

Data Path : Z:\VOASRV\HPCHEM1\MSVOA F\DATA\VF052219\  
 Data File : VF062705.D  
 Acq On : 22 May 2019 14:57  
 Operator : FY/SY  
 Sample : K2978-01  
 Misc : 5.17g/5mL/MSVOA F/SOIL  
 ALS Vial : 11 Sample Multiplier: 1

Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 RO-SOIL

Quant Time: May 23 01:22:16 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri May 17 05:49:09 2019  
 Response via : Initial Calibration

| Internal Standards         | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Pentafluorobenzene      | 5.05  | 168  | 43996    | 50.00 | ug/l  | -0.02    |
| 34) 1,4-Difluorobenzene    | 5.77  | 114  | 48920    | 50.00 | ug/l  | -0.02    |
| 63) Chlorobenzene-d5       | 9.91  | 117  | 20923    | 50.00 | ug/l  | 0.00     |
| 72) 1,4-Dichlorobenzene-d4 | 12.61 | 152  | 1415     | 50.00 | ug/l  | 0.00     |

## System Monitoring Compounds

|                           |        |     |          |       |        |       |
|---------------------------|--------|-----|----------|-------|--------|-------|
| 33) 1,2-Dichloroethane-d4 | 5.02   | 65  | 3643     | 11.72 | ug/l   | -0.02 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 23.44% |       |
| 35) Dibromofluoromethane  | 4.29   | 113 | 9446     | 25.23 | ug/l   | -0.03 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 50.46% |       |
| 50) Toluene-d8            | 7.70   | 98  | 27162    | 30.39 | ug/l   | -0.02 |
| Spiked Amount             | 50.000 |     | Recovery | =     | 60.78% |       |
| 62) 4-Bromofluorobenzene  | 11.49  | 95  | 2424     | 7.15  | ug/l   | 0.00  |
| Spiked Amount             | 50.000 |     | Recovery | =     | 14.30% |       |

## Target Compounds

|                               |       |     |      |           | Qvalue    |
|-------------------------------|-------|-----|------|-----------|-----------|
| 3) Chloromethane              | 1.22  | 50  | 879  | 1.594     | ug/l 94   |
| 6) Chloroethane               | 1.44  | 64  | 423  | 2.270     | ug/l # 3  |
| 8) Diethyl Ether              | 1.71  | 74  | 219  | 1.622     | ug/l 84   |
| 11) Tert butyl alcohol        | 2.70  | 59  | 592  | 28.842    | ug/l # 1  |
| 12) 1,1-Dichloroethene        | 1.85  | 96  | 1168 | 2.955     | ug/l # 1  |
| 13) Acrolein                  | 2.10  | 56  | 260  | 12.135    | ug/l # 42 |
| 14) Allyl chloride            | 2.23  | 41  | 1059 | 2.961     | ug/l # 81 |
| 15) Acrylonitrile             | 3.12  | 53  | 375  | 6.477     | ug/l # 73 |
| 16) Acetone                   | 2.37  | 43  | 1351 | 16.750    | ug/l # 78 |
| 18) Methyl Acetate            | 2.37  | 43  | 1351 | 10.659    | ug/l 100  |
| 20) Methylene Chloride        | 2.30  | 84  | 2334 | 5.773     | ug/l # 54 |
| 21) trans-1,2-Dichloroethene  | 2.45  | 96  | 772  | 1.998     | ug/l # 22 |
| 23) Vinyl Acetate             | 3.35  | 43  | 966  | 1.623     | ug/l # 73 |
| 25) 2-Butanone                | 4.50  | 43  | 1854 | 10.759    | ug/l 100  |
| 26) 2,2-Dichloropropane       | 3.78  | 77  | 1382 | 3.732     | ug/l 98   |
| 29) Tetrahydrofuran           | 4.26  | 42  | 844  | 12.103    | ug/l # 58 |
| 37) Ethyl Acetate             | 4.31  | 43  | 792  | 3.870     | ug/l # 21 |
| 41) Methacrylonitrile         | 4.91  | 41  | 653  | 6.085     | ug/l # 37 |
| 43) Isopropyl Acetate         | 7.11  | 43  | 1215 | 4.582     | ug/l # 43 |
| 45) 1,2-Dichloropropane       | 6.44  | 63  | 523  | 1.517     | ug/l # 34 |
| 48) Methyl methacrylate       | 6.84  | 41  | 712  | 5.137     | ug/l # 48 |
| 49) 1,4-Dioxane               | 6.87  | 88  | 396  | 223.084   | ug/l # 70 |
| 51) 4-Methyl-2-Pentanone      | 8.35  | 43  | 645  | 3.559     | ug/l # 83 |
| 53) t-1,3-Dichloropropene     | 8.39  | 75  | 364  | 1.076     | ug/l # 73 |
| 58) 2-Chloroethyl Vinyl ether | 7.45  | 63  | 103  | 1.253     | ug/l # 51 |
| 59) 2-Hexanone                | 9.73  | 43  | 1181 | Below Cal | 99        |
| 60) Dibromochloromethane      | 8.77  | 129 | 449  | 1.625     | ug/l 76   |
| 64) Tetrachloroethene         | 8.32  | 164 | 573  | 3.457     | ug/l # 13 |
| 66) 1,1,1,2-Tetrachloroethane | 10.08 | 131 | 190  | 1.152     | ug/l 98   |
| 67) Ethyl Benzene             | 10.05 | 91  | 1004 | 1.406     | ug/l # 42 |
| 68) m/p-Xylenes               | 10.28 | 106 | 310  | 1.155     | ug/l # 1  |
| 71) Bromoform                 | 10.87 | 173 | 102  | 1.234     | ug/l # 27 |
| 73) Isopropylbenzene          | 11.21 | 105 | 538  | 5.305     | ug/l # 45 |
| 74) N-amyl acetate            | 11.43 | 43  | 1423 | 55.769    | ug/l # 56 |

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 Operator : FY/SY  
 Sample : K2978-01  
 Misc : 5.17g/5mL/MSVOA F/SOIL  
 ALS Vial : 11 Sample Multiplier: 1

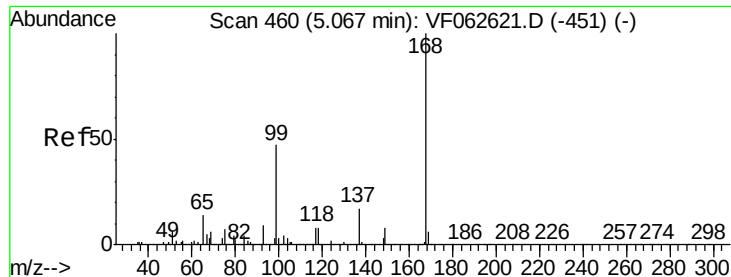
Instrument :  
 MSVOA\_F  
 ClientSampleId :  
 RO-SOIL

Quant Time: May 23 01:22:16 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_F\METHODS\82F051619S.M  
 Quant Title : SW846 8260  
 QLast Update : Fri May 17 05:49:09 2019  
 Response via : Initial Calibration

| Internal Standards             | R.T.  | QIon | Response | Conc   | Units  | Dev(Min) |
|--------------------------------|-------|------|----------|--------|--------|----------|
| -----                          |       |      |          |        |        |          |
| 75) 1,1,2,2-Tetrachloroethane  | 11.78 | 83   | 98       | 4.728  | ug/l # | 85       |
| 76) 1,2,3-Trichloropropane     | 11.73 | 75   | 246      | 18.064 | ug/l   | 76       |
| 77) Bromobenzene               | 11.59 | 156  | 85       | 3.372  | ug/l   | 90       |
| 78) n-propylbenzene            | 11.66 | 91   | 476      | 3.966  | ug/l # | 50       |
| 79) 2-Chlorotoluene            | 11.83 | 91   | 898      | 13.276 | ug/l   | 99       |
| 80) 1,3,5-Trimethylbenzene     | 12.01 | 105  | 208      | 2.558  | ug/l   | 96       |
| 81) trans-1,4-Dichloro-2-buten | 11.97 | 75   | 482      | 79.626 | ug/l # | 1        |
| 82) 4-Chlorotoluene            | 11.83 | 91   | 405      | 6.072  | ug/l   | 96       |
| 83) tert-Butylbenzene          | 12.17 | 119  | 820      | 9.939  | ug/l # | 32       |
| 84) 1,2,4-Trimethylbenzene     | 12.24 | 105  | 293      | 3.723  | ug/l   | 89       |
| 85) sec-Butylbenzene           | 12.37 | 105  | 441      | 3.983  | ug/l # | 54       |
| 86) p-Isopropyltoluene         | 12.54 | 119  | 183      | 1.961  | ug/l # | 74       |
| 87) 1,3-Dichlorobenzene        | 12.51 | 146  | 98       | 2.149  | ug/l # | 23       |
| 88) 1,4-Dichlorobenzene        | 12.65 | 146  | 174      | 4.065  | ug/l # | 46       |
| 89) n-Butylbenzene             | 12.92 | 91   | 336      | 3.652  | ug/l # | 25       |
| 90) Hexachloroethane           | 12.99 | 117  | 153      | 6.835  | ug/l   | 75       |
| 91) 1,2-Dichlorobenzene        | 12.95 | 146  | 65       | 1.599  | ug/l # | 23       |
| 92) 1,2-Dibromo-3-Chloropropan | 13.70 | 75   | 158      | 63.903 | ug/l # | 6        |
| 93) 1,2,4-Trichlorobenzene     | 14.26 | 180  | 177      | 6.082  | ug/l # | 11       |
| 94) Hexachlorobutadiene        | 14.24 | 225  | 66       | 3.250  | ug/l # | 16       |
| 95) Naphthalene                | 14.47 | 128  | 63       | 1.192  | ug/l # | 1        |
| 96) 1,2,3-Trichlorobenzene     | 14.59 | 180  | 60       | 2.177  | ug/l # | 66       |
| -----                          |       |      |          |        |        |          |

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





#1

Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.05 min Scan# 458

Delta R.T. -0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

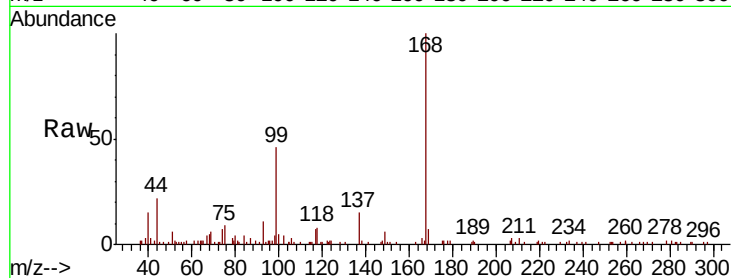
RO-SOIL

Tot Ion:168 Resp: 43996

Ion Ratio Lower Upper

168 100

99 45.6 37.8 56.8



Abundance Ion 168.00 (167.70 to 168.70): VF0

Ion 99.00 (98.70 to 99.70): VF0

5.05

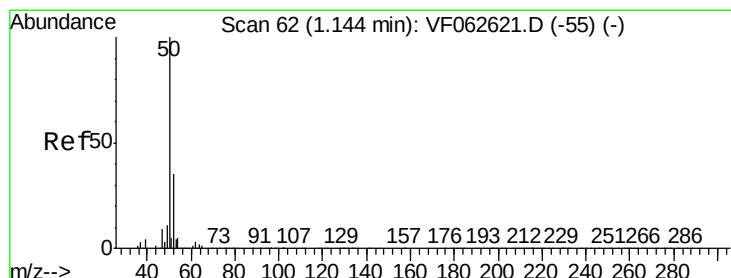
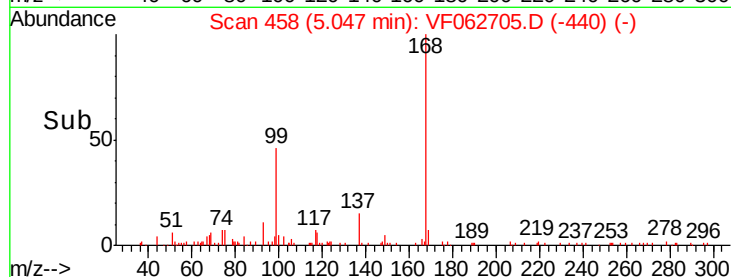
15000

10000

5000

0

Time-->



#3

Chloromethane

Concen: 1.594 ug/l

RT: 1.22 min Scan# 70

Delta R.T. 0.08 min

Lab File: VF062705.D

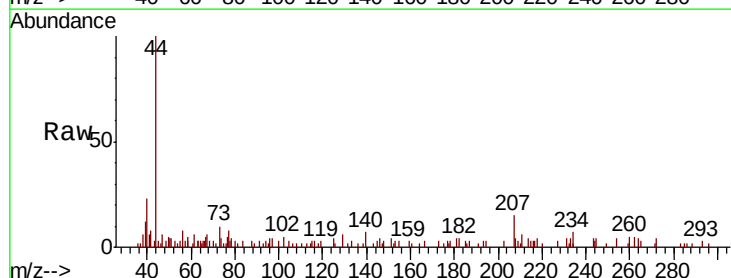
Acq: 22 May 2019 14:57

Tgt Ion: 50 Resp: 879

Ion Ratio Lower Upper

50 100

52 38.0 27.5 41.3



Abundance Ion 50.00 (49.70 to 50.70): VF0

Ion 52.00 (51.70 to 52.70): VF0

600

500

400

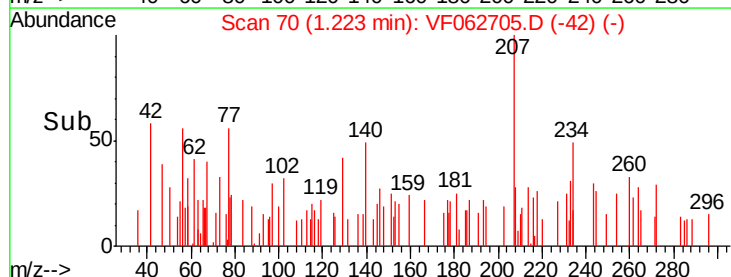
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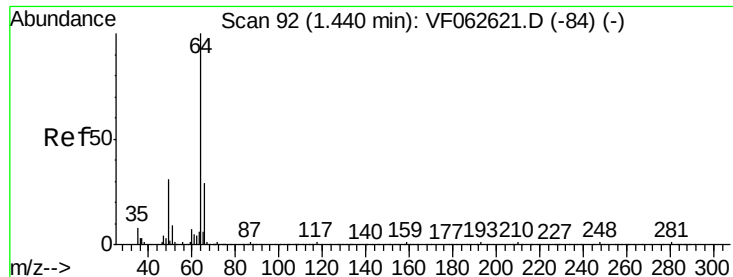
200

100

0

Time-->





#6

Chloroethane

Concen: 2.270 ug/l

RT: 1.44 min Scan# 92

Delta R.T. -0.00 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

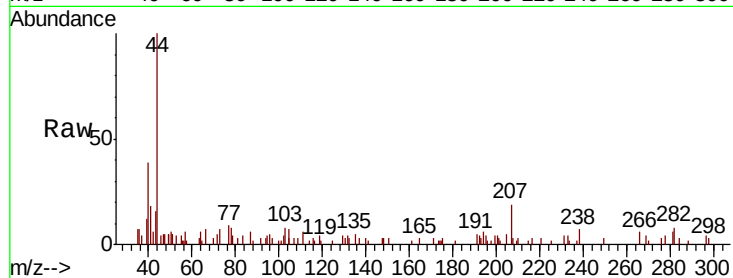
RO-SOIL

Tot Ion: 64 Resp: 423

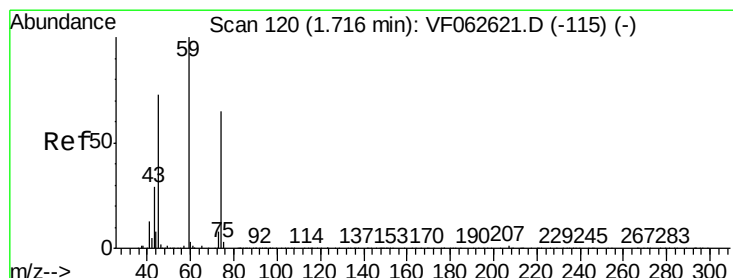
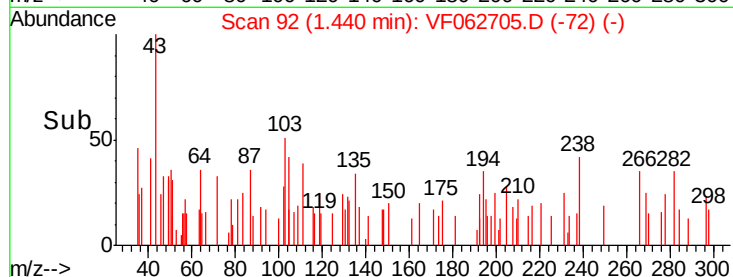
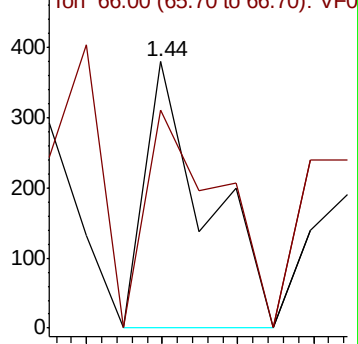
Ion Ratio Lower Upper

64 100

66 81.6 23.4 35.2#



Abundance Ion 64.00 (63.70 to 64.70): VF0



#8

Diethyl Ether

Concen: 1.622 ug/l

RT: 1.71 min Scan# 119

Delta R.T. -0.01 min

Lab File: VF062705.D

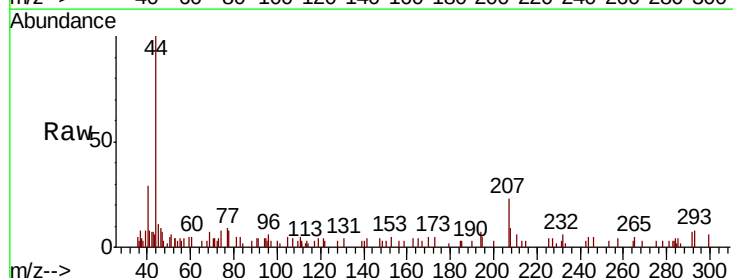
Acq: 22 May 2019 14:57

Tgt Ion: 74 Resp: 219

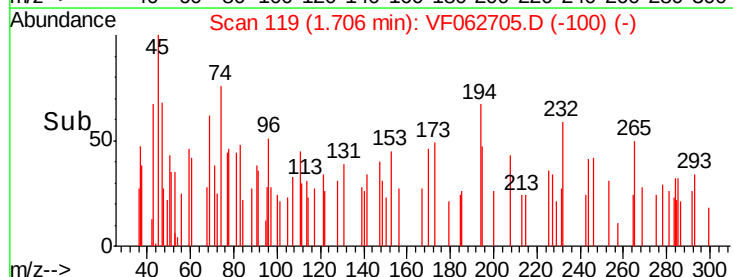
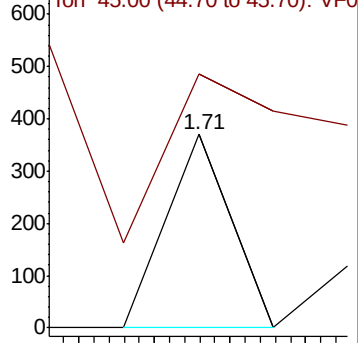
Ion Ratio Lower Upper

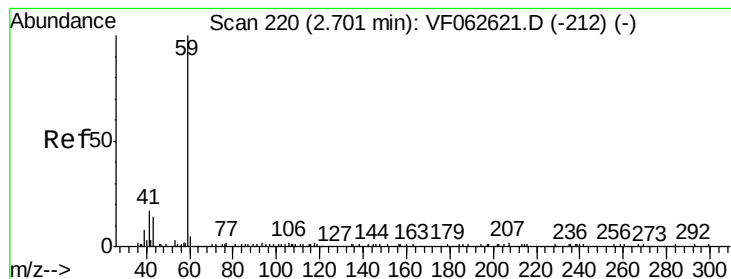
74 100

45 131.1 57.0 170.8



Abundance Ion 74.00 (73.70 to 74.70): VF0



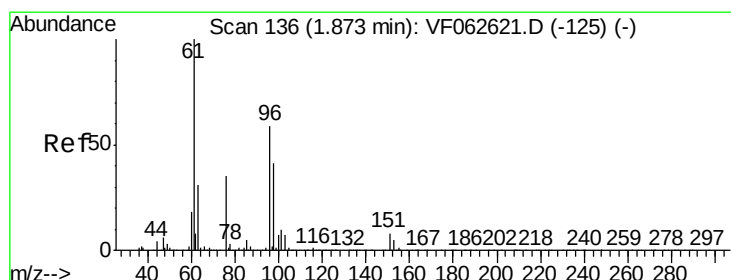
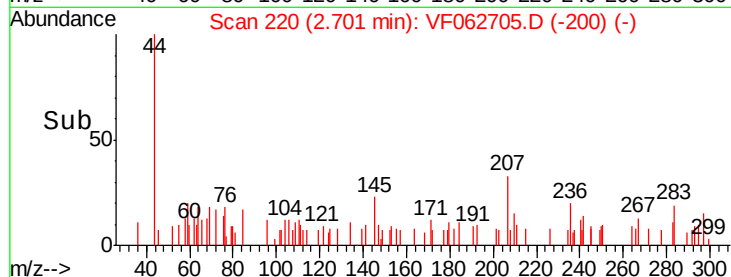
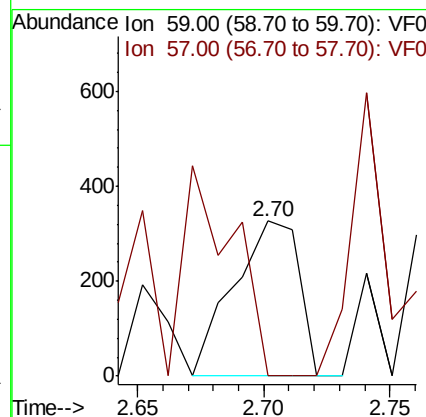
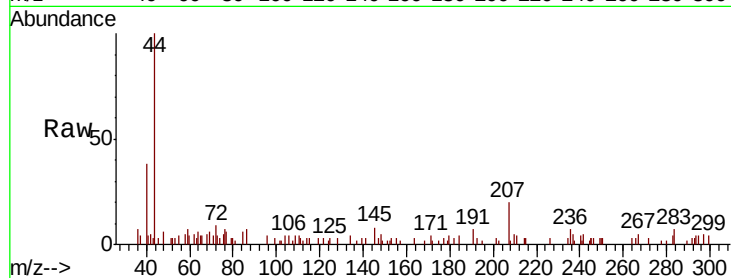


#11

Tert butyl alcohol  
Concen: 28.842 ug/l  
RT: 2.70 min Scan# 220  
Delta R.T. -0.00 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

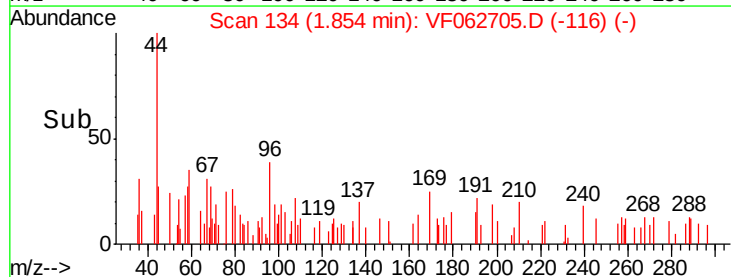
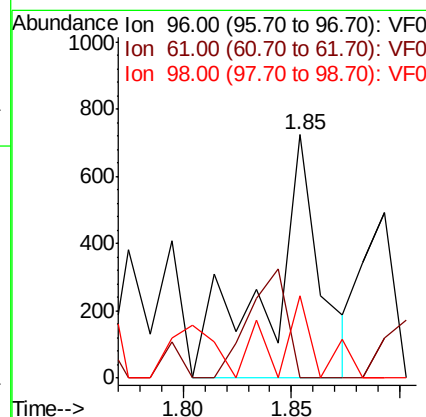
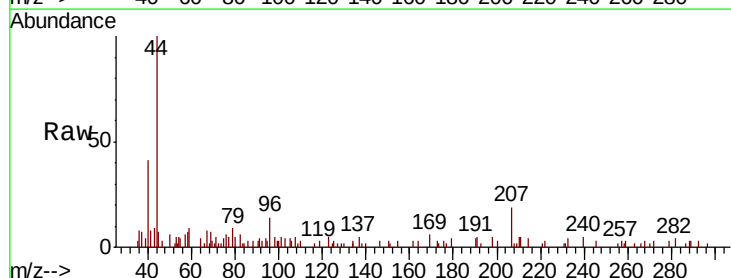
Tot Ion: 59 Resp: 592  
Ion Ratio Lower Upper  
59 100  
57 65.4 9.3 13.9#

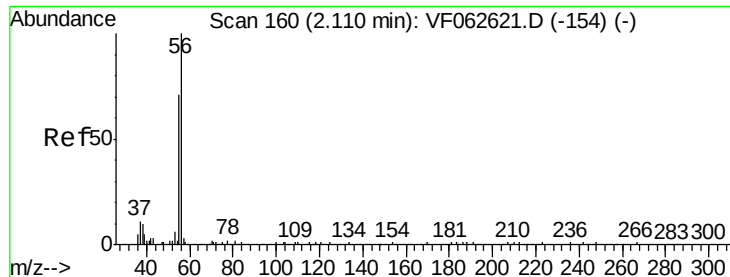


#12

1,1-Dichloroethene  
Concen: 2.955 ug/l  
RT: 1.85 min Scan# 134  
Delta R.T. -0.02 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 96 Resp: 1168  
Ion Ratio Lower Upper  
96 100  
61 0.0 134.3 201.5#  
98 33.7 55.0 82.6#





#13

Acrolein

Concen: 12.135 ug/l

RT: 2.10 min Scan# 159

Delta R.T. -0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

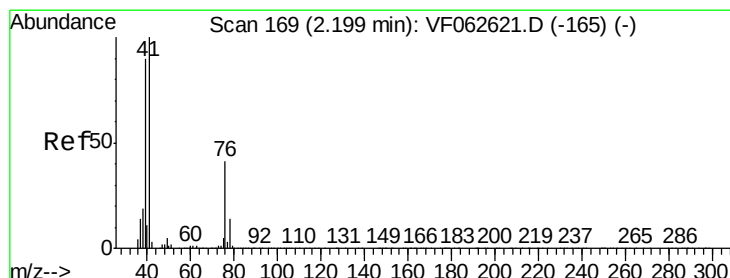
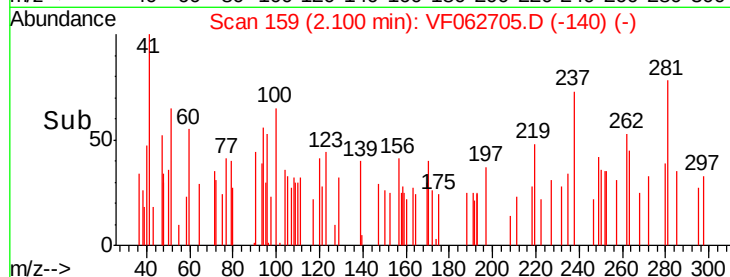
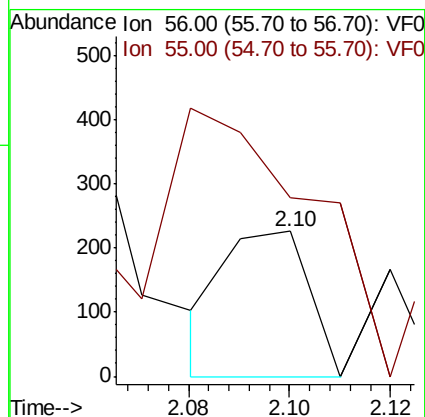
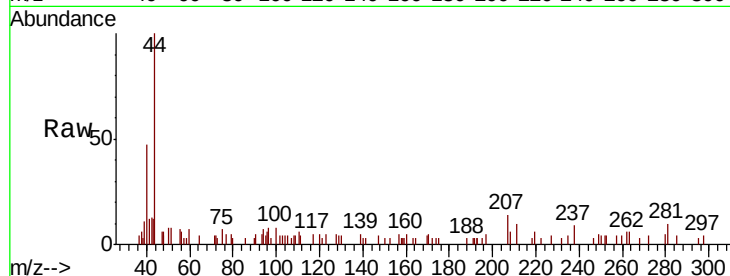
RO-SOIL

Tot Ion: 56 Resp: 260

Ion Ratio Lower Upper

56 100

55 123.0 59.4 89.0#



#14

Allyl chloride

Concen: 2.961 ug/l

RT: 2.23 min Scan# 172

Delta R.T. 0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

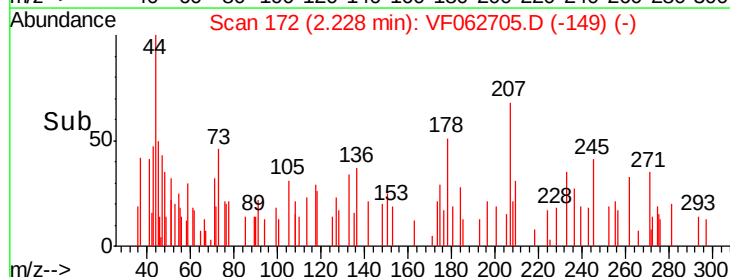
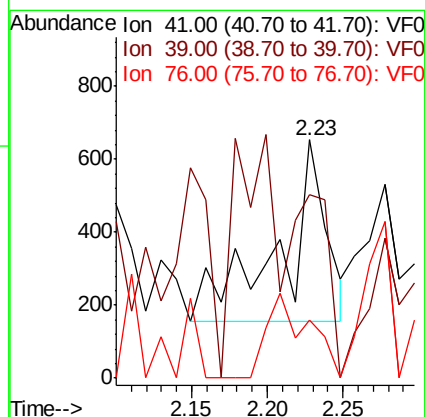
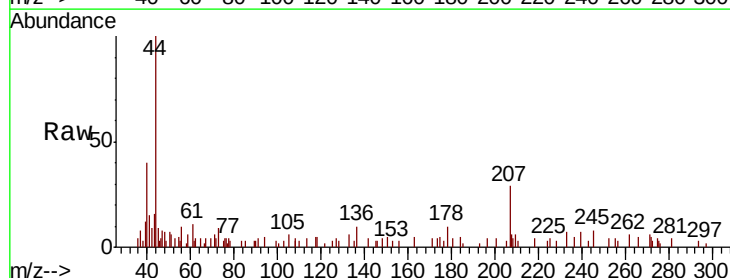
Tgt Ion: 41 Resp: 1059

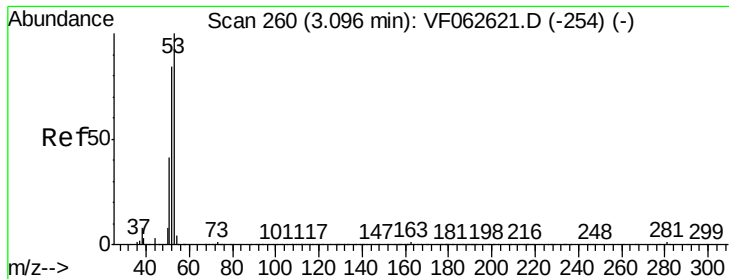
Ion Ratio Lower Upper

41 100

39 77.3 72.0 108.0

76 24.3 34.8 52.2#





#15

Acrylonitrile

Concen: 6.477 ug/l

RT: 3.12 min Scan# 262

Delta R.T. 0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

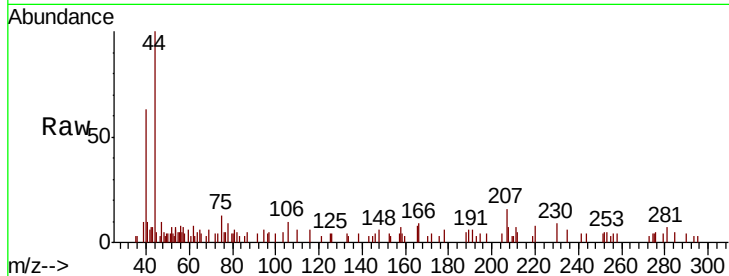
Tot Ion: 53 Resp: 375

Ion Ratio Lower Upper

53 100

52 119.8 67.3 100.9#

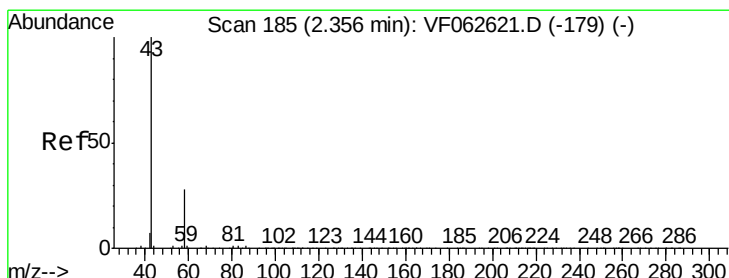
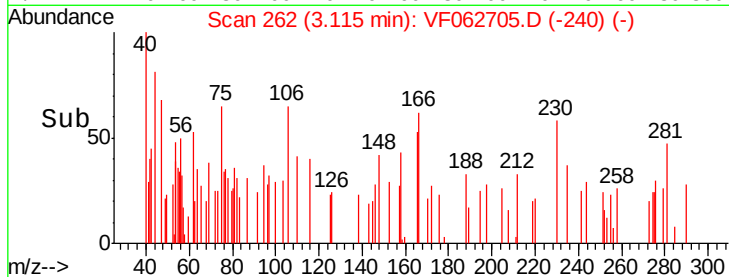
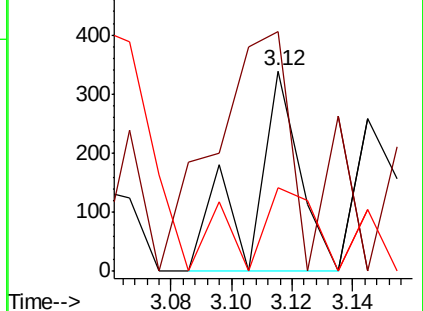
51 41.6 33.0 49.6



Abundance Ion 53.00 (52.70 to 53.70): VF0

Ion 52.00 (51.70 to 52.70): VF0

Ion 51.00 (50.70 to 51.70): VF0



#16

Acetone

Concen: 16.750 ug/l

RT: 2.37 min Scan# 186

Delta R.T. 0.01 min

Lab File: VF062705.D

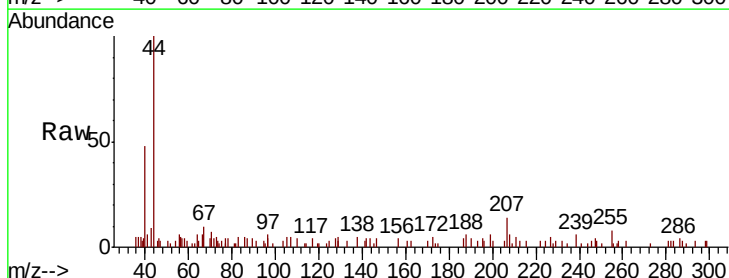
Acq: 22 May 2019 14:57

Tgt Ion: 43 Resp: 1351

Ion Ratio Lower Upper

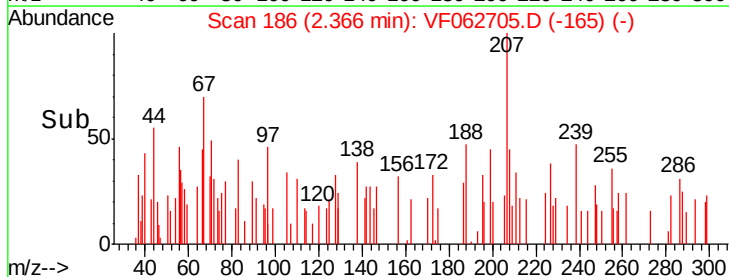
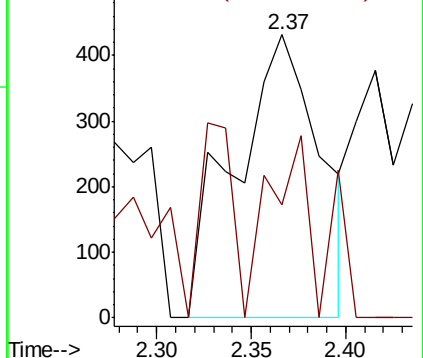
43 100

58 39.8 22.6 33.8#

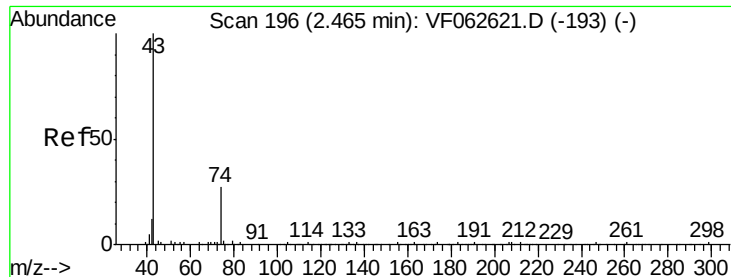


Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0



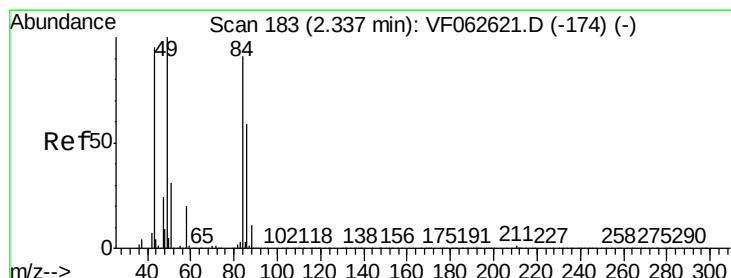
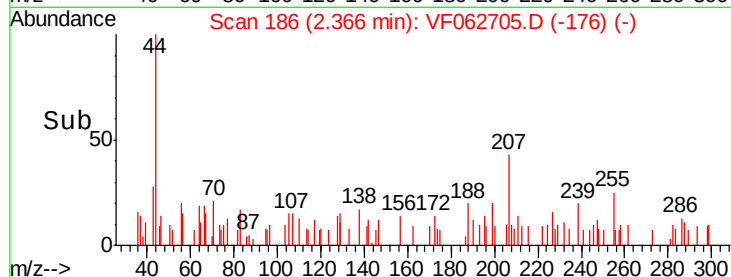
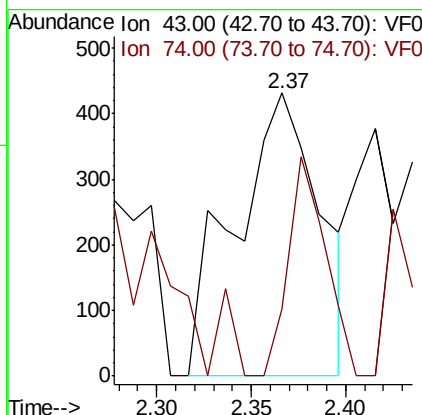
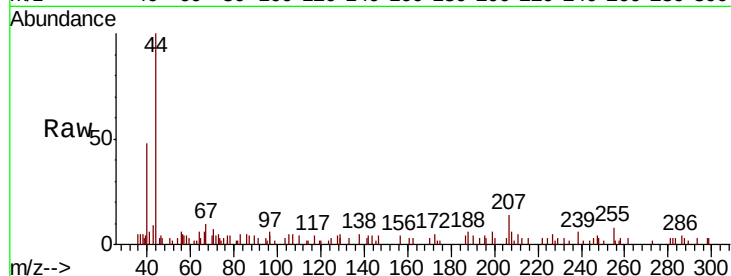




#18  
Methvl Acetate  
Concen: 10.659 ug/l  
RT: 2.37 min Scan# 186  
Delta R.T. -0.10 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

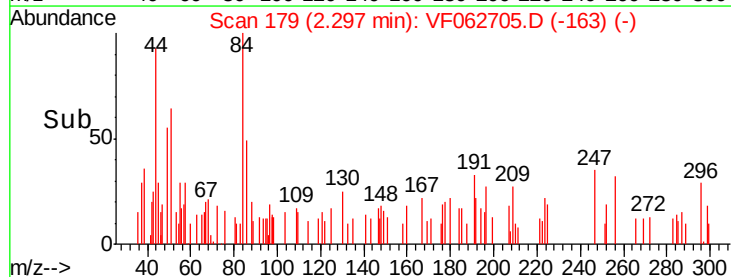
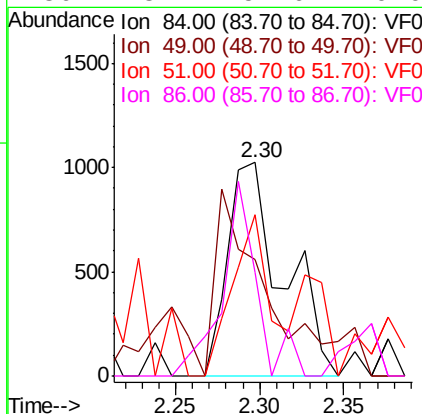
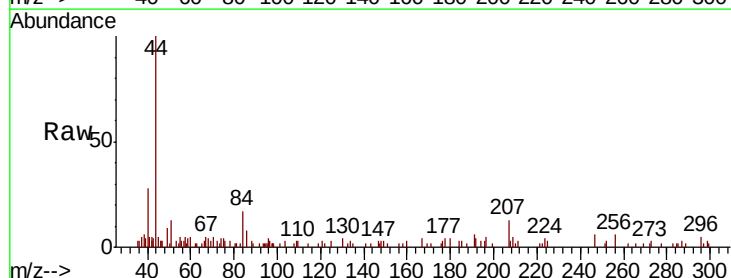
Instrument :  
MSVOA\_F  
ClientSampleId :  
RO-SOIL

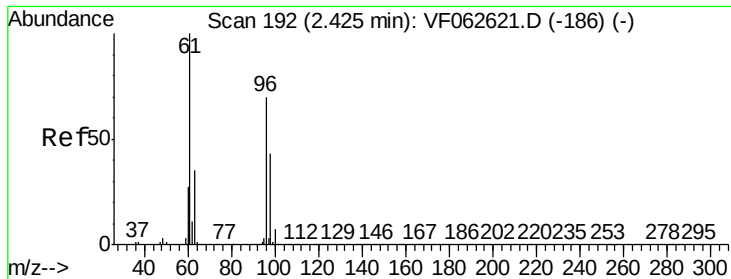
Tot Ion: 43 Resp: 1351  
Ion Ratio Lower Upper  
43 100  
74 23.6 18.9 28.3



#20  
Methylene Chloride  
Concen: 5.773 ug/l  
RT: 2.30 min Scan# 179  
Delta R.T. -0.04 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 84 Resp: 2334  
Ion Ratio Lower Upper  
84 100  
49 54.5 89.8 134.8#  
51 75.5 28.4 42.6#  
86 48.7 52.6 79.0#





#21

trans-1,2-Dichloroethene

Concen: 1.998 ug/l

RT: 2.45 min Scan# 195

Delta R.T. 0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

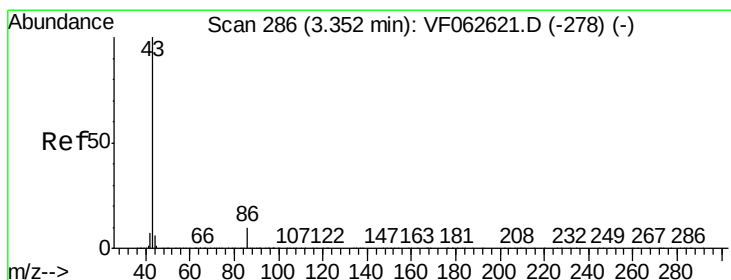
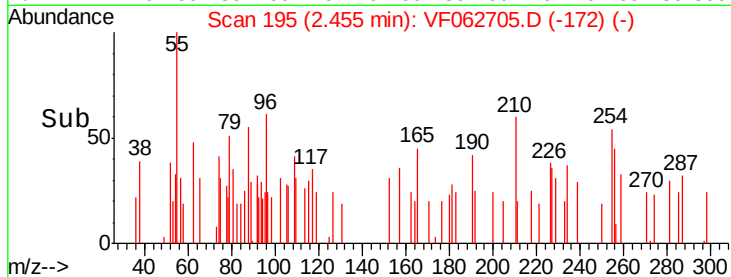
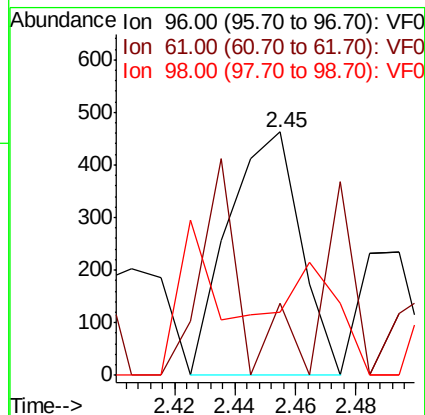
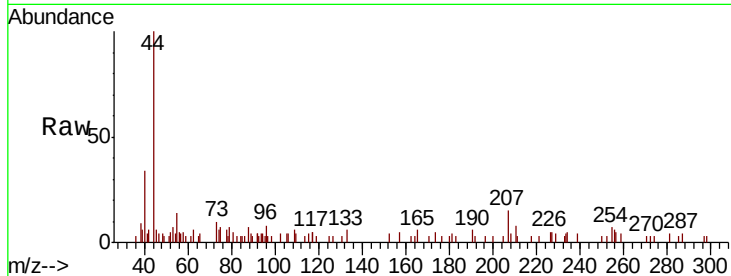
Tot Ion: 96 Resp: 772

Ion Ratio Lower Upper

96 100

61 29.6 114.6 171.8#

98 25.7 49.5 74.3#



#23

Vinyl Acetate

Concen: 1.623 ug/l

RT: 3.35 min Scan# 286

Delta R.T. -0.00 min

Lab File: VF062705.D

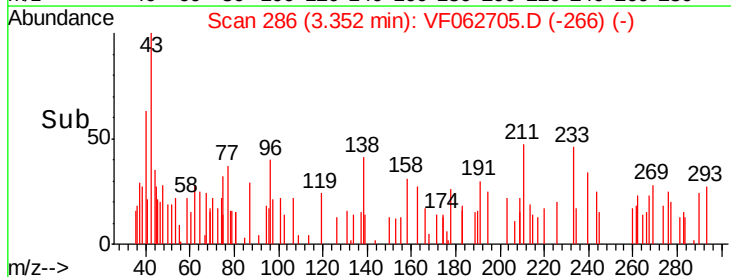
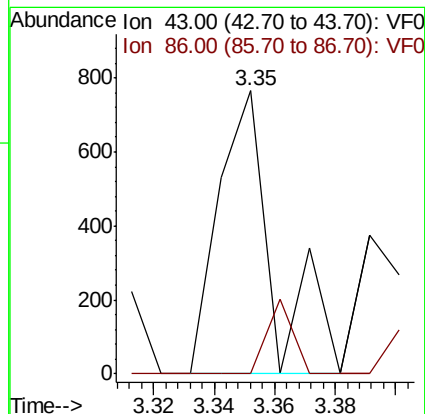
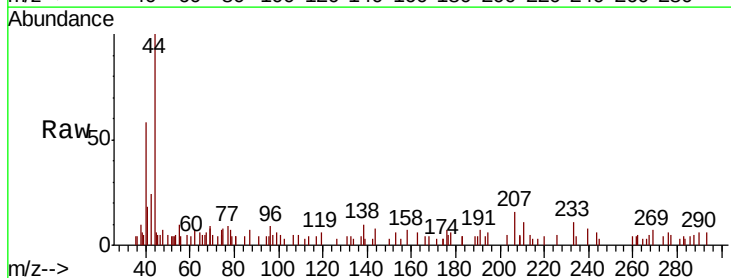
Acq: 22 May 2019 14:57

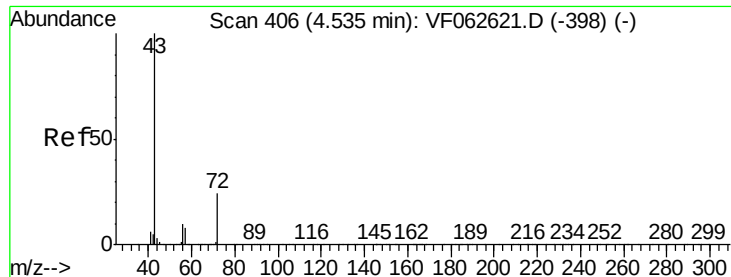
Tgt Ion: 43 Resp: 966

Ion Ratio Lower Upper

43 100

86 0.0 8.2 12.2#





#25

2-Butanone

Concen: 10.759 ug/l

RT: 4.50 min Scan# 402

Delta R.T. -0.04 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

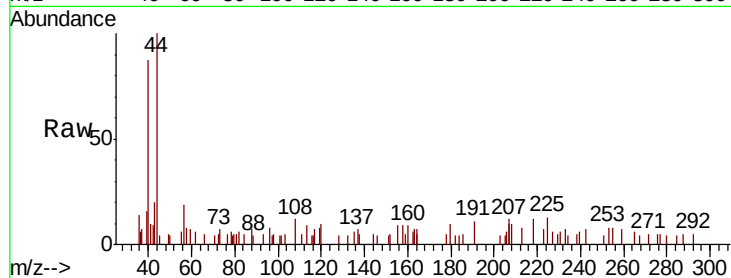
RO-SOIL

Tot Ion: 43 Resp: 1854

Ion Ratio Lower Upper

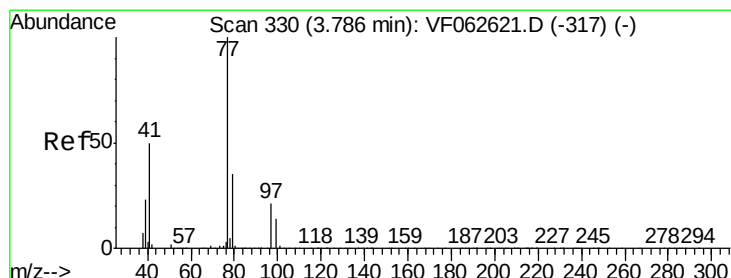
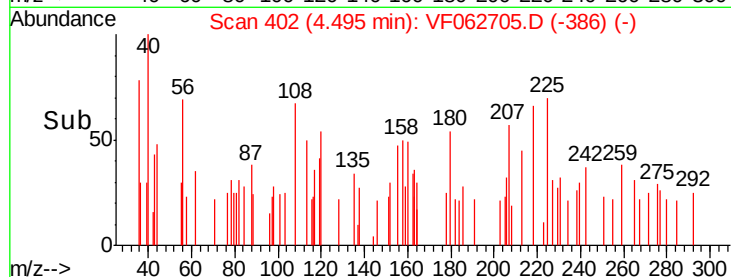
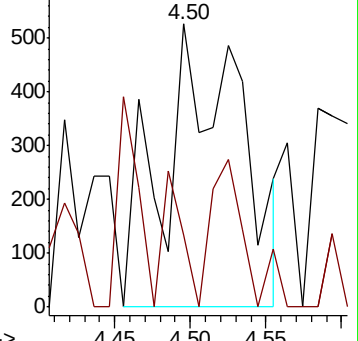
43 100

72 25.3 20.1 30.1



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 72.00 (71.70 to 72.70): VF0



#26

2,2-Dichloropropane

Concen: 3.732 ug/l

RT: 3.78 min Scan# 329

Delta R.T. -0.01 min

Lab File: VF062705.D

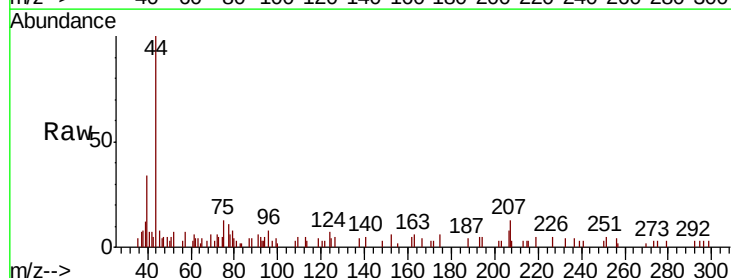
Acq: 22 May 2019 14:57

Tgt Ion: 77 Resp: 1382

Ion Ratio Lower Upper

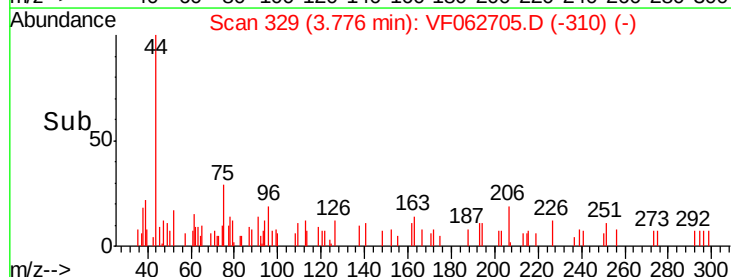
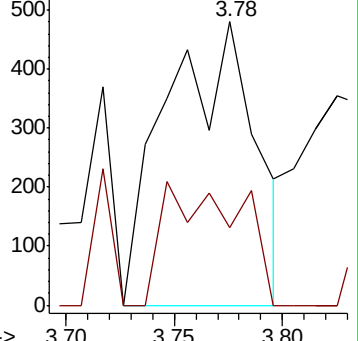
77 100

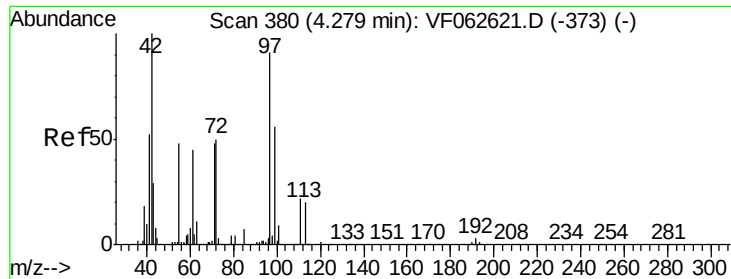
97 27.3 14.1 42.4



Abundance Ion 77.00 (76.70 to 77.70): VF0

Ion 97.00 (96.70 to 97.70): VF0





#29

Tetrahydrofuran

Concen: 12.103 ug/l

RT: 4.26 min Scan# 378

Delta R.T. -0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

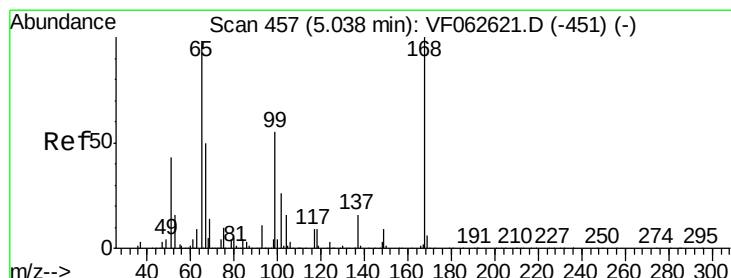
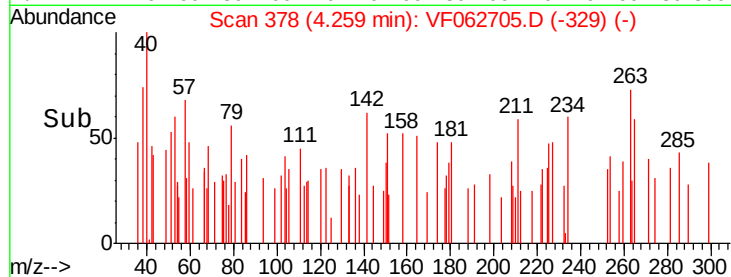
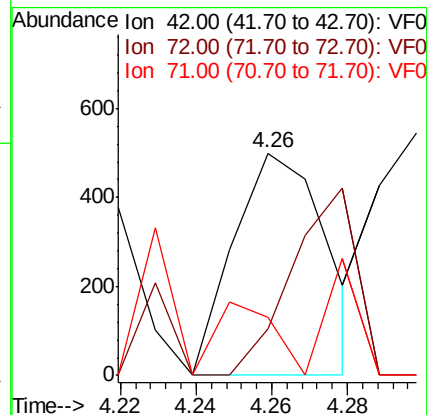
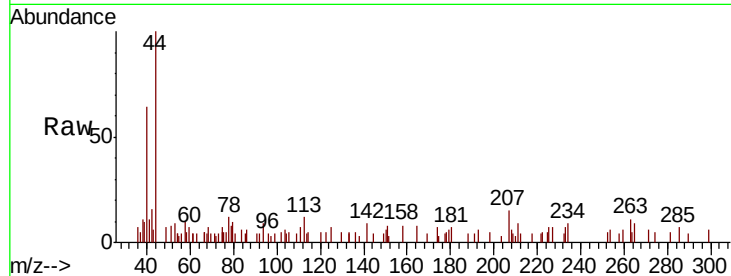
Tot Ion: 42 Resp: 844

Ion Ratio Lower Upper

42 100

72 59.0 38.2 57.2#

71 0.0 35.8 53.6#



#33

1,2-Dichloroethane-d4

Concen: 11.718 ug/l

RT: 5.02 min Scan# 455

Delta R.T. -0.02 min

Lab File: VF062705.D

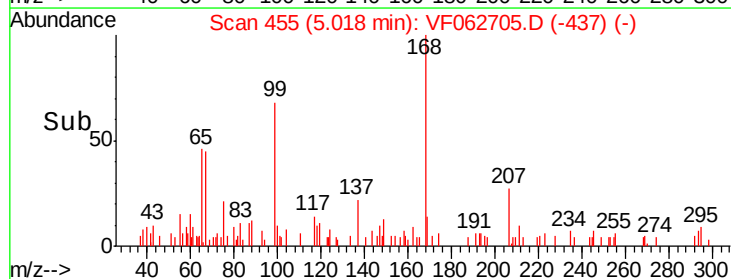
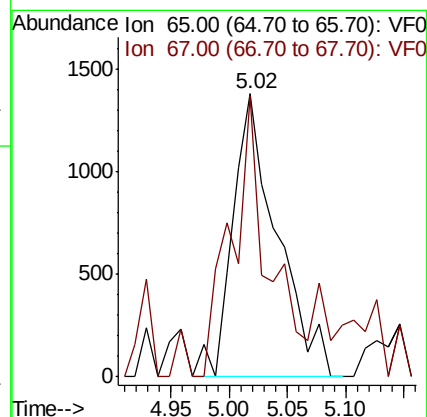
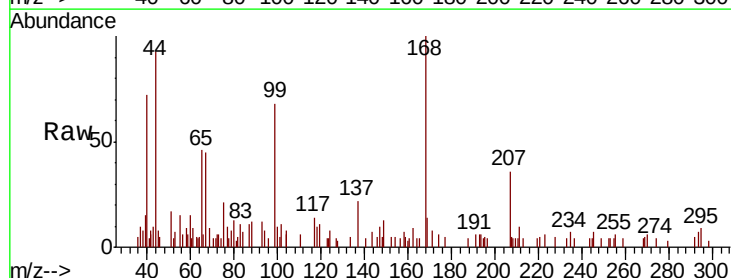
Acq: 22 May 2019 14:57

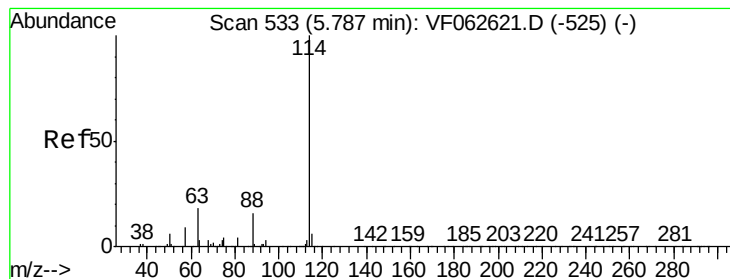
Tgt Ion: 65 Resp: 3643

Ion Ratio Lower Upper

65 100

67 99.2 0.0 117.6





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 5.77 min Scan# 531

Delta R.T. -0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

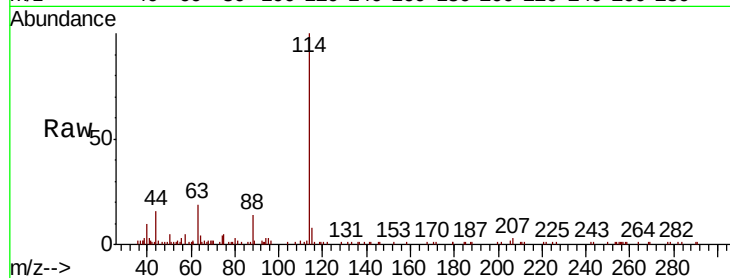
Tot Ion:114 Resp: 48920

Ion Ratio Lower Upper

114 100

63 19.2 0.0 35.4

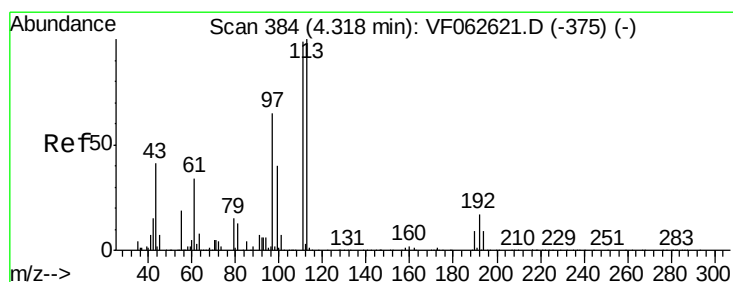
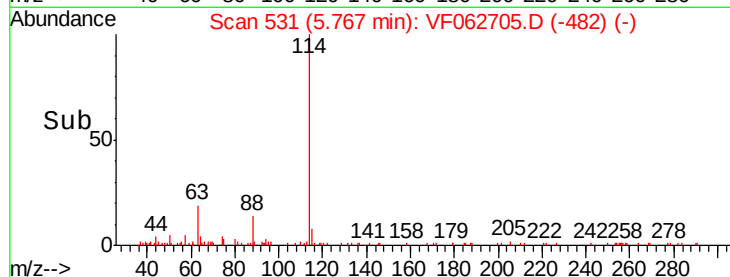
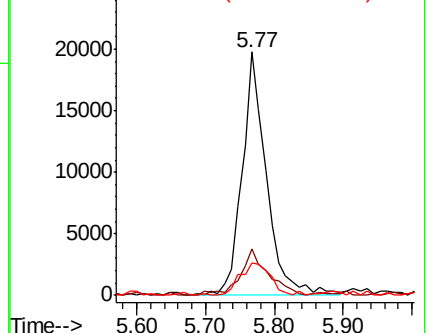
88 13.6 0.0 32.4



Abundance Ion 114.00 (113.70 to 114.70): V

Ion 63.00 (62.70 to 63.70): VF0

Ion 88.00 (87.70 to 88.70): VF0



#35

Dibromofluoromethane

Concen: 25.234 ug/l

RT: 4.29 min Scan# 381

Delta R.T. -0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

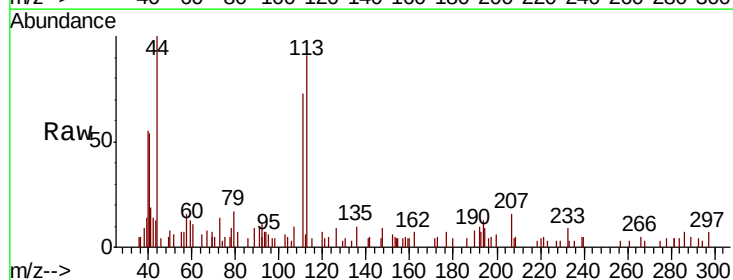
Tgt Ion:113 Resp: 9446

Ion Ratio Lower Upper

113 100

111 80.8 79.4 119.2

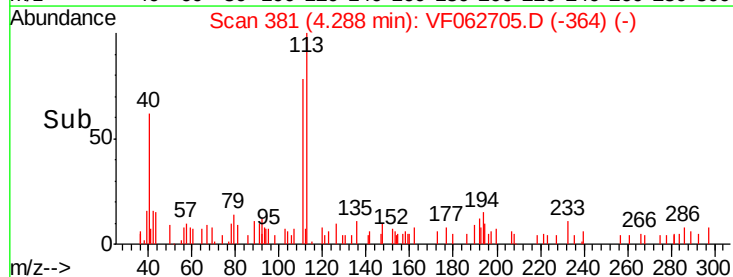
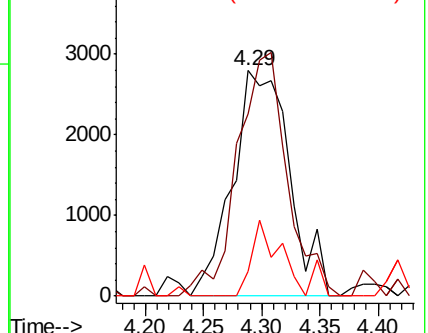
192 11.2 13.4 20.2#

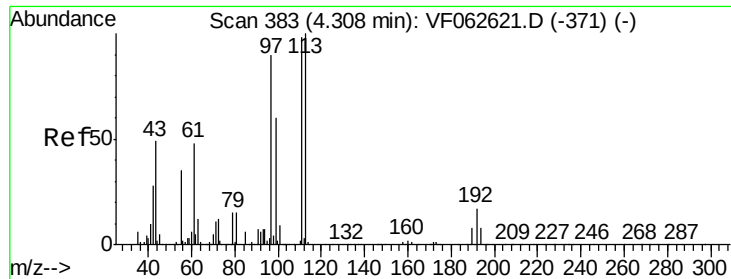


Abundance Ion 113.00 (112.70 to 113.70): V

Ion 111.00 (110.70 to 111.70): V

Ion 192.00 (191.70 to 192.70): V





#37

Ethyl Acetate

Concen: 3.870 ug/l

RT: 4.31 min Scan# 383

Delta R.T. -0.00 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

RO-SOIL

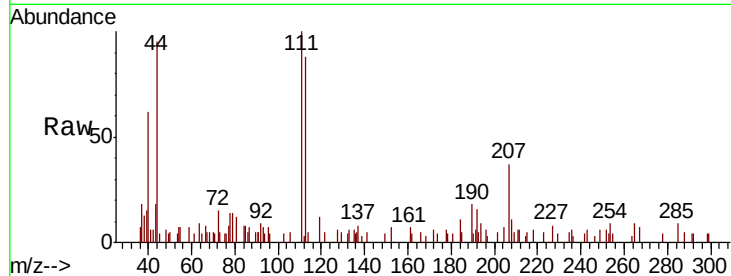
Tot Ion: 43 Resp: 792

Ion Ratio Lower Upper

43 100

61 21.2 76.9 115.3#

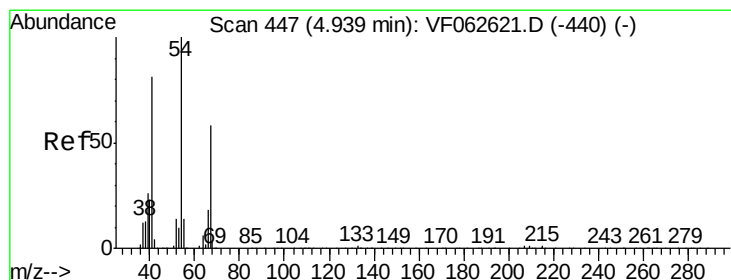
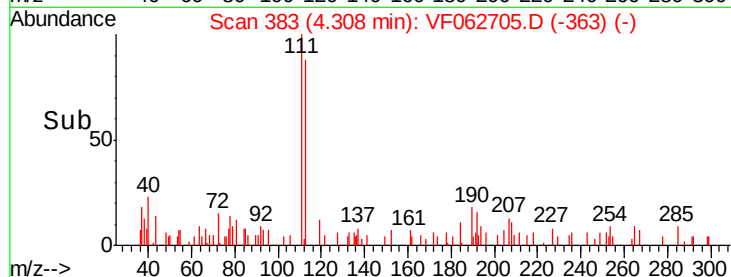
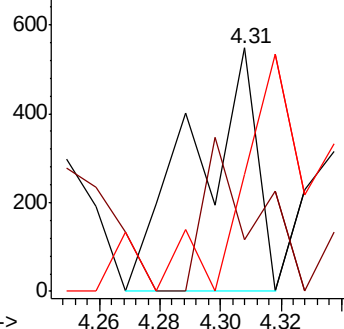
70 48.0 8.8 13.2#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 61.00 (60.70 to 61.70): VF0

Ion 70.00 (69.70 to 70.70): VF0



#41

Methacrylonitrile

Concen: 6.085 ug/l

RT: 4.91 min Scan# 444

Delta R.T. -0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Tgt Ion: 41 Resp: 653

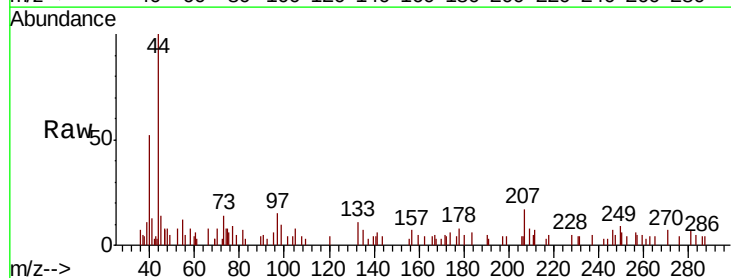
Ion Ratio Lower Upper

41 100

39 0.0 42.2 63.2#

67 0.0 56.4 84.6#

52 61.7 38.8 58.2#

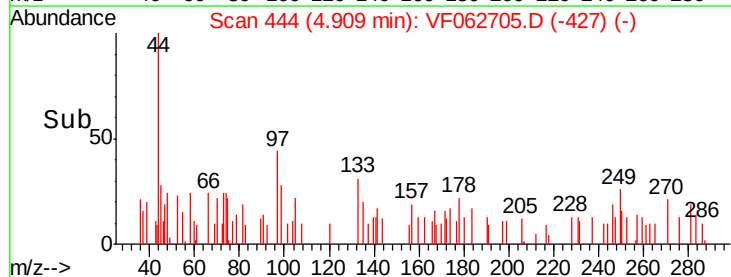
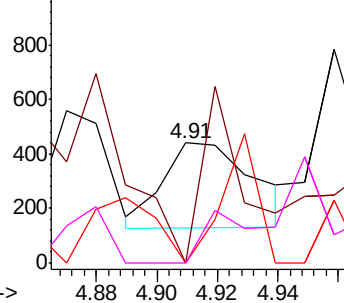


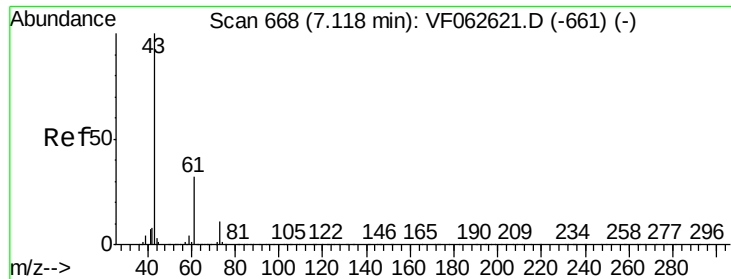
Abundance Ion 41.00 (40.70 to 41.70): VF0

Ion 39.00 (38.70 to 39.70): VF0

Ion 67.00 (66.70 to 67.70): VF0

Ion 52.00 (51.70 to 52.70): VF0





#43

Isopropyl Acetate

Concen: 4.582 ug/l

RT: 7.11 min Scan# 667

Delta R.T. -0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

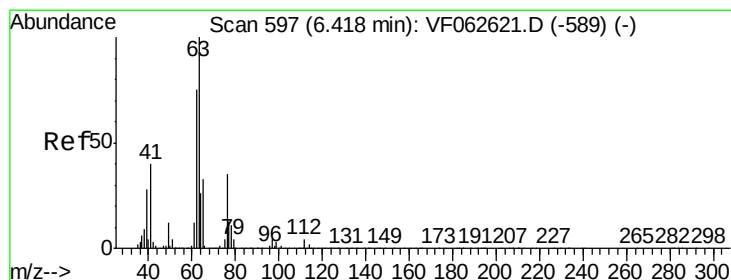
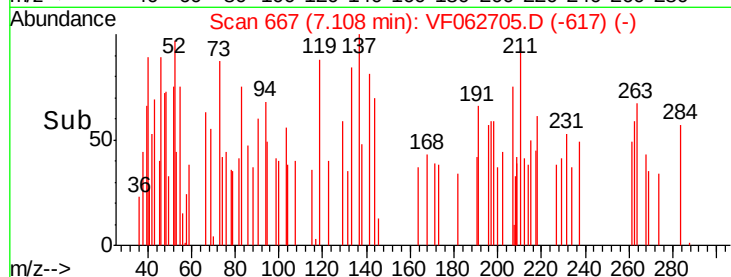
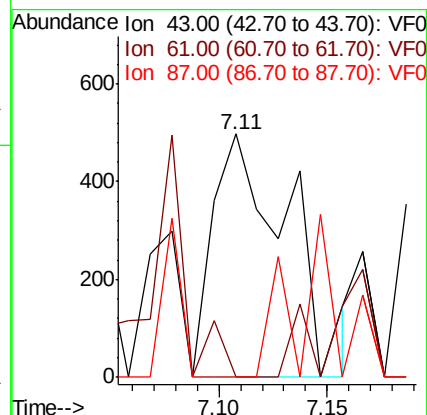
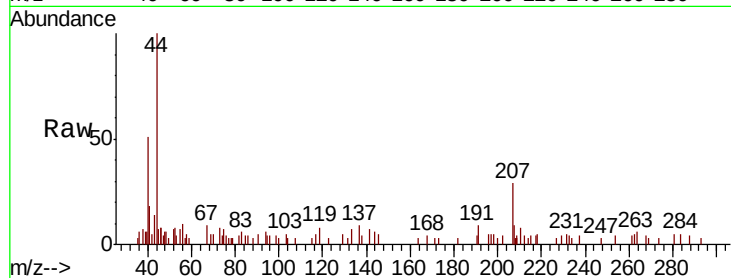
Tot Ion: 43 Resp: 1215

Ion Ratio Lower Upper

43 100

61 0.0 25.8 38.8#

87 0.0 0.4 0.6#



#45

1,2-Dichloropropane

Concen: 1.517 ug/l

RT: 6.44 min Scan# 599

Delta R.T. 0.02 min

Lab File: VF062705.D

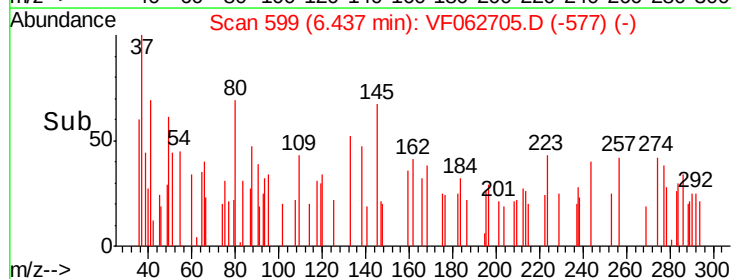
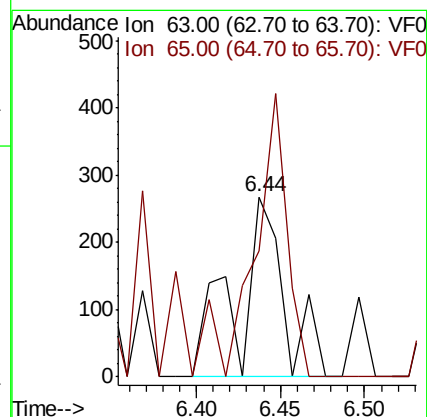
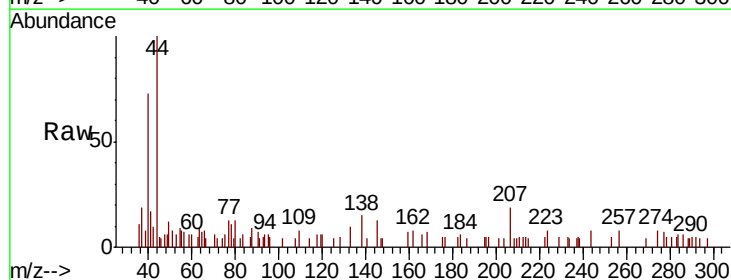
Acq: 22 May 2019 14:57

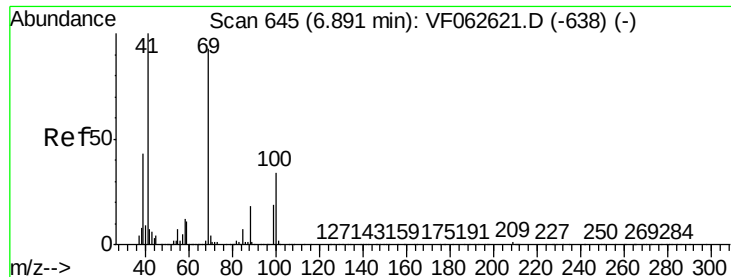
Tgt Ion: 63 Resp: 523

Ion Ratio Lower Upper

63 100

65 70.0 26.3 39.5#

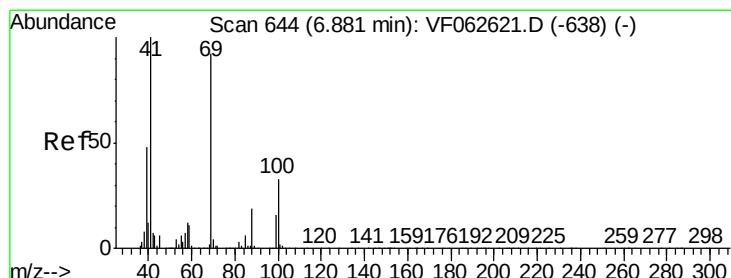
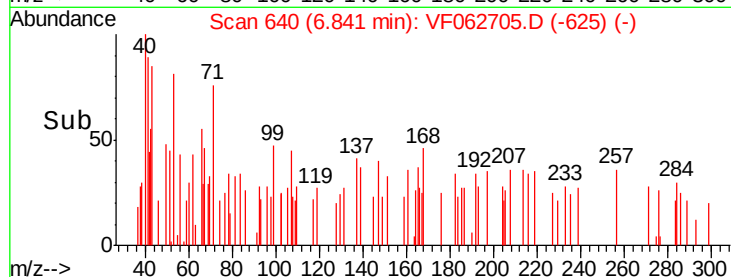
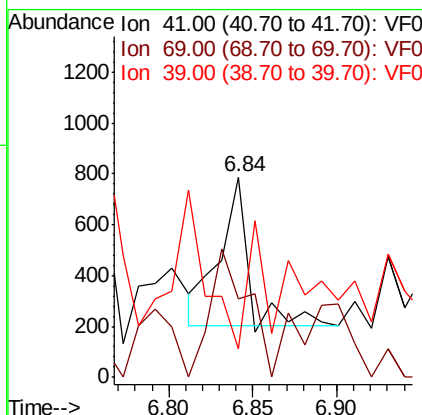
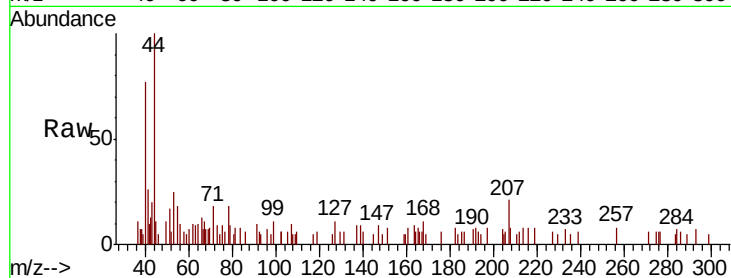




#48  
Methvl methacrylate  
Concen: 5.137 ug/l  
RT: 6.84 min Scan# 640  
Delta R.T. -0.05 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

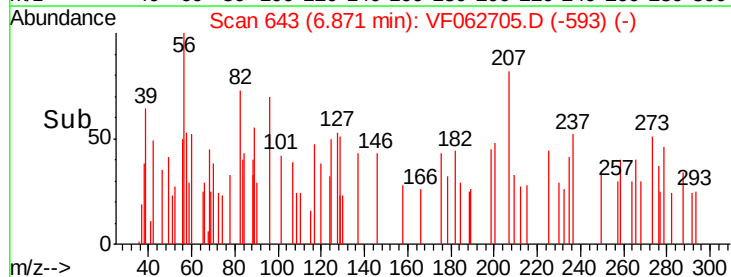
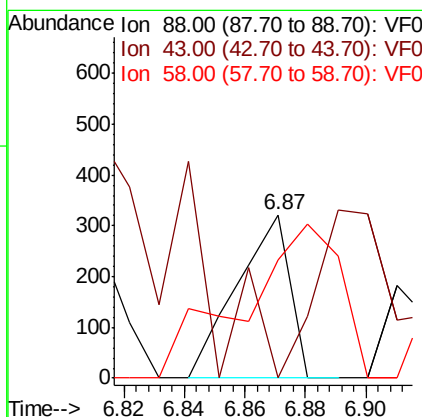
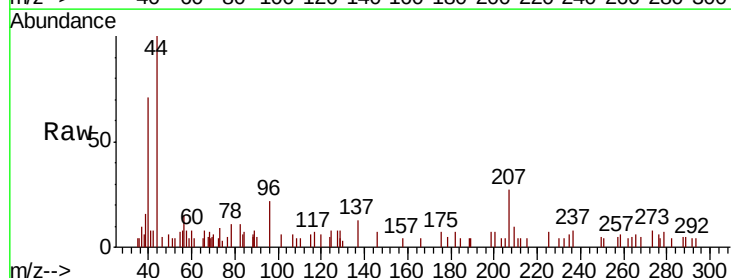
Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

Tot Ion: 41 Resp: 712  
Ion Ratio Lower Upper  
41 100  
69 39.2 74.2 111.2#  
39 14.5 34.2 51.4#

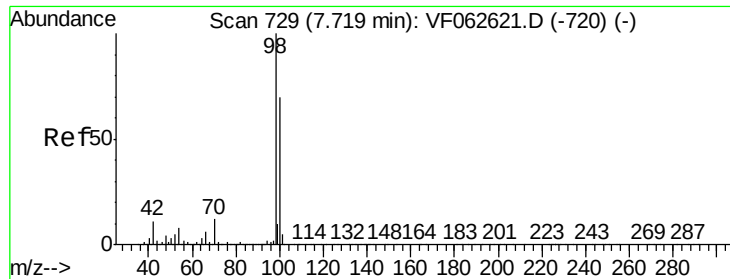


#49  
1,4-Dioxane  
Concen: 223.084 ug/l  
RT: 6.87 min Scan# 643  
Delta R.T. -0.01 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 88 Resp: 396  
Ion Ratio Lower Upper  
88 100  
43 0.0 30.0 45.0#  
58 72.3 51.1 76.7







#50

Toluene-d8

Concen: 30.390 ug/l

RT: 7.70 min Scan# 727

Delta R.T. -0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

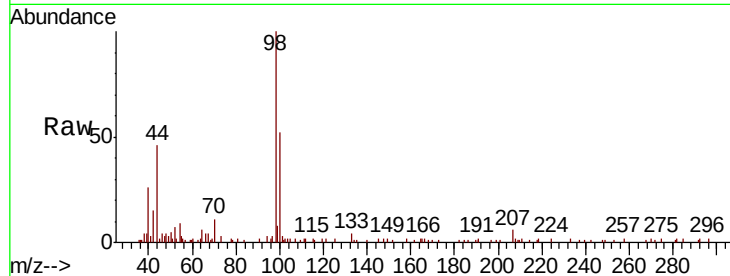
RO-SOIL

Tot Ion: 98 Resp: 27162

Ion Ratio Lower Upper

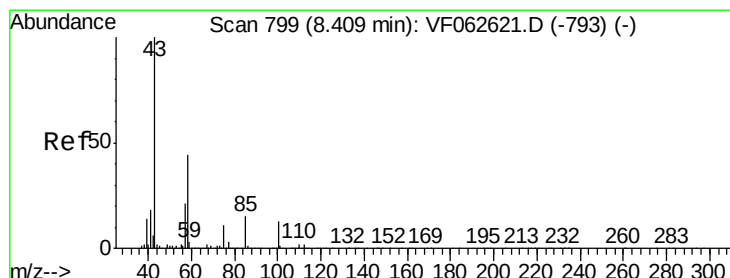
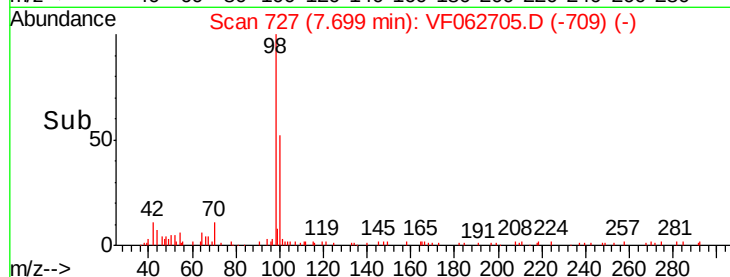
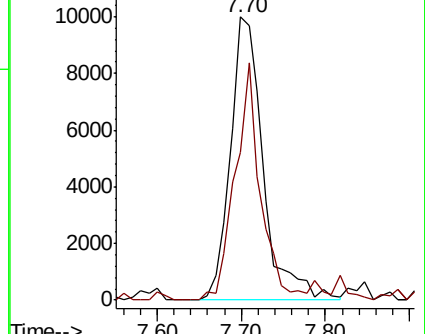
98 100

100 52.1 56.2 84.2#



Abundance Ion 98.00 (97.70 to 98.70): VF0

Ion 100.00 (99.70 to 100.70): VF0



#51

4-Methyl-2-Pentanone

Concen: 3.559 ug/l

RT: 8.35 min Scan# 793

Delta R.T. -0.06 min

Lab File: VF062705.D

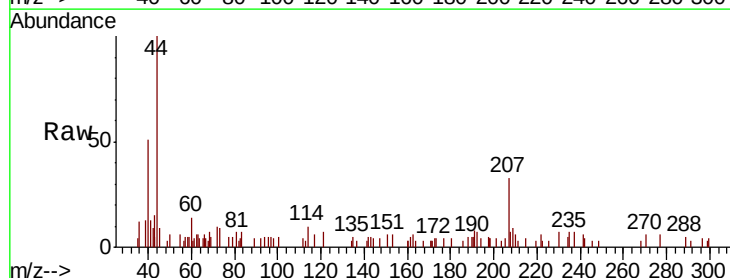
Acq: 22 May 2019 14:57

Tgt Ion: 43 Resp: 645

Ion Ratio Lower Upper

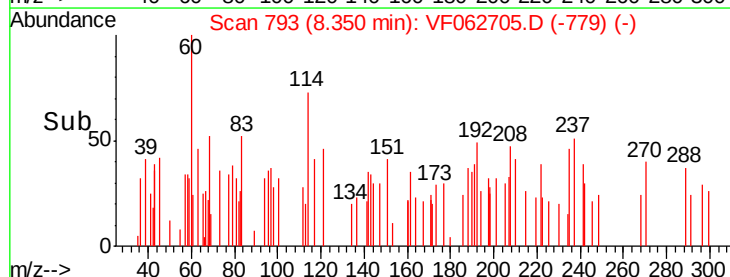
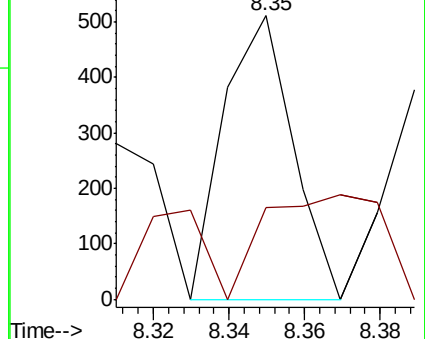
43 100

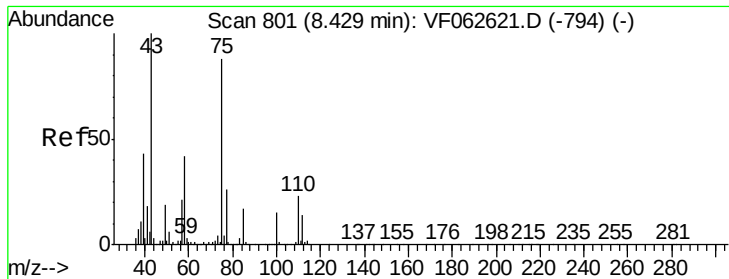
58 32.5 34.9 52.3#



Abundance Ion 43.00 (42.70 to 43.70): VF0

Ion 58.00 (57.70 to 58.70): VF0





#53

t-1,3-Dichloropropene

Concen: 1.076 ug/l

RT: 8.39 min Scan# 797

Delta R.T. -0.04 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

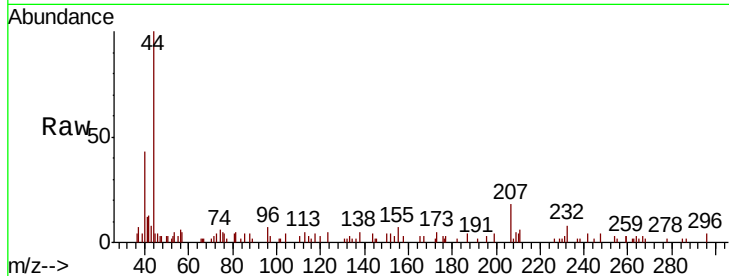
RO-SOIL

Tot Ion: 75 Resp: 364

Ion Ratio Lower Upper

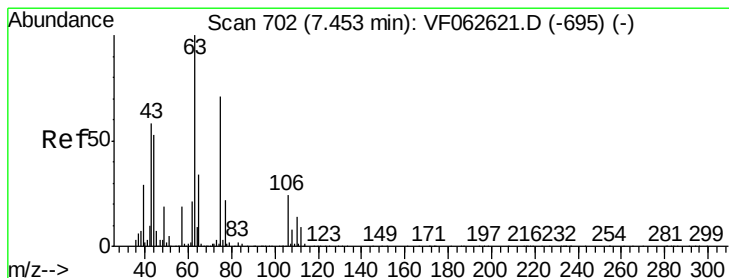
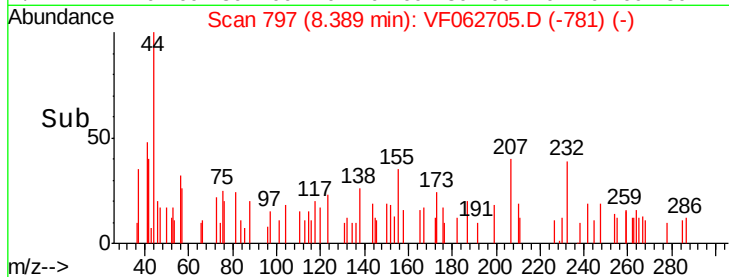
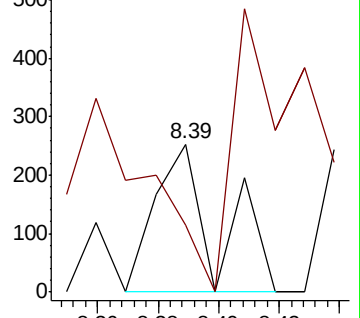
75 100

77 45.1 24.2 36.4#



Abundance Ion 75.00 (74.70 to 75.70): VF0

Ion 77.00 (76.70 to 77.70): VF0



#58

2-Chloroethyl Vinyl ether

Concen: 1.253 ug/l

RT: 7.45 min Scan# 702

Delta R.T. -0.00 min

Lab File: VF062705.D

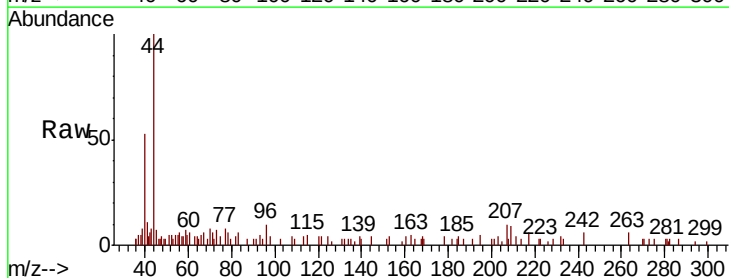
Acq: 22 May 2019 14:57

Tgt Ion: 63 Resp: 103

Ion Ratio Lower Upper

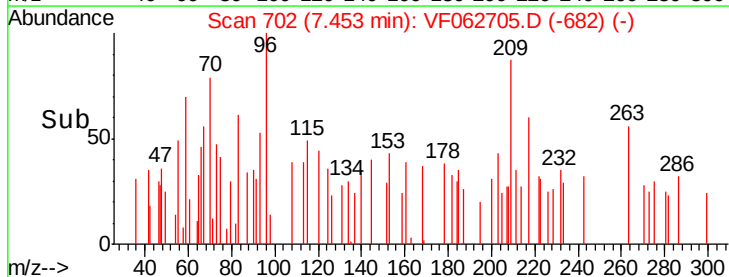
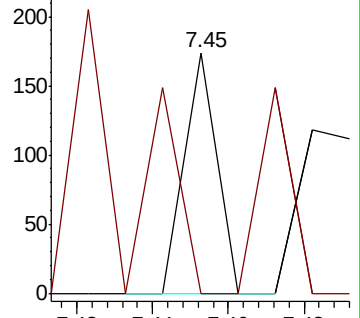
63 100

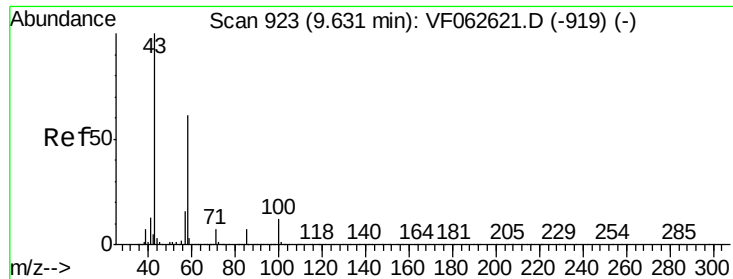
106 0.0 19.1 28.7#



Abundance Ion 63.00 (62.70 to 63.70): VF0

Ion 106.00 (105.70 to 106.70): V

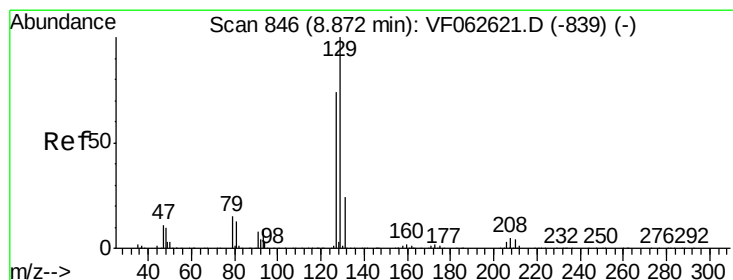
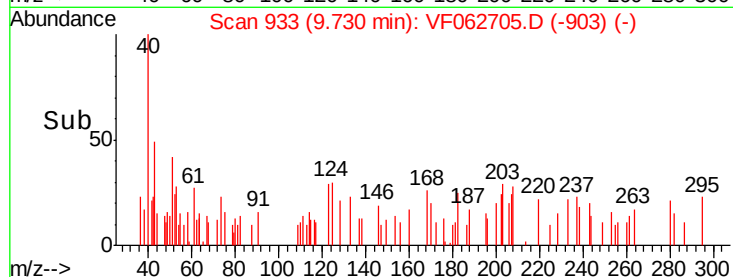
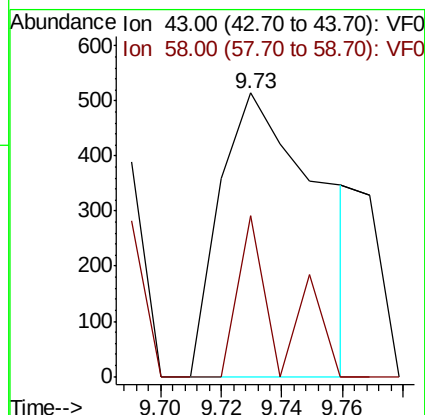
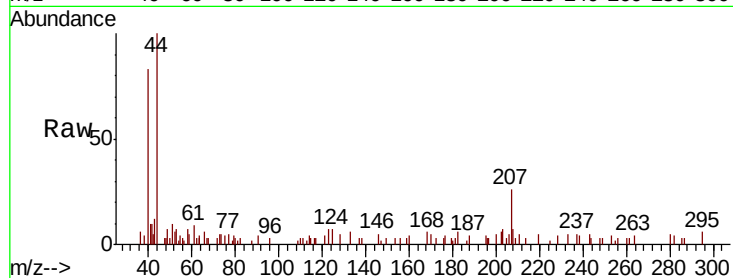




#59  
2-Hexanone  
Concen: Below Cal  
RT: 9.73 min Scan# 933  
Delta R.T. 0.10 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

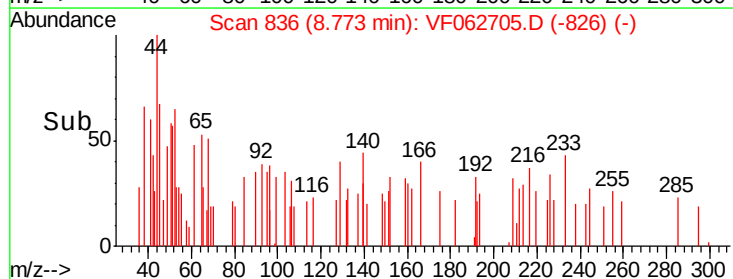
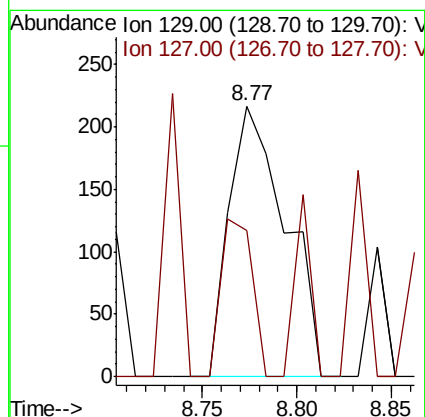
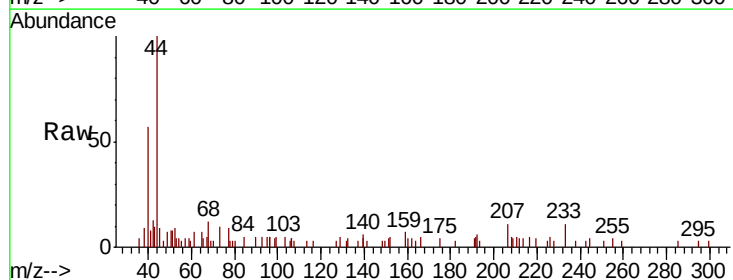
Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

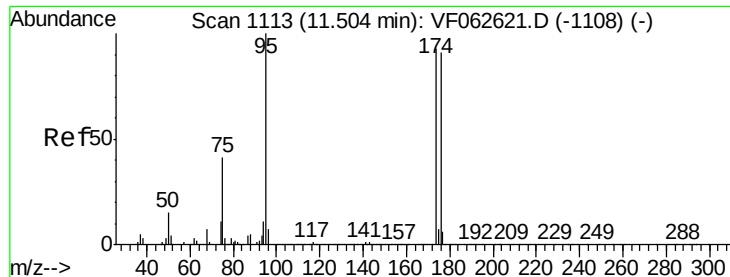
Tot Ion: 43 Resp: 1181  
Ion Ratio Lower Upper  
43 100  
58 56.8 28.1 84.4



#60  
Dibromochloromethane  
Concen: 1.625 ug/l  
RT: 8.77 min Scan# 836  
Delta R.T. -0.10 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 129 Resp: 449  
Ion Ratio Lower Upper  
129 100  
127 53.9 37.2 111.6

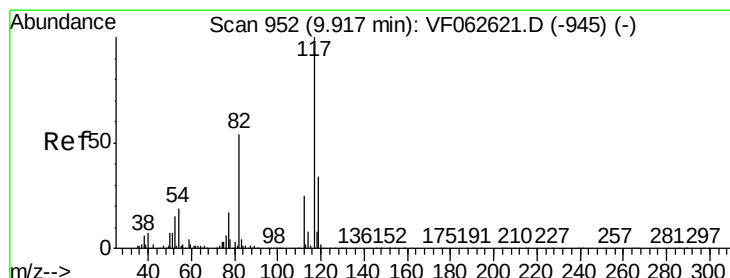
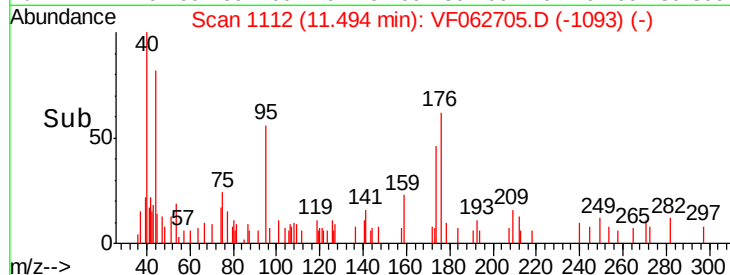
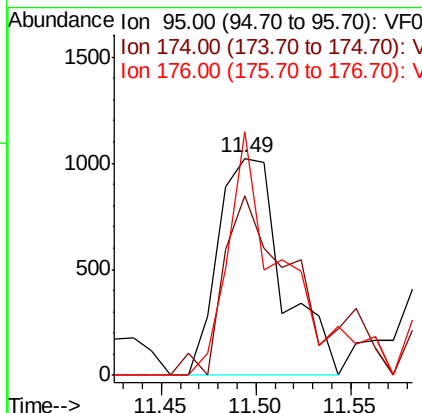
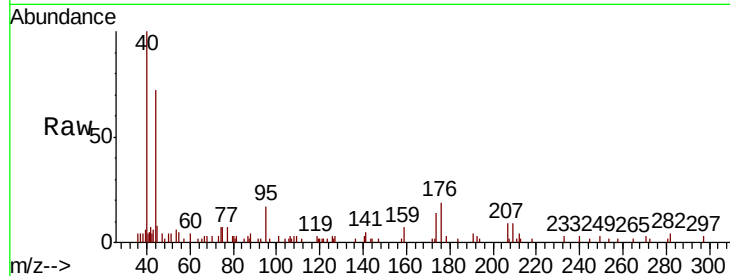




#62  
4-Bromofluorobenzene  
Concen: 7.151 ug/l  
RT: 11.49 min Scan# 1112  
Delta R.T. -0.01 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

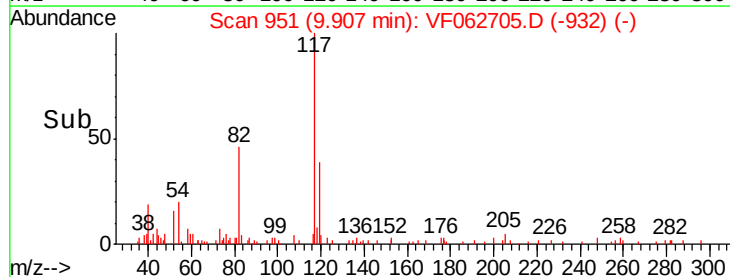
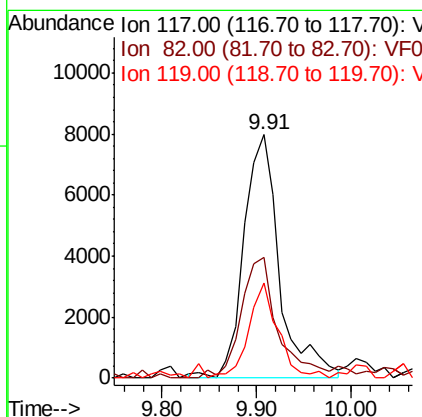
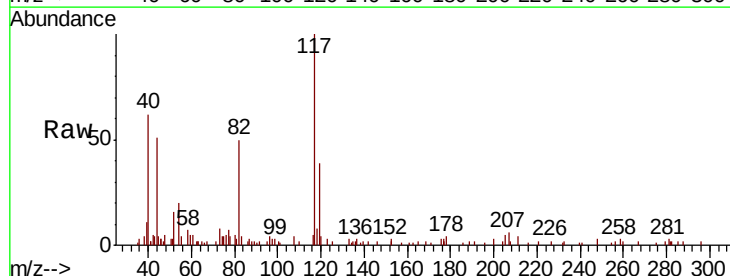
Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

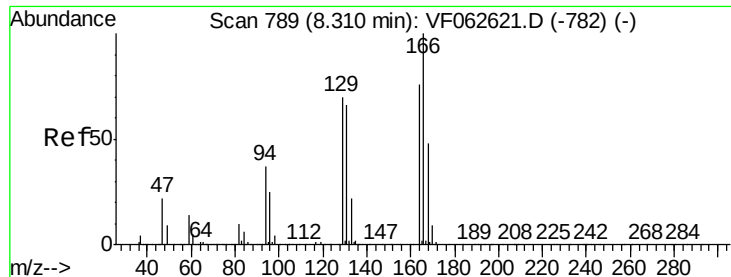
Tot Ion: 95 Resp: 2424  
Ion Ratio Lower Upper  
95 100  
174 82.6 0.0 185.6  
176 112.1 0.0 182.4



#63  
Chlorobenzene-d5  
Concen: 50.000 ug/l  
RT: 9.91 min Scan# 951  
Delta R.T. -0.01 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 117 Resp: 20923  
Ion Ratio Lower Upper  
117 100  
82 49.7 43.3 64.9  
119 39.3 27.4 41.0





#64

Tetrachloroethene

Concen: 3.457 ug/l

RT: 8.32 min Scan# 790

Delta R.T. 0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

RO-SOIL

Tot Ion:164 Resp: 573

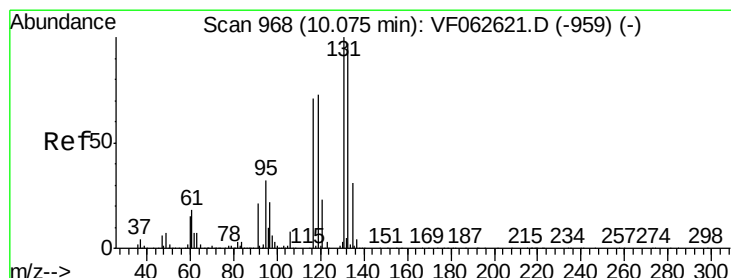
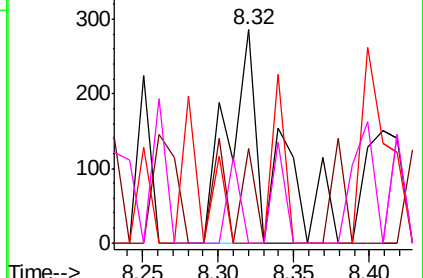
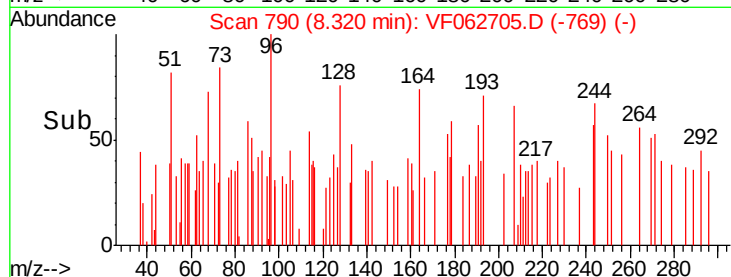
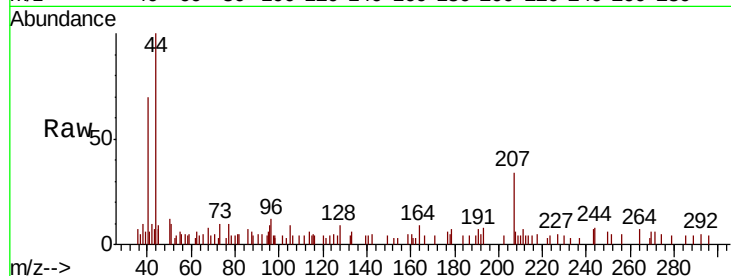
Ion Ratio Lower Upper

164 100

166 44.1 105.5 158.3#

129 0.0 73.8 110.6#

131 0.0 69.5 104.3#



#66

1,1,1,2-Tetrachloroethane

Concen: 1.152 ug/l

RT: 10.08 min Scan# 969

Delta R.T. 0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

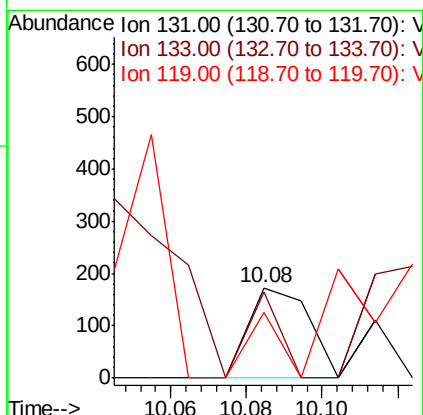
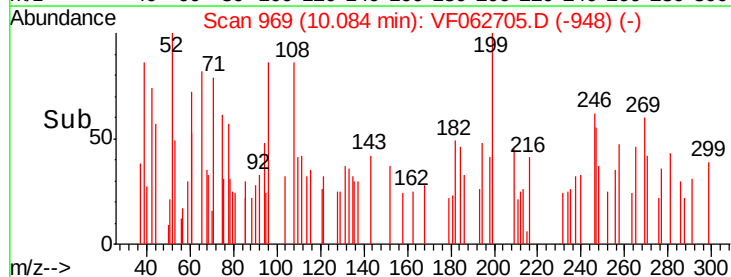
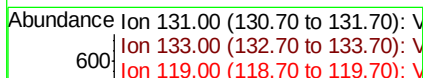
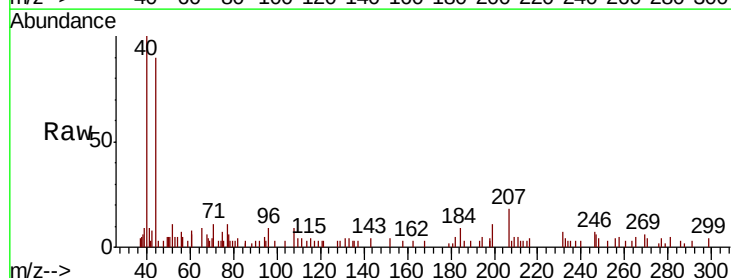
Tgt Ion:131 Resp: 190

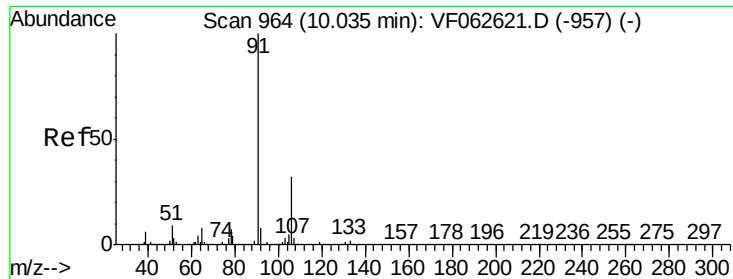
Ion Ratio Lower Upper

131 100

133 95.4 48.5 145.5

119 72.3 36.8 110.4

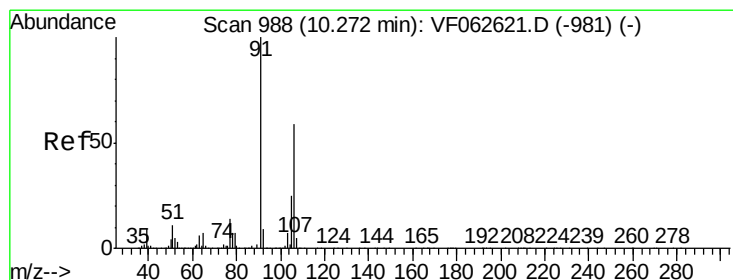
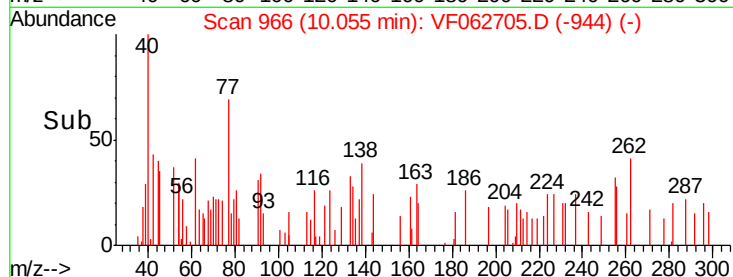
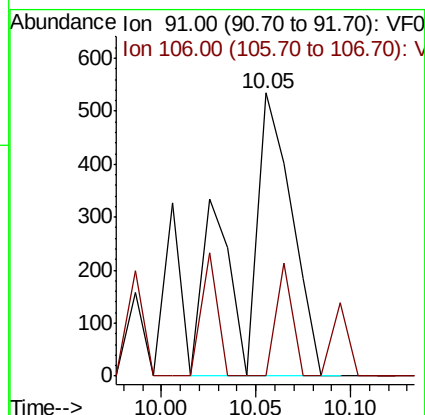
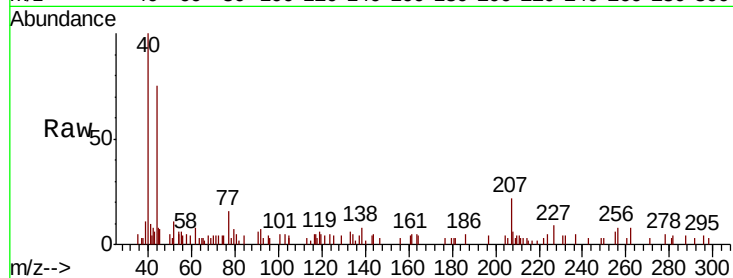




#67  
Ethyl Benzene  
Concen: 1.406 ug/l  
RT: 10.05 min Scan# 966  
Delta R.T. 0.02 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

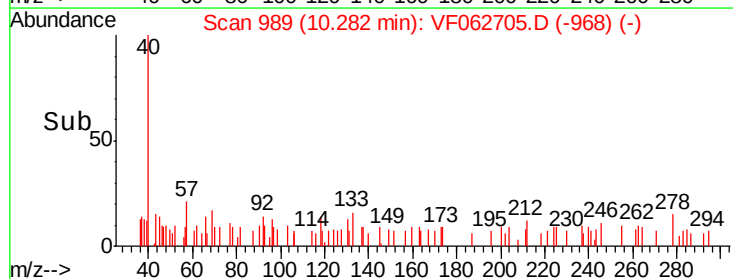
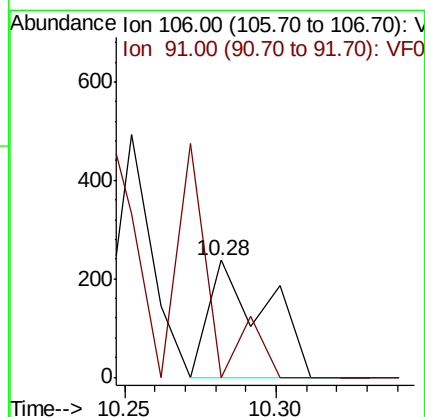
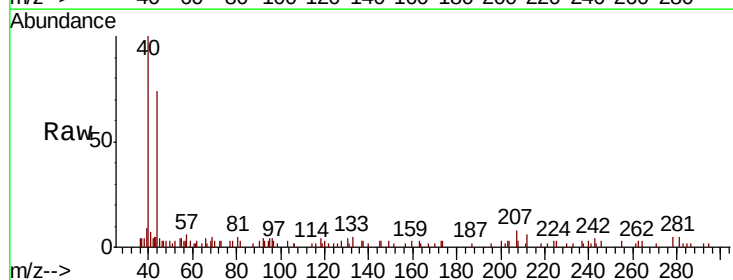
Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

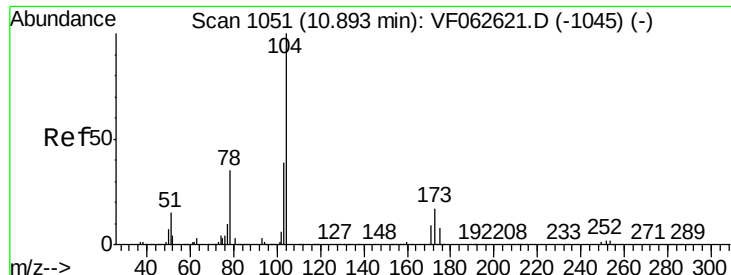
Tot Ion: 91 Resp: 1004  
Ion Ratio Lower Upper  
91 100  
106 0.0 25.8 38.8#



#68  
m/p-Xylenes  
Concen: 1.155 ug/l  
RT: 10.28 min Scan# 989  
Delta R.T. 0.01 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 106 Resp: 310  
Ion Ratio Lower Upper  
106 100  
91 0.0 136.9 205.3#





#71

Bromoform

Concen: 1.234 ug/l

RT: 10.87 min Scan# 1049

Delta R.T. -0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

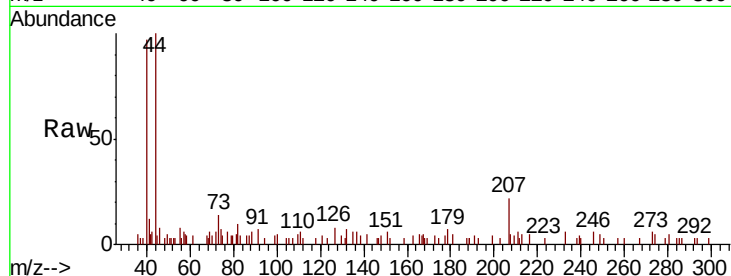
Tot Ion:173 Resp: 102

Ion Ratio Lower Upper

173 100

175 0.0 25.3 75.9#

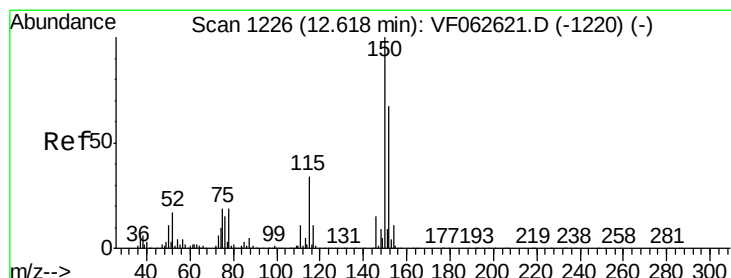
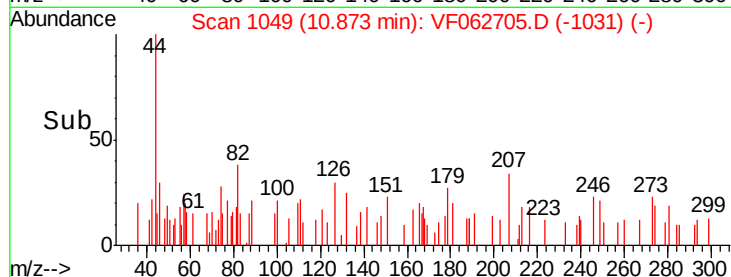
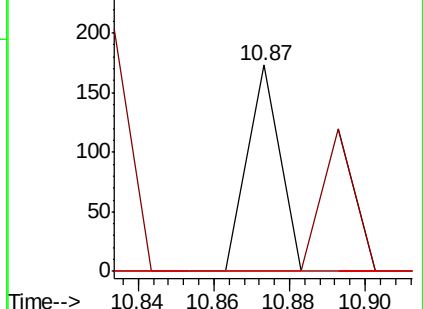
254 0.0 0.2 0.2#



Abundance Ion 173.00 (172.70 to 173.70): V

Ion 175.00 (174.70 to 175.70): V

Ion 254.00 (253.70 to 254.70): V



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.61 min Scan# 1225

Delta R.T. -0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

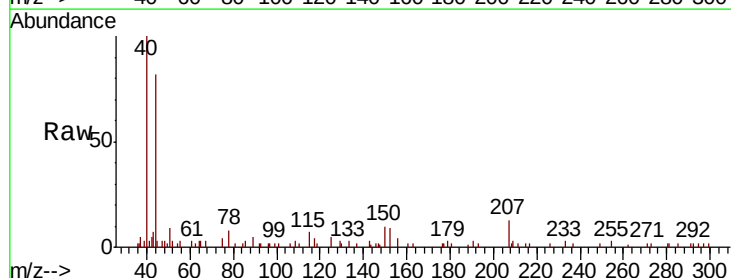
Tgt Ion:152 Resp: 1415

Ion Ratio Lower Upper

152 100

115 74.6 25.2 75.6

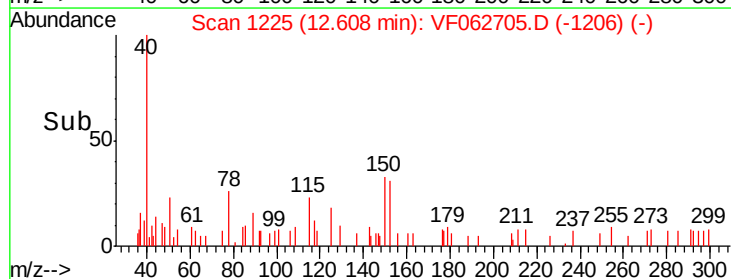
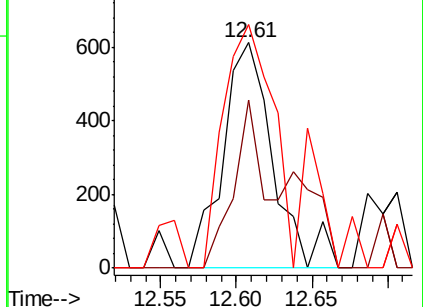
150 108.2 0.0 306.2

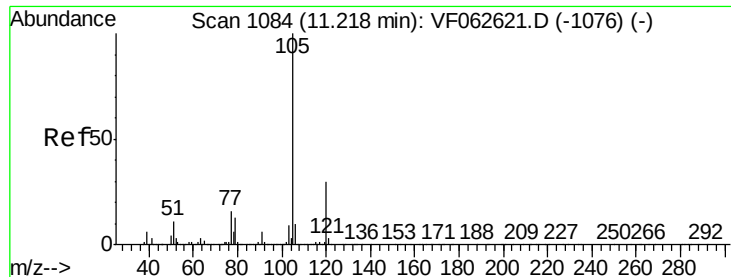


Abundance Ion 152.00 (151.70 to 152.70): V

Ion 115.00 (114.70 to 115.70): V

Ion 150.00 (149.70 to 150.70): V





#73

Isopropylbenzene

Concen: 5.305 ug/l

RT: 11.21 min Scan# 1083

Delta R.T. -0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

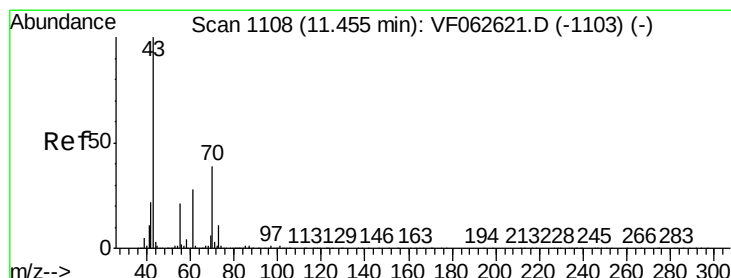
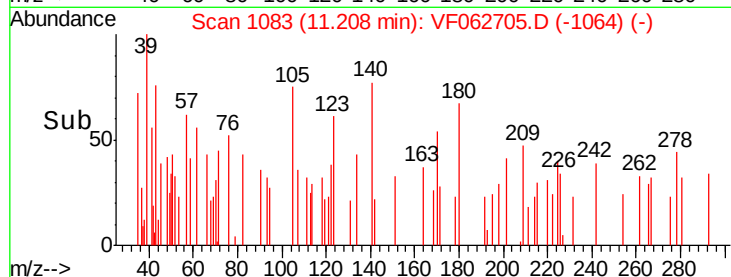
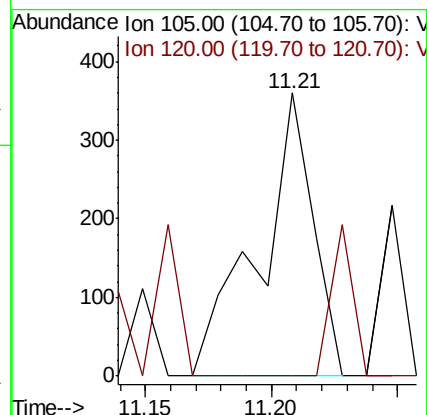
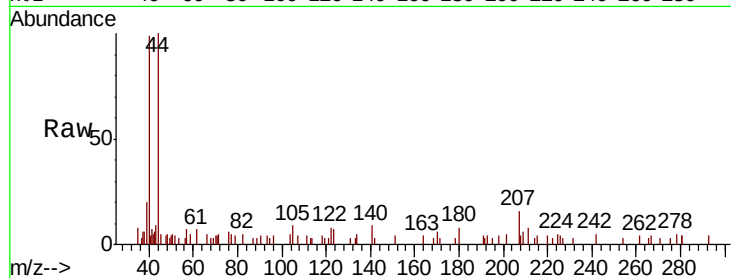
RO-SOIL

Tot Ion: 105 Resp: 538

Ion Ratio Lower Upper

105 100

120 0.0 14.8 44.4#



#74

N-ethyl acetate

Concen: 55.769 ug/l

RT: 11.43 min Scan# 1105

Delta R.T. -0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Tgt Ion: 43 Resp: 1423

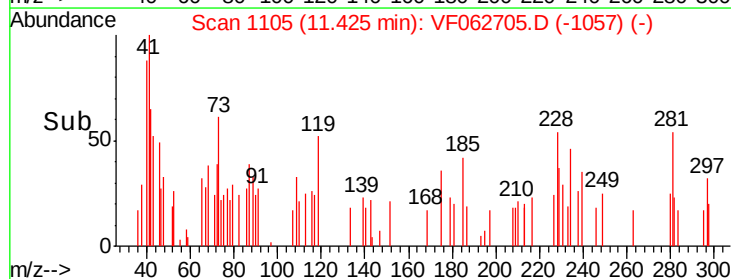
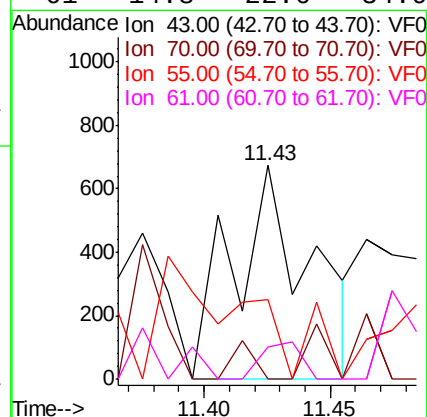
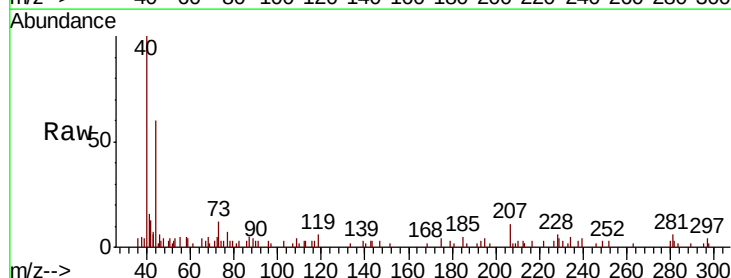
Ion Ratio Lower Upper

43 100

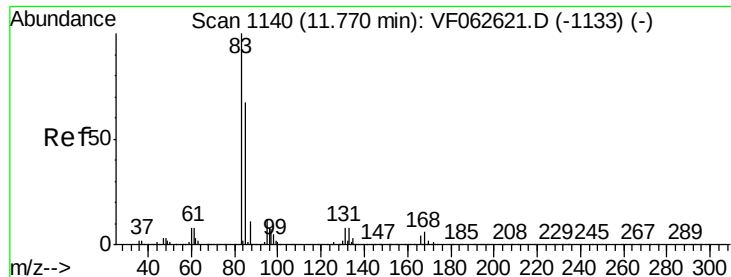
70 0.0 30.9 46.3#

55 36.9 17.0 25.4#

61 14.8 22.6 34.0#







#75

1,1,2,2-Tetrachloroethane

Concen: 4.728 ug/l

RT: 11.78 min Scan# 1141

Delta R.T. 0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

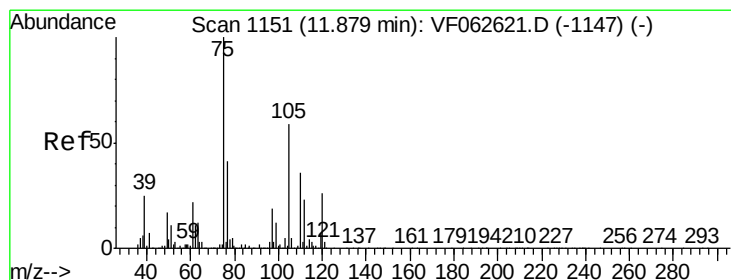
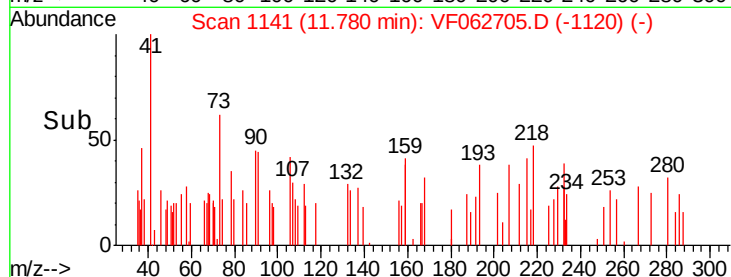
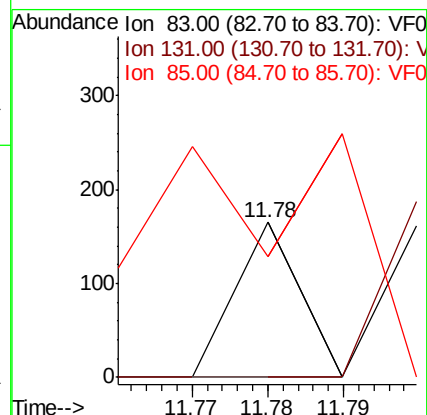
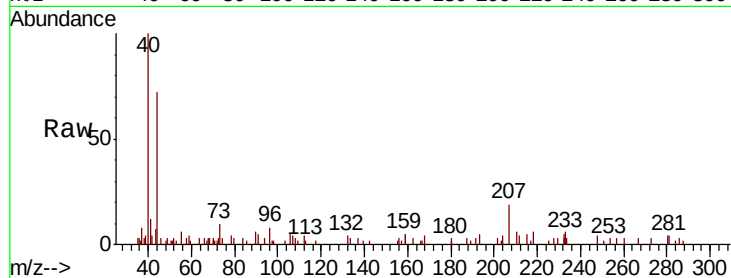
Tot Ion: 83 Resp: 98

Ion Ratio Lower Upper

83 100

131 0.0 4.0 12.0#

85 78.2 33.5 100.5



#76

1,2,3-Trichloropropane

Concen: 18.064 ug/l

RT: 11.73 min Scan# 1136

Delta R.T. -0.15 min

Lab File: VF062705.D

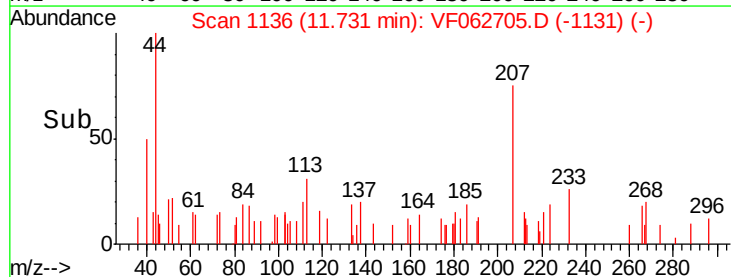
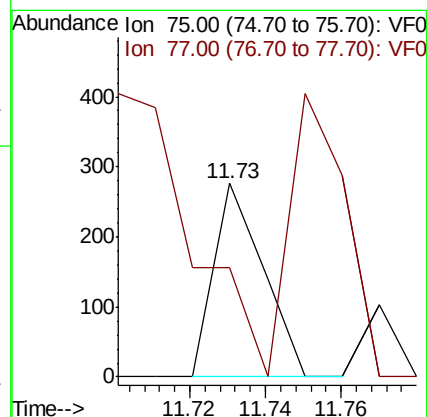
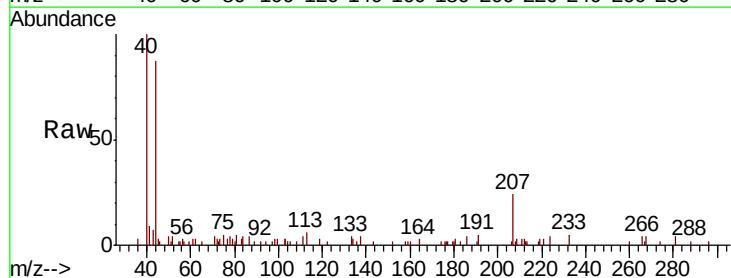
Acq: 22 May 2019 14:57

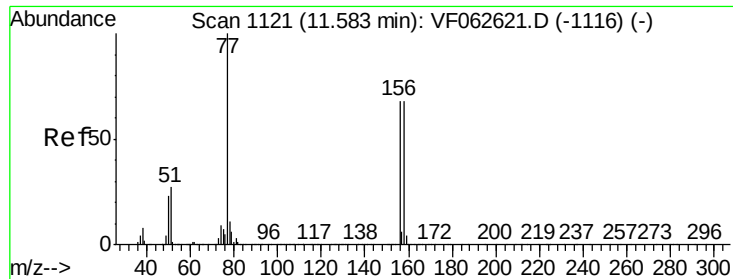
Tgt Ion: 75 Resp: 246

Ion Ratio Lower Upper

75 100

77 56.5 20.6 61.8

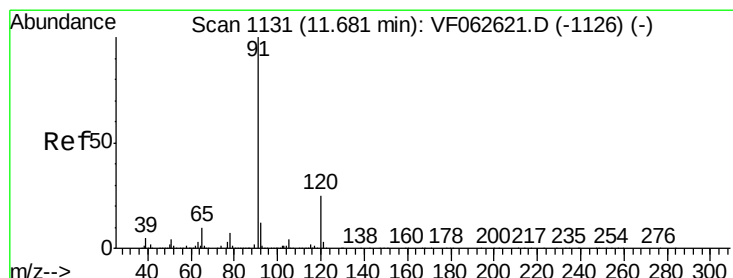
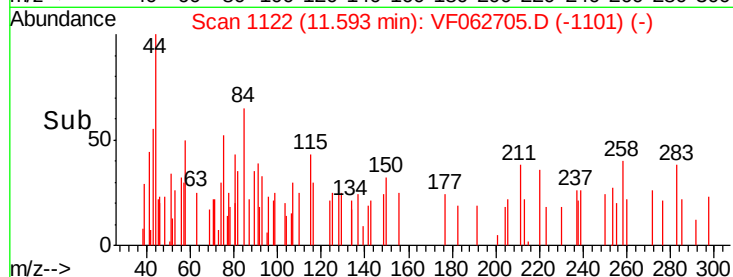
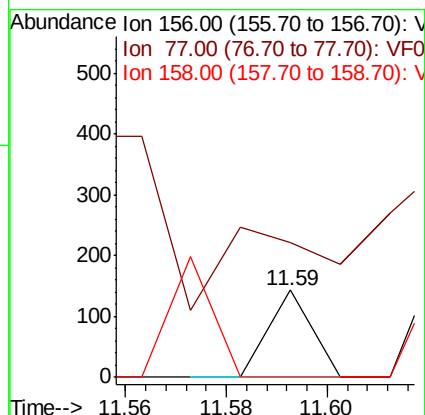
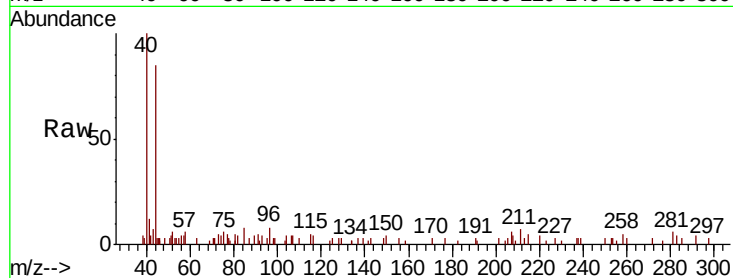




#77  
Bromobenzene  
Concen: 3.372 ug/l  
RT: 11.59 min Scan# 1122  
Delta R.T. 0.01 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

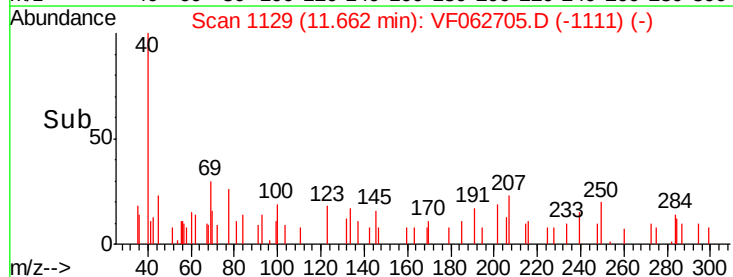
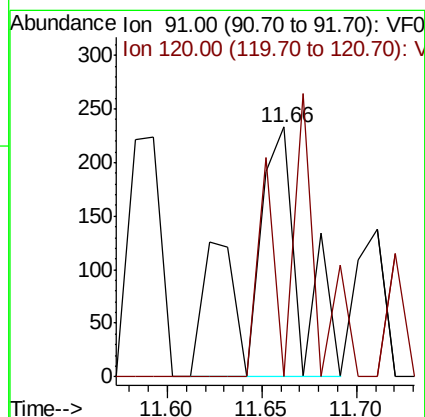
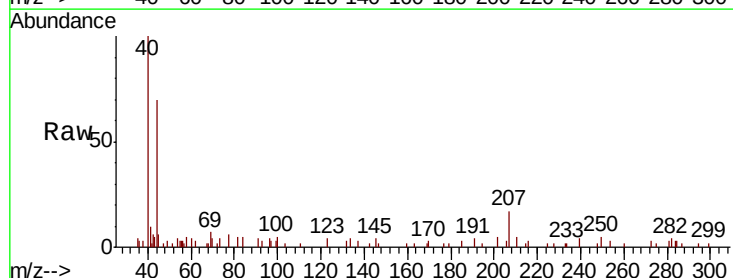
Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

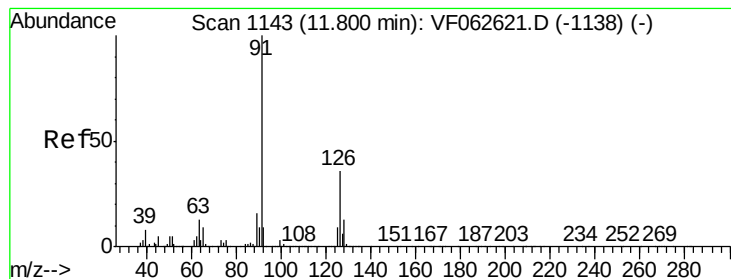
Tot Ion:156 Resp: 85  
Ion Ratio Lower Upper  
156 100  
77 154.5 73.6 220.8  
158 82.5 49.6 148.8



#78  
n-propylbenzene  
Concen: 3.966 ug/l  
RT: 11.66 min Scan# 1129  
Delta R.T. -0.02 min  
Lab File: VF062705.D  
Acq: 22 May 2019 14:57

Tgt Ion: 91 Resp: 476  
Ion Ratio Lower Upper  
91 100  
120 0.0 12.7 38.1#





#79

2-Chlorotoluene

Concen: 13.276 ug/l

RT: 11.83 min Scan# 1146

Delta R.T. 0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

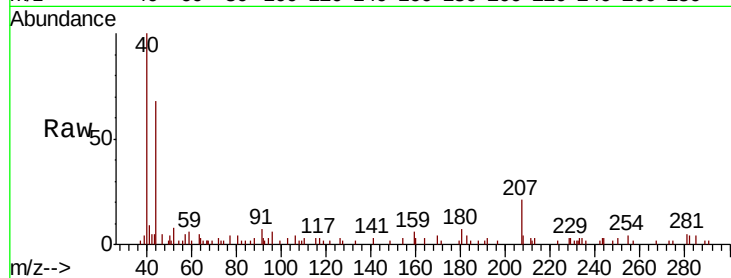
RO-SOIL

Tot Ion: 91 Resp: 898

Ion Ratio Lower Upper

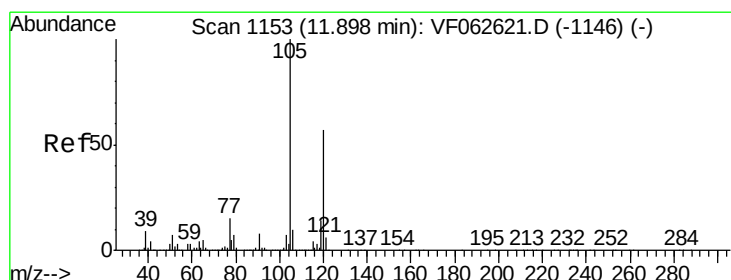
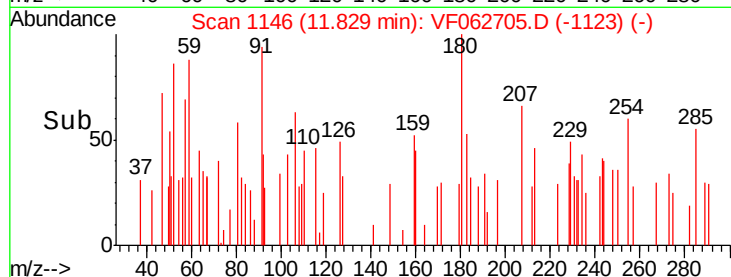
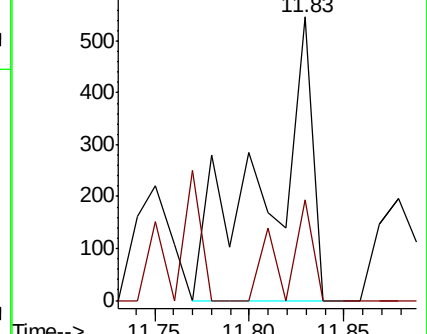
91 100

126 35.5 18.1 54.4



Abundance Ion 91.00 (90.70 to 91.70): VF0

Ion 126.00 (125.70 to 126.70): V



#80

1,3,5-Trimethylbenzene

Concen: 2.558 ug/l

RT: 12.01 min Scan# 1164

Delta R.T. 0.11 min

Lab File: VF062705.D

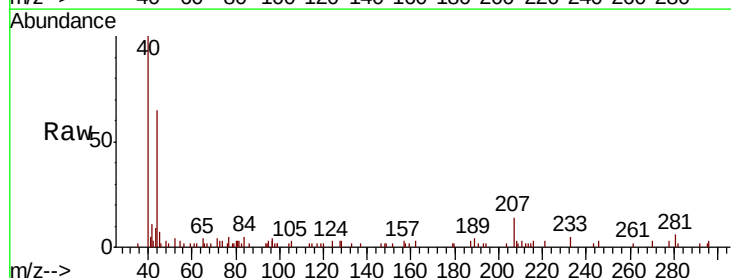
Acq: 22 May 2019 14:57

Tgt Ion: 105 Resp: 208

Ion Ratio Lower Upper

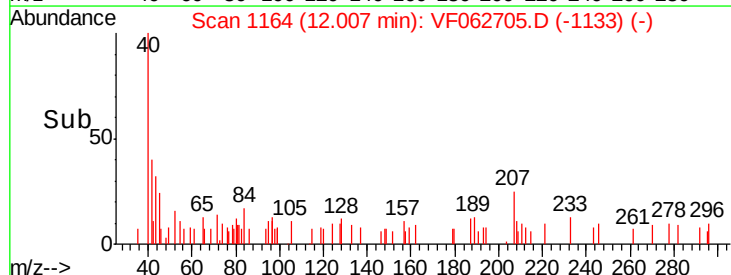
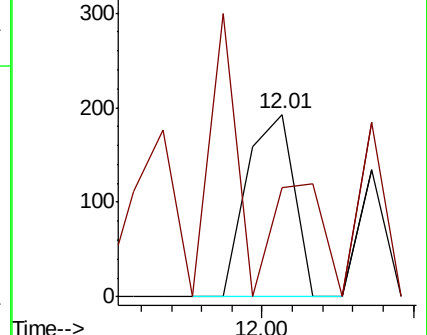
105 100

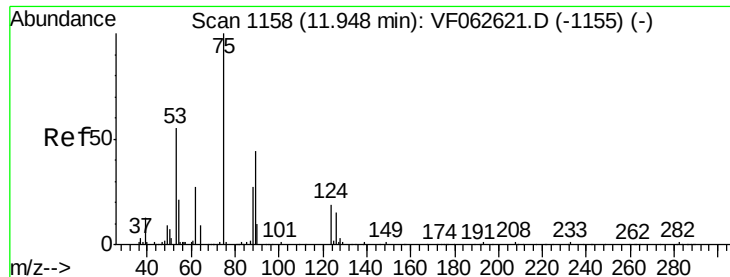
120 60.1 28.7 86.3



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V





#81

trans-1,4-Dichloro-2-butene

Concen: 79.626 ug/l

RT: 11.97 min Scan# 1160

Delta R.T. 0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

RO-SOIL

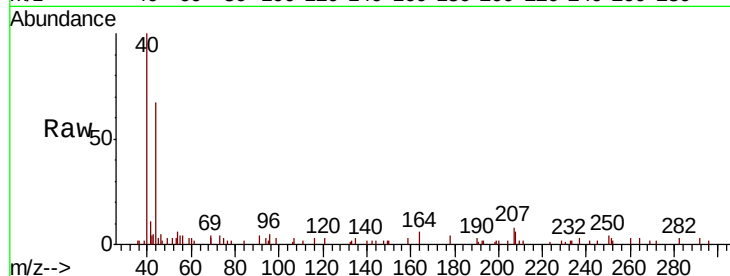
Tot Ion: 75 Resp: 482

Ion Ratio Lower Upper

75 100

53 299.5 46.9 70.3#

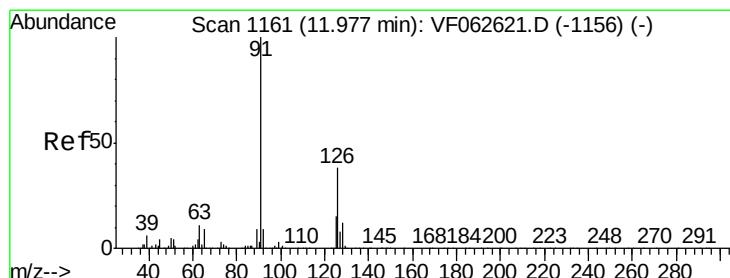
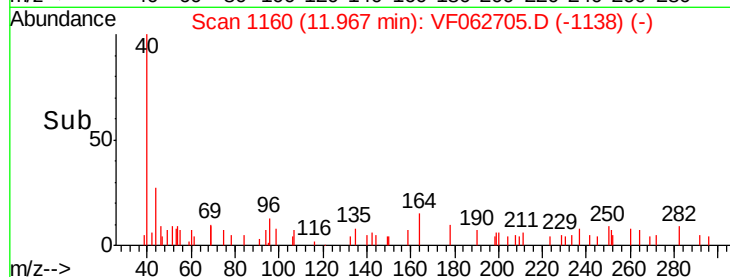
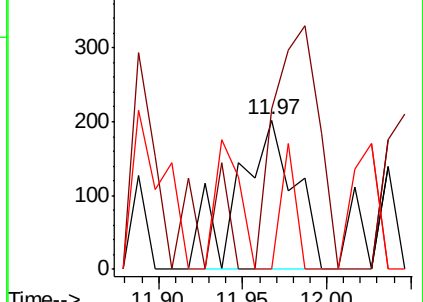
89 0.0 36.4 54.6#



Abundance Ion 75.00 (74.70 to 75.70): VF0

Ion 53.00 (52.70 to 53.70): VF0

Ion 89.00 (88.70 to 89.70): VF0



#82

4-Chlorotoluene

Concen: 6.072 ug/l

RT: 11.83 min Scan# 1146

Delta R.T. -0.15 min

Lab File: VF062705.D

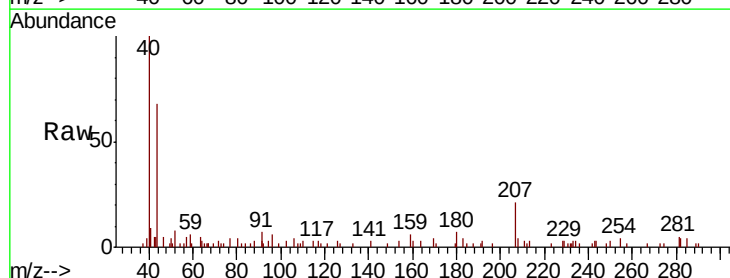
Acq: 22 May 2019 14:57

Tgt Ion: 91 Resp: 405

Ion Ratio Lower Upper

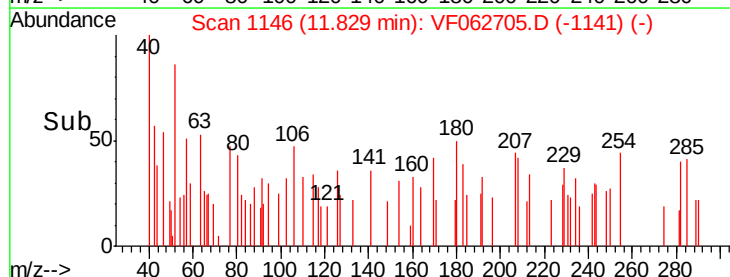
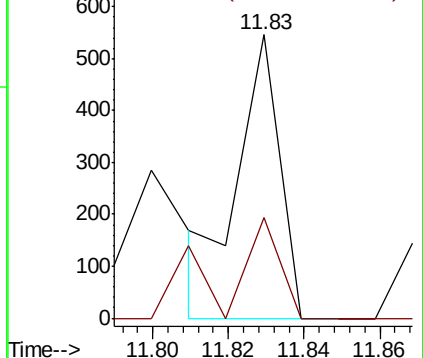
91 100

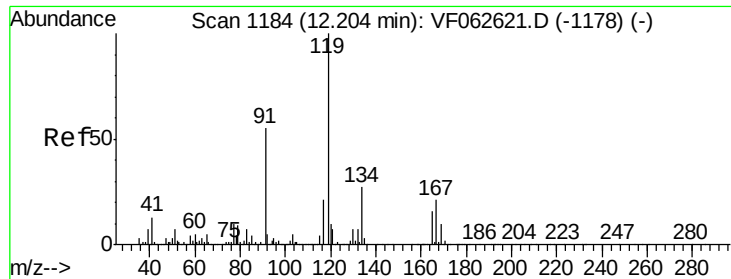
126 35.5 19.1 57.1



Abundance Ion 91.00 (90.70 to 91.70): VF0

Ion 126.00 (125.70 to 126.70): V





#83

tert-Butylbenzene

Concen: 9.939 ug/l

RT: 12.17 min Scan# 1181

Delta R.T. -0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampleId :

RO-SOIL

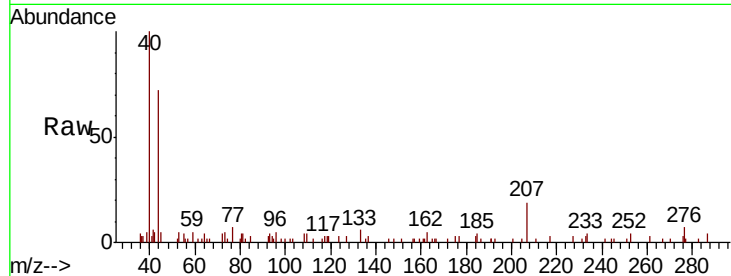
Tot Ion:119 Resp: 820

Ion Ratio Lower Upper

119 100

91 0.0 27.3 81.9#

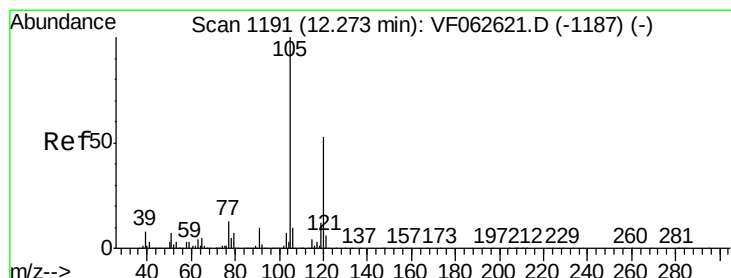
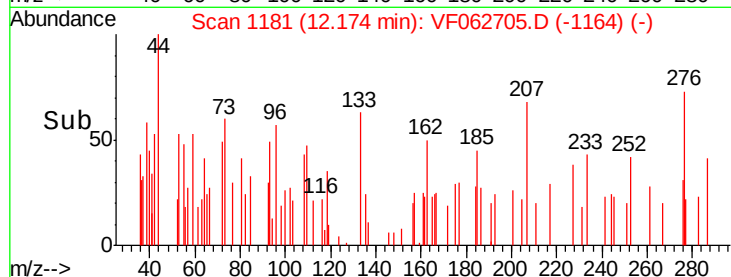
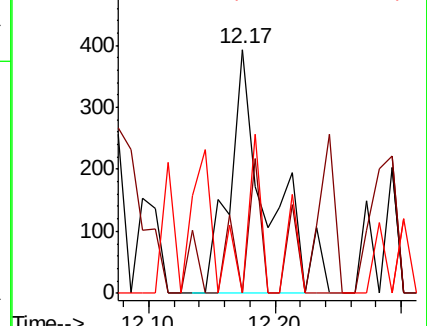
134 0.0 13.6 40.7#



Abundance Ion 119.00 (118.70 to 119.70): V

Ion 91.00 (90.70 to 91.70): VF0

Ion 134.00 (133.70 to 134.70): V



#84

1,2,4-Trimethylbenzene

Concen: 3.723 ug/l

RT: 12.24 min Scan# 1188

Delta R.T. -0.03 min

Lab File: VF062705.D

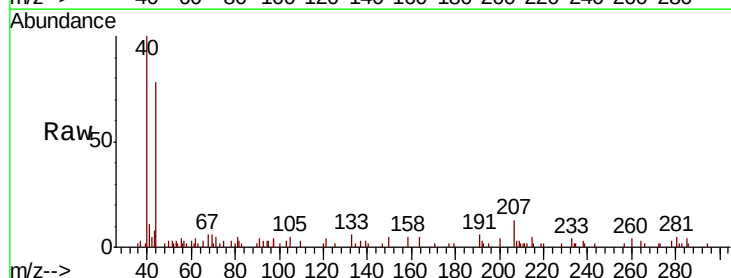
Acq: 22 May 2019 14:57

Tgt Ion:105 Resp: 293

Ion Ratio Lower Upper

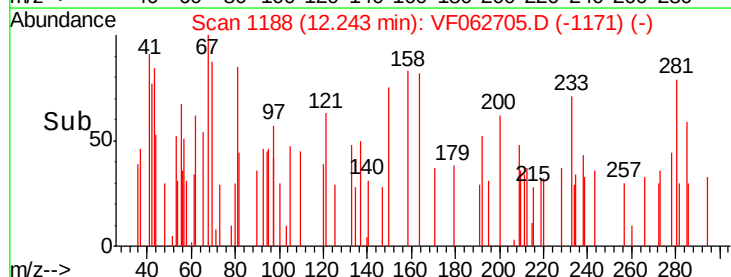
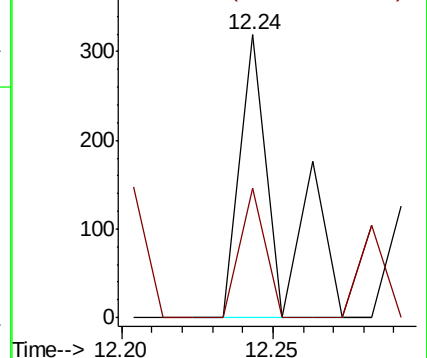
105 100

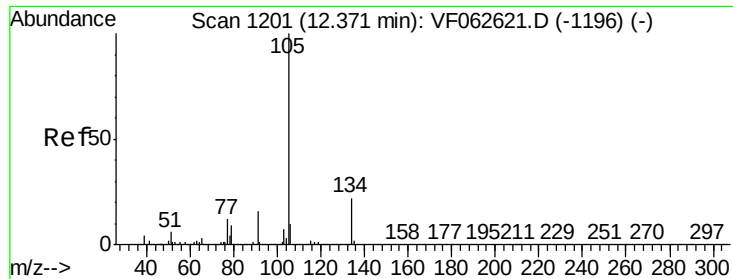
120 45.8 26.7 80.1



Abundance Ion 105.00 (104.70 to 105.70): V

Ion 120.00 (119.70 to 120.70): V

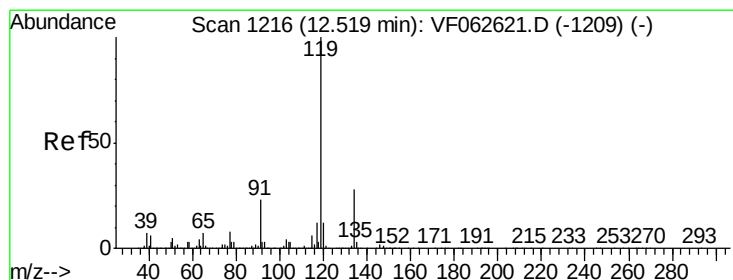
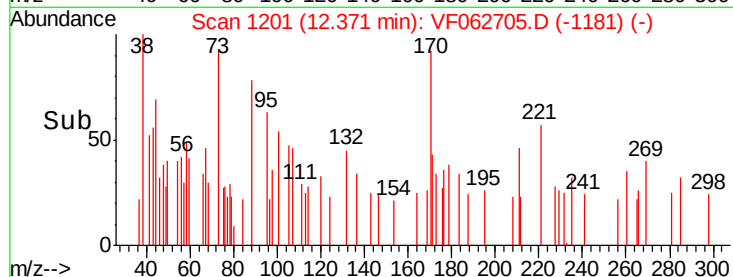
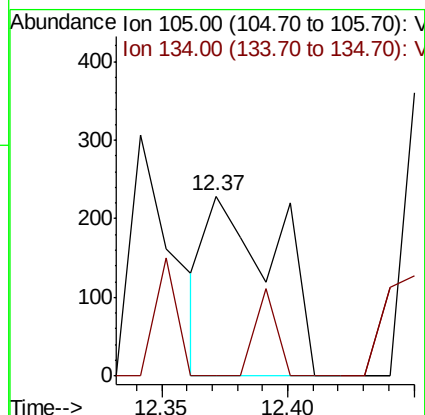
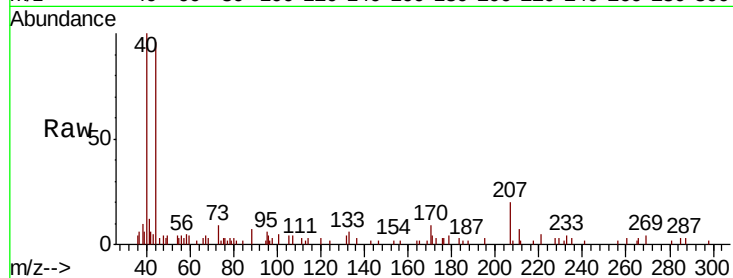




#85  
 sec-Butylbenzene  
 Concen: 3.983 ug/l  
 RT: 12.37 min Scan# 1201  
 Delta R.T. -0.00 min  
 Lab File: VF062705.D  
 Acq: 22 May 2019 14:57

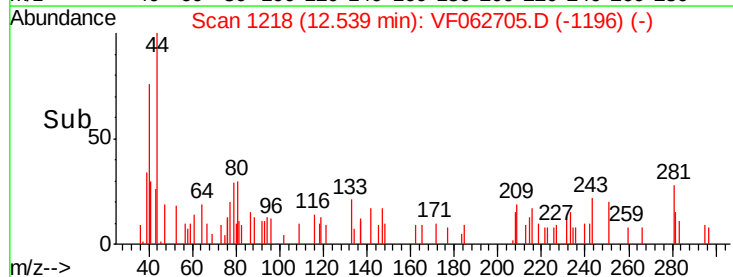
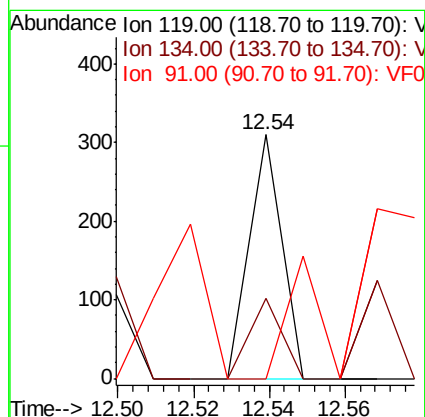
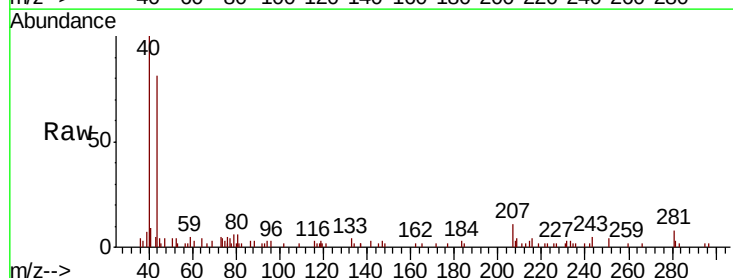
Instrument :  
 MSVOA\_F  
 ClientSampled :  
 RO-SOIL

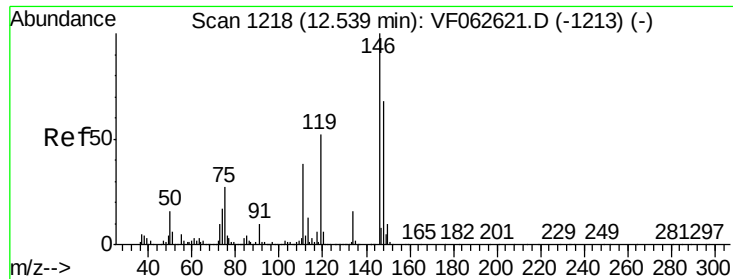
Tot Ion:105 Resp: 441  
 Ion Ratio Lower Upper  
 105 100  
 134 0.0 10.8 32.4#



#86  
 p-Isopropyltoluene  
 Concen: 1.961 ug/l  
 RT: 12.54 min Scan# 1218  
 Delta R.T. 0.02 min  
 Lab File: VF062705.D  
 Acq: 22 May 2019 14:57

Tgt Ion:119 Resp: 183  
 Ion Ratio Lower Upper  
 119 100  
 134 32.6 14.1 42.3  
 91 0.0 11.4 34.2#





#87

1,3-Dichlorobenzene

Concen: 2.149 ug/l

RT: 12.51 min Scan# 1215

Delta R.T. -0.03 min

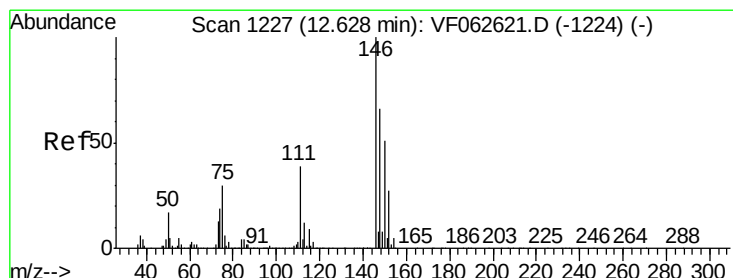
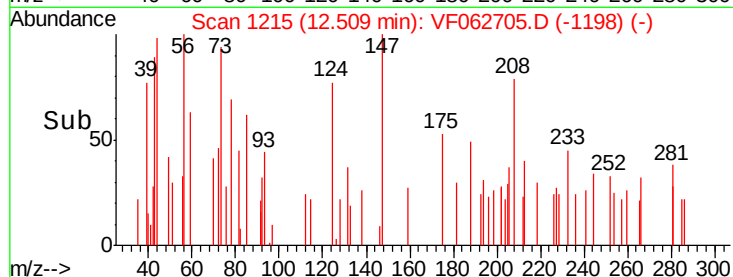
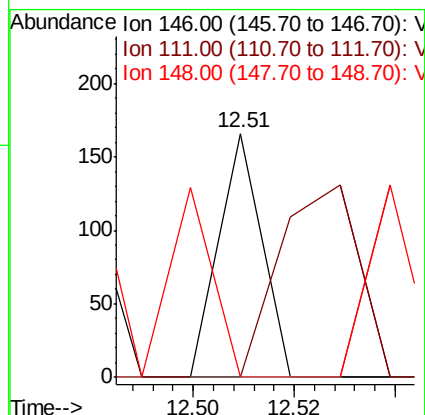
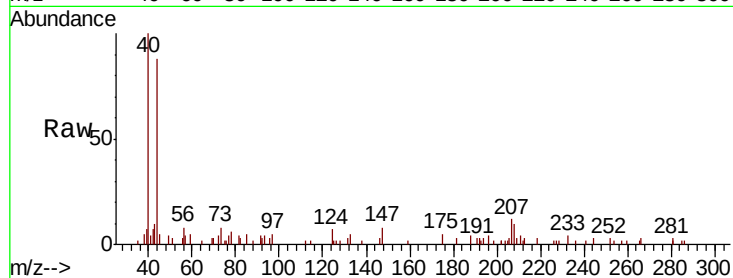
Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :  
MSVOA\_F  
ClientSampled :  
RO-SOIL

Tot Ion:146 Resp: 98

| Ion | Ratio | Lower | Upper  |
|-----|-------|-------|--------|
| 146 | 100   |       |        |
| 111 | 0.0   | 18.9  | 56.9#  |
| 148 | 0.0   | 34.0  | 101.8# |



#88

1,4-Dichlorobenzene

Concen: 4.065 ug/l

RT: 12.65 min Scan# 1229

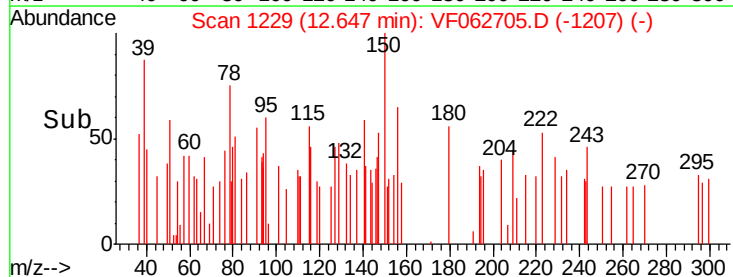
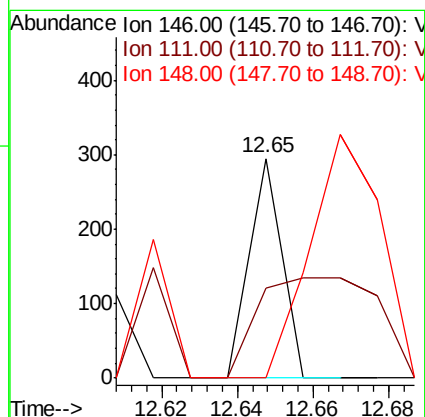
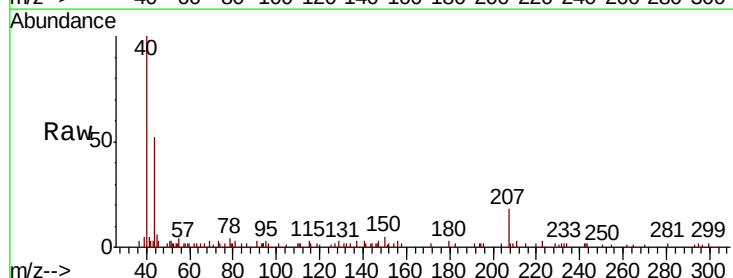
Delta R.T. 0.02 min

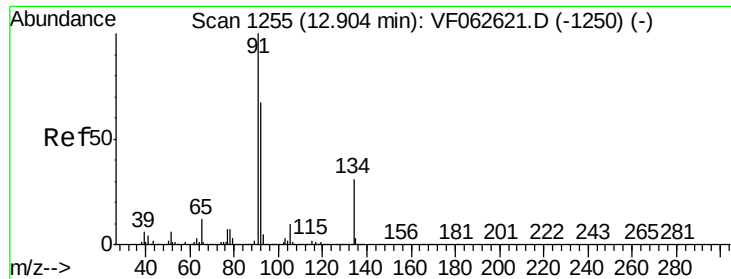
Lab File: VF062705.D

Acq: 22 May 2019 14:57

Tgt Ion:146 Resp: 174

| Ion | Ratio | Lower | Upper |
|-----|-------|-------|-------|
| 146 | 100   |       |       |
| 111 | 41.0  | 19.4  | 58.2  |
| 148 | 0.0   | 33.2  | 99.6# |





#89

n-Butylbenzene

Concen: 3.652 ug/l

RT: 12.92 min Scan# 1257

Delta R.T. 0.02 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

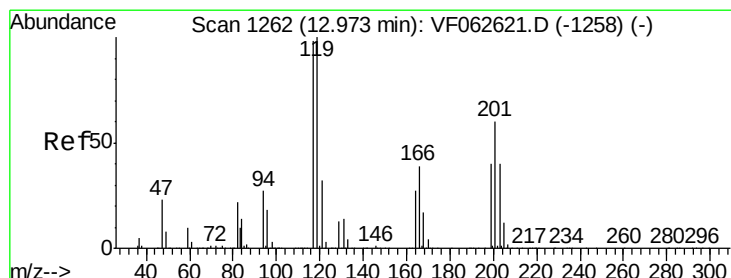
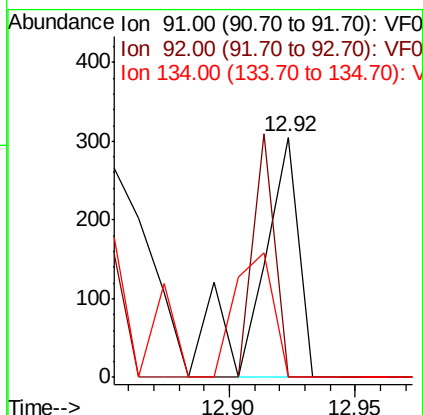
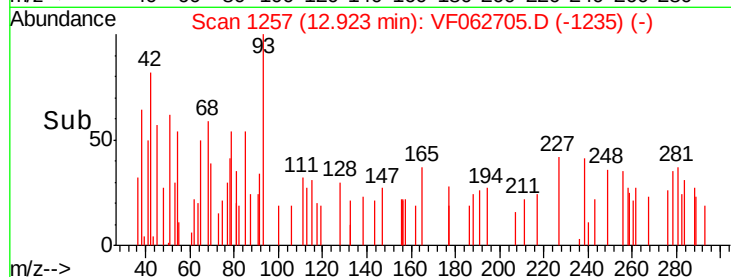
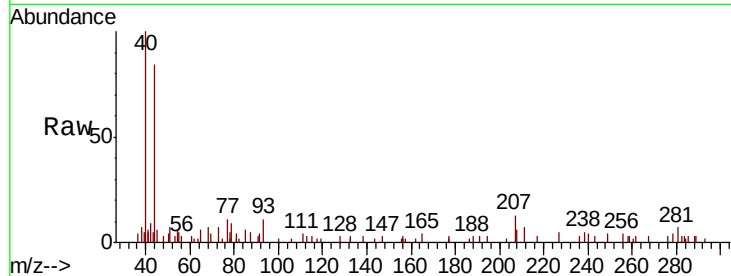
Tot Ion: 91 Resp: 336

Ion Ratio Lower Upper

91 100

92 0.0 33.3 99.8#

134 0.0 15.4 46.4#



#90

Hexachloroethane

Concen: 6.835 ug/l

RT: 12.99 min Scan# 1264

Delta R.T. 0.02 min

Lab File: VF062705.D

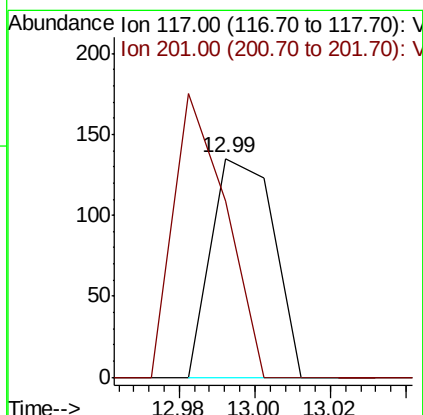
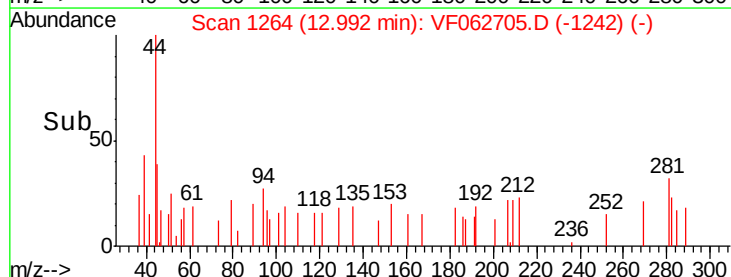
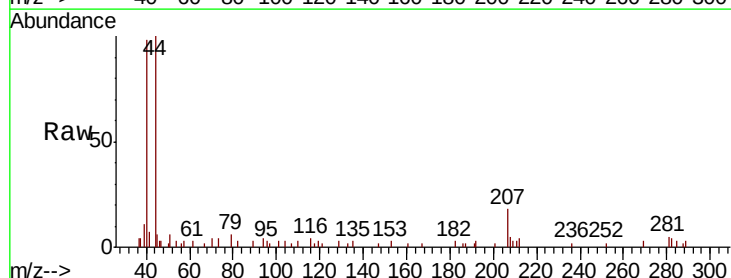
Acq: 22 May 2019 14:57

Tgt Ion: 117 Resp: 153

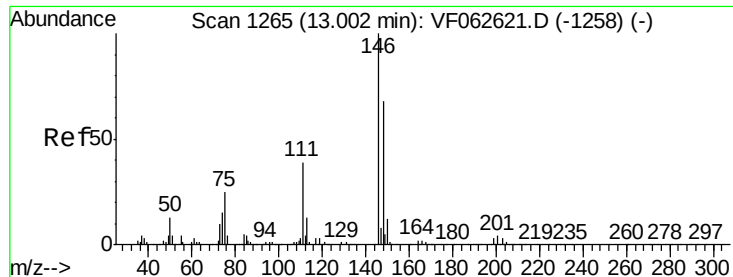
Ion Ratio Lower Upper

117 100

201 80.7 30.7 92.1







#91

1,2-Dichlorobenzene

Concen: 1.599 ug/l

RT: 12.95 min Scan# 1260

Delta R.T. -0.05 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

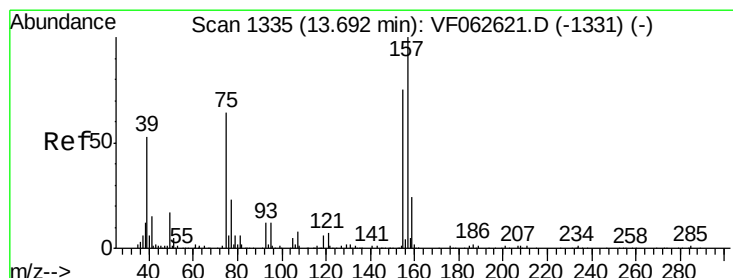
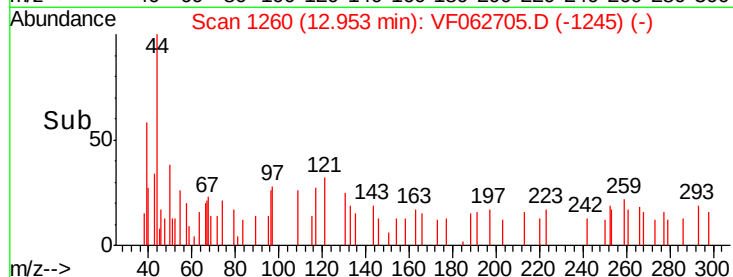
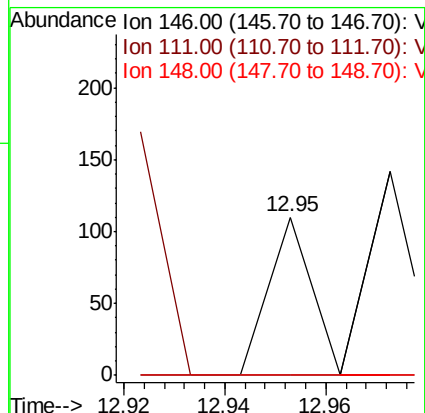
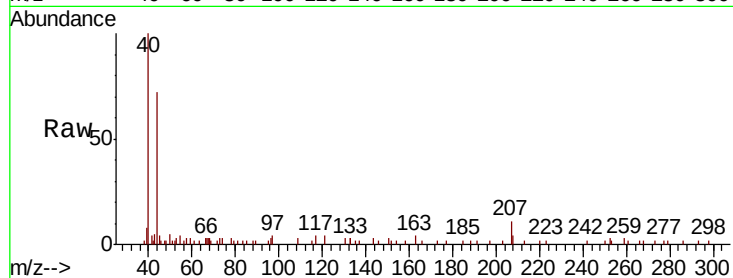
Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 146   | Resp: | 65     |
| Ion      | Ratio | Lower | Upper  |
| 146      | 100   |       |        |
| 111      | 0.0   | 19.8  | 59.3#  |
| 148      | 0.0   | 34.1  | 102.2# |



#92

1,2-Dibromo-3-Chloropropane

Concen: 63.903 ug/l

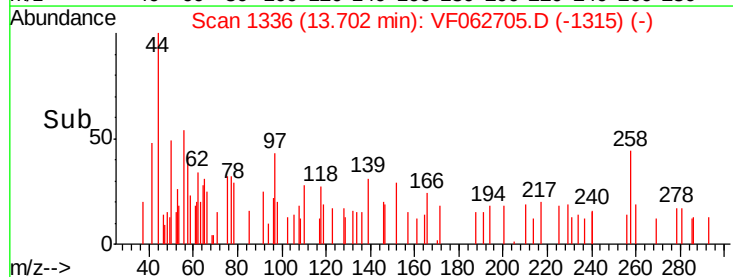
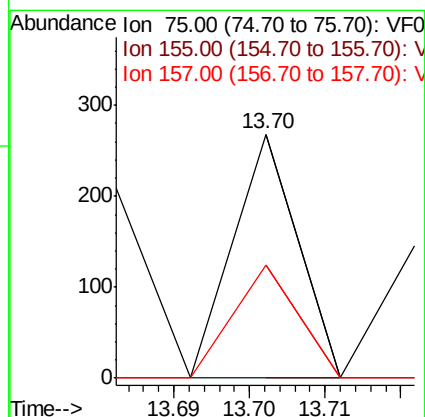
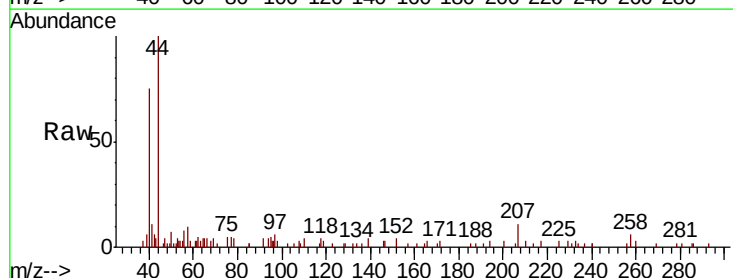
RT: 13.70 min Scan# 1336

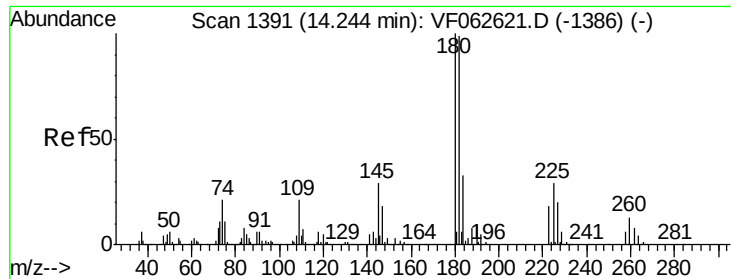
Delta R.T. 0.01 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 75    | Resp: | 158    |
| Ion      | Ratio | Lower | Upper  |
| 75       | 100   |       |        |
| 155      | 0.0   | 58.1  | 174.3# |
| 157      | 46.6  | 77.8  | 233.4# |

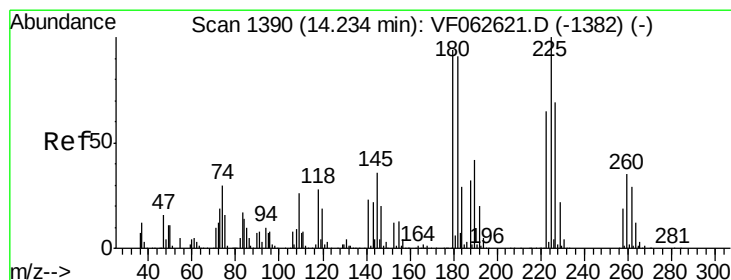
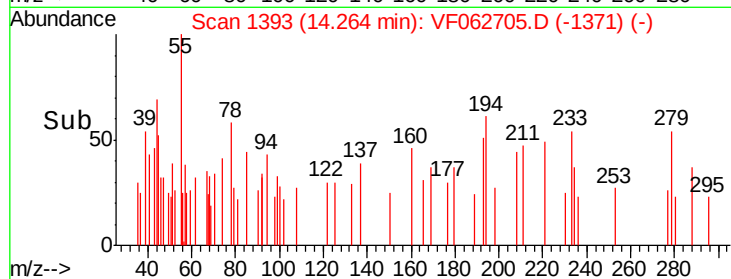
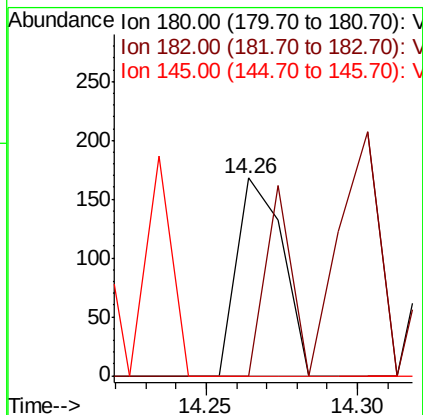
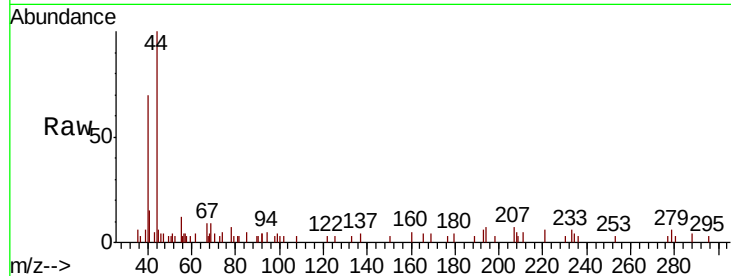




#93  
 1,2,4-Trichlorobenzene  
 Concen: 6.082 ug/l  
 RT: 14.26 min Scan# 1393  
 Delta R.T. 0.02 min  
 Lab File: VF062705.D  
 Acq: 22 May 2019 14:57

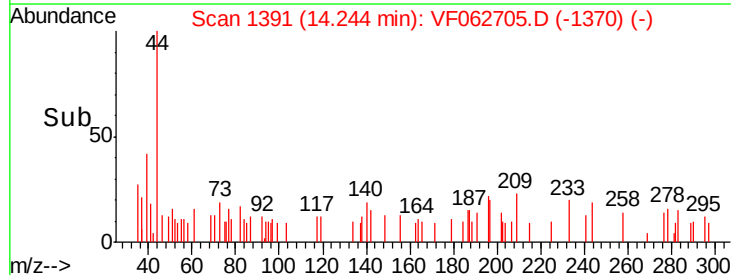
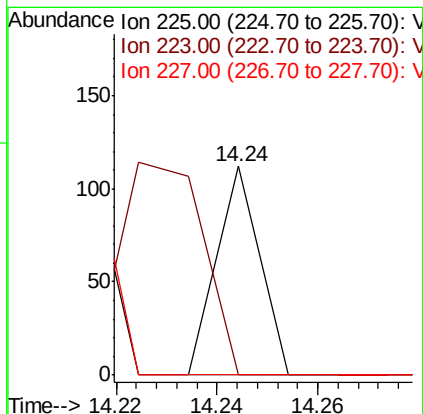
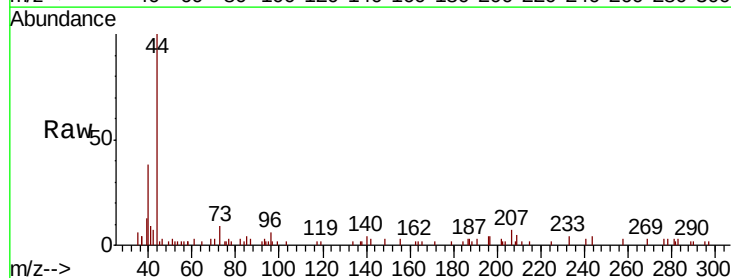
Instrument :  
 MSVOA\_F  
 ClientSampleID :  
 RO-SOIL

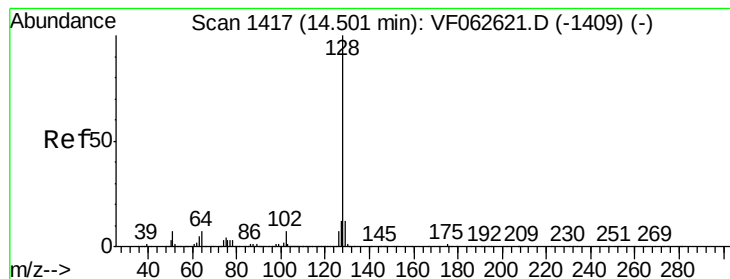
| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 180     | 100   |       |        |
| 182     | 0.0   | 49.7  | 149.1# |
| 145     | 0.0   | 14.6  | 44.0#  |



#94  
 Hexachlorobutadiene  
 Concen: 3.250 ug/l  
 RT: 14.24 min Scan# 1391  
 Delta R.T. 0.01 min  
 Lab File: VF062705.D  
 Acq: 22 May 2019 14:57

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 225     | 100   |       |        |
| 223     | 0.0   | 32.5  | 97.4#  |
| 227     | 0.0   | 34.5  | 103.5# |





#95

Naphthalene

Concen: 1.192 ug/l

RT: 14.47 min Scan# 1414

Delta R.T. -0.03 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Instrument :

MSVOA\_F

ClientSampled :

RO-SOIL

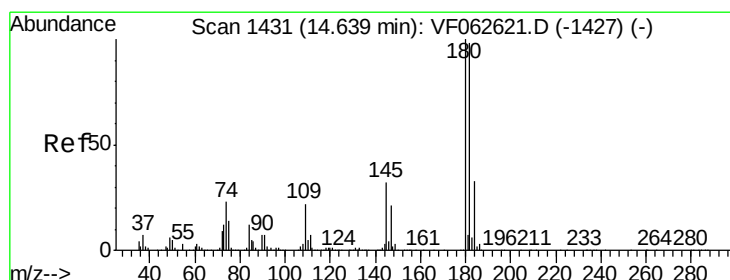
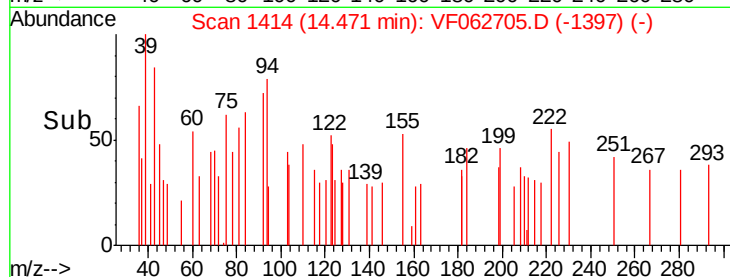
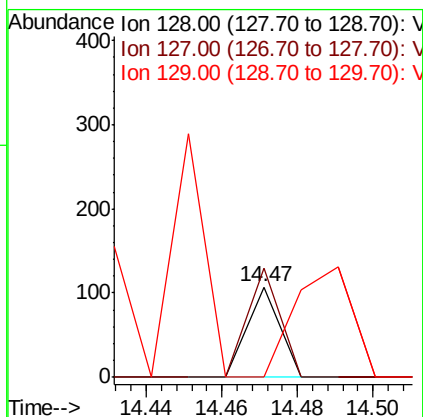
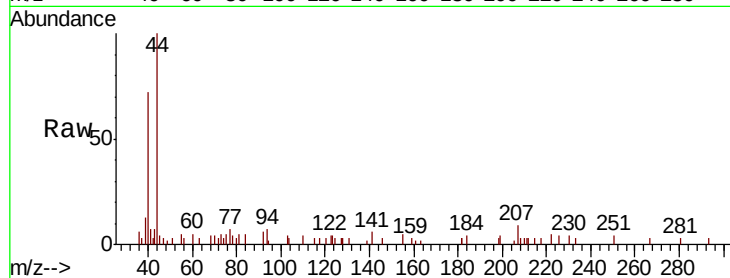
Tot Ion:128 Resp: 63

Ion Ratio Lower Upper

128 100

127 121.5 9.7 14.5#

129 0.0 9.3 13.9#



#96

1,2,3-Trichlorobenzene

Concen: 2.177 ug/l

RT: 14.59 min Scan# 1426

Delta R.T. -0.05 min

Lab File: VF062705.D

Acq: 22 May 2019 14:57

Tgt Ion:180 Resp: 60

Ion Ratio Lower Upper

180 100

182 123.8 48.9 146.7

145 0.0 16.1 48.2#

