

Data File : VL033766.D  
Acq On : 23 May 2019 5:07  
Operator : SY/AP  
Sample : K2929-02DL 10X  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
BPS1-ODA-3001-04DL

Quant Time: May 23 06:54:35 2019  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL051719AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri May 17 08:15:41 2019  
QLast Update : Fri May 17 08:15:41 2019  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.75  | 49   | 906660   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.28  | 114  | 2079111  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.23 | 117  | 2120577  | 10.00 | ppbv  | -0.01    |

System Monitoring Compounds

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.56  | 95    | 1688048  | 9.82     | ppbv | -0.01  |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 98.20% |

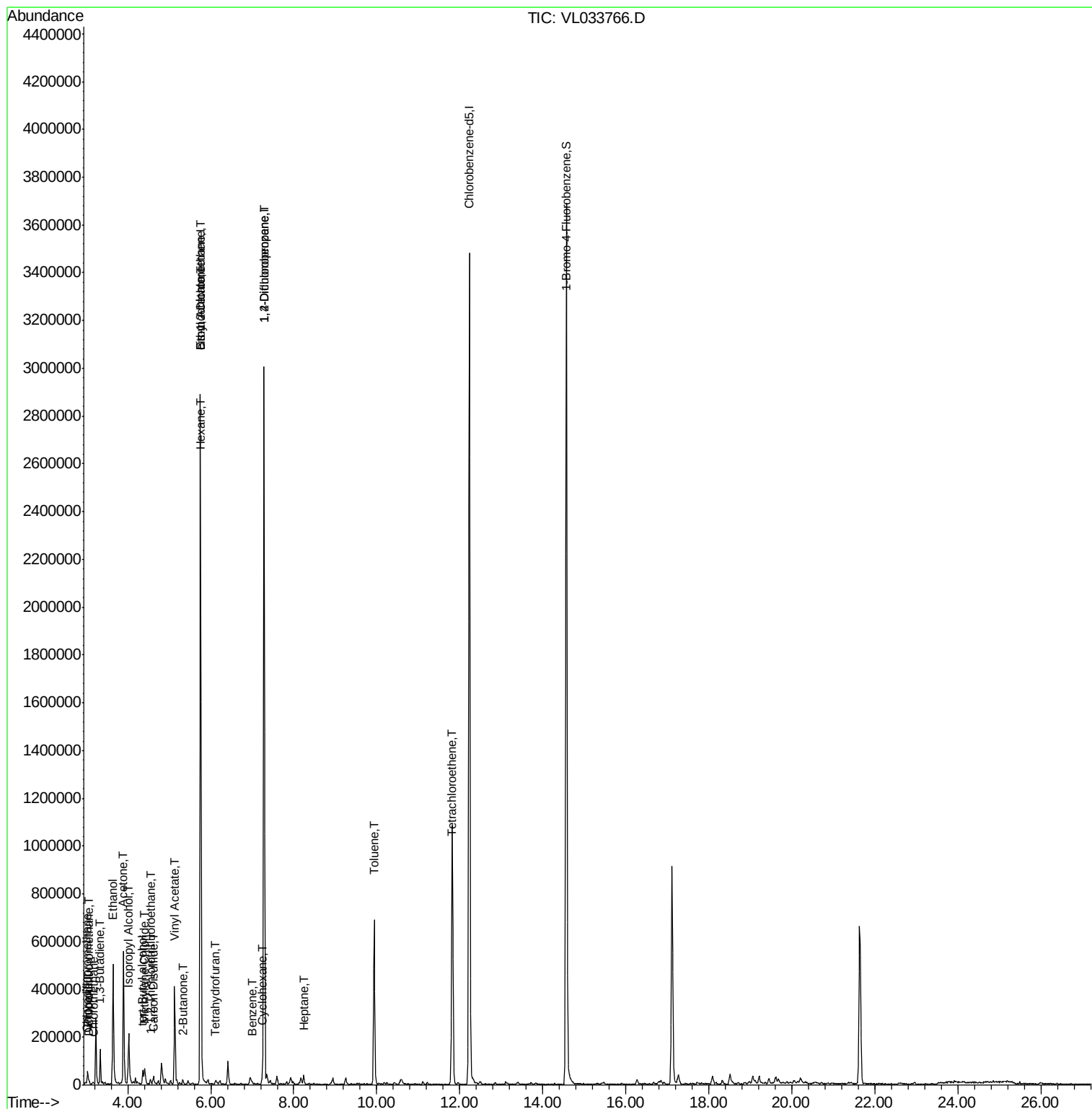
| Target Compounds               | R.T.  | QIon | Response | Conc   | Units  | Qvalue |
|--------------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.07  | 85   | 8205     | 0.043  | ppbv   | 89     |
| 3) Chlorodifluoromethane       | 3.01  | 51   | 8703     | 0.084  | ppbv # | 90     |
| 4) Chloromethane               | 3.17  | 50   | 6171     | 0.104  | ppbv   | 97     |
| 9) Propene                     | 3.03  | 41   | 16390    | 0.371  | ppbv   | 93     |
| 10) Heptane                    | 8.24  | 43   | 11133    | 0.089  | ppbv   | 98     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.55  | 101  | 5613     | 0.044  | ppbv   | 97     |
| 13) Ethanol                    | 3.64  | 45   | 497967   | 34.878 | ppbv   | 100    |
| 15) Acetone                    | 3.90  | 43   | 513610   | 4.083  | ppbv   | 96     |
| 16) 1,3-Butadiene              | 3.34  | 39   | 41024    | 0.819  | ppbv # | 12     |
| 17) tert-Butyl alcohol         | 4.36  | 59   | 27537    | 0.271  | ppbv # | 73     |
| 19) Isopropyl Alcohol          | 4.02  | 45   | 198198   | 2.444  | ppbv # | 93     |
| 20) Methylene Chloride         | 4.40  | 84   | 17992    | 0.371  | ppbv   | 92     |
| 23) Vinyl Acetate              | 5.14  | 43   | 26638    | 0.161  | ppbv # | 1      |
| 25) Ethyl Acetate              | 5.75  | 43   | 875192   | 3.960  | ppbv # | 91     |
| 26) Hexane                     | 5.77  | 57   | 16188    | 0.170  | ppbv # | 1      |
| 27) Carbon Disulfide           | 4.62  | 76   | 14969    | 0.115  | ppbv # | 9      |
| 30) Cyclohexane                | 7.24  | 84   | 3623     | 0.045  | ppbv # | 1      |
| 31) cis-1,2-Dichloroethene     | 5.76  | 61   | 108039   | 1.147  | ppbv # | 25     |
| 34) 2-Butanone                 | 5.33  | 43   | 13735    | 0.107  | ppbv # | 75     |
| 36) Benzene                    | 7.00  | 78   | 2260     | 0.012  | ppbv # | 90     |
| 39) 1,2-Dichloropropane        | 7.28  | 63   | 539495   | 7.651  | ppbv # | 23     |
| 41) Tetrahydrofuran            | 6.13  | 42   | 893      | 0.012  | ppbv # | 61     |
| 52) Tetrachloroethene          | 11.80 | 164  | 841      | 0.013  | ppbv # | 10     |
| 53) Toluene                    | 9.94  | 91   | 482135   | 2.364  | ppbv   | 98     |

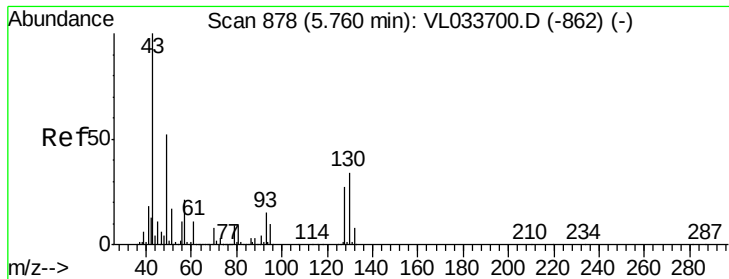
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.75 min Scan# 875

Delta R.T. -0.01 min

Lab File: VL033766.D

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Instrument :

MSVOA\_L

ClientSampleId :

BPS1-ODA-3001-04DL

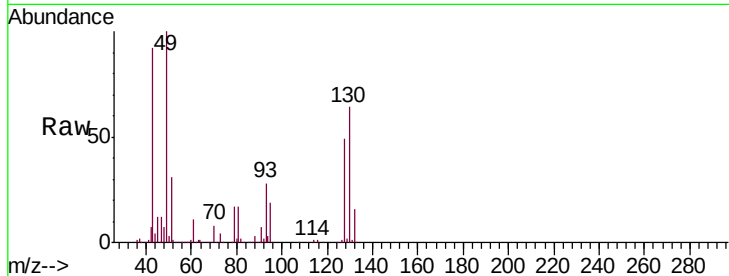
Tgt Ion: 49 Resp: 906660

Ion Ratio Lower Upper

49 100

128 50.6 25.2 75.6

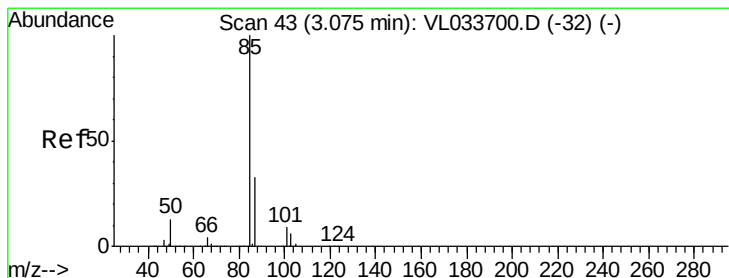
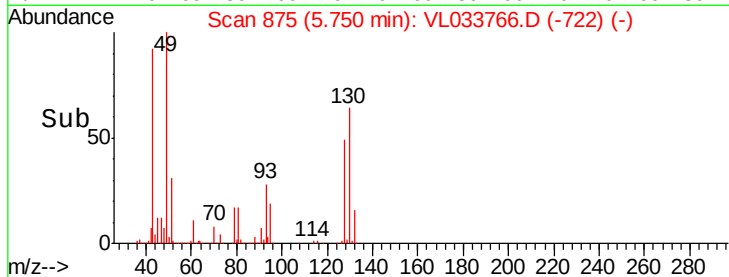
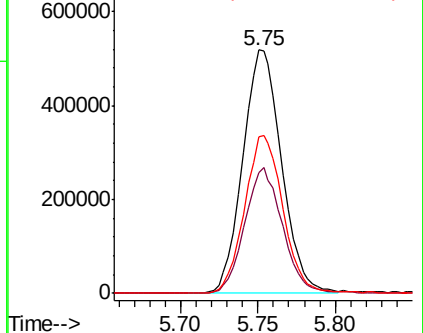
130 64.8 32.5 97.5



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0



#2

Dichlorodifluoromethane

Concen: 0.043 ppbv

RT: 3.07 min Scan# 42

Delta R.T. -0.00 min

Lab File: VL033766.D

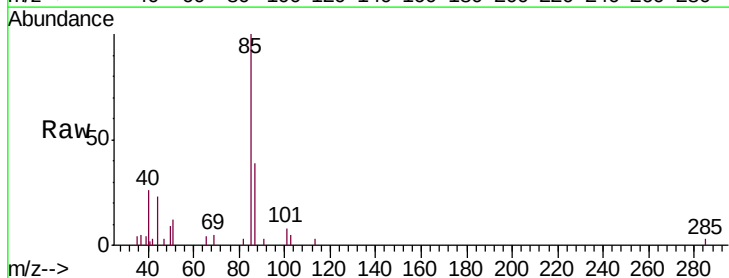
Acq: 23 May 2019 5:07

Tgt Ion: 85 Resp: 8205

Ion Ratio Lower Upper

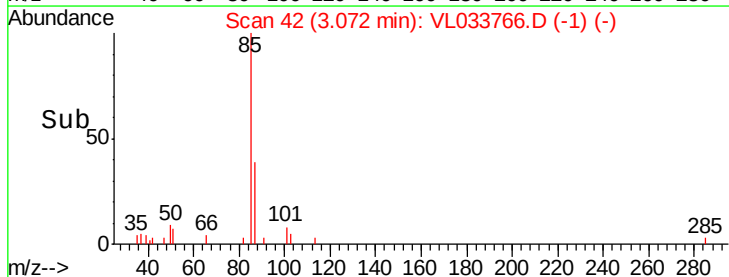
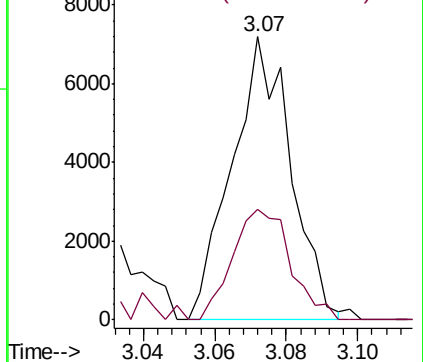
85 100

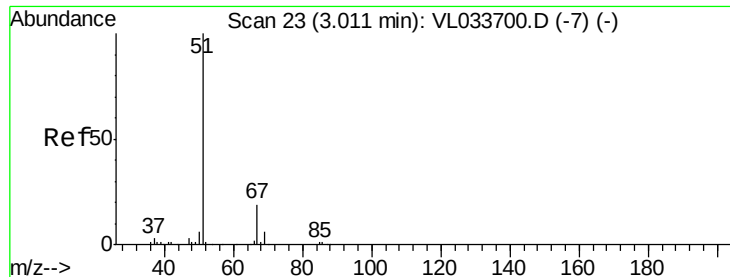
87 38.9 26.3 39.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.084 ppbv

RT: 3.01 min Scan# 24

Delta R.T. 0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

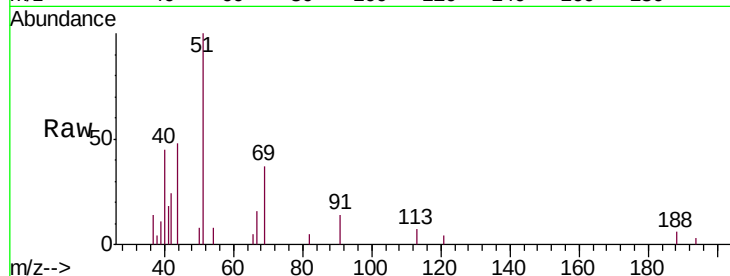
BPS1-ODA-3001-04DL

Tgt Ion: 51 Resp: 8703

Ion Ratio Lower Upper

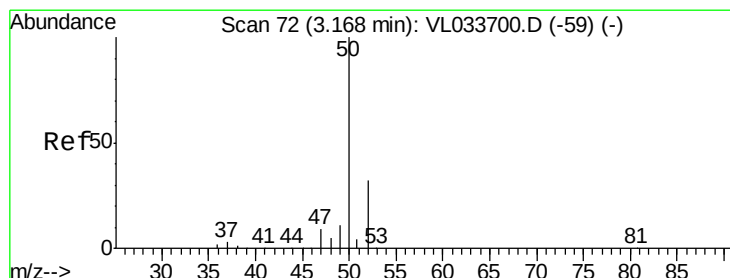
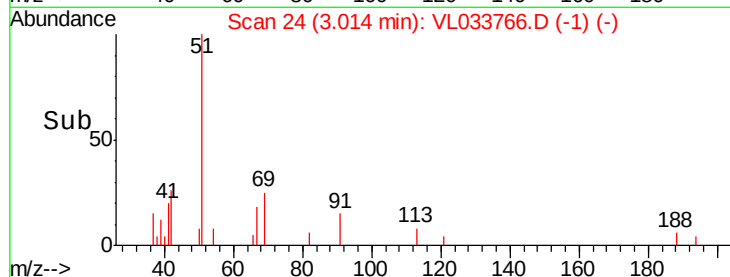
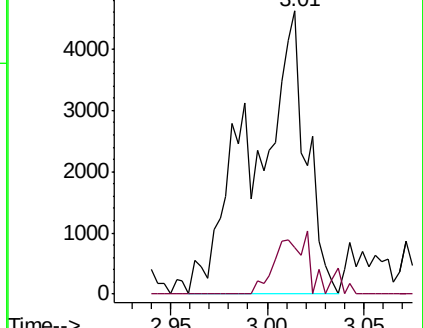
51 100

67 14.9 15.6 23.4#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.104 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL033766.D

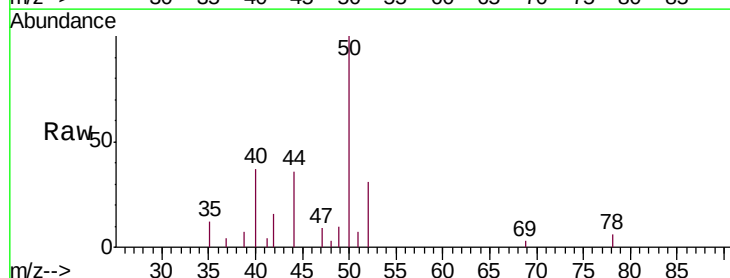
Acq: 23 May 2019 5:07

Tgt Ion: 50 Resp: 6171

Ion Ratio Lower Upper

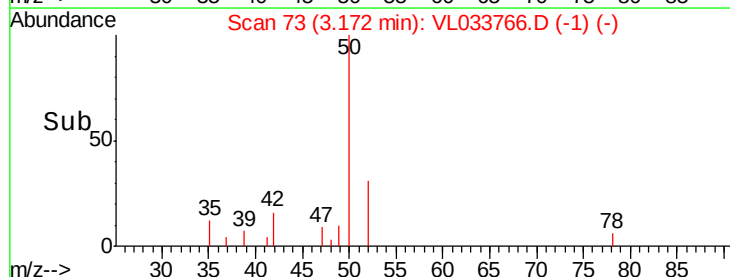
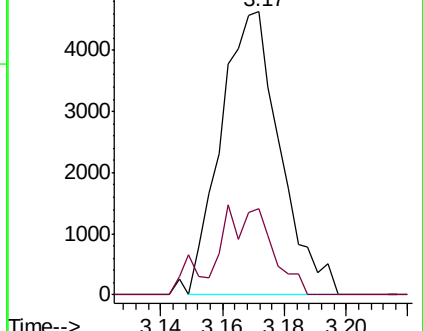
50 100

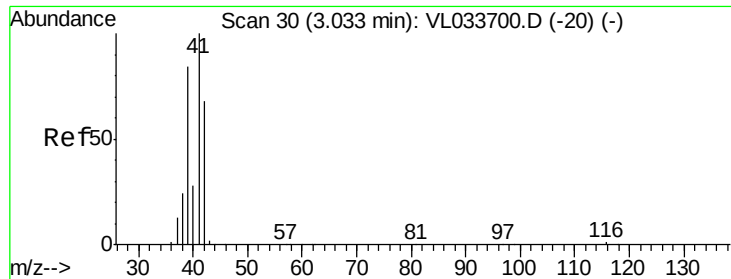
52 30.7 25.7 38.5



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.371 ppbv

RT: 3.03 min Scan# 29

Delta R.T. -0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

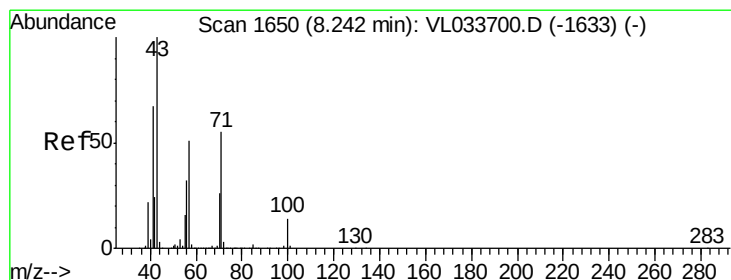
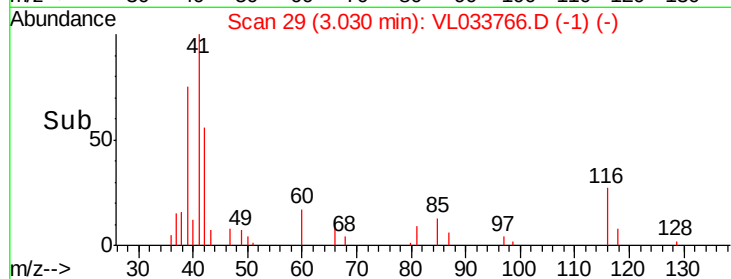
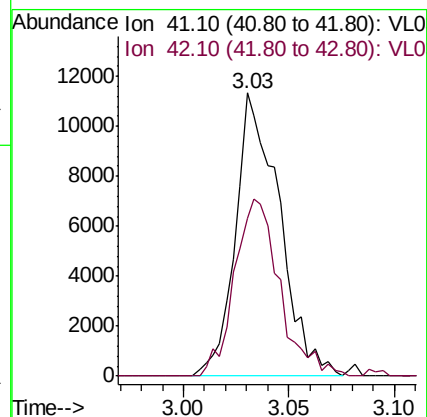
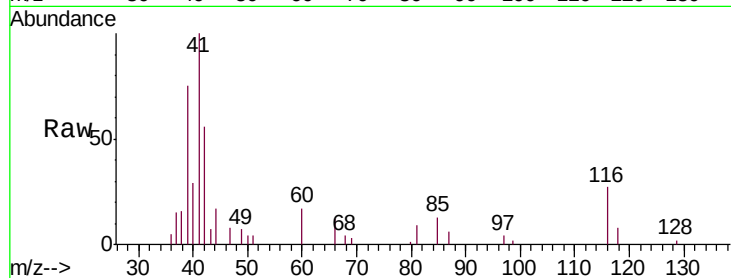
BPS1-ODA-3001-04DL

Tgt Ion: 41 Resp: 16390

Ion Ratio Lower Upper

41 100

42 64.3 56.1 84.1



#10

Heptane

Concen: 0.089 ppbv

RT: 8.24 min Scan# 1648

Delta R.T. -0.01 min

Lab File: VL033766.D

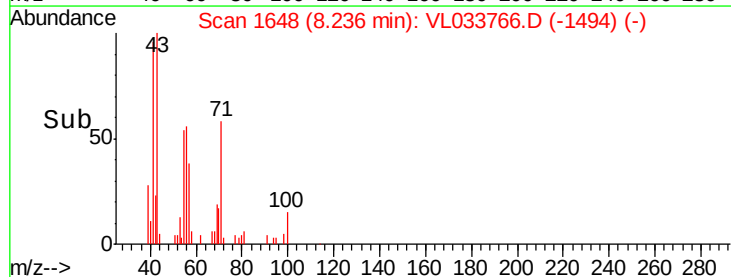
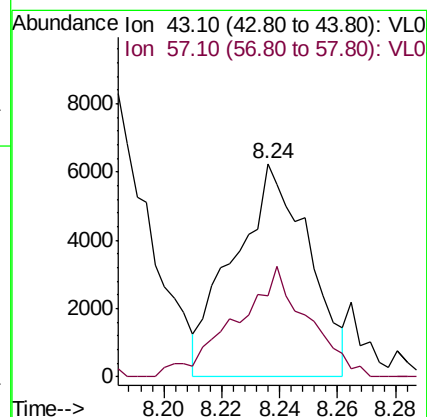
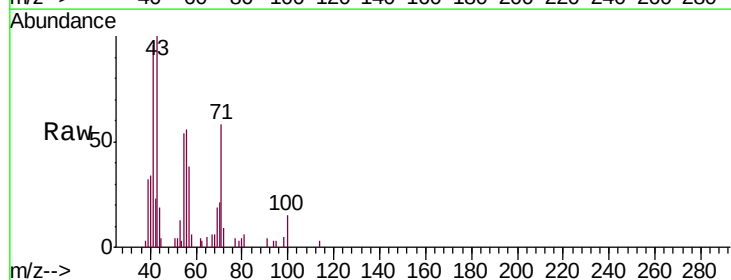
Acq: 23 May 2019 5:07

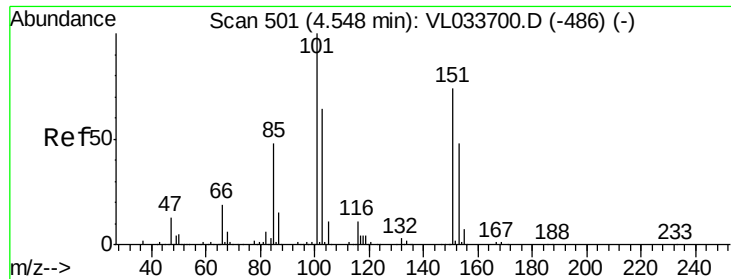
Tgt Ion: 43 Resp: 11133

Ion Ratio Lower Upper

43 100

57 50.1 41.4 62.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.044 ppbv

RT: 4.55 min Scan# 501

Delta R.T. 0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

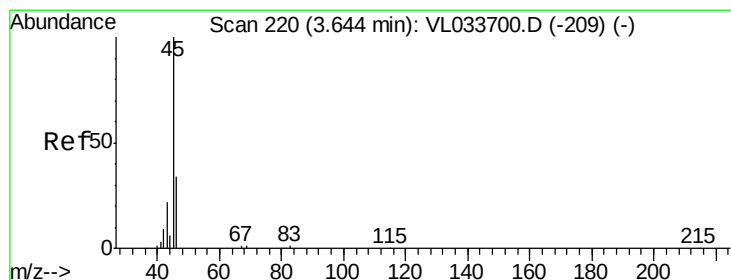
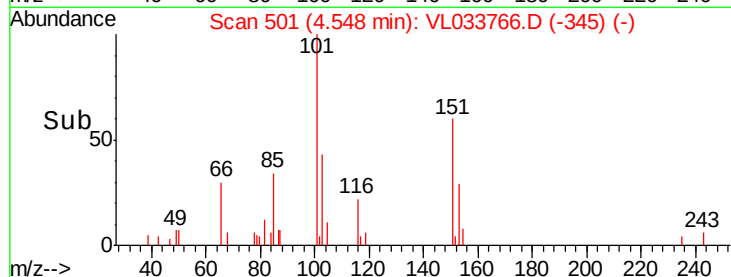
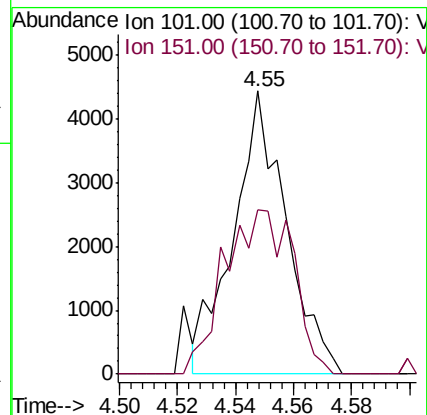
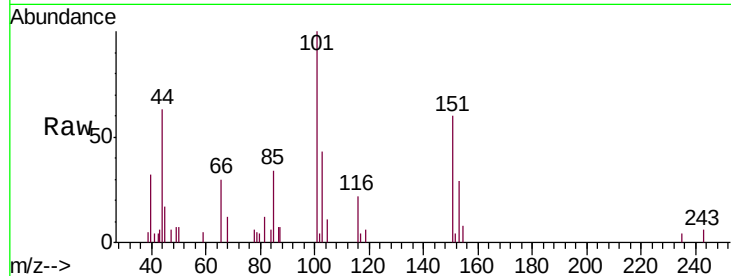
BPS1-ODA-3001-04DL

Tgt Ion:101 Resp: 5613

Ion Ratio Lower Upper

101 100

151 75.6 58.2 87.4



#13

Ethanol

Concen: 34.878 ppbv

RT: 3.64 min Scan# 220

Delta R.T. 0.00 min

Lab File: VL033766.D

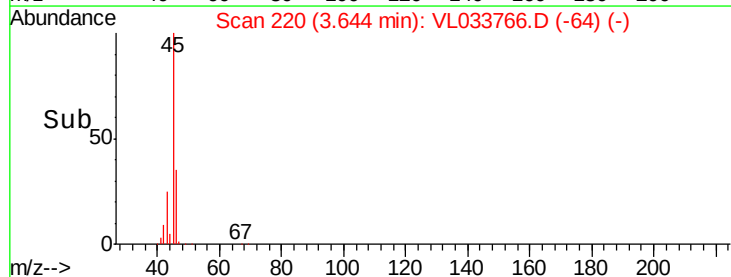
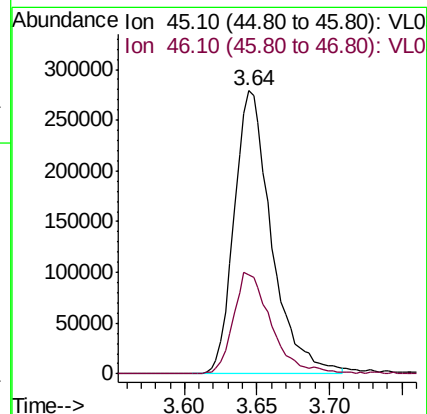
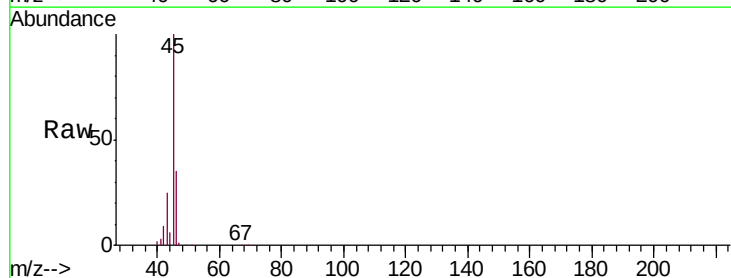
Acq: 23 May 2019 5:07

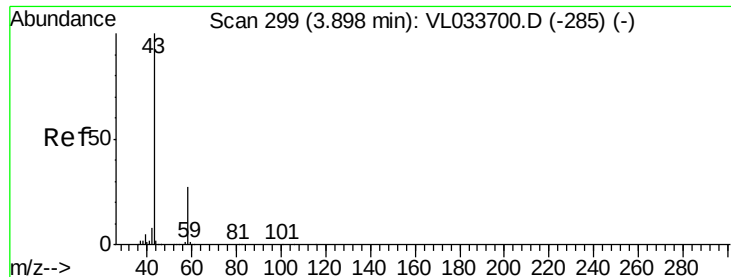
Tgt Ion: 45 Resp: 497967

Ion Ratio Lower Upper

45 100

46 37.1 14.8 59.0





#15

Acetone

Concen: 4.083 ppbv

RT: 3.90 min Scan# 298

Delta R.T. -0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

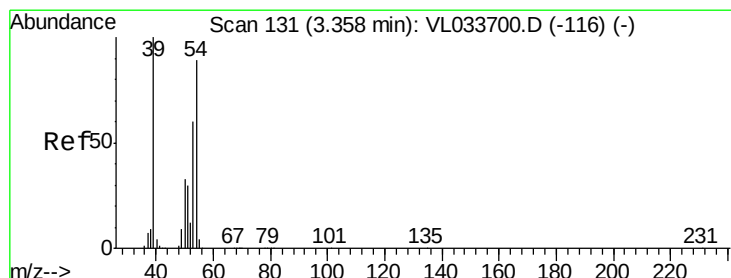
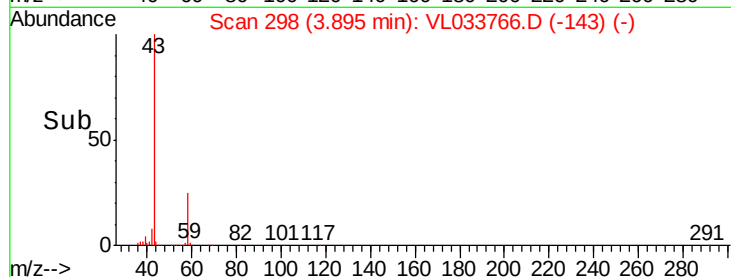
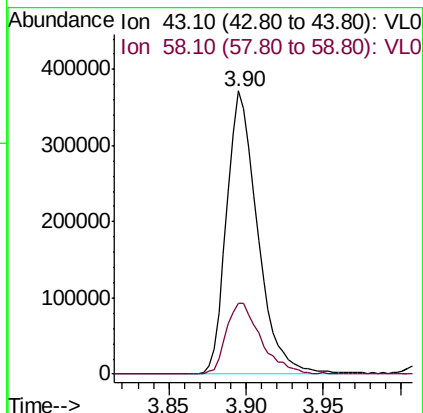
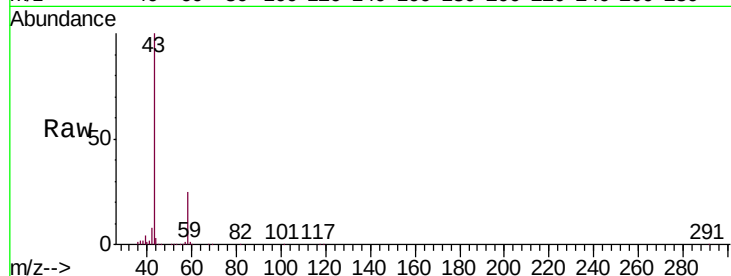
BPS1-ODA-3001-04DL

Tgt Ion: 43 Resp: 513610

Ion Ratio Lower Upper

43 100

58 28.8 21.3 31.9



#16

1,3-Butadiene

Concen: 0.819 ppbv

RT: 3.34 min Scan# 125

Delta R.T. -0.02 min

Lab File: VL033766.D

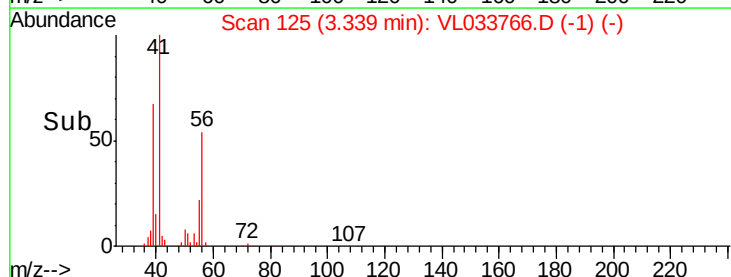
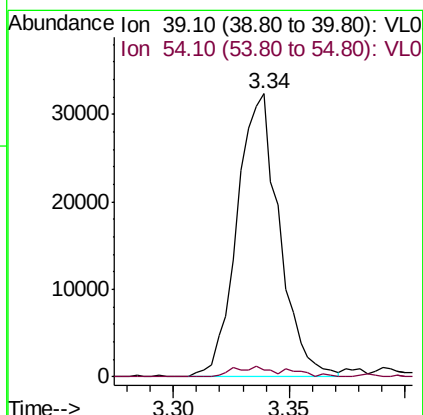
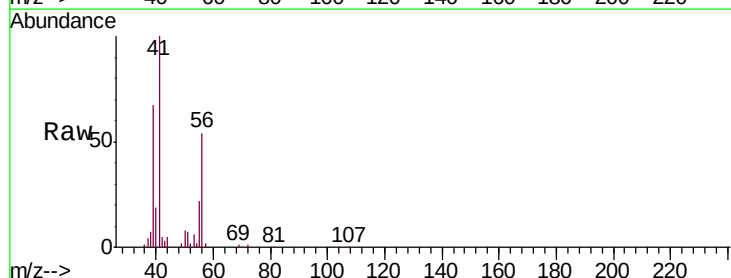
Acq: 23 May 2019 5:07

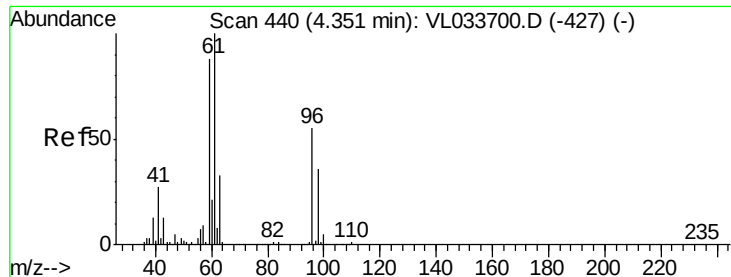
Tgt Ion: 39 Resp: 41024

Ion Ratio Lower Upper

39 100

54 5.0 69.0 103.6#





#17

tert-Butyl alcohol

Concen: 0.271 ppbv

RT: 4.36 min Scan# 444

Delta R.T. 0.01 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

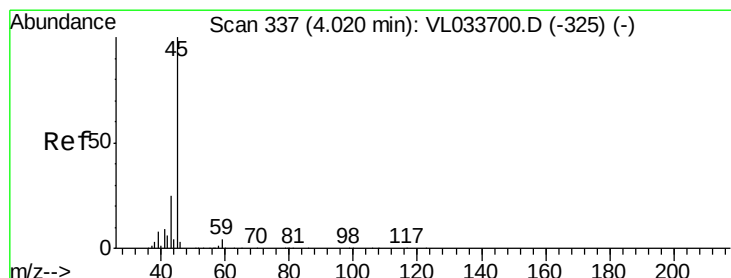
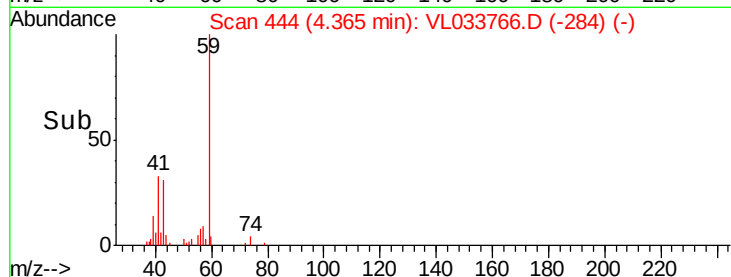
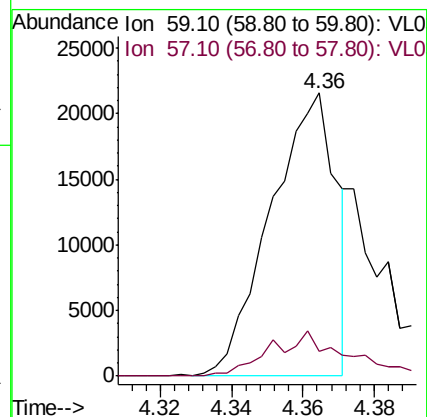
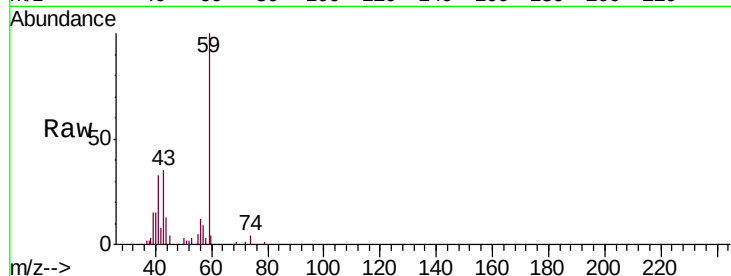
BPS1-ODA-3001-04DL

Tgt Ion: 59 Resp: 27537

Ion Ratio Lower Upper

59 100

57 20.4 8.4 12.6#



#19

Isopropyl Alcohol

Concen: 2.444 ppbv

RT: 4.02 min Scan# 338

Delta R.T. 0.00 min

Lab File: VL033766.D

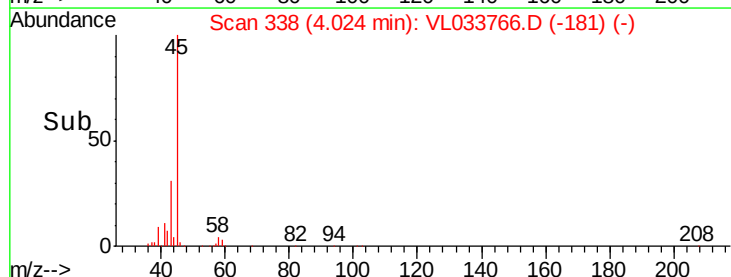
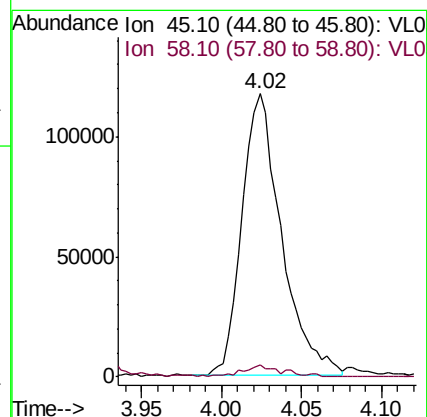
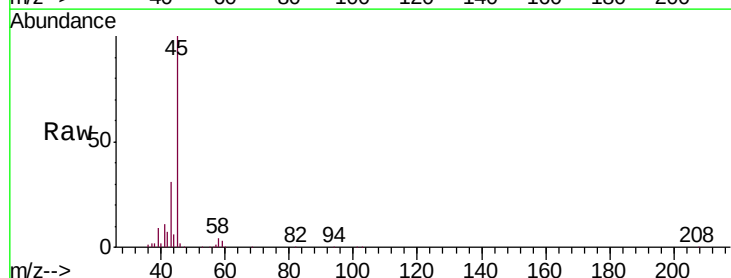
Acq: 23 May 2019 5:07

Tgt Ion: 45 Resp: 198198

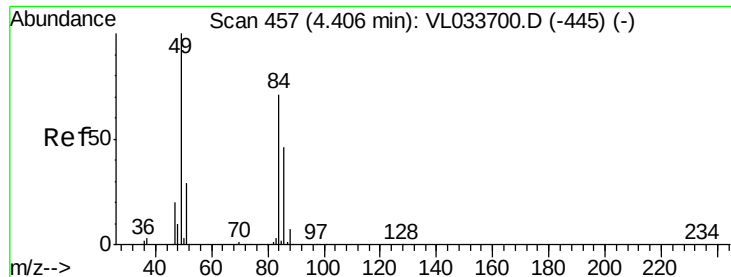
Ion Ratio Lower Upper

45 100

58 4.6 1.6 2.4#



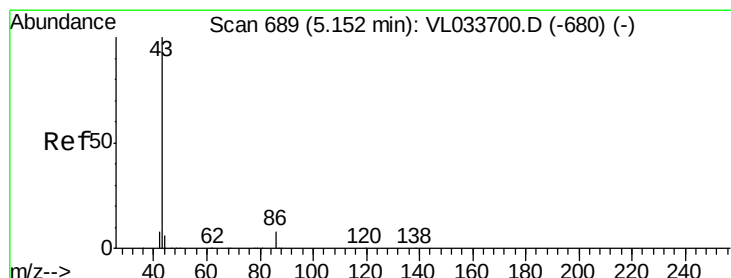
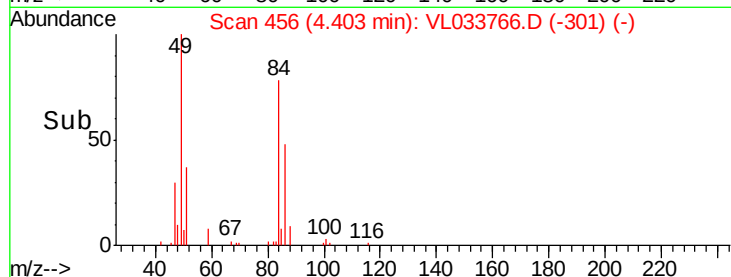
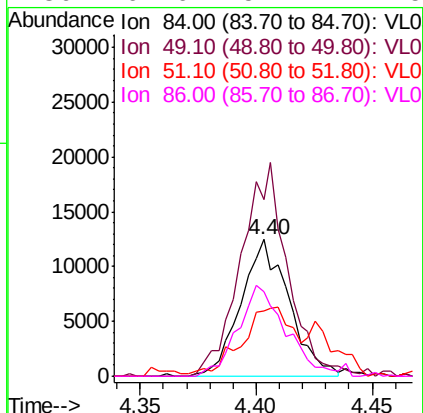
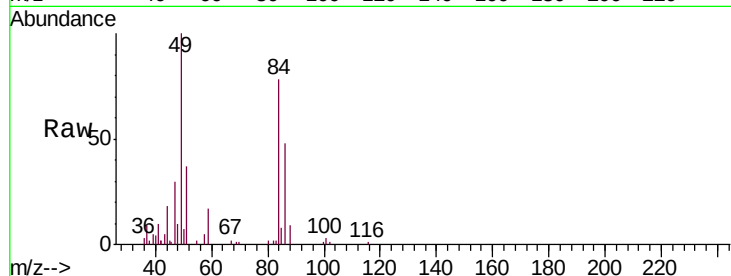




#20  
Methylene Chloride  
Concen: 0.371 ppbv  
RT: 4.40 min Scan# 456  
Delta R.T. -0.00 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

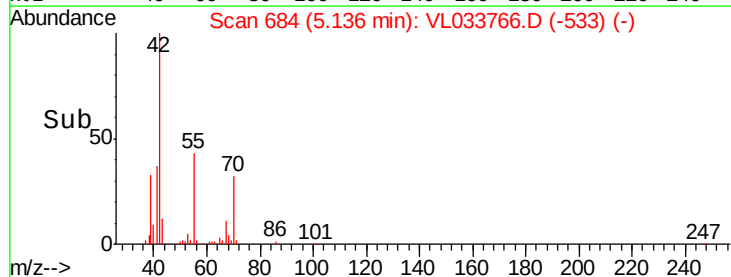
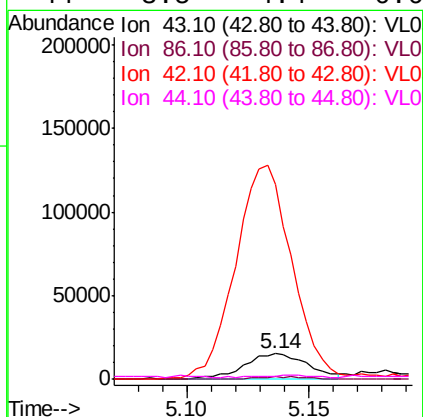
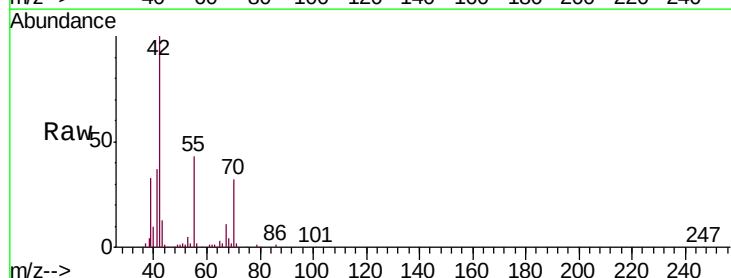
Instrument :  
MSVOA\_L  
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BPS1-ODA-3001-04DL

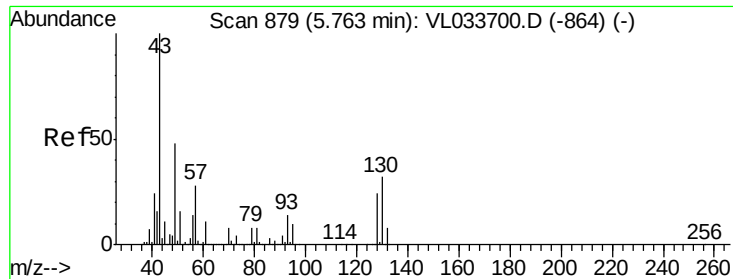
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 84    | Resp: | 17992 |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 129.0 | 112.8 | 169.2 |
| 51       | 46.1  | 33.4  | 50.0  |
| 86       | 61.6  | 51.7  | 77.5  |



#23  
Vinyl Acetate  
Concen: 0.161 ppbv  
RT: 5.14 min Scan# 684  
Delta R.T. -0.02 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 26638 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 8.0   | 6.0   | 9.0   |
| 42       | 768.0 | 7.5   | 11.3# |
| 44       | 3.5   | 4.4   | 6.6#  |

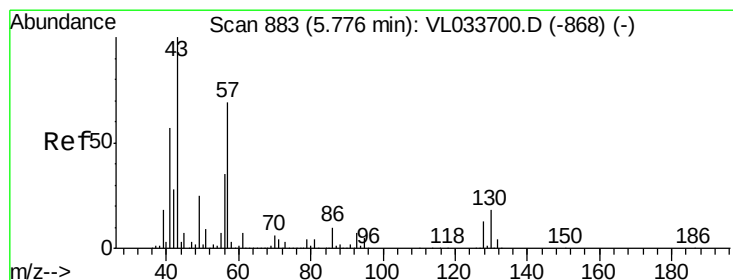
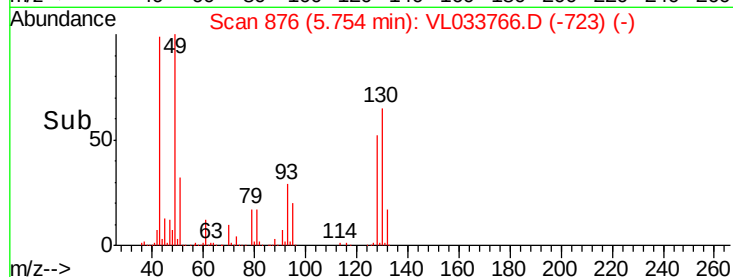
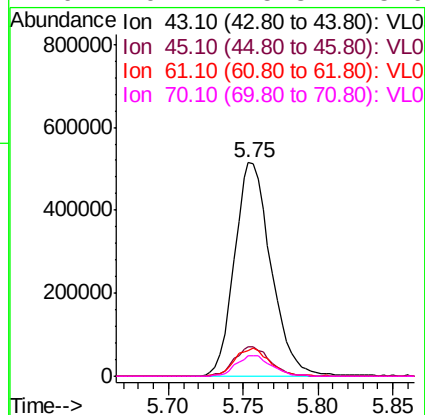
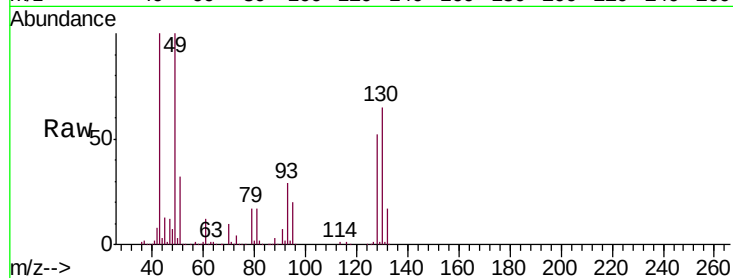




#25  
Ethyl Acetate  
Concen: 3.960 ppbv  
RT: 5.75 min Scan# 876  
Delta R.T. -0.01 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

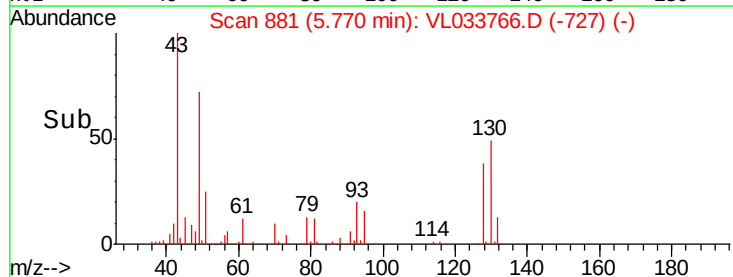
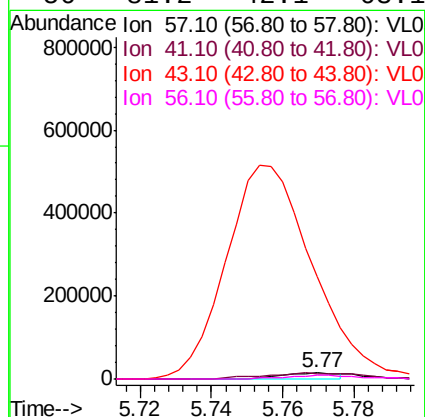
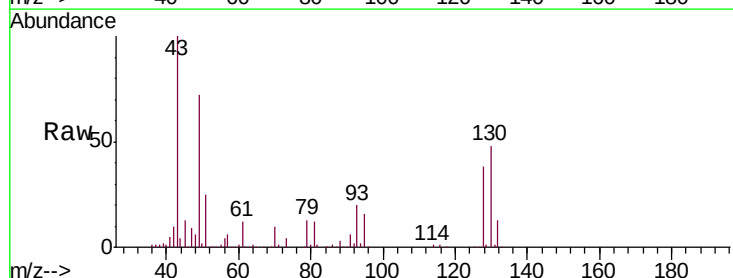
Instrument :  
MSVOA\_L  
ClientSampleId :  
BPS1-ODA-3001-04DL

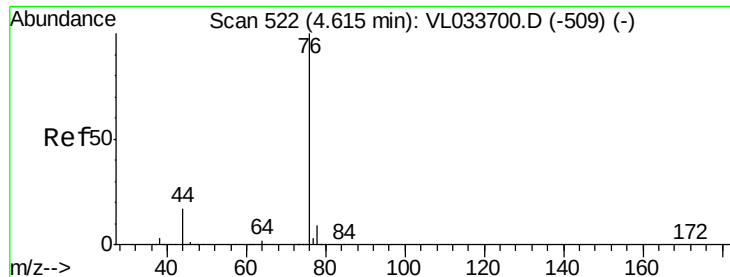
|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 875192 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 13.8  | 7.9   | 11.9#  |
| 61       | 12.7  | 7.7   | 11.5#  |
| 70       | 9.4   | 5.8   | 8.6#   |



#26  
Hexane  
Concen: 0.170 ppbv  
RT: 5.77 min Scan# 881  
Delta R.T. -0.01 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

|          |        |       |        |
|----------|--------|-------|--------|
| Tgt Ion: | 57     | Resp: | 16188  |
| Ion      | Ratio  | Lower | Upper  |
| 57       | 100    |       |        |
| 41       | 183.1  | 69.8  | 104.6# |
| 43       | 5452.2 | 181.8 | 272.6# |
| 56       | 81.2   | 42.1  | 63.1#  |





#27

Carbon Disulfide

Concen: 0.115 ppbv

RT: 4.62 min Scan# 524

Delta R.T. 0.01 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

BPS1-ODA-3001-04DL

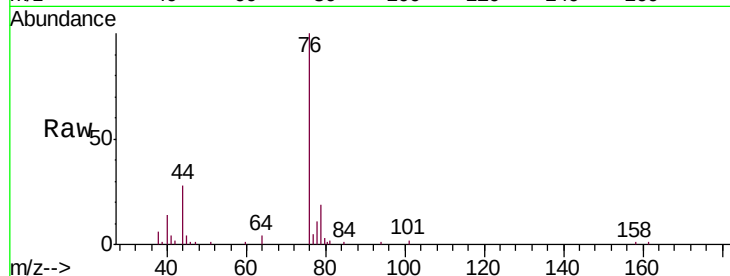
Tgt Ion: 76 Resp: 14969

Ion Ratio Lower Upper

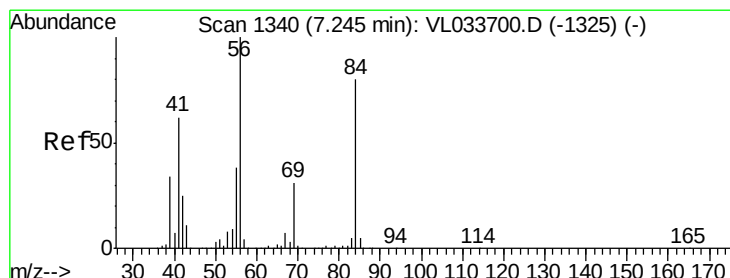
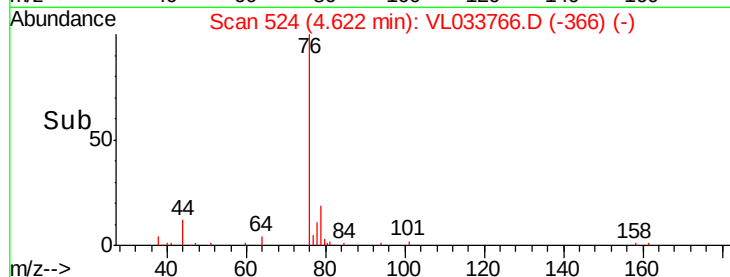
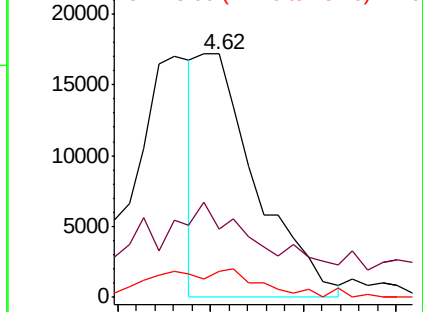
76 100

44 69.2 13.8 20.8#

78 23.2 7.4 11.0#



Abundance Ion 76.00 (75.70 to 76.70): VL0  
Ion 44.10 (43.80 to 44.80): VL0  
Ion 78.00 (77.70 to 78.70): VL0



#30

Cyclohexane

Concen: 0.045 ppbv

RT: 7.24 min Scan# 1338

Delta R.T. -0.01 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

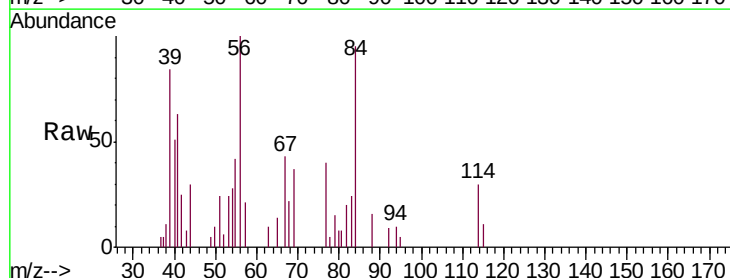
Tgt Ion: 84 Resp: 3623

Ion Ratio Lower Upper

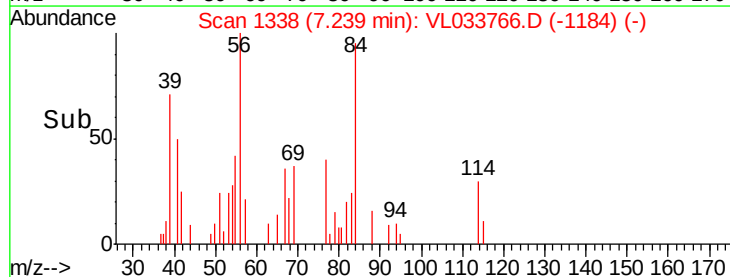
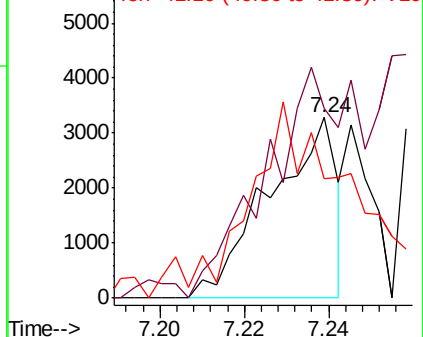
84 100

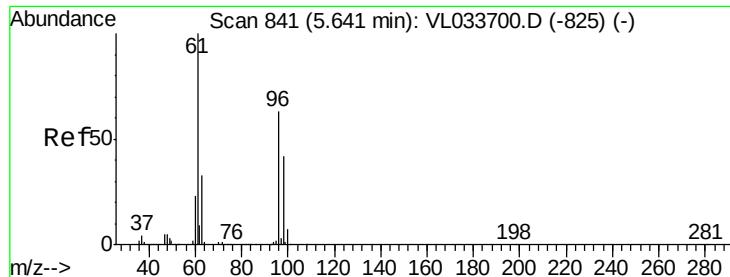
56 0.0 107.7 161.5#

41 205.4 66.0 99.0#



Abundance Ion 84.20 (83.90 to 84.90): VL0  
Ion 56.10 (55.80 to 56.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0



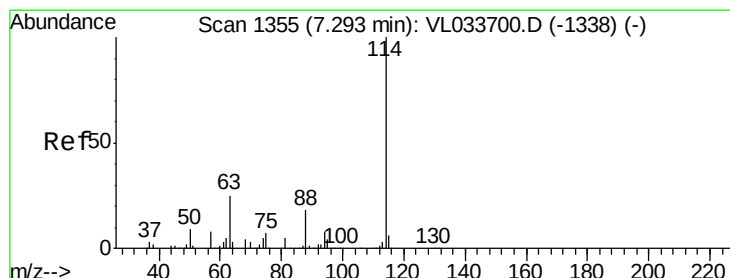
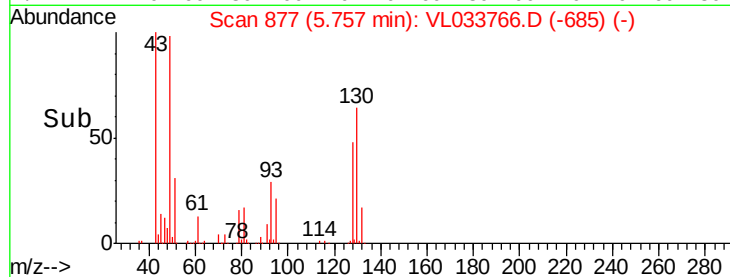
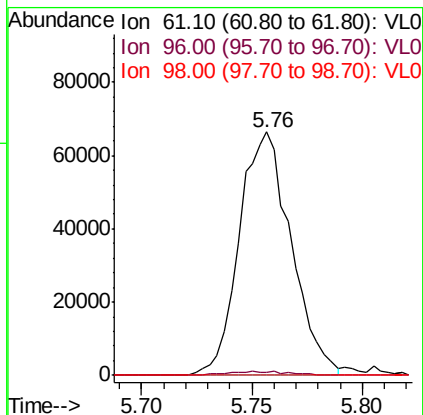
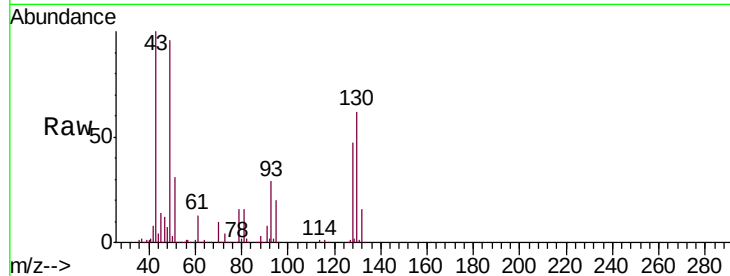


#31

cis-1,2-Dichloroethene  
 Concen: 1.147 ppbv  
 RT: 5.76 min Scan# 877  
 Delta R.T. 0.12 min  
 Lab File: VL033766.D  
 Acq: 23 May 2019 5:07

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 BPS1-ODA-3001-04DL

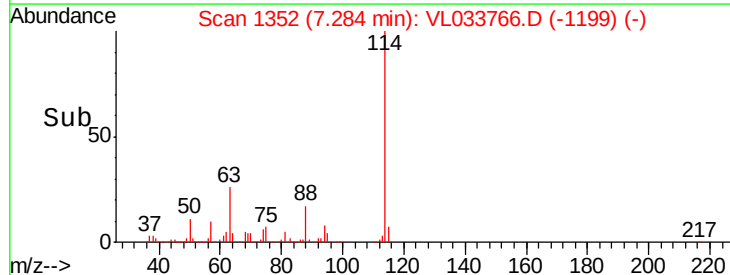
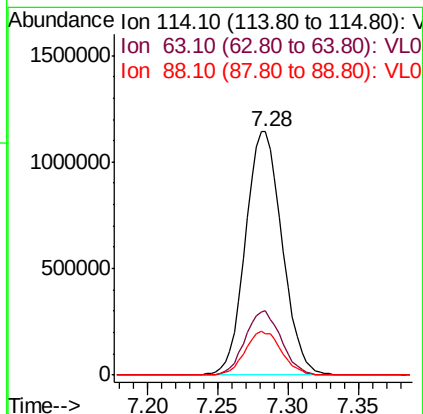
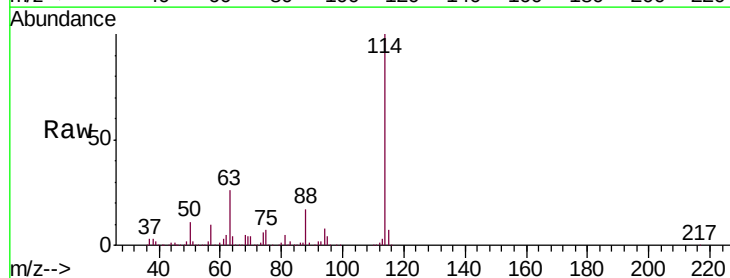
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 1.1   | 50.8  | 76.2# |
| 98      | 0.0   | 33.3  | 49.9# |

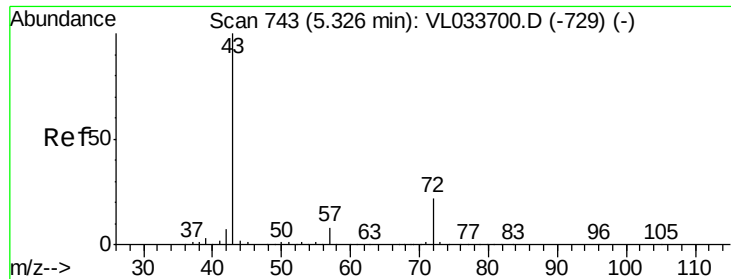


#33

1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.28 min Scan# 1352  
 Delta R.T. -0.01 min  
 Lab File: VL033766.D  
 Acq: 23 May 2019 5:07

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 26.2  | 20.9  | 31.3  |
| 88      | 17.9  | 14.3  | 21.5  |





#34

2-Butanone

Concen: 0.107 ppbv

RT: 5.33 min Scan# 743

Delta R.T. 0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

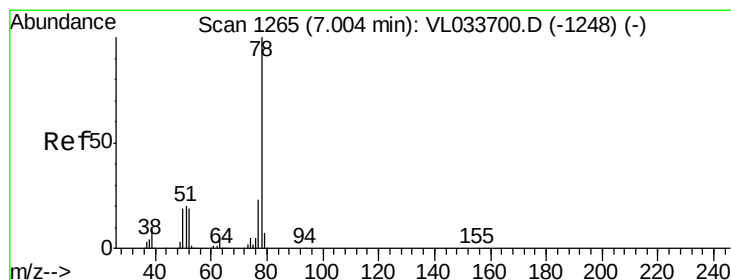
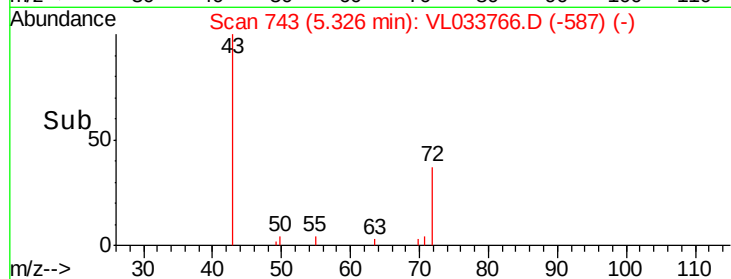
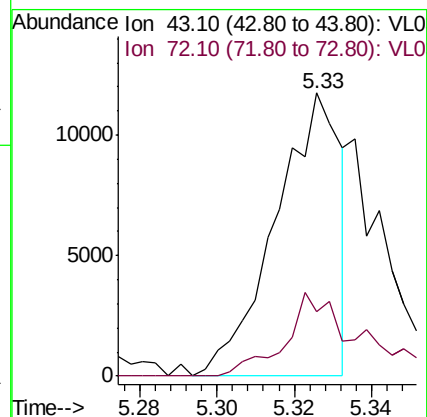
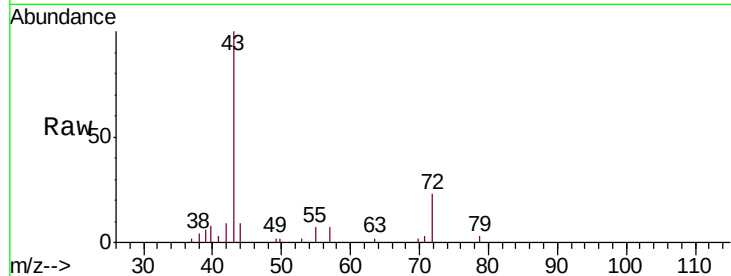
BPS1-ODA-3001-04DL

Tgt Ion: 43 Resp: 13735

Ion Ratio Lower Upper

43 100

72 34.4 17.8 26.6#



#36

Benzene

Concen: 0.012 ppbv

RT: 7.00 min Scan# 1264

Delta R.T. -0.00 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

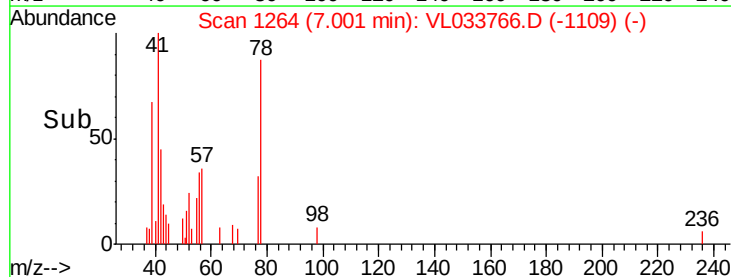
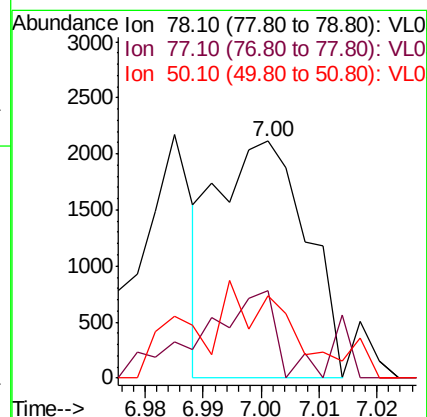
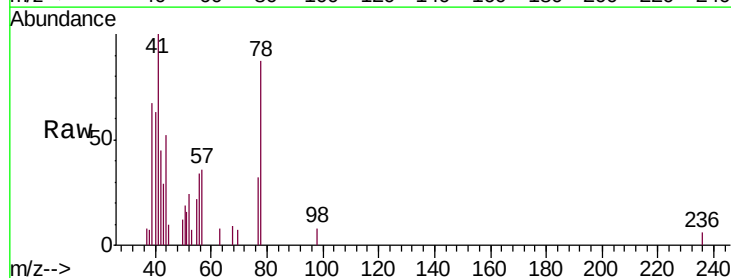
Tgt Ion: 78 Resp: 2260

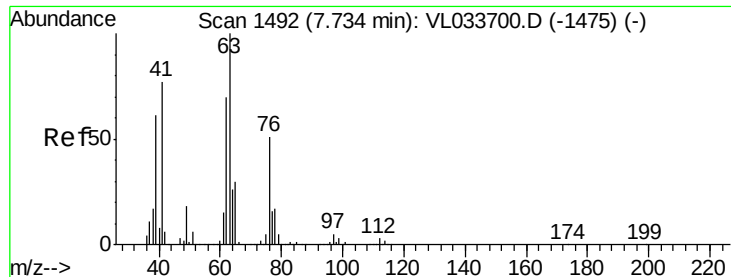
Ion Ratio Lower Upper

78 100

77 24.8 18.4 27.6

50 27.4 15.5 23.3#





#39

1,2-Dichloropropane

Concen: 7.651 ppbv

RT: 7.28 min Scan# 1352

Delta R.T. -0.45 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

BPS1-ODA-3001-04DL

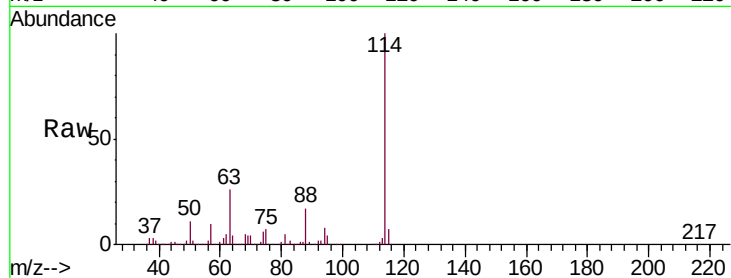
Tgt Ion: 63 Resp: 539495

Ion Ratio Lower Upper

63 100

41 0.0 61.5 92.3#

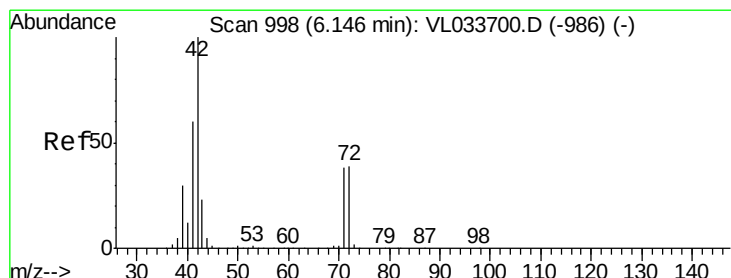
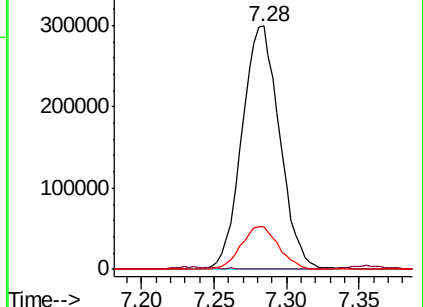
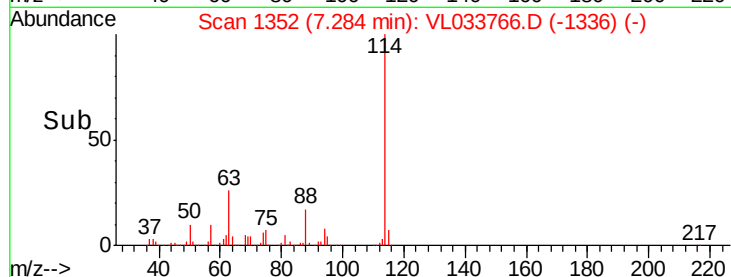
62 17.3 56.2 84.4#



Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0



#41

Tetrahydrofuran

Concen: 0.012 ppbv

RT: 6.13 min Scan# 992

Delta R.T. -0.02 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

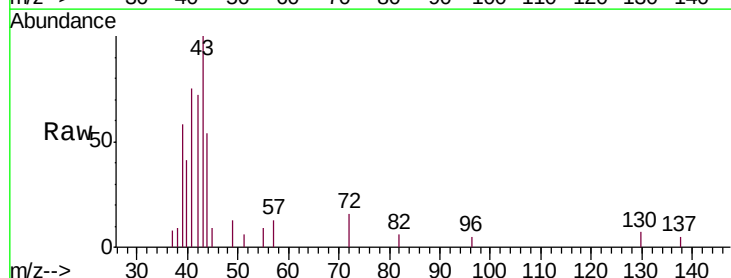
Tgt Ion: 42 Resp: 893

Ion Ratio Lower Upper

42 100

72 49.9 32.0 48.0#

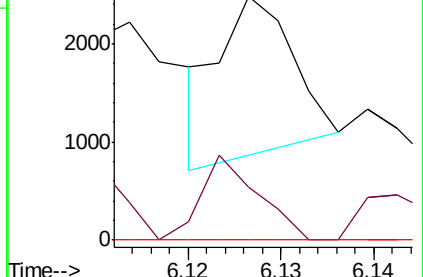
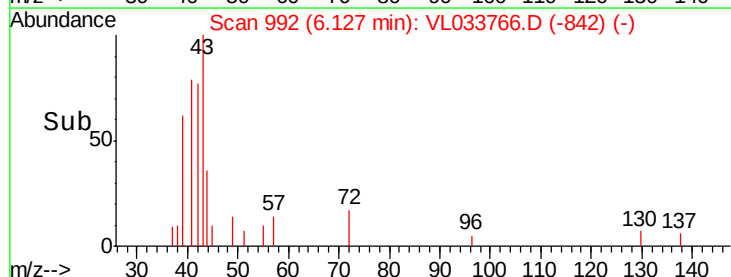
71 0.0 30.4 45.6#

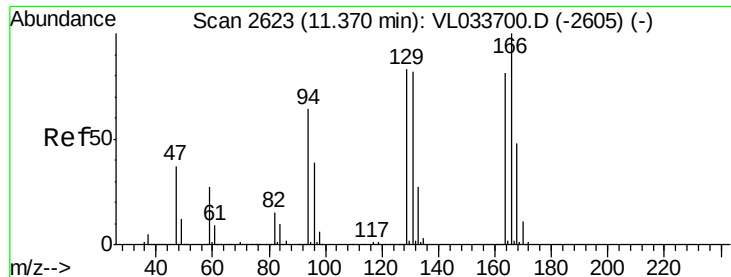


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#52

Tetrachloroethene

Concen: 0.013 ppbv

RT: 11.80 min Scan# 2756

Delta R.T. 0.43 min

Lab File: VL033766.D

Acq: 23 May 2019 5:07

Instrument :

MSVOA\_L

ClientSampleId :

BPS1-ODA-3001-04DL

Tgt Ion:164 Resp: 841

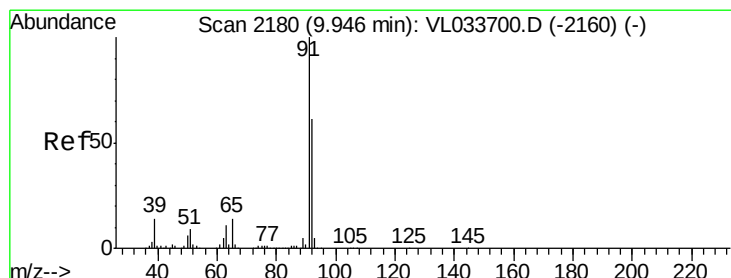
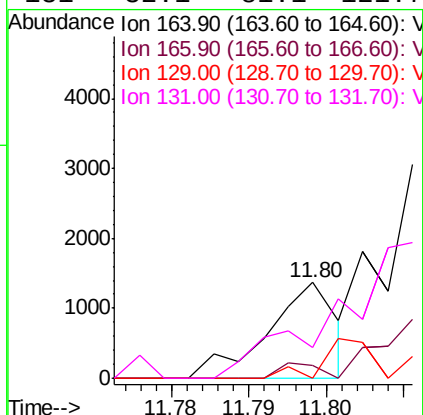
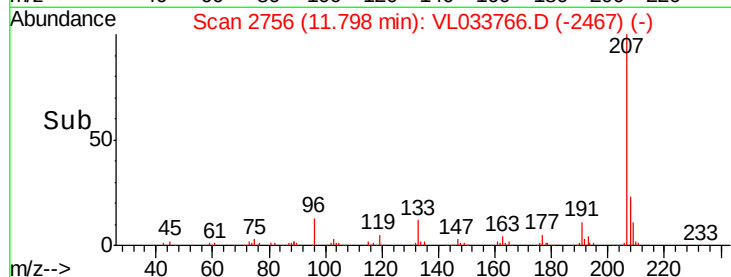
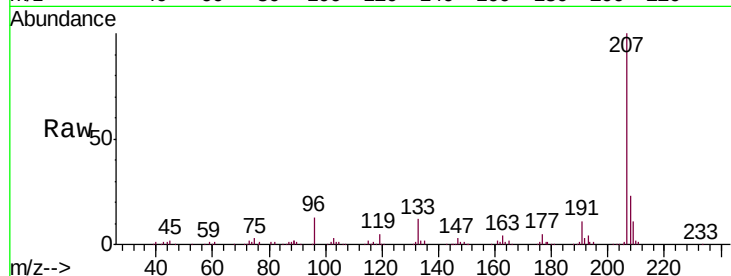
Ion Ratio Lower Upper

164 100

166 13.3 98.9 148.3#

129 0.0 81.8 122.6#

131 32.1 81.1 121.7#



#53

Toluene

Concen: 2.364 ppbv

RT: 9.94 min Scan# 2177

Delta R.T. -0.01 min

Lab File: VL033766.D

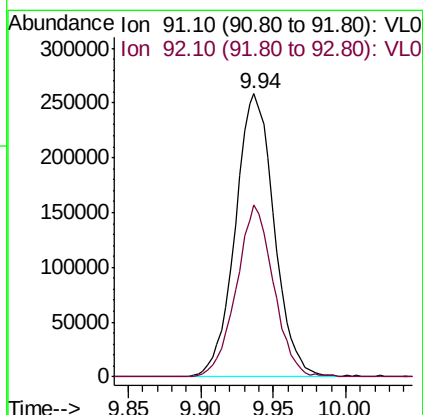
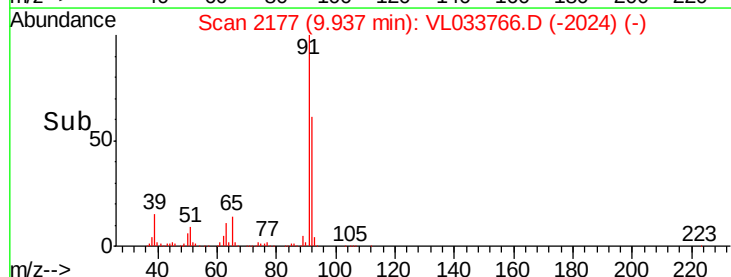
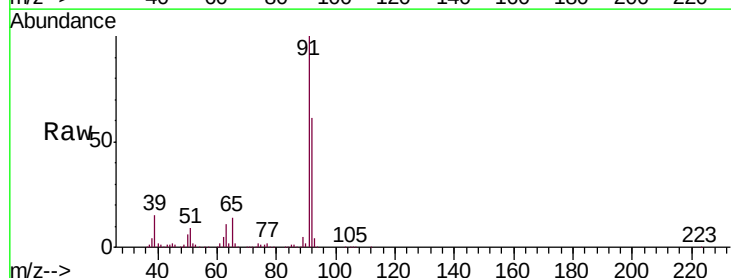
Acq: 23 May 2019 5:07

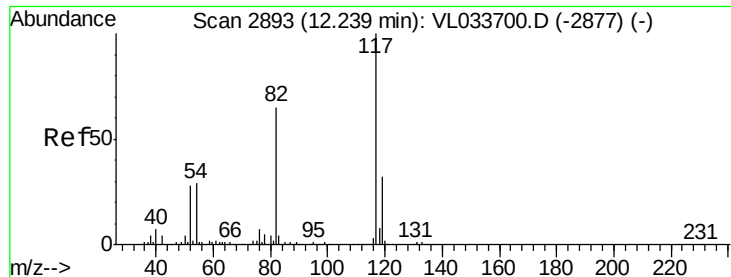
Tgt Ion: 91 Resp: 482135

Ion Ratio Lower Upper

91 100

92 58.3 47.6 71.4

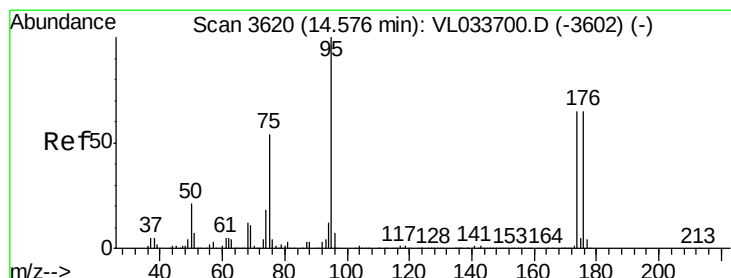
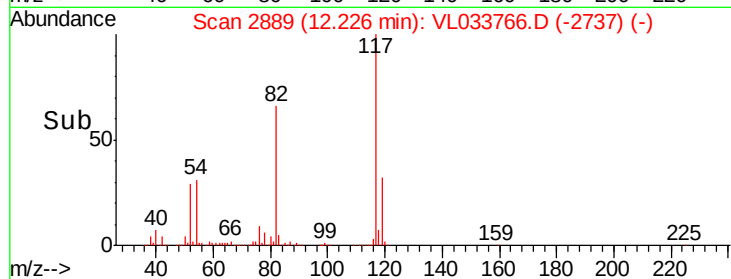
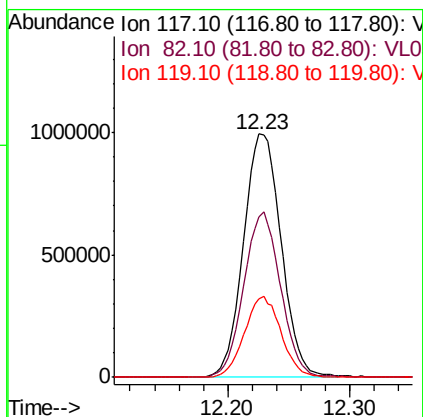
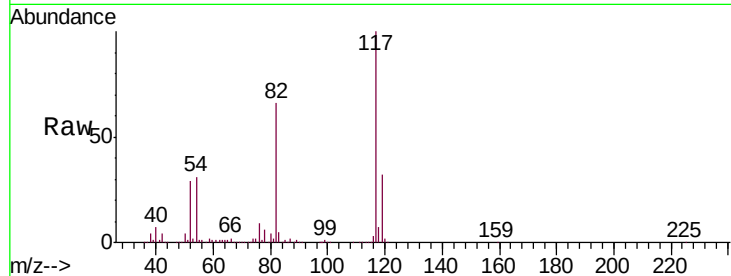




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.23 min Scan# 2889  
Delta R.T. -0.01 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

Instrument :  
MSVOA\_L  
ClientSampleId :  
BPS1-ODA-3001-04DL

Tgt Ion: 117 Resp: 2120577  
Ion Ratio Lower Upper  
117 100  
82 66.7 49.4 74.0  
119 32.4 24.9 37.3



#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.819 ppbv  
RT: 14.56 min Scan# 3616  
Delta R.T. -0.01 min  
Lab File: VL033766.D  
Acq: 23 May 2019 5:07

Tgt Ion: 95 Resp: 1688048  
Ion Ratio Lower Upper  
95 100  
174 66.5 53.9 80.9  
175 4.9 3.8 5.8

