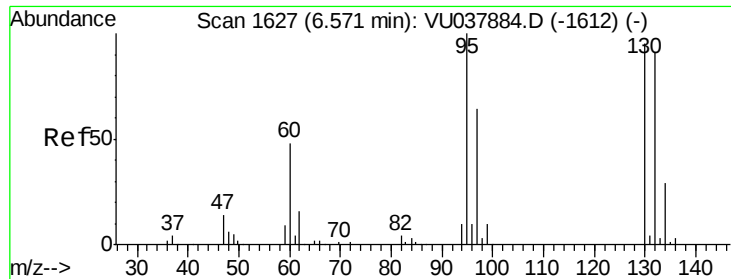
Acq: 29 Apr 2020 09:46

Tgt Ion: 78 Resp: 971456



Abundance Ion 78.00 (77.70 to 78.70): VU0

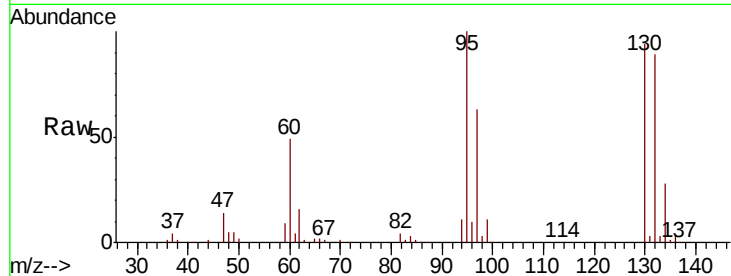




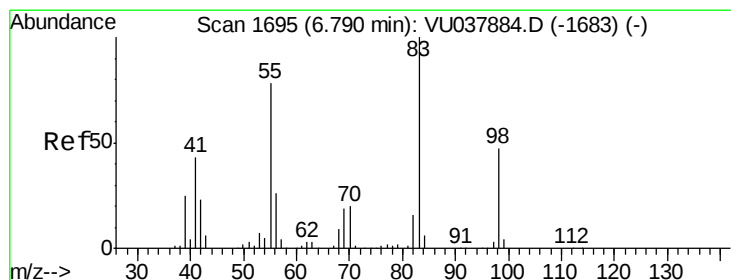
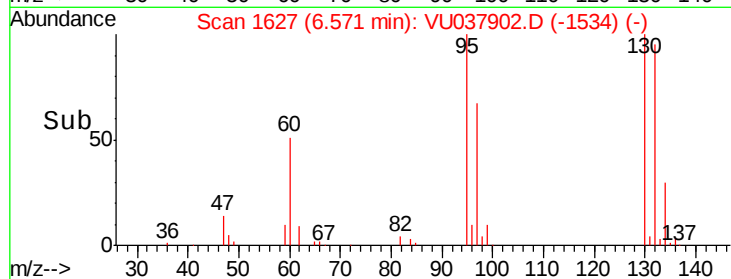
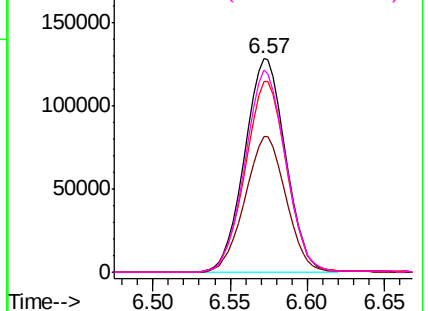
#34  
 Trichloroethene  
 Concen: 51.760 ug/L  
 RT: 6.57 min Scan# 1627  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

Instrument :  
 MSVOA\_U  
 ClientSampleId :

Tot Ion: 95 Resp: 237015  
 Ion Ratio Lower Upper  
 95 100  
 97 63.4 44.4 82.5  
 132 89.3 65.0 120.6  
 130 94.4 65.5 121.7

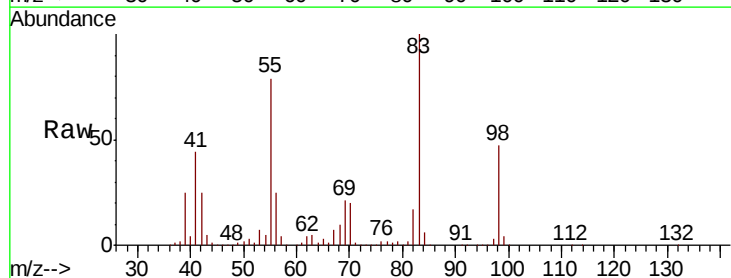


Abundance Ion 95.00 (94.70 to 95.70): VU0  
 Ion 97.00 (96.70 to 97.70): VU0  
 Ion 132.00 (131.70 to 132.70): V  
 Ion 130.00 (129.70 to 130.70): V

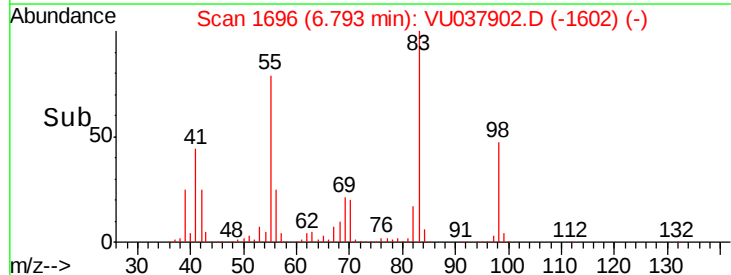
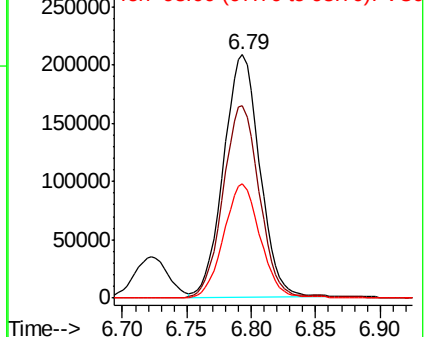


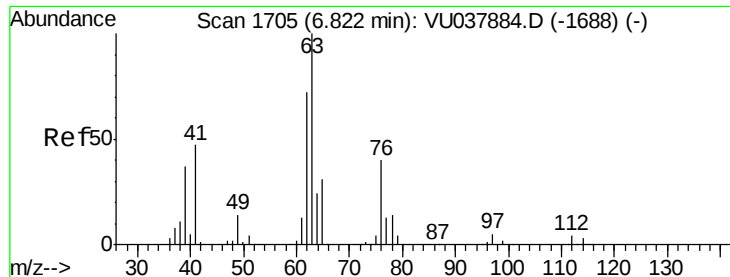
#35  
 Methylcyclohexane  
 Concen: 50.473 ug/L  
 RT: 6.79 min Scan# 1696  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

Tgt Ion: 83 Resp: 404704  
 Ion Ratio Lower Upper  
 83 100  
 55 79.5 66.3 99.5  
 98 47.5 37.4 56.0



Abundance Ion 83.00 (82.70 to 83.70): VU0  
 Ion 55.00 (54.70 to 55.70): VU0  
 Ion 98.00 (97.70 to 98.70): VU0





#37

1,2-Dichloropropane

Concen: 51.469 ug/L

RT: 6.82 min Scan# 1705

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

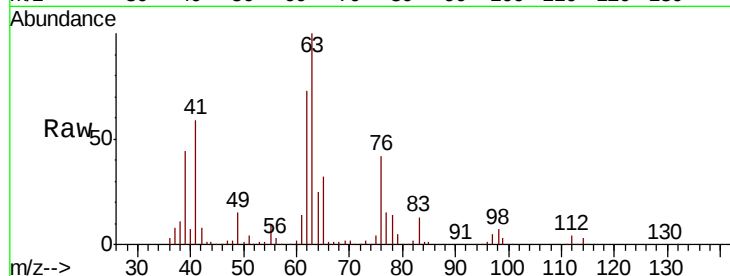
ClientSampleId :

Tot Ion: 63 Resp: 262424

Ion Ratio Lower Upper

63 100

112 4.0 3.0 4.4



Abundance Ion 63.00 (62.70 to 63.70): VU037884.D (-1688) (-)

Ion 112.00 (111.70 to 112.70): VU037884.D (-1688) (-)

6.82

150000

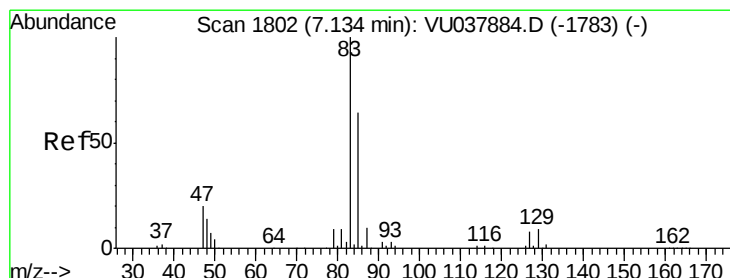
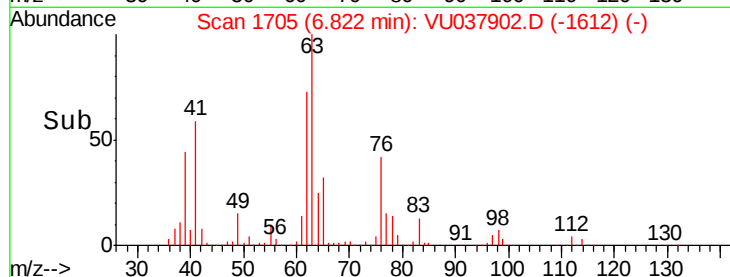
100000

50000

0

6.75 6.80 6.85 6.90

Time-->



#38

Bromodichloromethane

Concen: 52.003 ug/L

RT: 7.13 min Scan# 1802

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

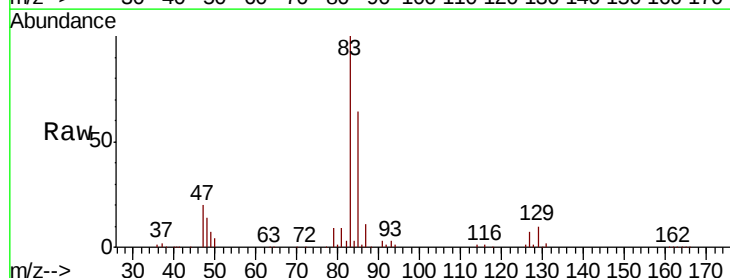
Tgt Ion: 83 Resp: 320349

Ion Ratio Lower Upper

83 100

85 64.1 43.3 80.3

127 7.4 6.2 9.2



Abundance Ion 83.00 (82.70 to 83.70): VU037884.D (-1783) (-)

Ion 85.00 (84.70 to 85.70): VU037884.D (-1783) (-)

Ion 127.00 (126.70 to 127.70): VU037884.D (-1783) (-)

7.13

200000

150000

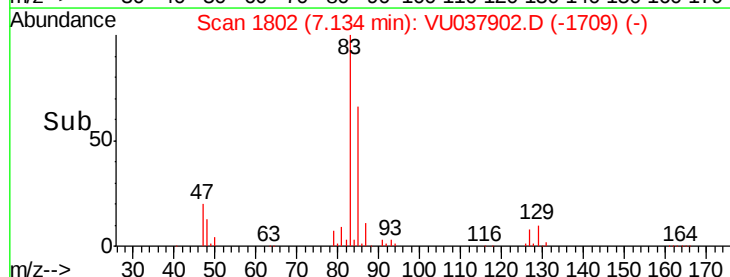
100000

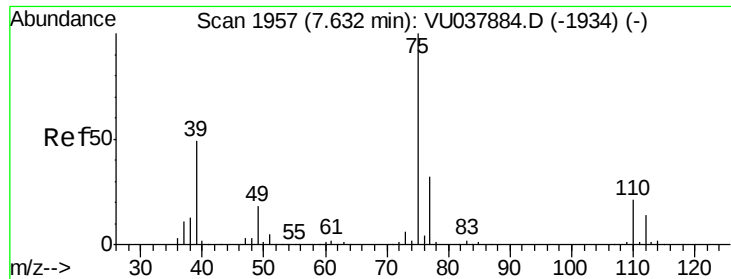
50000

0

7.05 7.10 7.15 7.20

Time-->

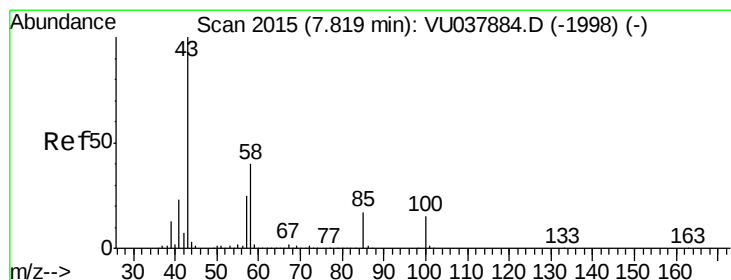
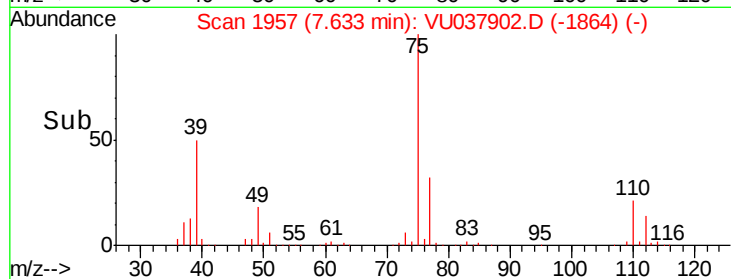
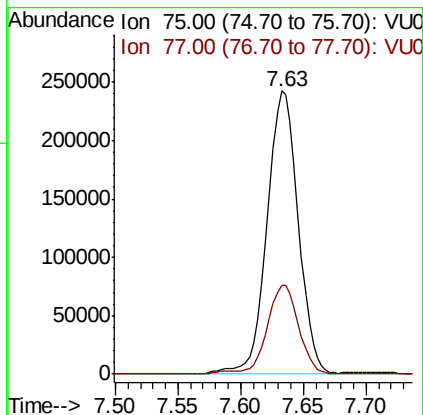
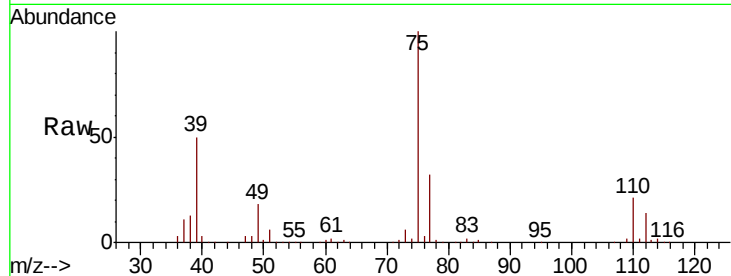




#39  
 cis-1,3-Dichloropropene  
 Concen: 51.531 ug/L  
 RT: 7.63 min Scan# 1957  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

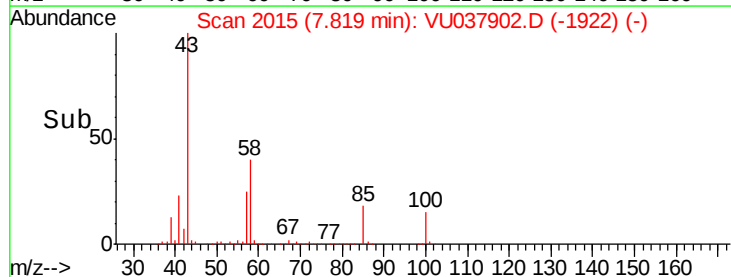
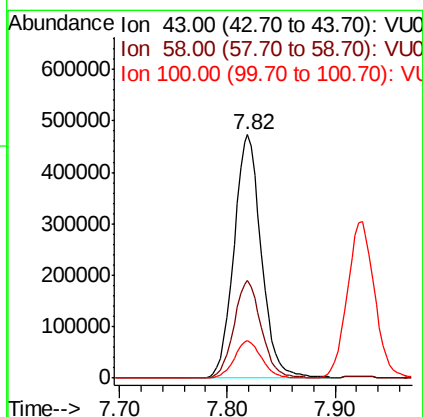
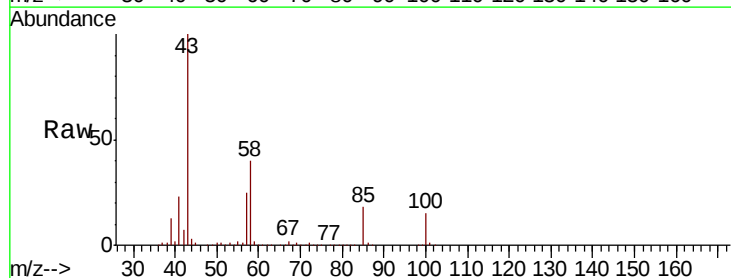
Instrument :  
 MSVOA\_U  
 ClientSampled :

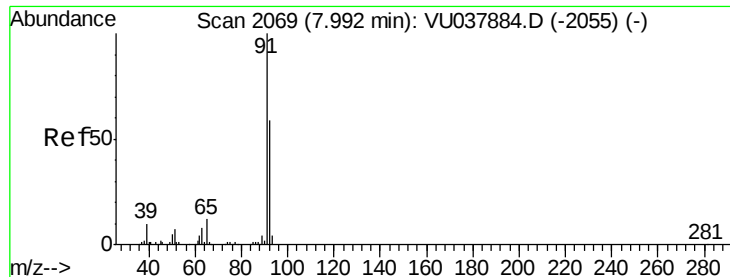
Tot Ion: 75 Resp: 420673  
 Ion Ratio Lower Upper  
 75 100  
 77 31.5 21.7 40.3



#40  
 4-Methyl-2-pentanone  
 Concen: 94.503 ug/L  
 RT: 7.82 min Scan# 2015  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

Tgt Ion: 43 Resp: 837963  
 Ion Ratio Lower Upper  
 43 100  
 58 40.0 30.2 45.2  
 100 15.2 10.9 16.3





#42

Toluene

Concen: 52.901 ug/L

RT: 8.00 min Scan# 2070

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

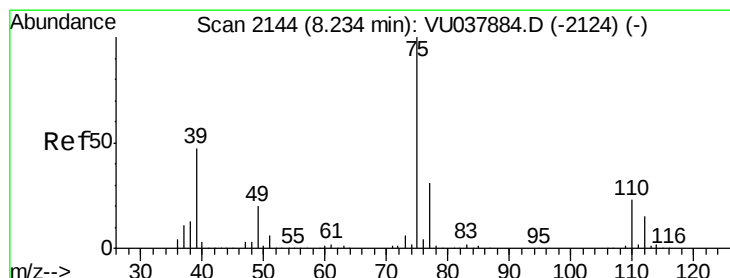
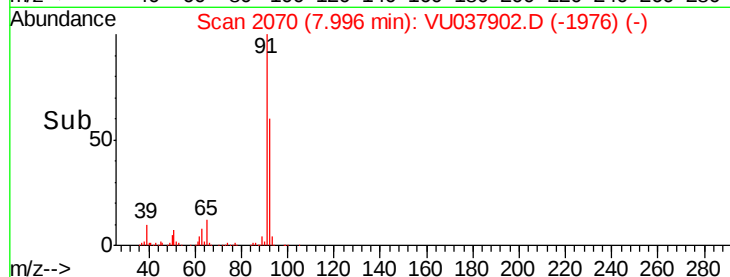
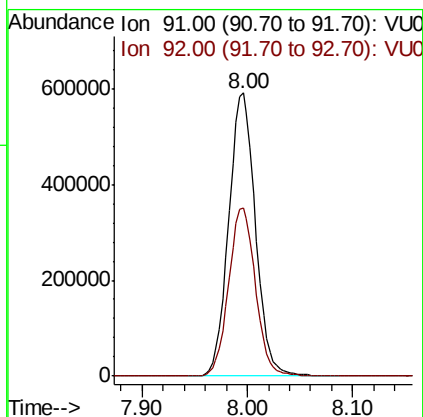
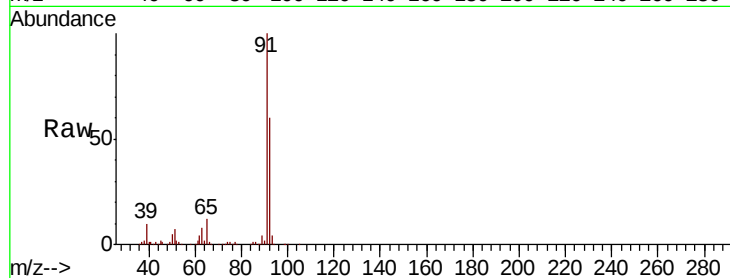
ClientSampleId :

Tot Ion: 91 Resp: 1035412

Ion Ratio Lower Upper

91 100

92 59.6 41.2 76.6



#44

trans-1,3-Dichloropropene

Concen: 50.979 ug/L

RT: 8.23 min Scan# 2144

Delta R.T. 0.00 min

Lab File: VU037902.D

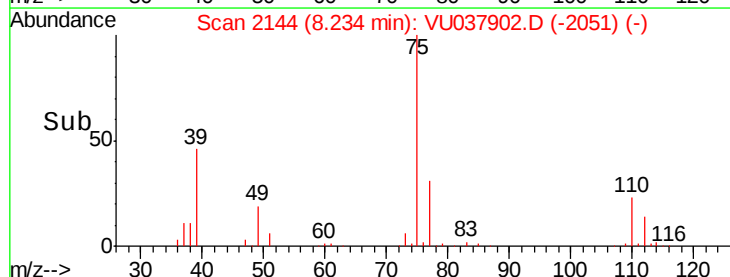
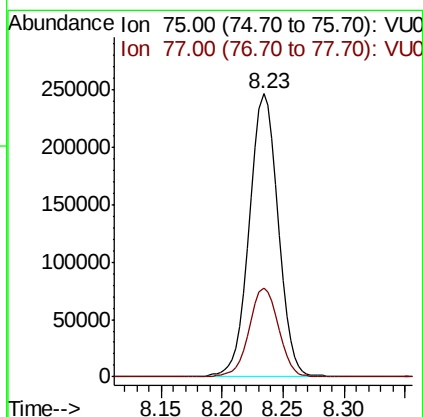
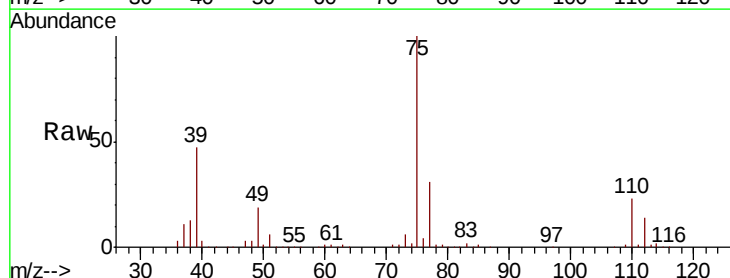
Acq: 29 Apr 2020 09:46

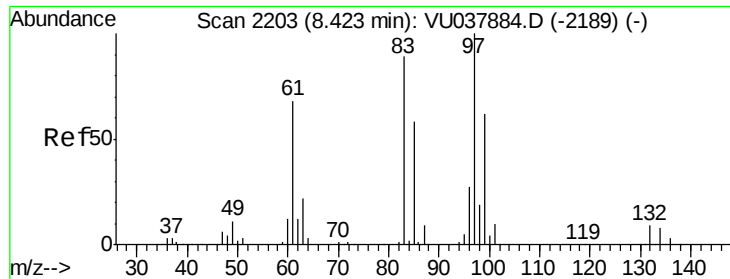
Tgt Ion: 75 Resp: 401710

Ion Ratio Lower Upper

75 100

77 31.2 21.0 39.0

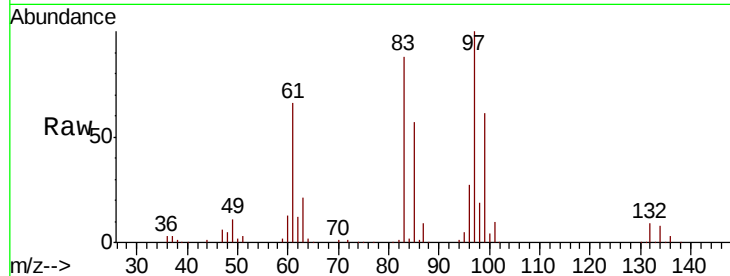




#45  
1,1,2-Trichloroethane  
Concen: 53.604 ug/L  
RT: 8.42 min Scan# 2203  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Instrument :  
MSVOA\_U  
ClientSampleId :

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 97    | Resp: | 238426 |
| Ion      | Ratio | Lower | Upper  |
| 97       | 100   |       |        |
| 99       | 61.4  | 44.0  | 81.6   |
| 83       | 87.7  | 62.6  | 116.2  |
| 85       | 57.0  | 40.0  | 74.4   |



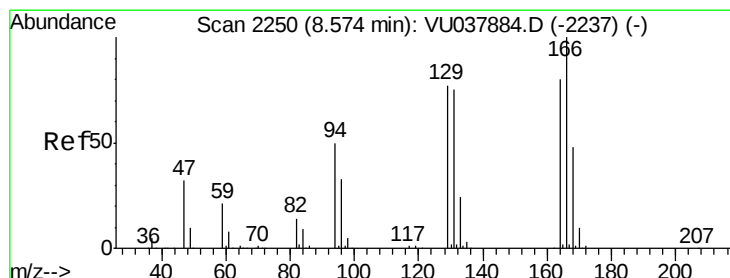
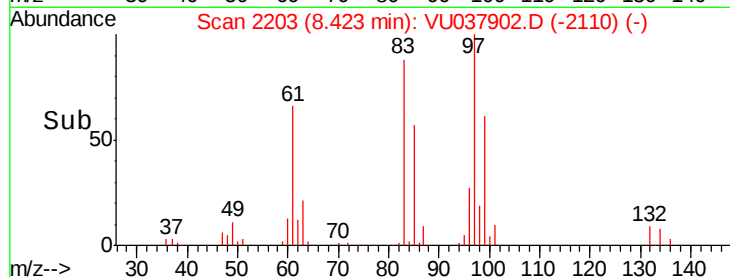
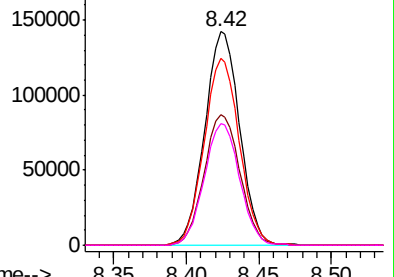
Abundance

Ion 97.00 (96.70 to 97.70): VU037902.D (-2189) (-)

Ion 99.00 (98.70 to 99.70): VU037902.D (-2189) (-)

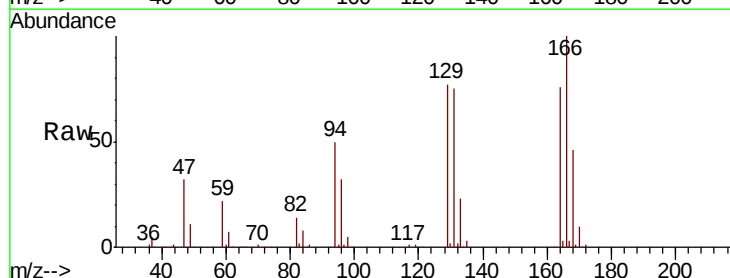
Ion 83.00 (82.70 to 83.70): VU037902.D (-2189) (-)

Ion 85.00 (84.70 to 85.70): VU037902.D (-2189) (-)



#46  
Tetrachloroethene  
Concen: 48.441 ug/L  
RT: 8.57 min Scan# 2250  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 164   | Resp: | 162131 |
| Ion      | Ratio | Lower | Upper  |
| 164      | 100   |       |        |
| 129      | 100.8 | 67.3  | 125.1  |
| 131      | 97.8  | 64.8  | 120.4  |
| 166      | 131.2 | 88.5  | 164.4  |



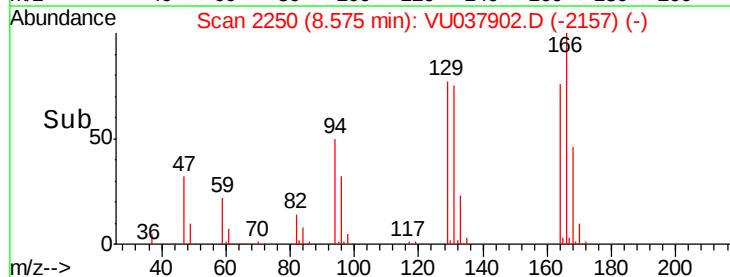
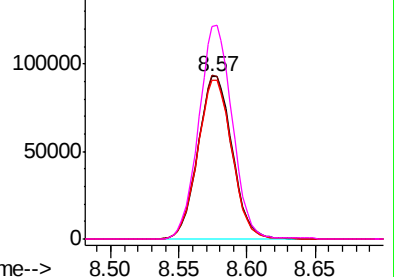
Abundance

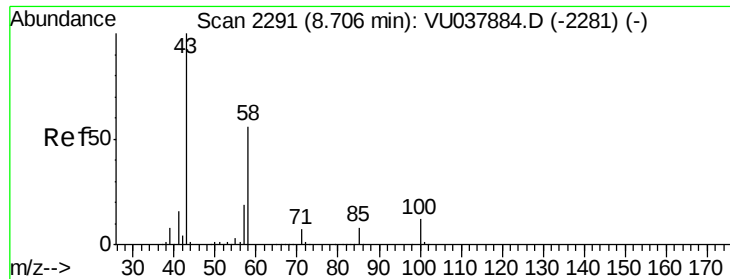
Ion 164.00 (163.70 to 164.70): VU037902.D (-2237) (-)

Ion 129.00 (128.70 to 129.70): VU037902.D (-2237) (-)

Ion 131.00 (130.70 to 131.70): VU037902.D (-2237) (-)

Ion 166.00 (165.70 to 166.70): VU037902.D (-2237) (-)

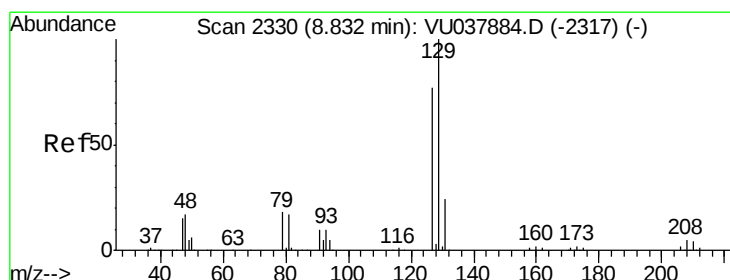
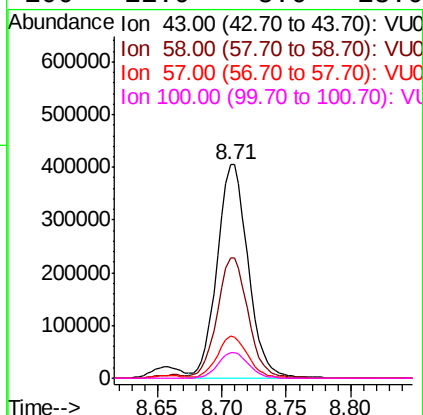
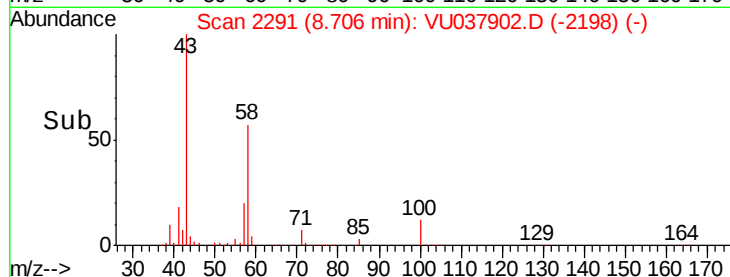
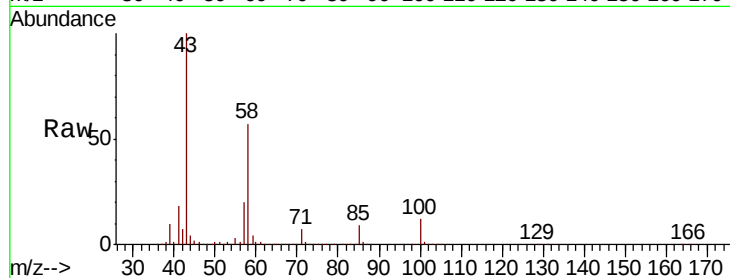




#48  
2-Hexanone  
Concen: 96.162 ug/L  
RT: 8.71 min Scan# 2291  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

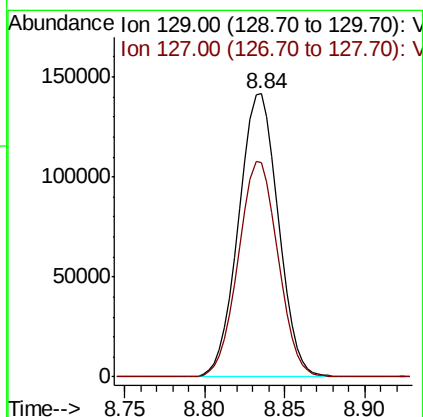
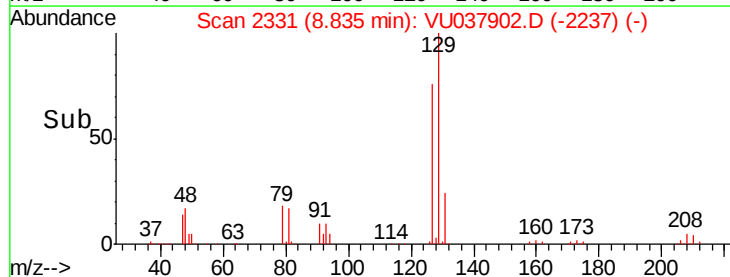
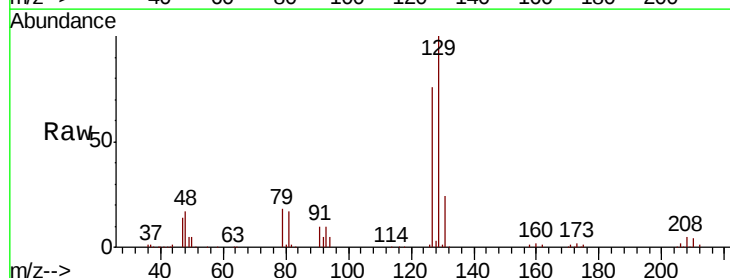
Instrument :  
MSVOA\_U  
ClientSampleId :

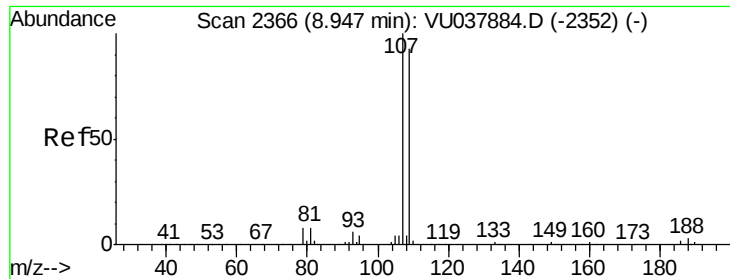
Tot Ion: 43 Resp: 674189  
Ion Ratio Lower Upper  
43 100  
58 56.4 42.6 63.8  
57 19.3 14.6 22.0  
100 11.9 8.6 13.0



#49  
Dibromochloromethane  
Concen: 51.605 ug/L  
RT: 8.84 min Scan# 2331  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion: 129 Resp: 239681  
Ion Ratio Lower Upper  
129 100  
127 75.7 54.7 101.5

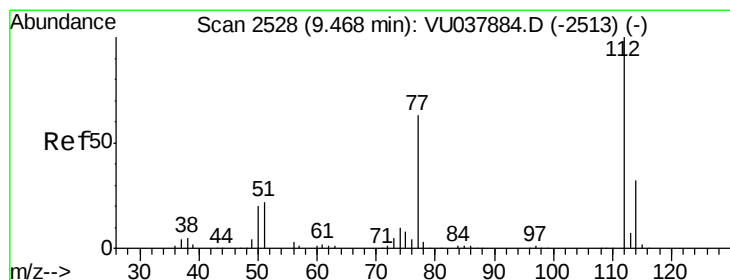
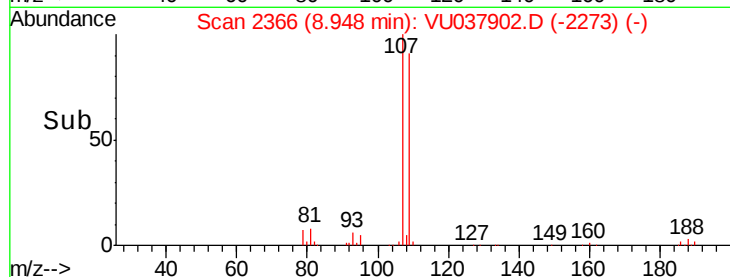
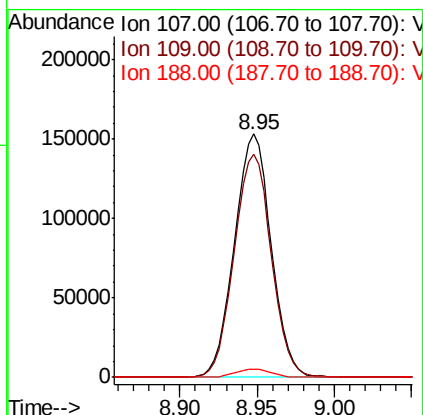
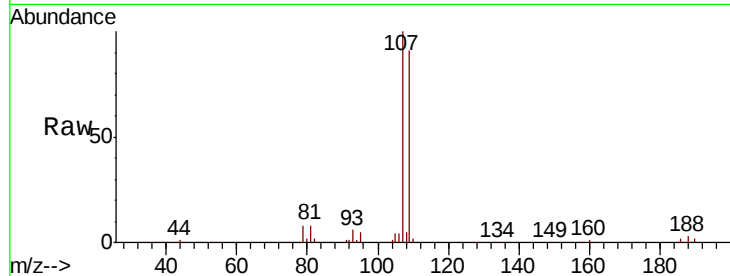




#50  
 1,2-Dibromoethane  
 Concen: 52.324 ug/L  
 RT: 8.95 min Scan# 2366  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

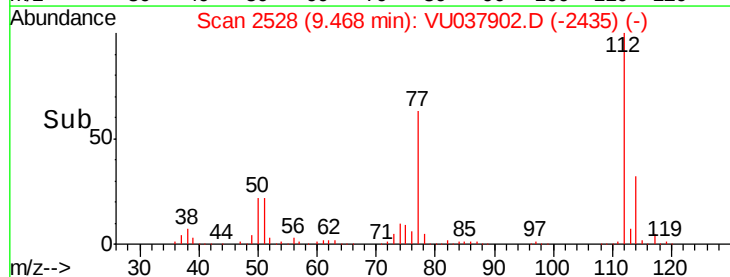
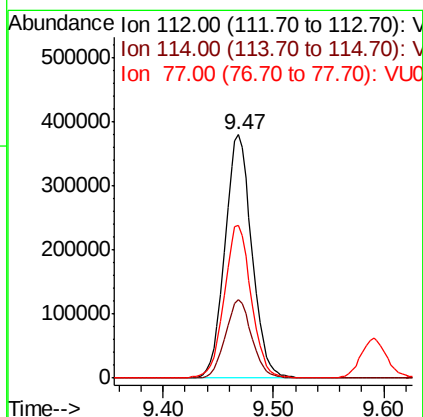
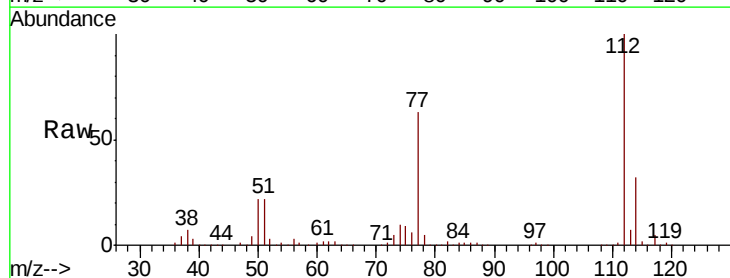
Instrument :  
 MSVOA\_U  
 ClientSampleId :

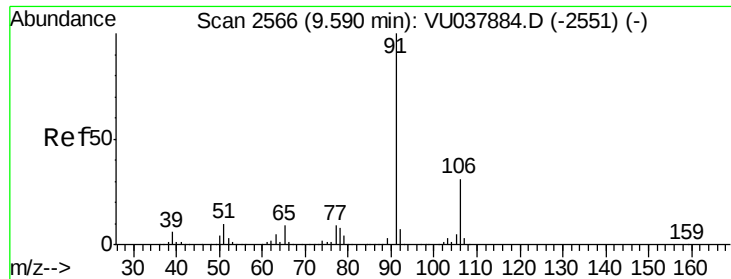
| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 107     | 100   |       |       |
| 109     | 91.4  | 65.7  | 122.1 |
| 188     | 3.4   | 2.9   | 4.3   |



#51  
 Chlorobenzene  
 Concen: 52.783 ug/L  
 RT: 9.47 min Scan# 2528  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 112     | 100   |       |       |
| 114     | 32.2  | 22.3  | 41.3  |
| 77      | 62.8  | 49.8  | 74.6  |

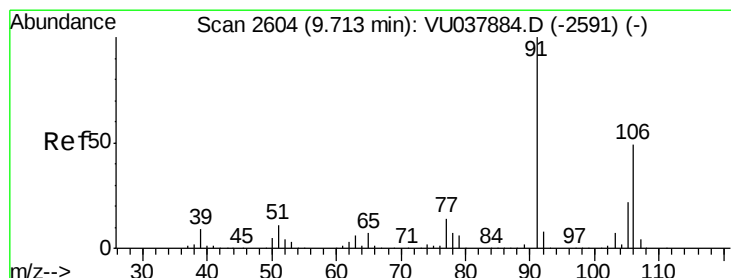
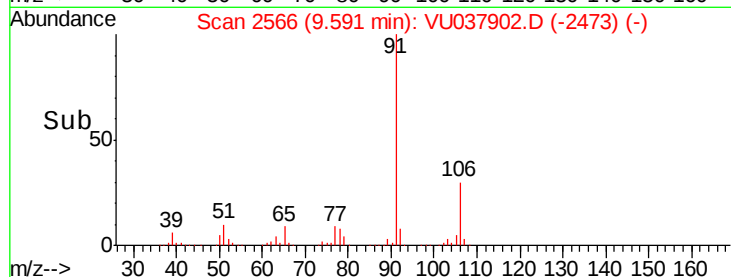
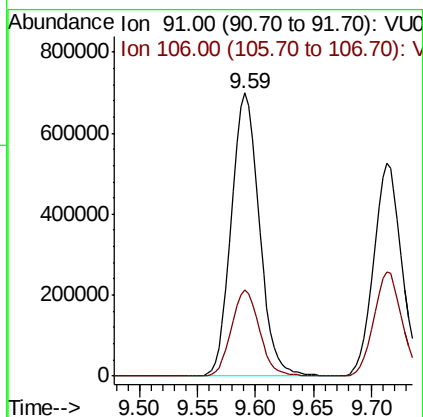
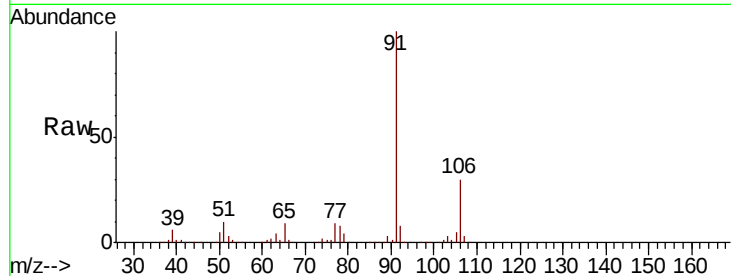




#52  
Ethylbenzene  
Concen: 53.159 ug/L  
RT: 9.59 min Scan# 2566  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

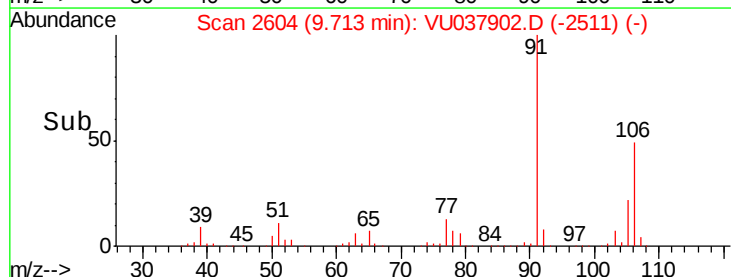
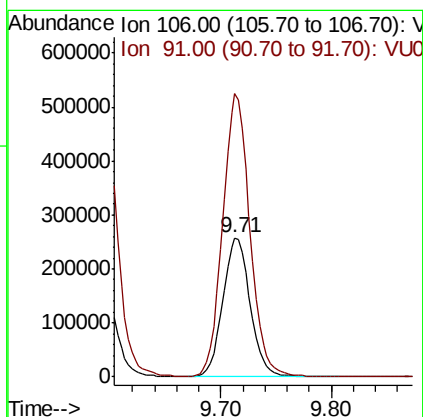
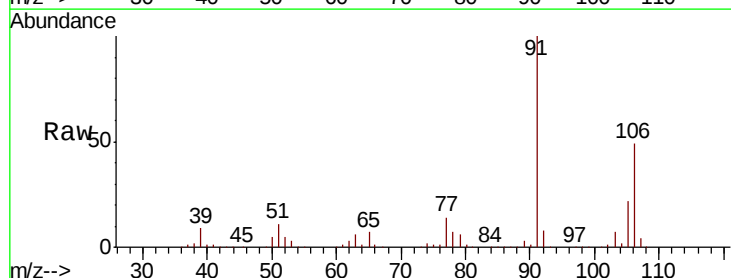
Instrument :  
MSVOA\_U  
ClientSampled :

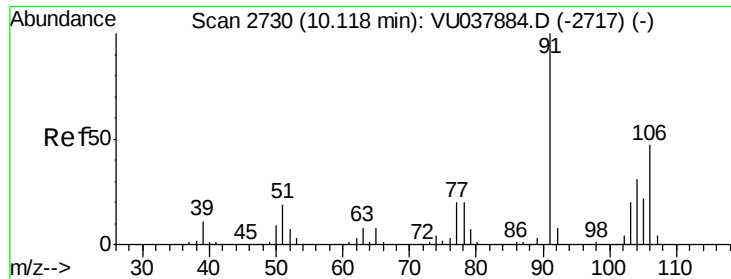
Tot Ion: 91 Resp: 1165179  
Ion Ratio Lower Upper  
91 100  
106 30.4 21.1 39.1



#53  
m,p-Xylene  
Concen: 53.701 ug/L  
RT: 9.71 min Scan# 2604  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion: 106 Resp: 443169  
Ion Ratio Lower Upper  
106 100  
91 203.4 142.8 265.2





#54

o-xylene

Concen: 53.824 ug/L

RT: 10.12 min Scan# 2730

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

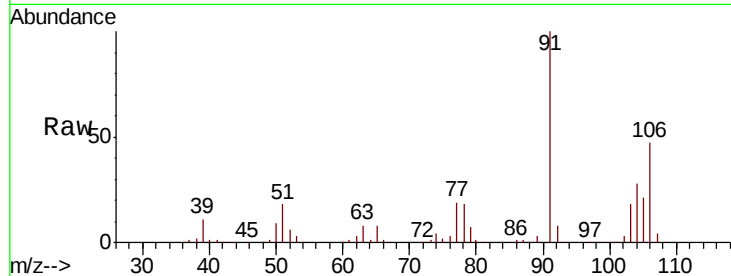
ClientSampleId :

Tot Ion:106 Resp: 434410

Ion Ratio Lower Upper

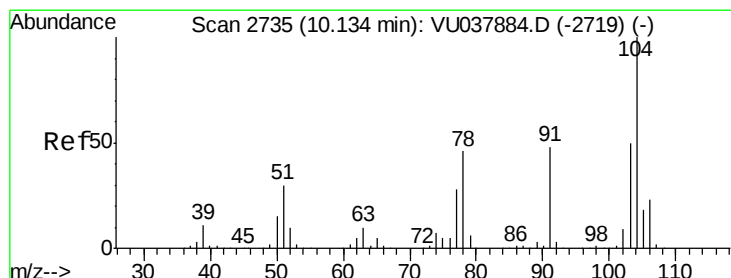
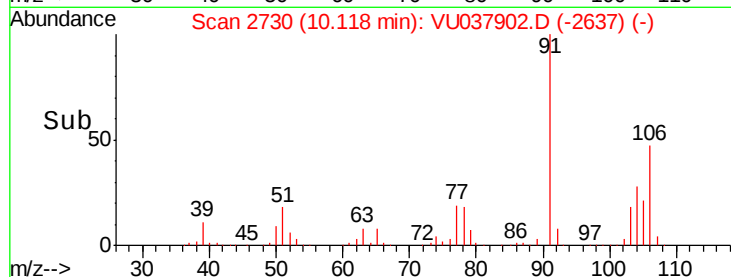
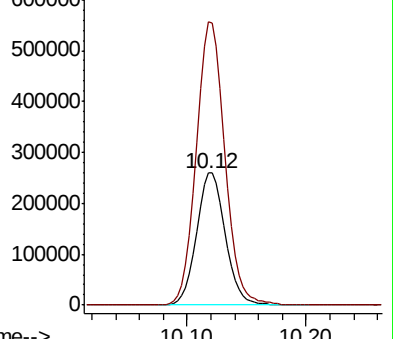
106 100

91 214.0 150.6 279.6



Abundance Ion 106.00 (105.70 to 106.70): V

Ion 91.00 (90.70 to 91.70): VU0



#55

Styrene

Concen: 54.305 ug/L

RT: 10.13 min Scan# 2735

Delta R.T. 0.00 min

Lab File: VU037902.D

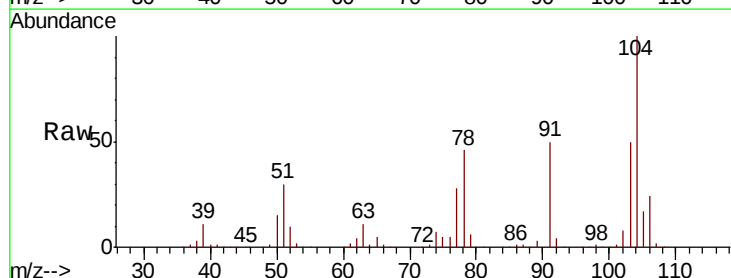
Acq: 29 Apr 2020 09:46

Tgt Ion:104 Resp: 753757

Ion Ratio Lower Upper

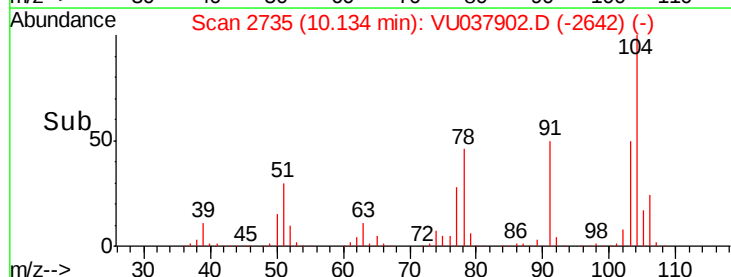
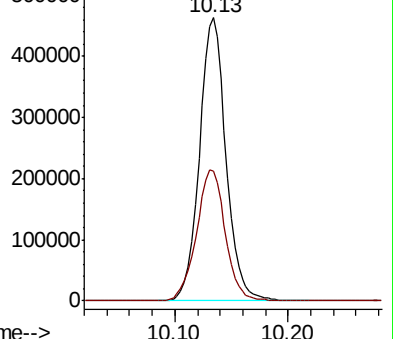
104 100

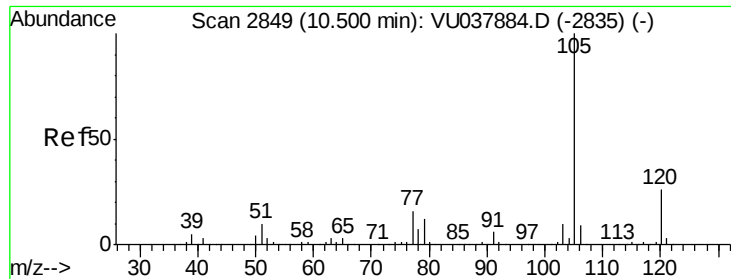
78 45.8 32.6 60.6



Abundance Ion 104.00 (103.70 to 104.70): V

Ion 78.00 (77.70 to 78.70): VU0





#56

Isopropylbenzene

Concen: 53.275 ug/L

RT: 10.50 min Scan# 2850

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

ClientSampleId :

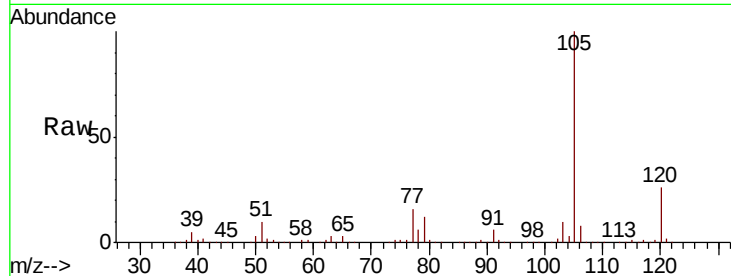
Tot Ion:105 Resp: 1137967

Ion Ratio Lower Upper

105 100

120 25.8 20.6 31.0

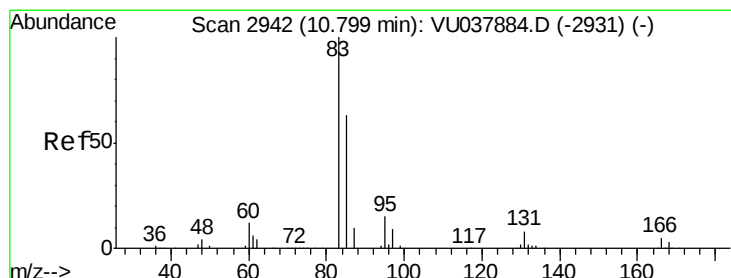
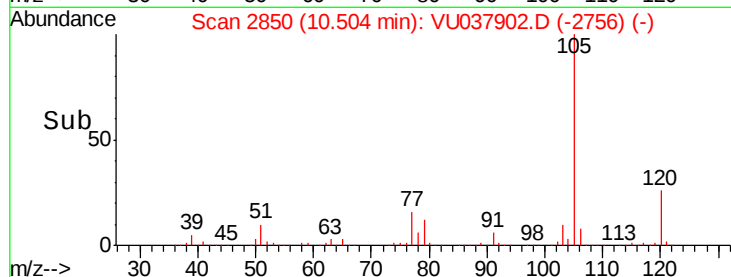
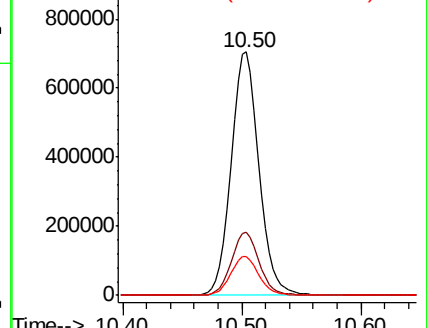
77 16.1 13.0 19.4



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

Ion 77.00 (76.70 to 77.70): V



#58

1,1,2,2-Tetrachloroethane

Concen: 53.876 ug/L

RT: 10.80 min Scan# 2942

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

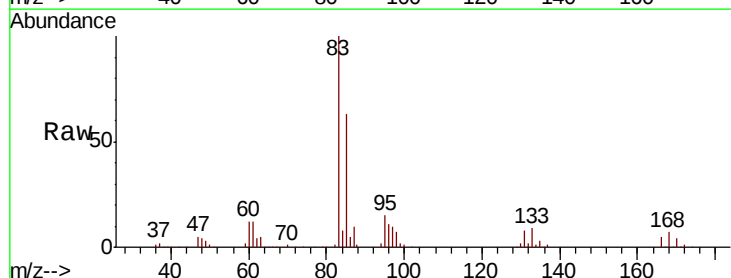
Tgt Ion: 83 Resp: 426189

Ion Ratio Lower Upper

83 100

85 63.3 43.8 81.4

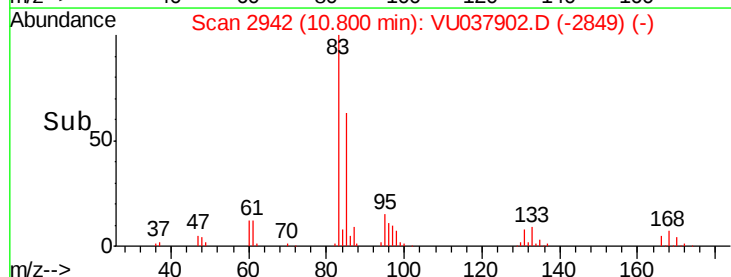
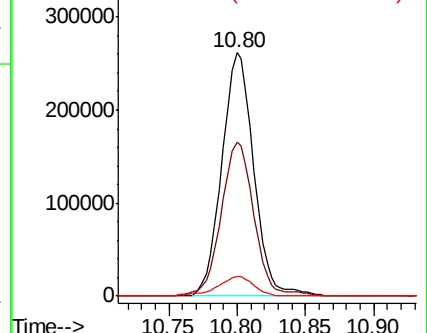
131 8.3 7.2 10.8

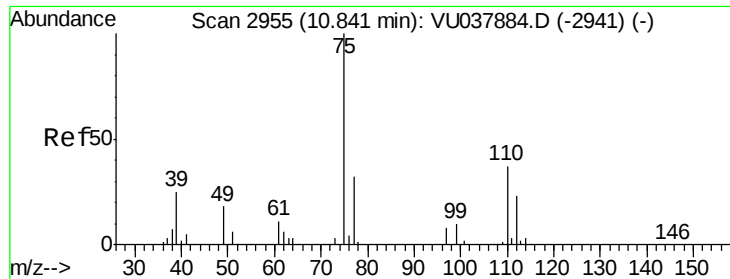


Abundance Ion 83.00 (82.70 to 83.70): V

Ion 85.00 (84.70 to 85.70): V

Ion 131.00 (130.70 to 131.70): V





#59

1,2,3-Trichloropropane

Concen: 52.286 ug/L

RT: 10.84 min Scan# 2955

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

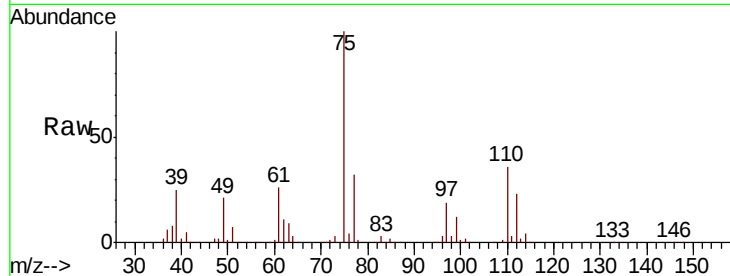
ClientSampleId :

Tot Ion: 75 Resp: 358121

Ion Ratio Lower Upper

75 100

77 31.9 25.8 38.6



Abundance Ion 75.00 (74.70 to 75.70): VU037884.D (-2941) (-)

Ion 77.00 (76.70 to 77.70): VU037884.D (-2941) (-)

10.84

250000

200000

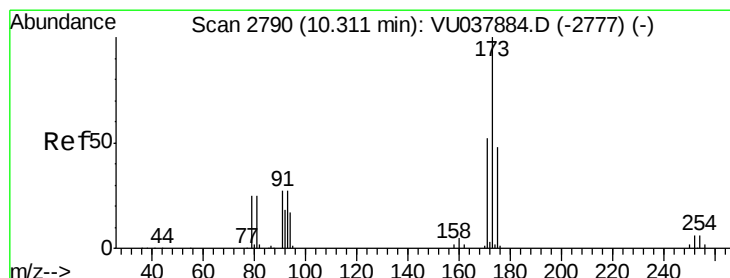
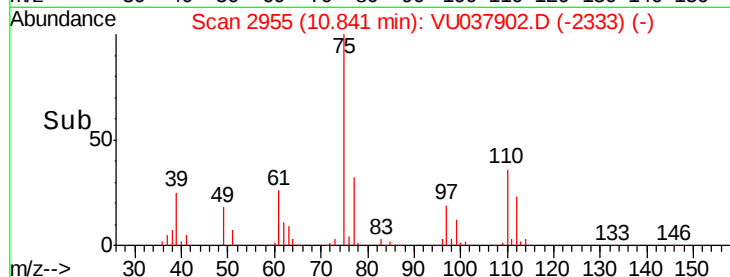
150000

100000

50000

0

Time--> 10.75 10.80 10.85 10.90



#61

Bromoform

Concen: 50.056 ug/L

RT: 10.31 min Scan# 2790

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

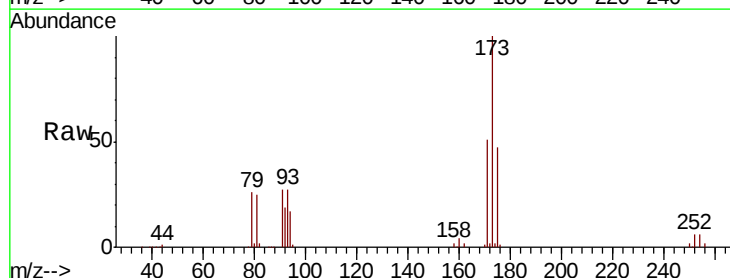
Tgt Ion: 173 Resp: 167793

Ion Ratio Lower Upper

173 100

175 47.8 38.8 58.2

254 6.0 5.8 8.8



Abundance Ion 173.00 (172.70 to 173.70): VU037884.D (-2777) (-)

Ion 175.00 (174.70 to 175.70): VU037884.D (-2777) (-)

Ion 254.00 (253.70 to 254.70): VU037884.D (-2777) (-)

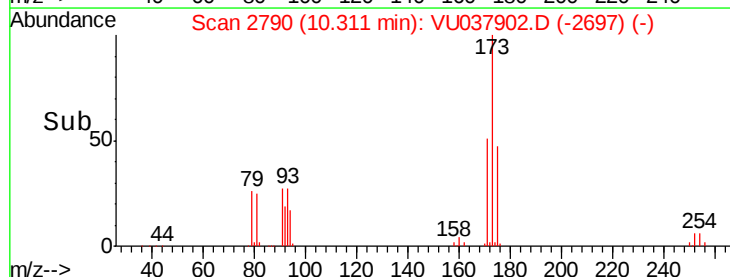
10.31

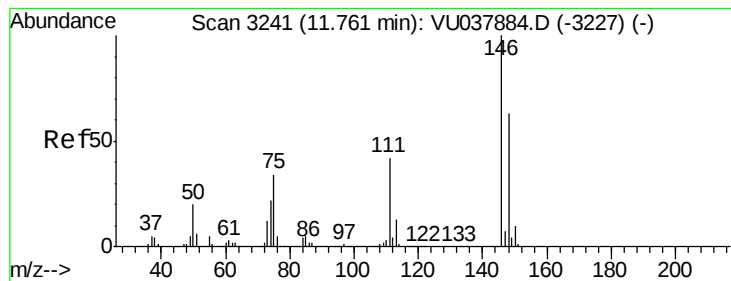
100000

50000

0

Time--> 10.25 10.30 10.35 10.40





#62

1,3-Dichlorobenzene

Concen: 52.792 ug/L

RT: 11.76 min Scan# 3241

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

ClientSampleId :

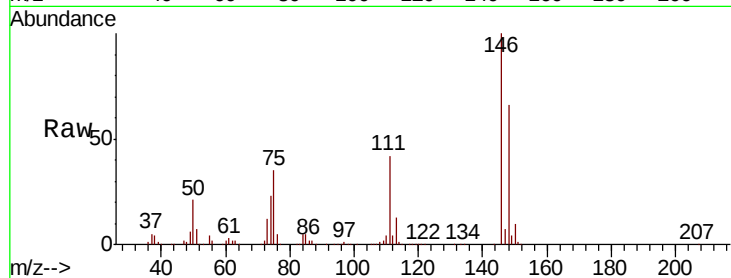
Tot Ion:146 Resp: 492333

Ion Ratio Lower Upper

146 100

111 42.5 29.0 53.9

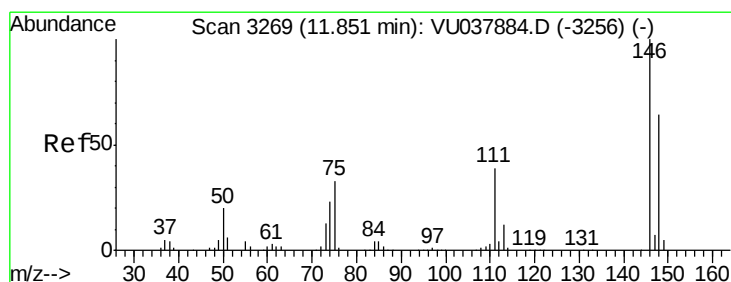
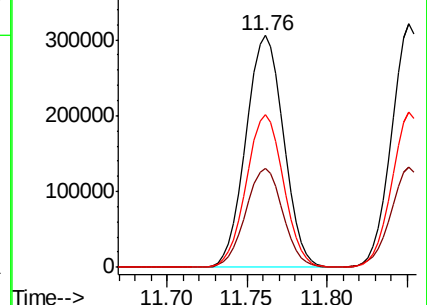
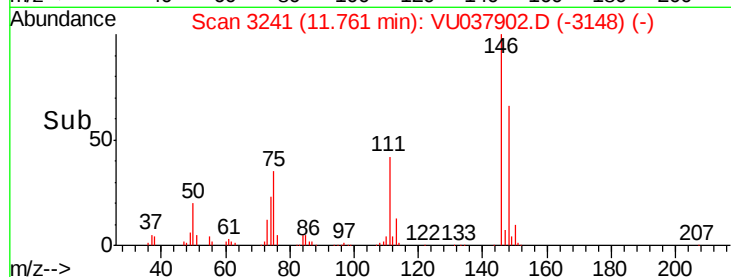
148 65.9 44.5 82.7



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



#63

1,4-Dichlorobenzene

Concen: 52.887 ug/L

RT: 11.85 min Scan# 3269

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

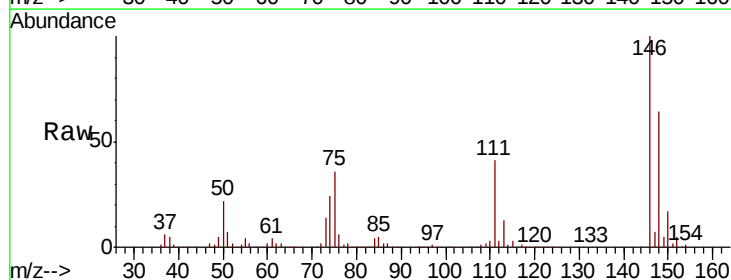
Tgt Ion:146 Resp: 497816

Ion Ratio Lower Upper

146 100

111 41.1 27.2 50.4

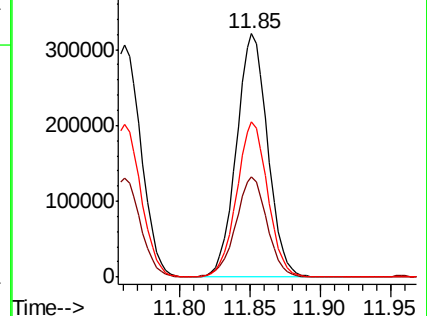
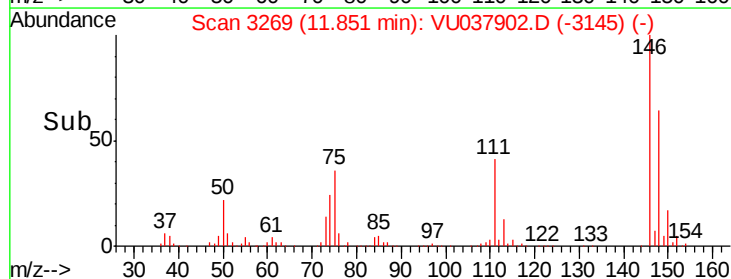
148 63.5 43.9 81.5

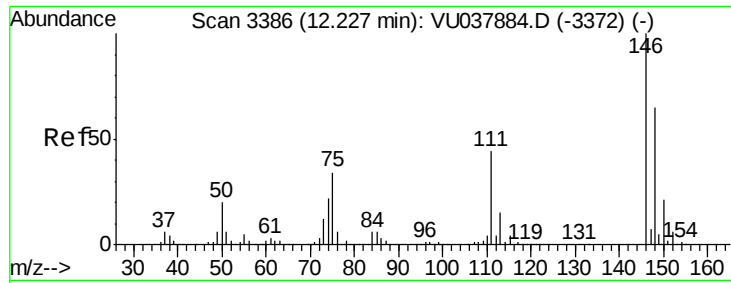


Abundance Ion 146.00 (145.70 to 146.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 148.00 (147.70 to 148.70): V





#65

1,2-Dichlorobenzene

Concen: 54.548 ug/L

RT: 12.23 min Scan# 3386

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

Instrument :

MSVOA\_U

ClientSampled :

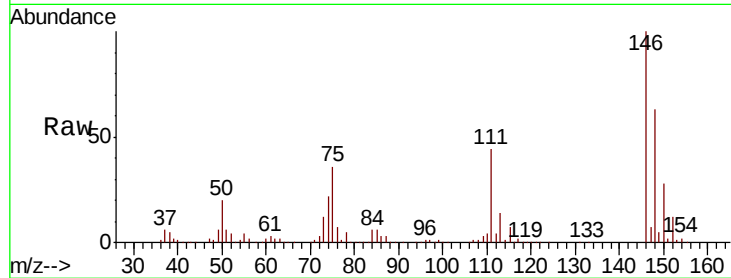
Tot Ion:146 Resp: 494328

Ion Ratio Lower Upper

146 100

111 43.7 35.4 53.2

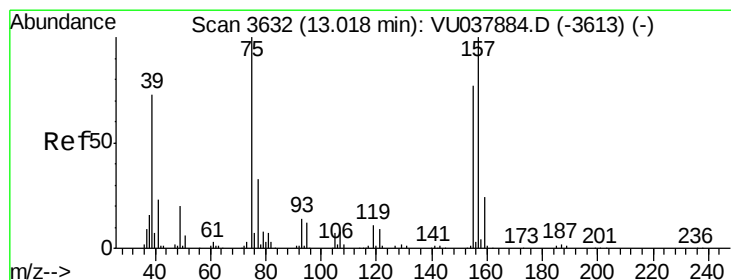
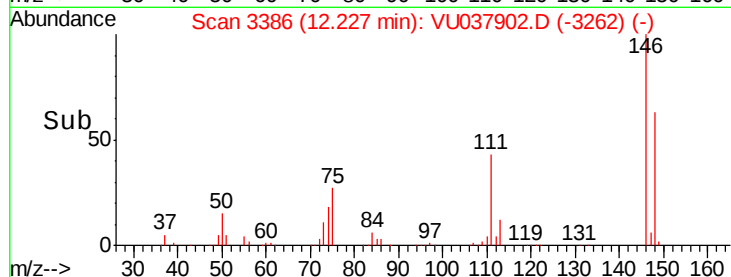
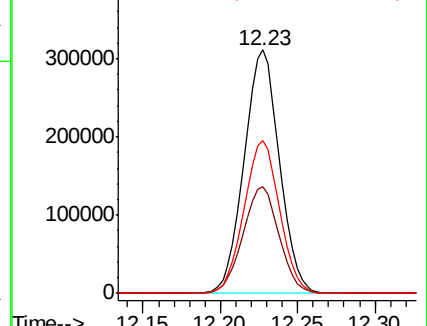
148 62.8 49.8 74.8



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: 51.085 ug/L

RT: 13.02 min Scan# 3632

Delta R.T. 0.00 min

Lab File: VU037902.D

Acq: 29 Apr 2020 09:46

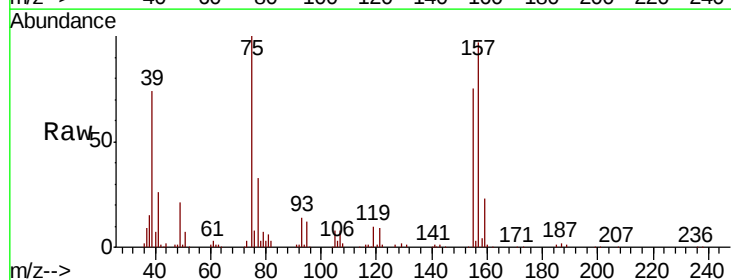
Tgt Ion: 75 Resp: 103175

Ion Ratio Lower Upper

75 100

155 74.9 59.6 89.4

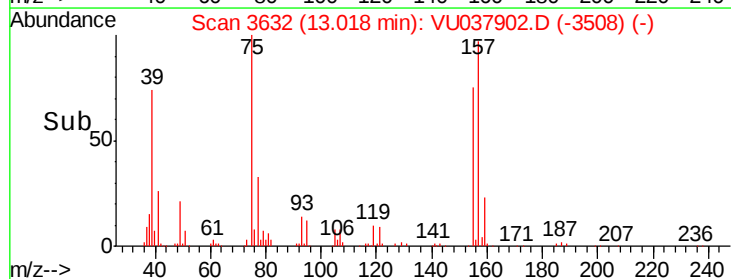
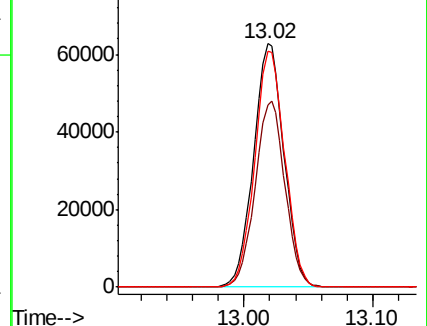
157 97.0 77.2 115.8

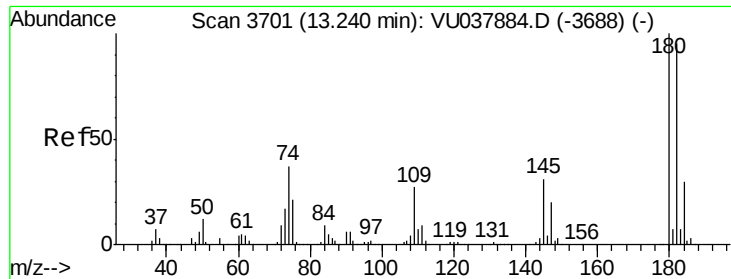


Abundance Ion 75.00 (74.70 to 75.70): VU0

Ion 155.00 (154.70 to 155.70): V

Ion 157.00 (156.70 to 157.70): V

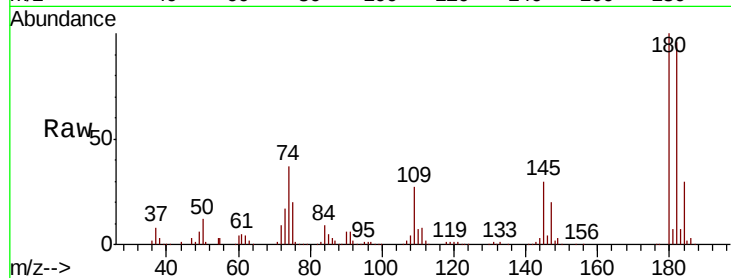




#67  
 1,3,5-Trichlorobenzene  
 Concen: 52.198 ug/L  
 RT: 13.24 min Scan# 3702  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

Instrument :  
 MSVOA\_U  
 ClientSampleId :

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 95.3  | 76.5  | 114.7 |
| 184     | 30.1  | 24.2  | 36.4  |
| 145     | 30.4  | 24.2  | 36.4  |



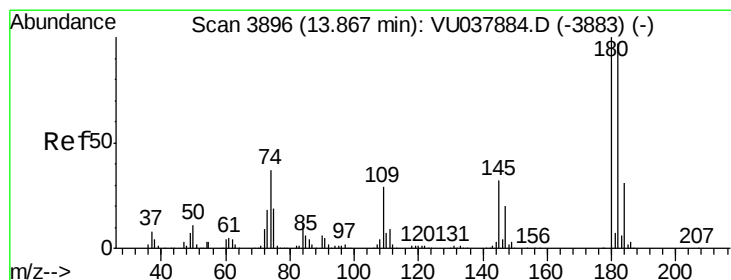
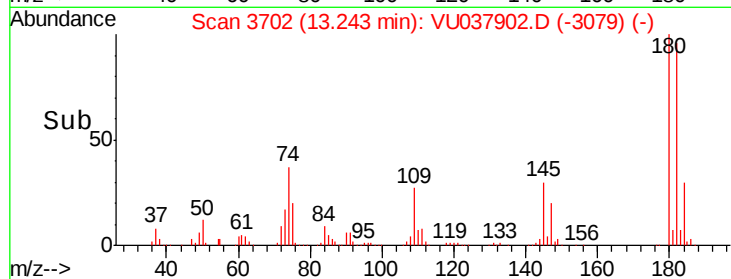
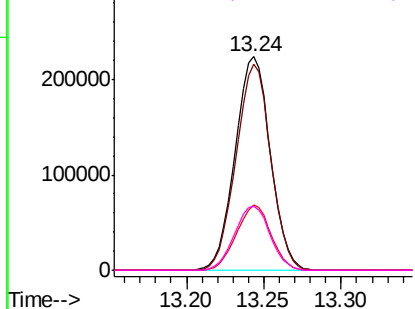
Abundance

Ion 180.00 (179.70 to 180.70): V

Ion 182.00 (181.70 to 182.70): V

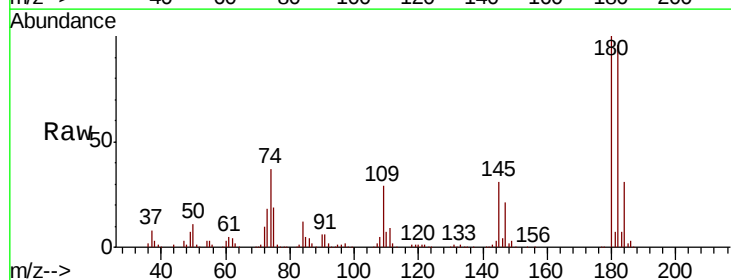
Ion 184.00 (183.70 to 184.70): V

Ion 145.00 (144.70 to 145.70): V



#68  
 1,2,4-trichlorobenzene  
 Concen: 51.144 ug/L  
 RT: 13.87 min Scan# 3897  
 Delta R.T. 0.00 min  
 Lab File: VU037902.D  
 Acq: 29 Apr 2020 09:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 180     | 100   |       |       |
| 182     | 96.7  | 76.9  | 115.3 |
| 145     | 31.8  | 23.8  | 35.8  |

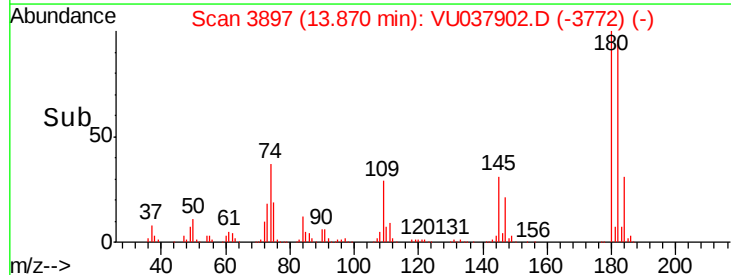
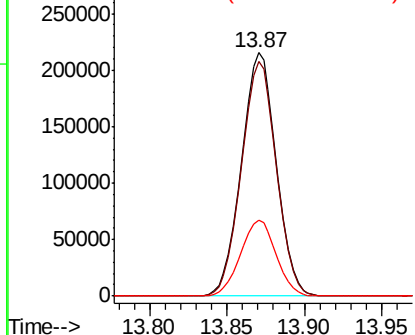


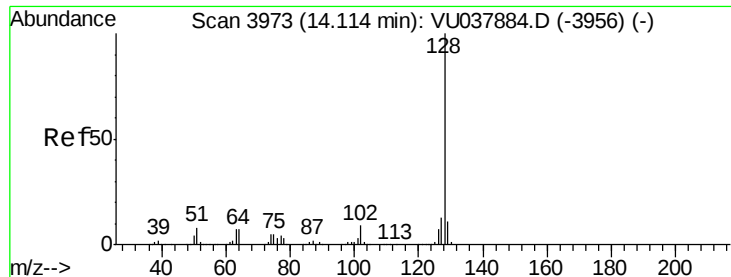
Abundance

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

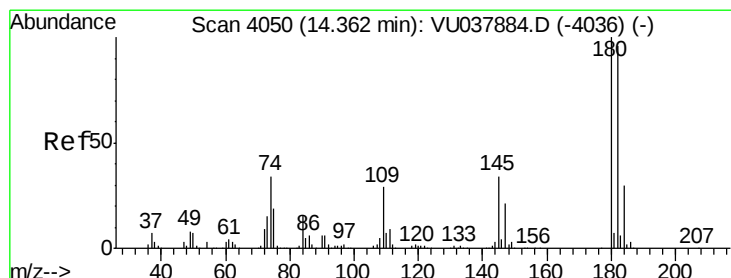
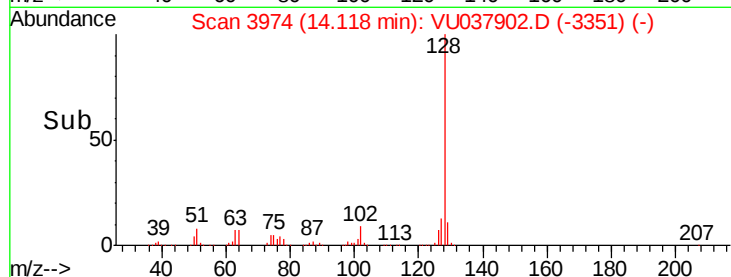
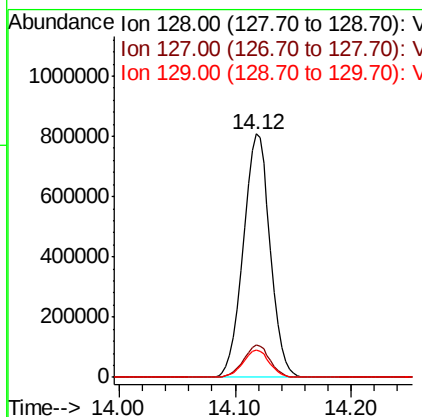
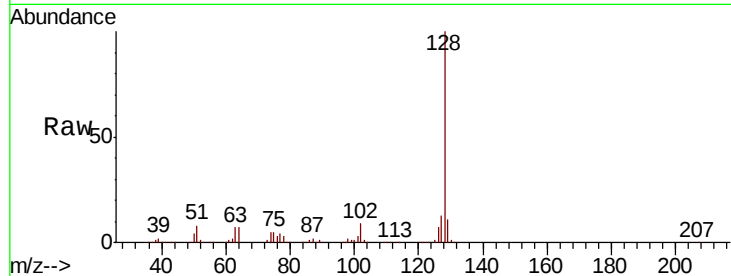




#69  
Naphthalene  
Concen: 54.926 ug/L  
RT: 14.12 min Scan# 3974  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Instrument :  
MSVOA\_U  
ClientSampled :

Tot Ion:128 Resp: 1298263  
Ion Ratio Lower Upper  
128 100  
127 13.0 10.5 15.7  
129 10.9 8.6 13.0



#70  
1,2,3-Trichlorobenzene  
Concen: 52.074 ug/L  
RT: 14.37 min Scan# 4051  
Delta R.T. 0.00 min  
Lab File: VU037902.D  
Acq: 29 Apr 2020 09:46

Tgt Ion:180 Resp: 338940  
Ion Ratio Lower Upper  
180 100  
182 94.6 76.6 114.8  
145 34.1 26.1 39.1

