

Data File : VL032571.D  
Acq On : 28 Sep 2018 5:23  
Operator : SY/AP  
Sample : J5094-05  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
CIA-1

Quant Time: Sep 28 06:48:58 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL092418AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Sep 25 05:17:15 2018  
QLast Update : Tue Sep 25 05:17:15 2018  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.79  | 49   | 1227879  | 10.00 | ppbv  | -0.02    |
| 33) 1,4-Difluorobenzene | 7.32  | 114  | 2782841  | 10.00 | ppbv  | -0.02    |
| 55) Chlorobenzene-d5    | 12.27 | 117  | 2962253  | 10.00 | ppbv  | -0.02    |

System Monitoring Compounds  
68) 1-Bromo-4-Fluorobenzene 14.61 95 2089918 9.36 ppbv -0.03  
Spiked Amount 10.000 Range 65 - 135 Recovery = 93.60%

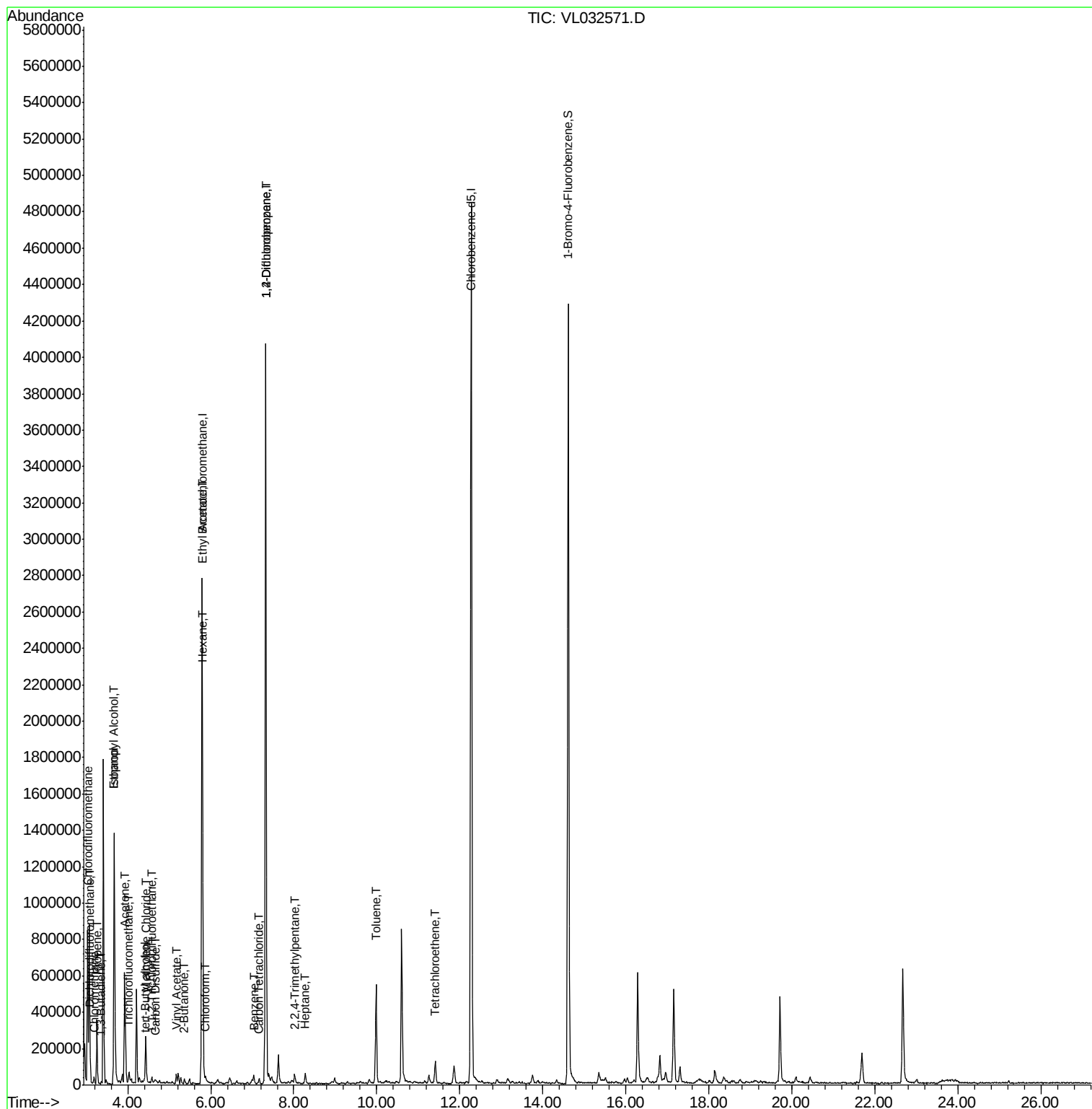
| Target Compounds               | R.T.  | QIon | Response | Conc    | Units  | Qvalue |
|--------------------------------|-------|------|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane     | 3.10  | 85   | 91411    | 0.805   | ppbv   | 97     |
| 3) Chlorodifluoromethane       | 3.03  | 51   | 767092   | 7.512   | ppbv   | 98     |
| 4) Chloromethane               | 3.19  | 50   | 29642    | 0.498   | ppbv   | 92     |
| 9) Propene                     | 3.26  | 41   | 76723    | 1.732   | ppbv   | 94     |
| 10) Heptane                    | 8.27  | 43   | 6119     | 0.038   | ppbv # | 28     |
| 11) Trichlorofluoromethane     | 4.03  | 101  | 39050    | 0.289   | ppbv   | 90     |
| 12) 1,1,2-Trichlorotrifluoroet | 4.58  | 101  | 5032     | 0.046   | ppbv # | 17     |
| 13) Ethanol                    | 3.67  | 45   | 1490584  | 111.932 | ppbv   | 97     |
| 15) Acetone                    | 3.93  | 43   | 627632   | 5.823   | ppbv   | 98     |
| 16) 1,3-Butadiene              | 3.36  | 39   | 2961     | 0.068   | ppbv # | 1      |
| 17) tert-Butyl alcohol         | 4.40  | 59   | 2856     | 0.211   | ppbv # | 100    |
| 19) Isopropyl Alcohol          | 3.67  | 45   | 1490584  | 19.855  | ppbv # | 93     |
| 20) Methylene Chloride         | 4.43  | 84   | 83754    | 1.605   | ppbv   | 97     |
| 23) Vinyl Acetate              | 5.17  | 43   | 34038    | 0.179   | ppbv # | 81     |
| 25) Ethyl Acetate              | 5.80  | 43   | 210435   | 0.805   | ppbv # | 87     |
| 26) Hexane                     | 5.81  | 57   | 219047   | 1.854   | ppbv # | 51     |
| 27) Carbon Disulfide           | 4.65  | 76   | 6758     | 0.053   | ppbv # | 1      |
| 29) Chloroform                 | 5.87  | 83   | 6433     | 0.035   | ppbv   | 84     |
| 34) 2-Butanone                 | 5.36  | 43   | 27505    | 0.166   | ppbv   | 98     |
| 35) Carbon Tetrachloride       | 7.16  | 117  | 9306     | 0.048   | ppbv # | 73     |
| 36) Benzene                    | 7.04  | 78   | 34436    | 0.153   | ppbv # | 86     |
| 39) 1,2-Dichloropropane        | 7.32  | 63   | 750418   | 7.404   | ppbv # | 26     |
| 44) 2,2,4-Trimethylpentane     | 8.02  | 57   | 24427    | 0.056   | ppbv # | 52     |
| 52) Tetrachloroethene          | 11.41 | 164  | 18757    | 0.240   | ppbv   | 95     |
| 53) Toluene                    | 9.98  | 91   | 380096   | 1.387   | ppbv   | 100    |

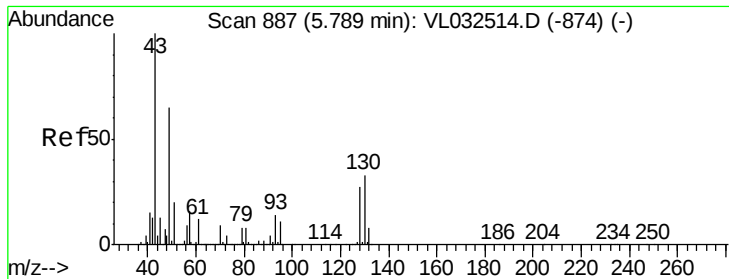
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.79 min Scan# 887

Delta R.T. -0.02 min

Lab File: VL032571.D

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CIA-1

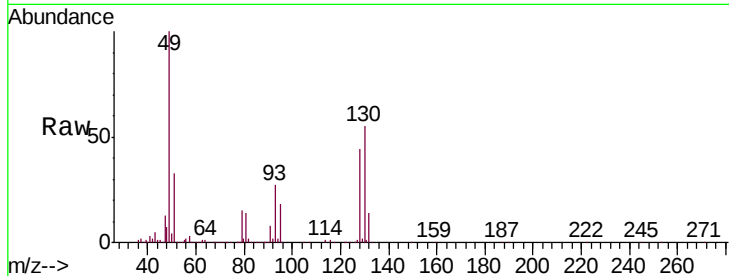
Tgt Ion: 49 Resp: 1227879

Ion Ratio Lower Upper

49 100

128 44.9 20.7 62.1

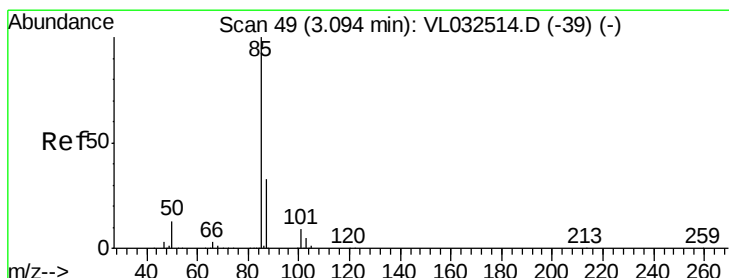
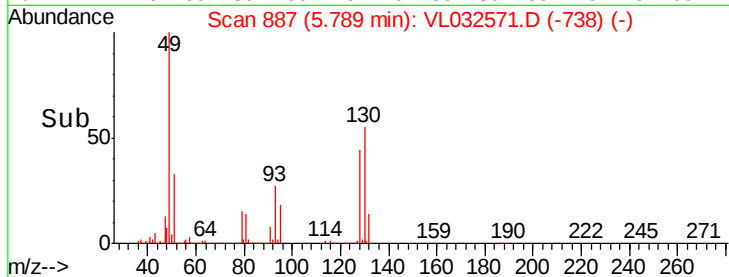
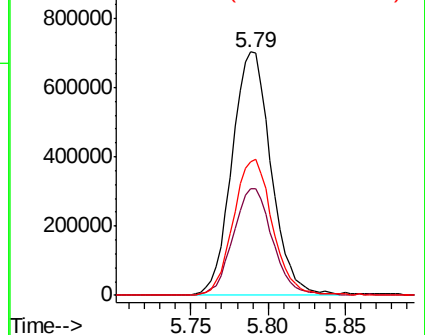
130 56.9 26.6 79.7



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: 0.805 ppbv

RT: 3.10 min Scan# 50

Delta R.T. -0.01 min

Lab File: VL032571.D

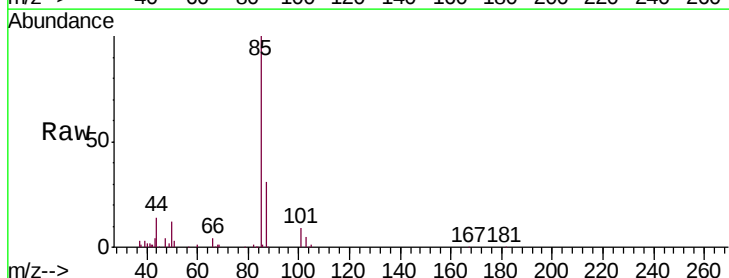
Acq: 28 Sep 2018 5:23

Tgt Ion: 85 Resp: 91411

Ion Ratio Lower Upper

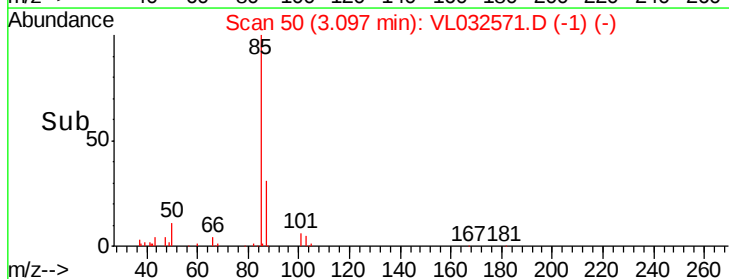
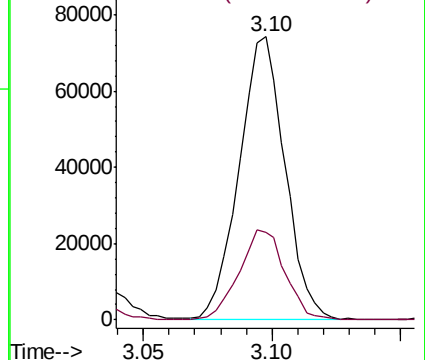
85 100

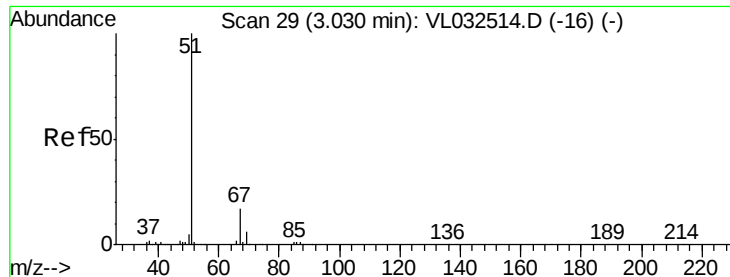
87 30.9 26.2 39.4



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 7.512 ppbv

RT: 3.03 min Scan# 30

Delta R.T. -0.01 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

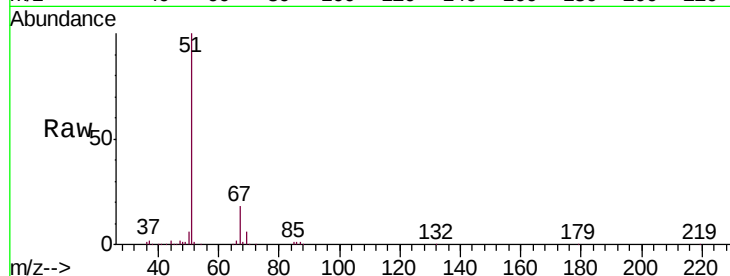
CIA-1

Tgt Ion: 51 Resp: 767092

Ion Ratio Lower Upper

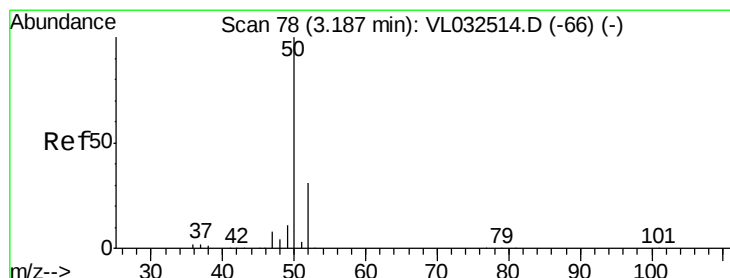
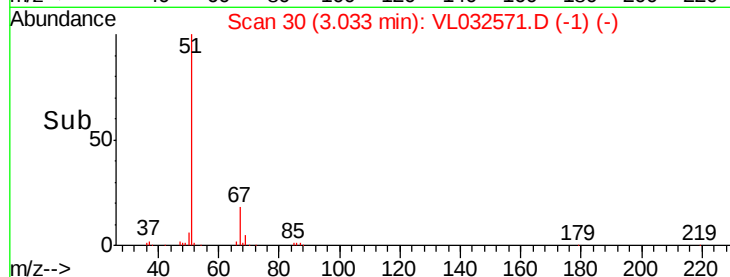
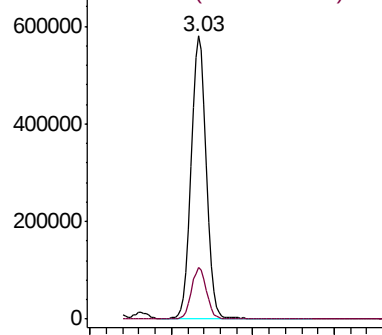
51 100

67 18.2 13.8 20.8



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.498 ppbv

RT: 3.19 min Scan# 78

Delta R.T. -0.02 min

Lab File: VL032571.D

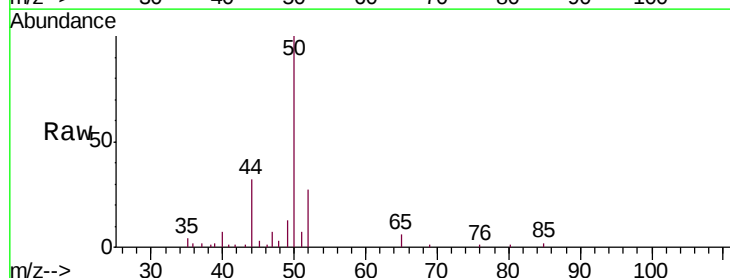
Acq: 28 Sep 2018 5:23

Tgt Ion: 50 Resp: 29642

Ion Ratio Lower Upper

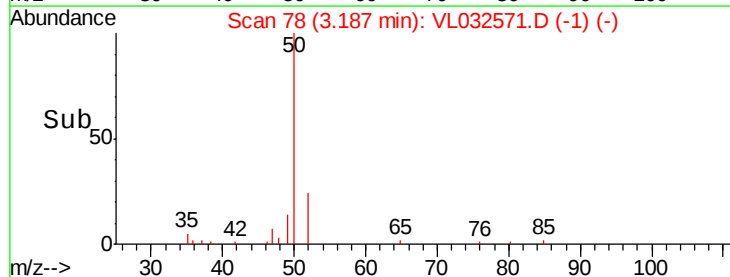
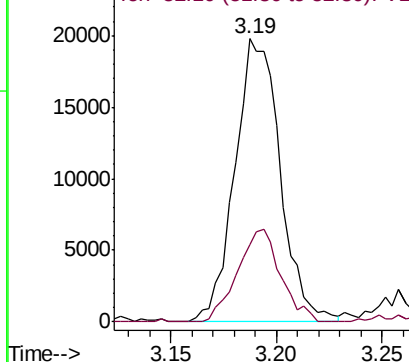
50 100

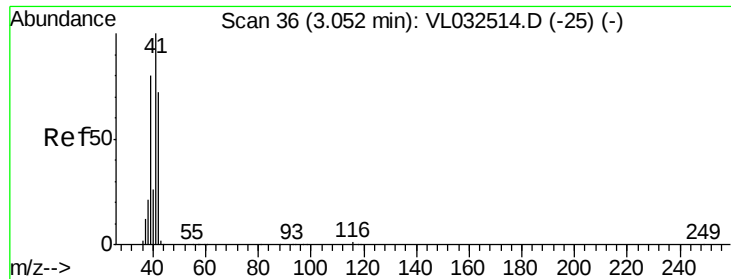
52 27.7 25.6 38.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 1.732 ppbv

RT: 3.26 min Scan# 100

Delta R.T. 0.19 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

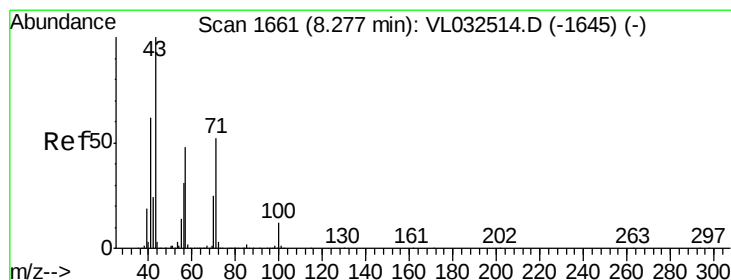
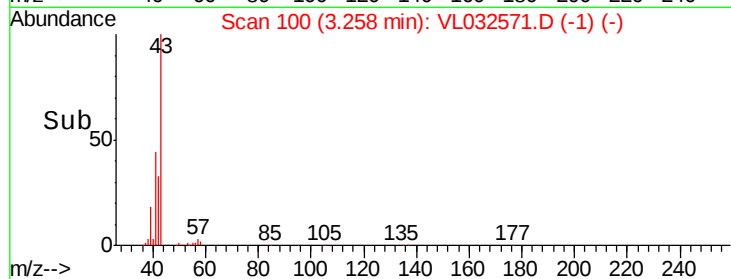
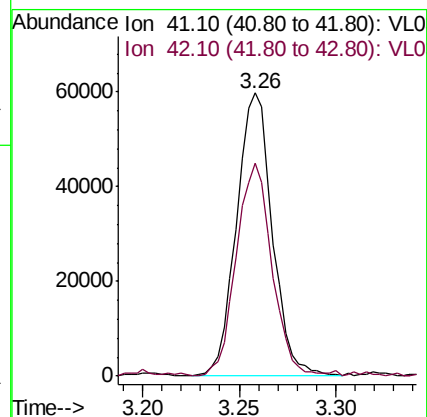
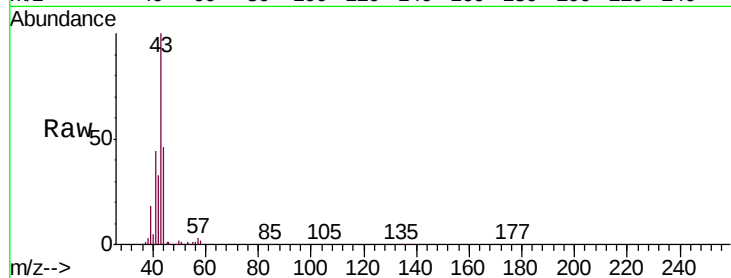
CIA-1

Tgt Ion: 41 Resp: 76723

Ion Ratio Lower Upper

41 100

42 75.5 56.6 84.8



#10

Heptane

Concen: 0.038 ppbv

RT: 8.27 min Scan# 1658

Delta R.T. -0.03 min

Lab File: VL032571.D

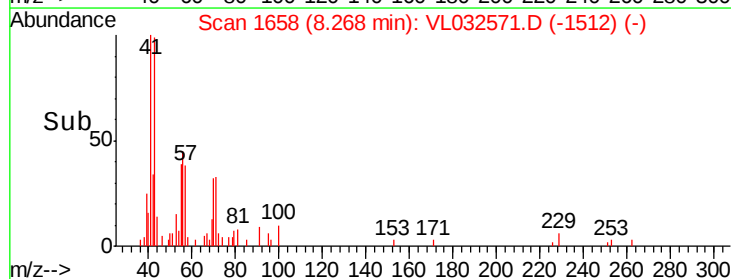
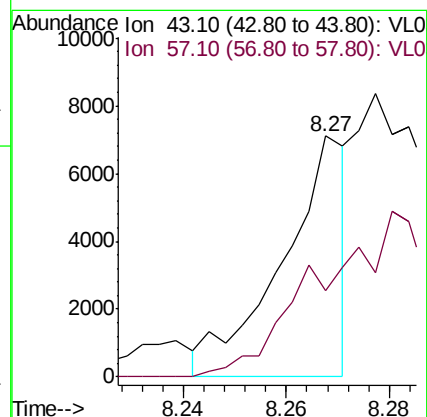
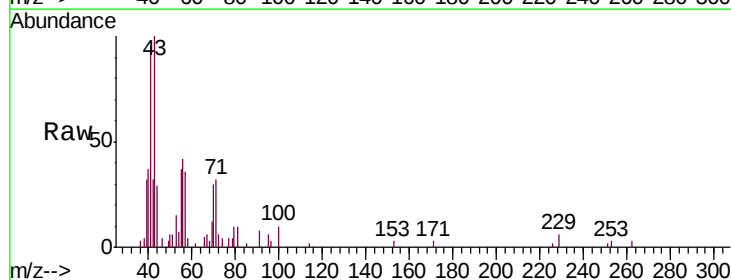
Acq: 28 Sep 2018 5:23

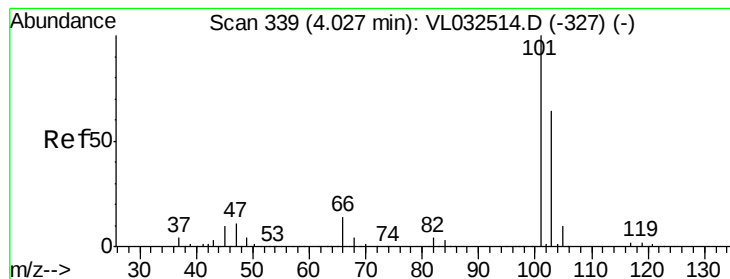
Tgt Ion: 43 Resp: 6119

Ion Ratio Lower Upper

43 100

57 0.0 39.6 59.4#





#11

Trichlorofluoromethane

Concen: 0.289 ppbv

RT: 4.03 min Scan# 340

Delta R.T. -0.01 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

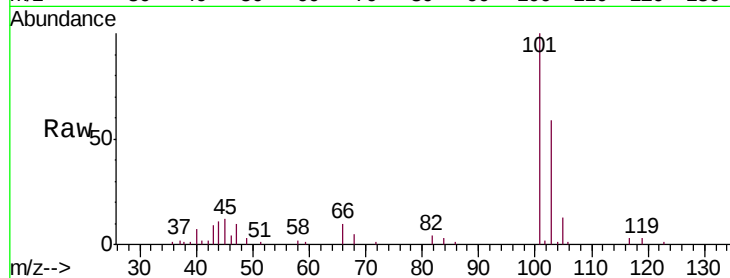
CIA-1

Tgt Ion:101 Resp: 39050

Ion Ratio Lower Upper

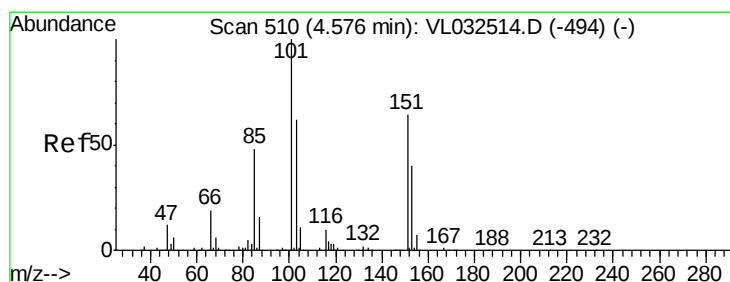
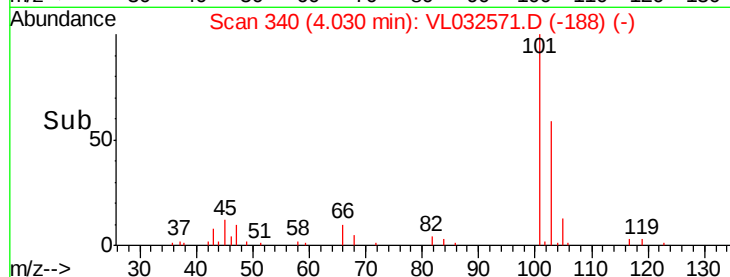
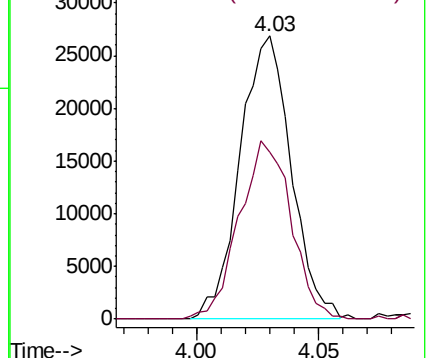
101 100

103 58.2 52.8 79.2



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.046 ppbv

RT: 4.58 min Scan# 510

Delta R.T. -0.02 min

Lab File: VL032571.D

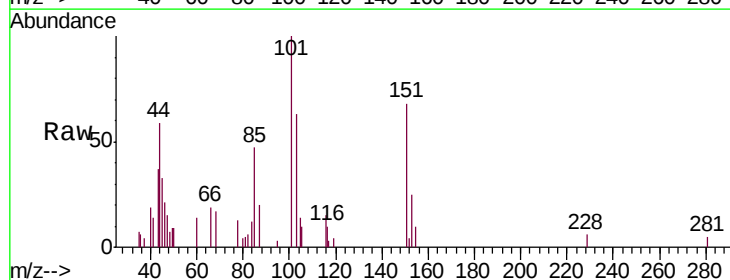
Acq: 28 Sep 2018 5:23

Tgt Ion:101 Resp: 5032

Ion Ratio Lower Upper

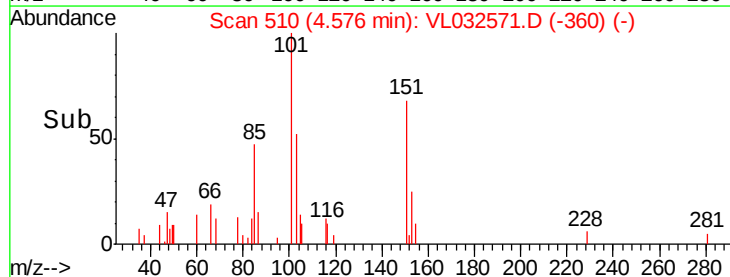
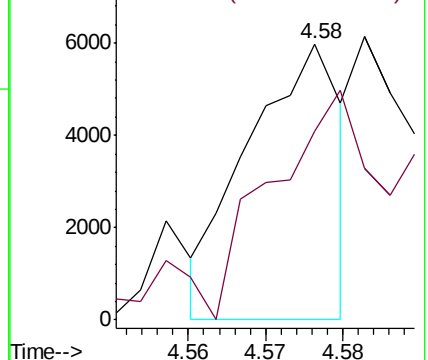
101 100

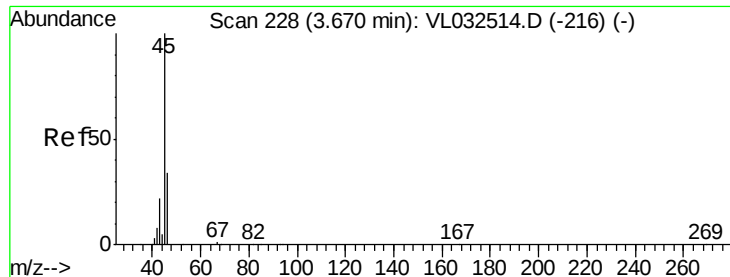
151 0.0 52.6 78.8#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 111.932 ppbv

RT: 3.67 min Scan# 229

Delta R.T. -0.01 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampled :

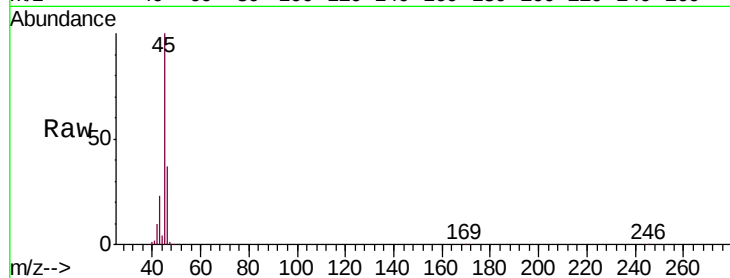
CIA-1

Tgt Ion: 45 Resp: 1490584

Ion Ratio Lower Upper

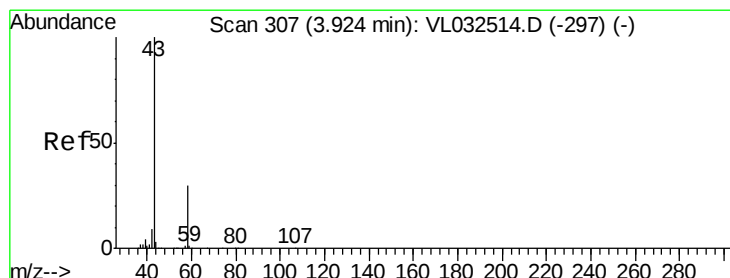
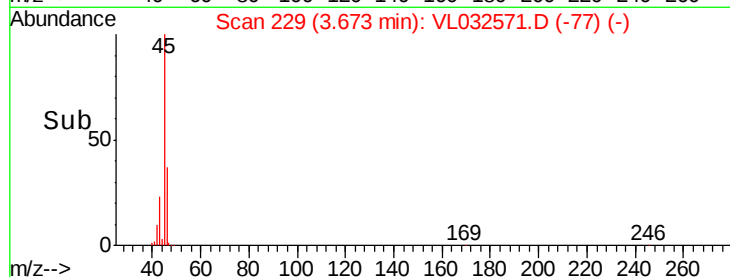
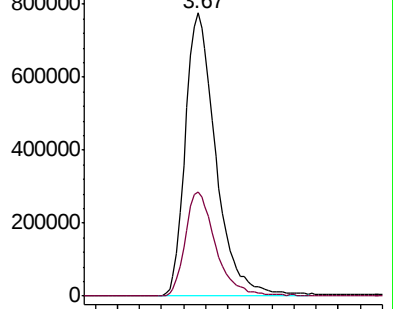
45 100

46 37.2 14.2 56.8



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0



#15

Acetone

Concen: 5.823 ppbv

RT: 3.93 min Scan# 308

Delta R.T. -0.01 min

Lab File: VL032571.D

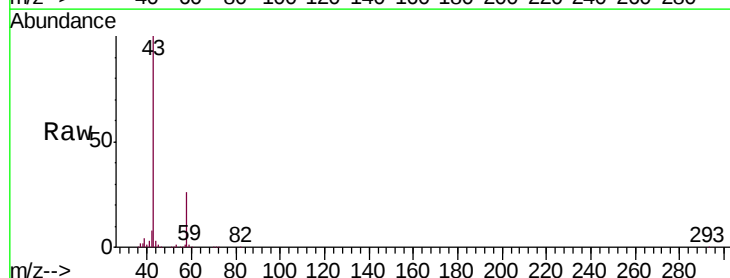
Acq: 28 Sep 2018 5:23

Tgt Ion: 43 Resp: 627632

Ion Ratio Lower Upper

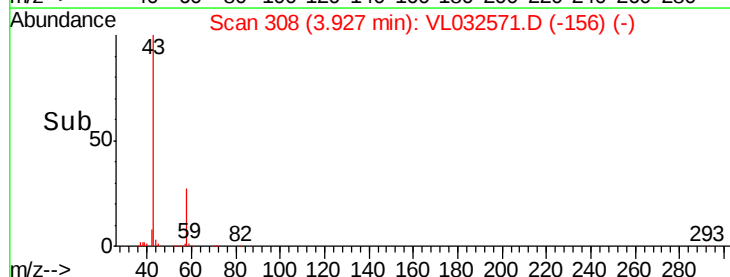
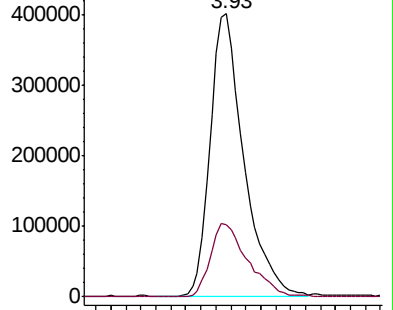
43 100

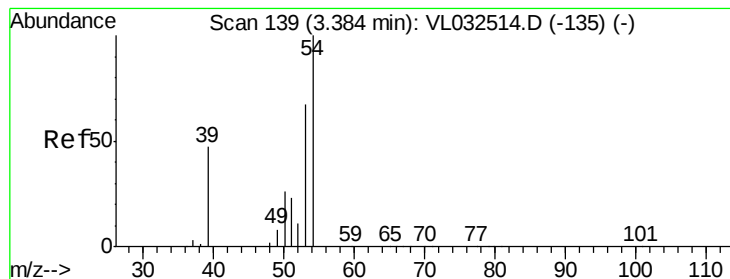
58 29.4 22.6 33.8



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#16

1,3-Butadiene

Concen: 0.068 ppbv

RT: 3.36 min Scan# 133

Delta R.T. -0.03 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampled :

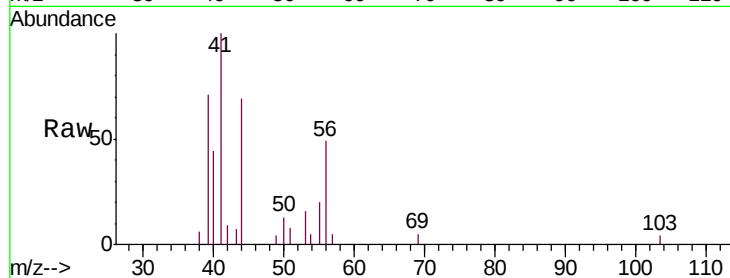
CIA-1

Tgt Ion: 39 Resp: 2961

Ion Ratio Lower Upper

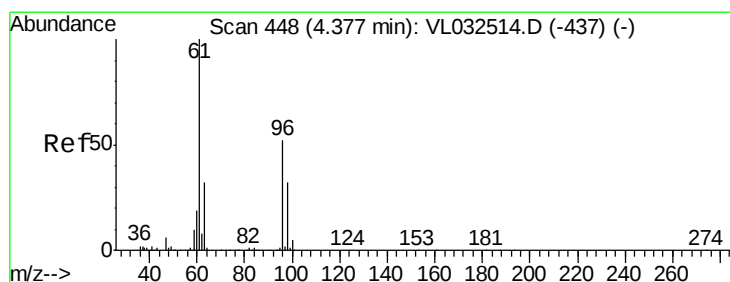
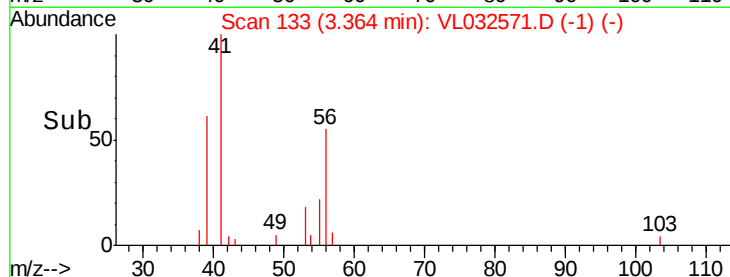
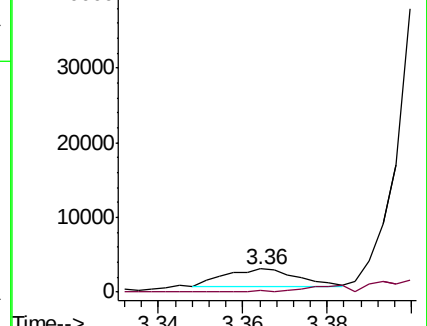
39 100

54 0.0 80.8 121.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0



#17

tert-Butyl alcohol

Concen: 0.211 ppbv

RT: 4.40 min Scan# 455

Delta R.T. -0.01 min

Lab File: VL032571.D

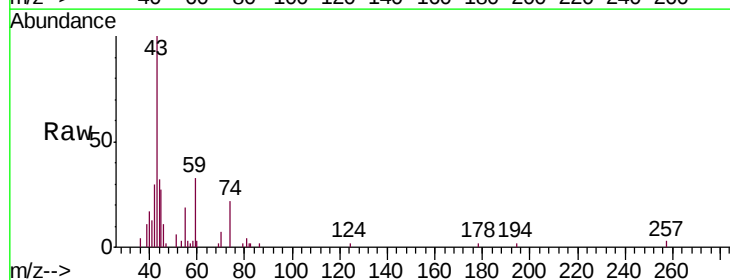
Acq: 28 Sep 2018 5:23

Tgt Ion: 59 Resp: 2856

Ion Ratio Lower Upper

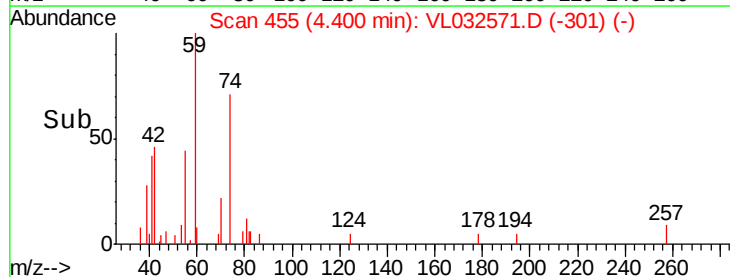
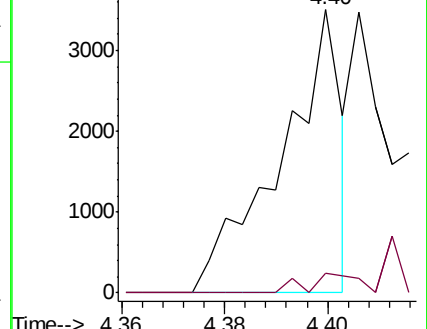
59 100

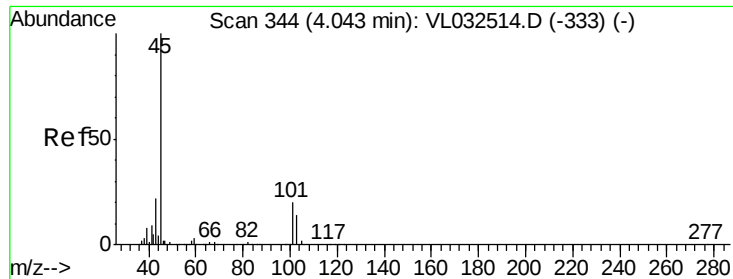
57 0.0 0.0 0.0



Abundance Ion 59.10 (58.80 to 59.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#19

Isopropyl Alcohol

Concen: 19.855 ppbv

RT: 3.67 min Scan# 229

Delta R.T. -0.39 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

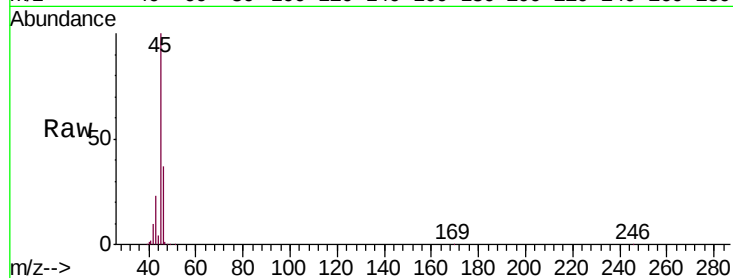
CIA-1

Tgt Ion: 45 Resp: 1490584

Ion Ratio Lower Upper

45 100

58 0.0 2.0 3.0#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.67

800000

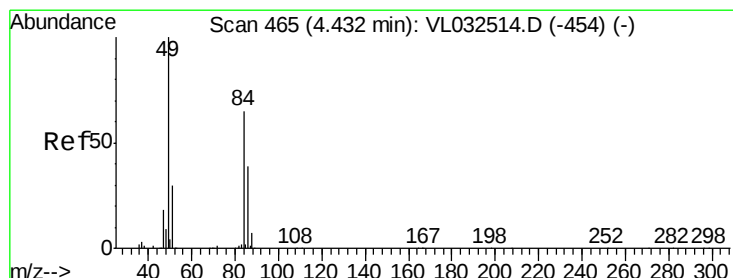
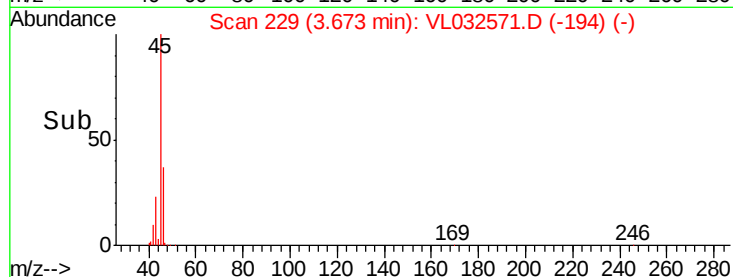
600000

400000

200000

0

Time-->



#20

Methylene Chloride

Concen: 1.605 ppbv

RT: 4.43 min Scan# 466

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Tgt Ion: 84 Resp: 83754

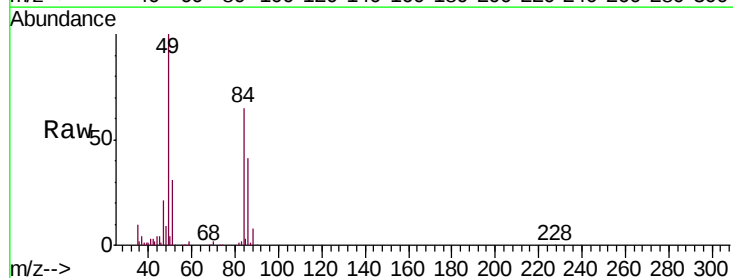
Ion Ratio Lower Upper

84 100

49 153.0 119.1 178.7

51 47.4 35.2 52.8

86 62.7 49.4 74.2



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

120000

100000

80000

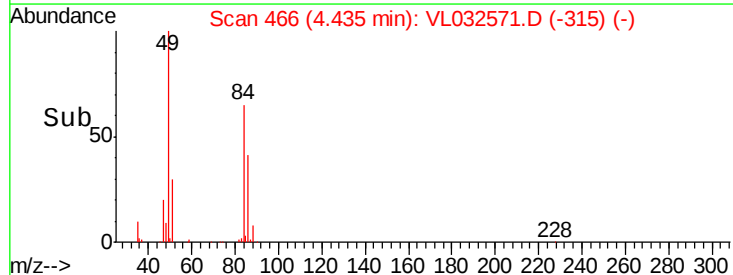
60000

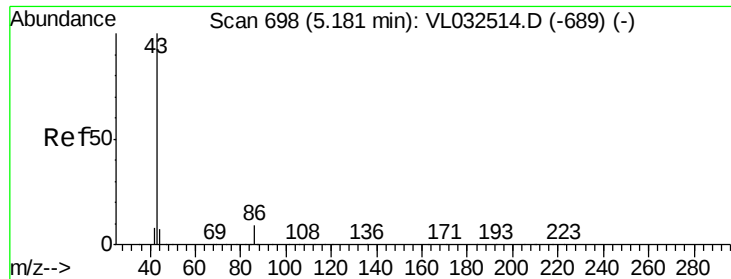
40000

20000

0

Time-->

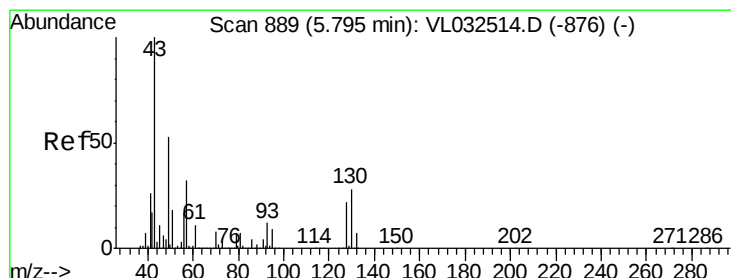
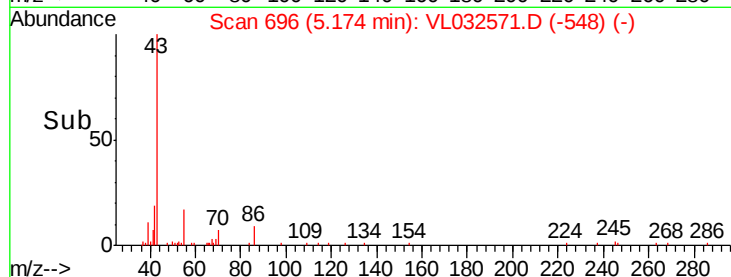
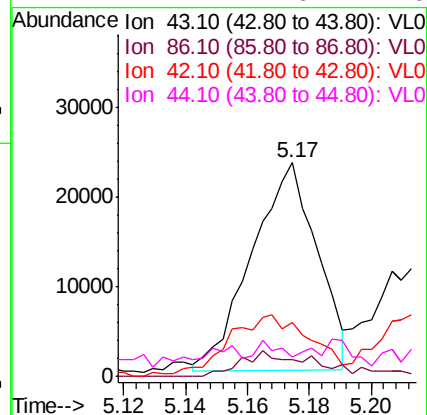
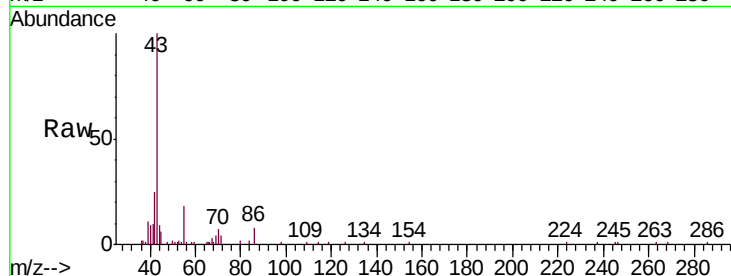




#23  
 Vinyl Acetate  
 Concen: 0.179 ppbv  
 RT: 5.17 min Scan# 696  
 Delta R.T. -0.02 min  
 Lab File: VL032571.D  
 Acq: 28 Sep 2018 5:23

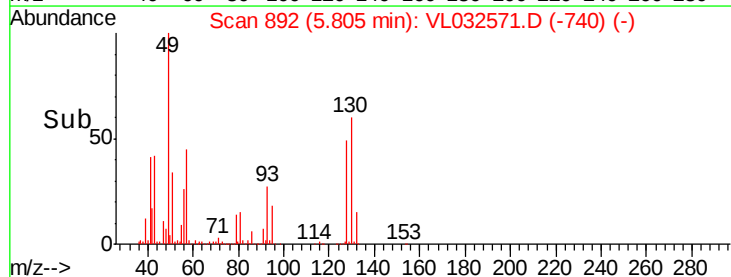
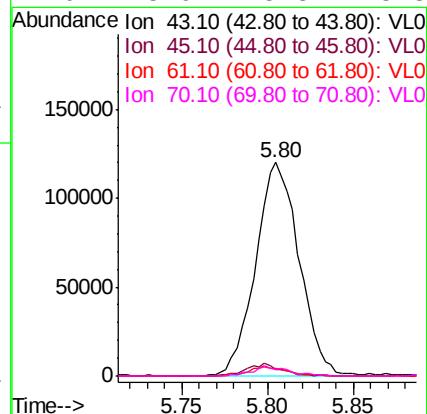
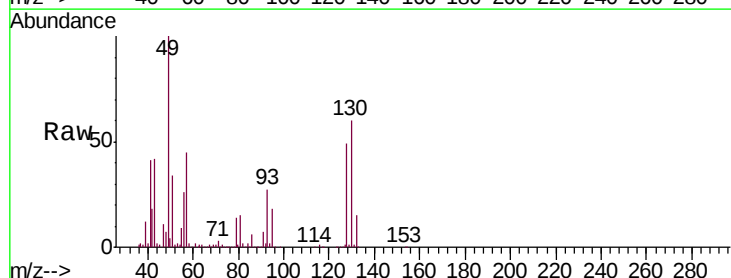
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 CIA-1

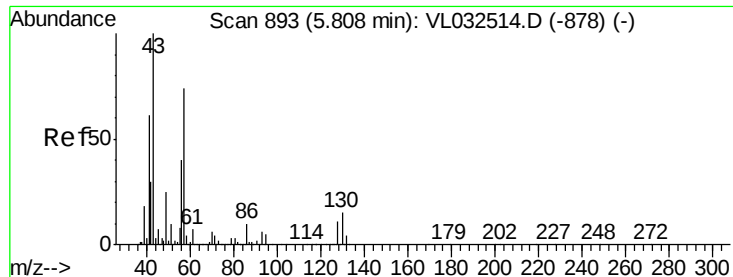
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 34038 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 8.5   | 5.9   | 8.9   |
| 42       | 22.3  | 6.9   | 10.3# |
| 44       | 1.7   | 4.6   | 7.0#  |



#25  
 Ethyl Acetate  
 Concen: 0.805 ppbv  
 RT: 5.80 min Scan# 892  
 Delta R.T. -0.01 min  
 Lab File: VL032571.D  
 Acq: 28 Sep 2018 5:23

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 43    | Resp: | 210435 |
| Ion      | Ratio | Lower | Upper  |
| 43       | 100   |       |        |
| 45       | 4.8   | 8.0   | 12.0#  |
| 61       | 4.0   | 7.6   | 11.4#  |
| 70       | 3.9   | 5.8   | 8.8#   |





#26

Hexane

Concen: 1.854 ppbv

RT: 5.81 min Scan# 894

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

CIA-1

Tgt Ion: 57 Resp: 219047

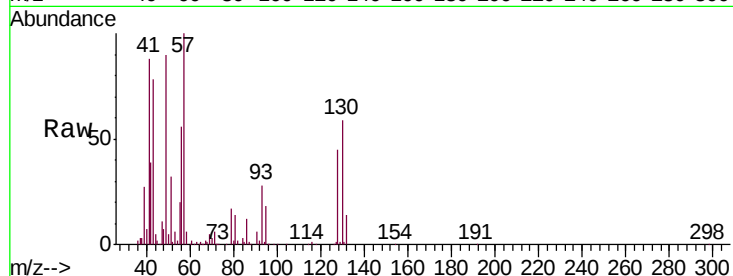
Ion Ratio Lower Upper

57 100

41 93.6 69.0 103.4

43 96.2 172.1 258.1#

56 59.2 42.2 63.2

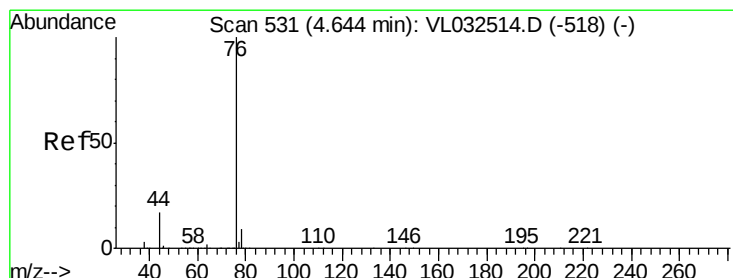
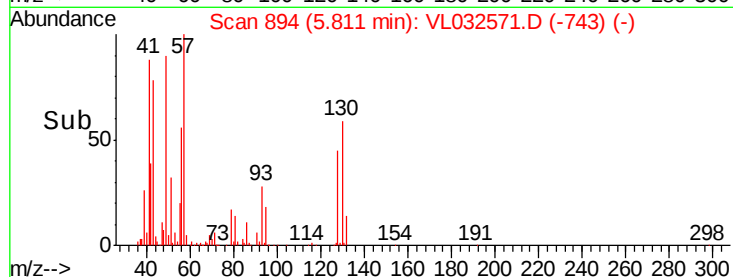
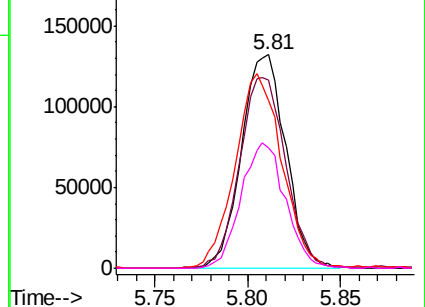


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#27

Carbon Disulfide

Concen: 0.053 ppbv

RT: 4.65 min Scan# 532

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

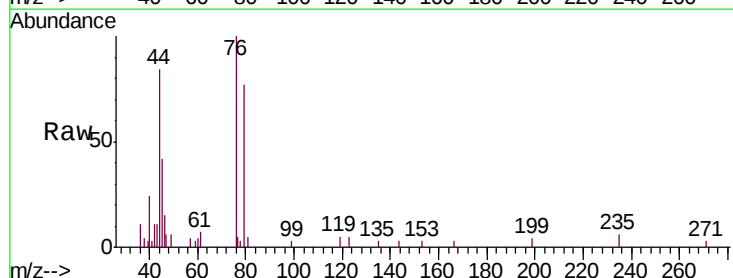
Tgt Ion: 76 Resp: 6758

Ion Ratio Lower Upper

76 100

44 115.9 14.0 21.0#

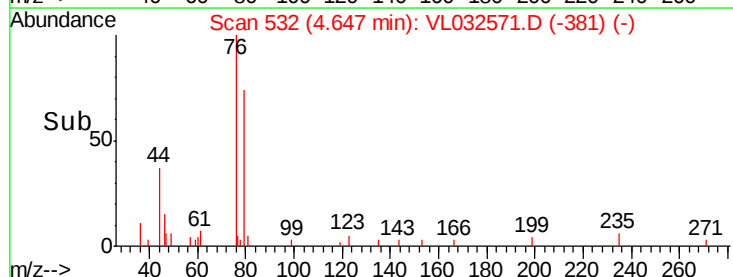
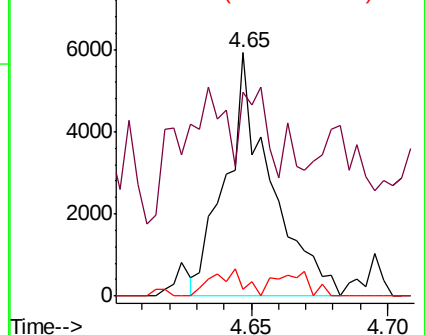
78 16.4 7.5 11.3#

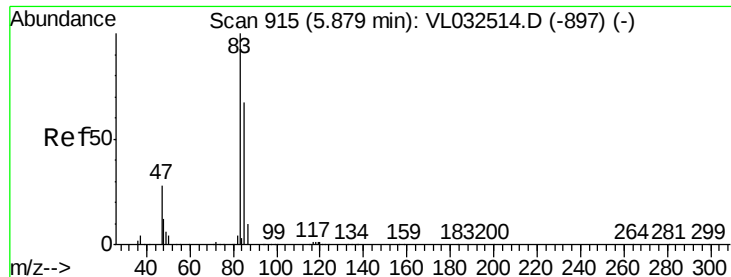


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0





#29

Chloroform

Concen: 0.035 ppbv

RT: 5.87 min Scan# 913

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

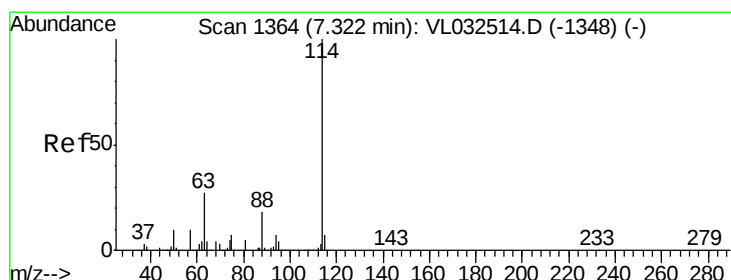
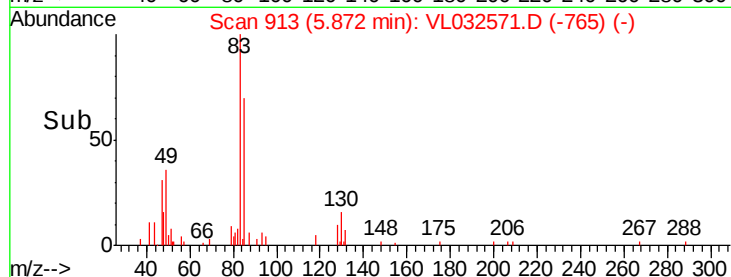
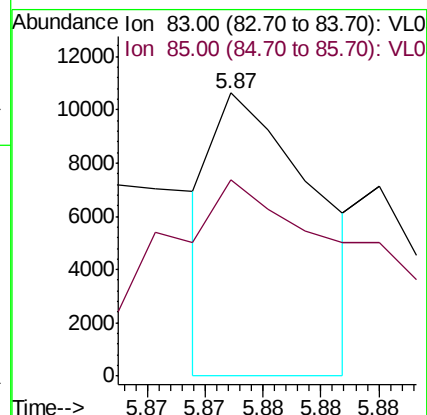
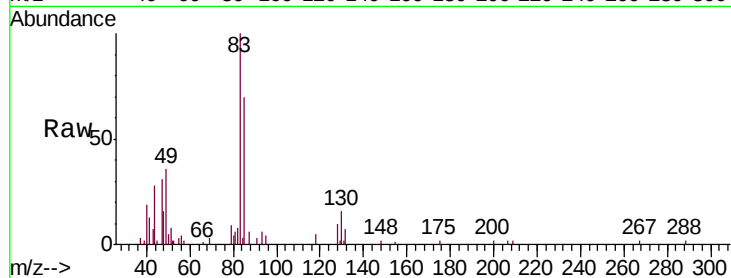
CIA-1

Tgt Ion: 83 Resp: 6433

Ion Ratio Lower Upper

83 100

85 52.8 52.5 78.7



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.32 min Scan# 1364

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

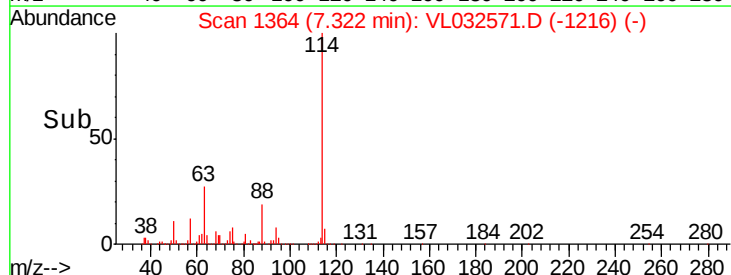
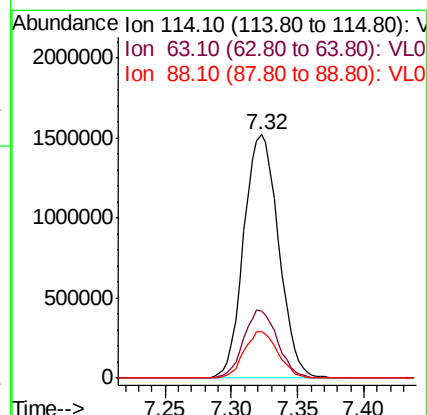
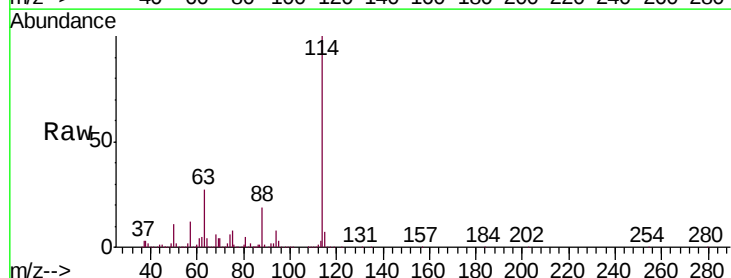
Tgt Ion: 114 Resp: 2782841

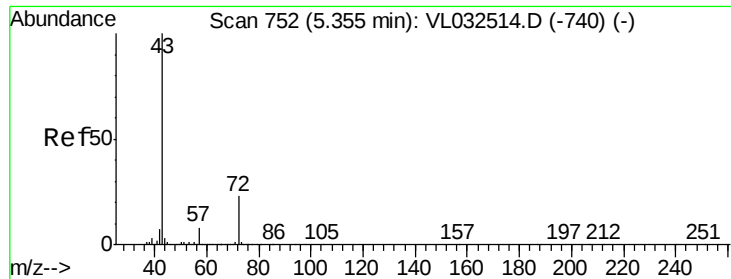
Ion Ratio Lower Upper

114 100

63 27.1 22.2 33.4

88 18.8 15.0 22.4

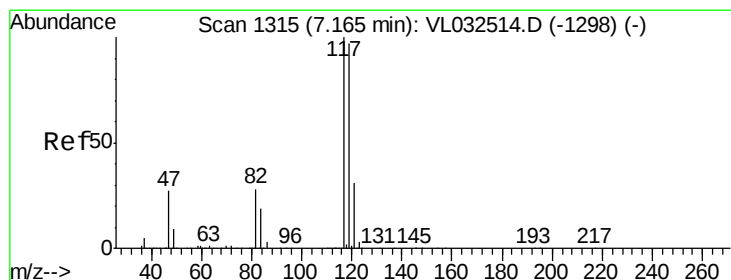
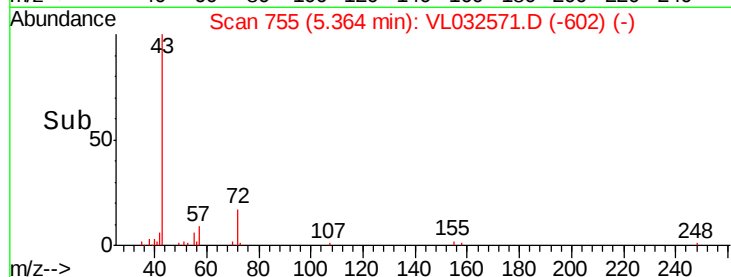
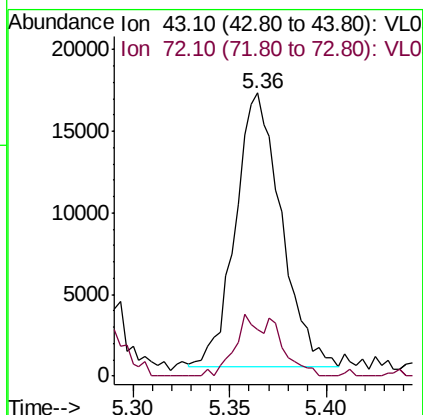
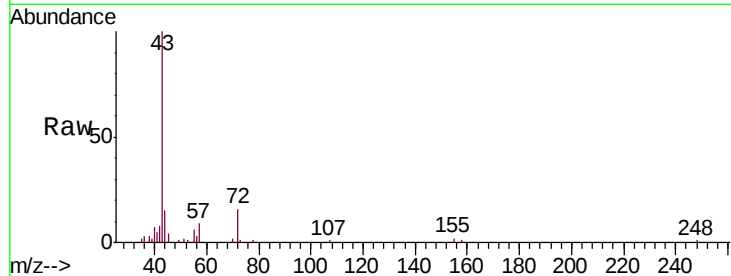




#34  
2-Butanone  
Concen: 0.166 ppbv  
RT: 5.36 min Scan# 755  
Delta R.T. -0.01 min  
Lab File: VL032571.D  
Acq: 28 Sep 2018 5:23

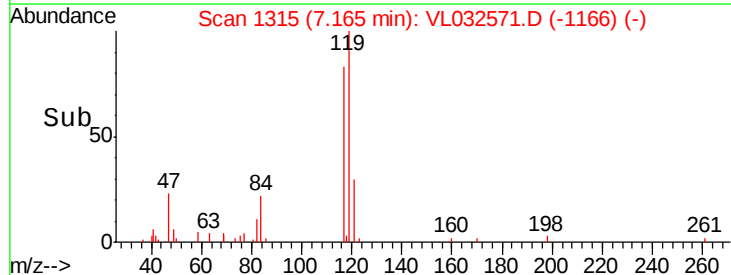
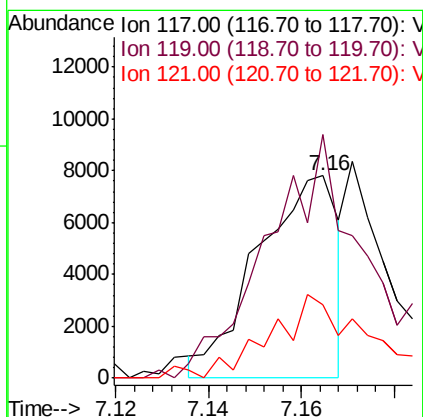
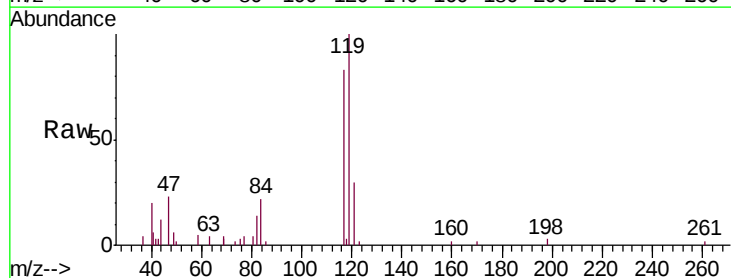
Instrument :  
MSVOA\_L  
ClientSampleId :  
CIA-1

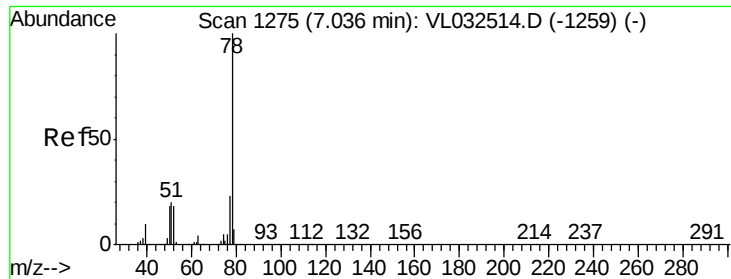
Tgt Ion: 43 Resp: 27505  
Ion Ratio Lower Upper  
43 100  
72 21.3 17.8 26.6



#35  
Carbon Tetrachloride  
Concen: 0.048 ppbv  
RT: 7.16 min Scan# 1315  
Delta R.T. -0.02 min  
Lab File: VL032571.D  
Acq: 28 Sep 2018 5:23

Tgt Ion: 117 Resp: 9306  
Ion Ratio Lower Upper  
117 100  
119 126.7 76.6 115.0#  
121 36.4 24.6 36.8

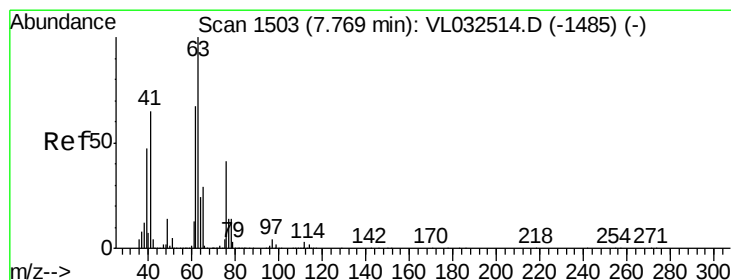
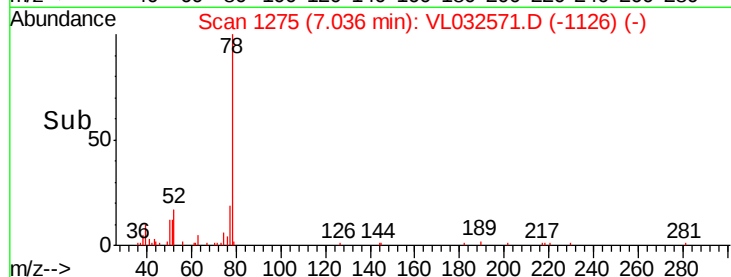
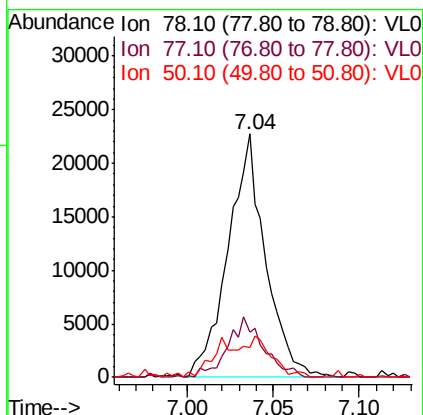
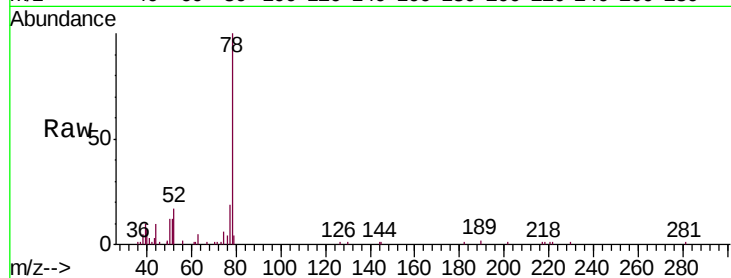




#36  
Benzene  
Concen: 0.153 ppbv  
RT: 7.04 min Scan# 1275  
Delta R.T. -0.02 min  
Lab File: VL032571.D  
Acq: 28 Sep 2018 5:23

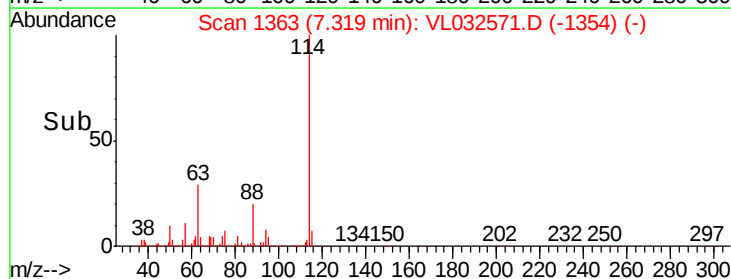
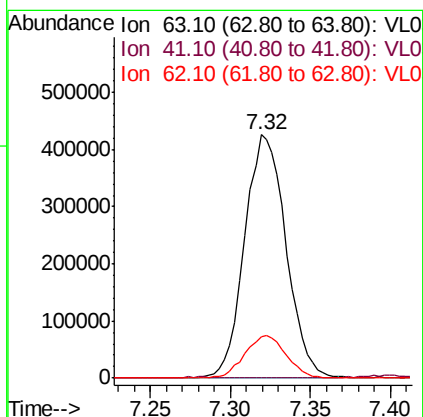
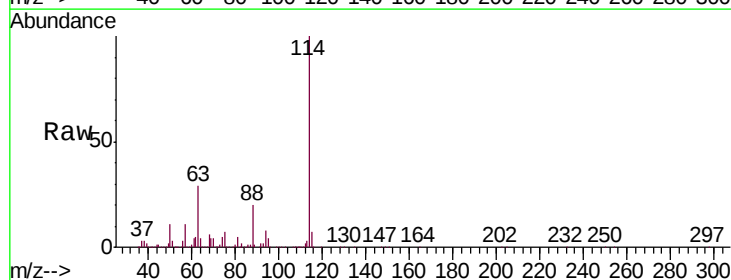
Instrument :  
MSVOA\_L  
ClientSampleId :  
CIA-1

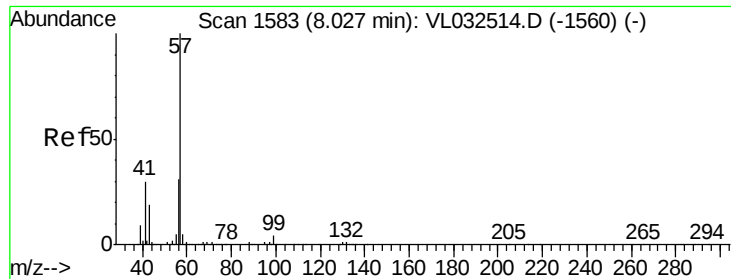
Tgt Ion: 78 Resp: 34436  
Ion Ratio Lower Upper  
78 100  
77 18.5 18.4 27.6  
50 9.3 14.4 21.6#



#39  
1,2-Dichloropropane  
Concen: 7.404 ppbv  
RT: 7.32 min Scan# 1363  
Delta R.T. -0.47 min  
Lab File: VL032571.D  
Acq: 28 Sep 2018 5:23

Tgt Ion: 63 Resp: 750418  
Ion Ratio Lower Upper  
63 100  
41 0.1 55.4 83.0#  
62 17.1 55.4 83.0#

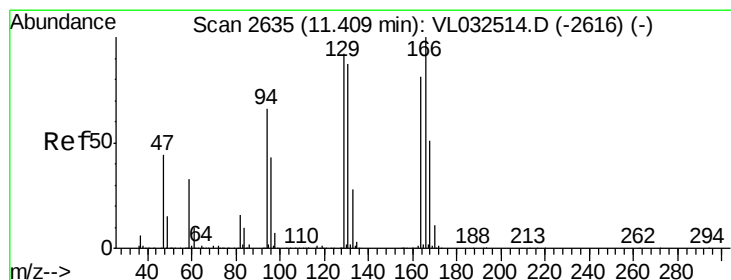
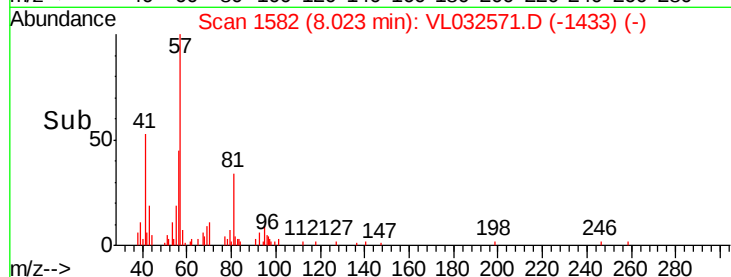
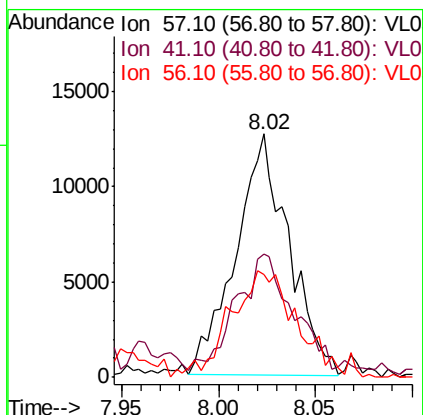
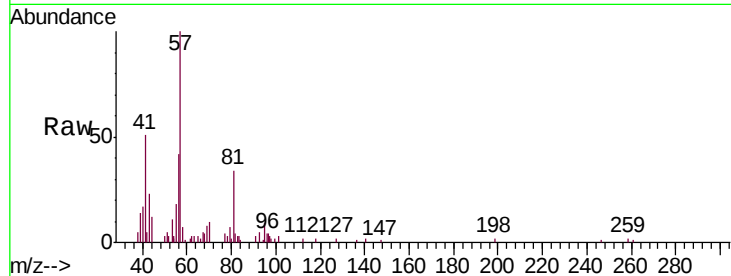




#44  
 2,2,4-Trimethylpentane  
 Concen: 0.056 ppbv  
 RT: 8.02 min Scan# 1582  
 Delta R.T. -0.02 min  
 Lab File: VL032571.D  
 Acq: 28 Sep 2018 5:23

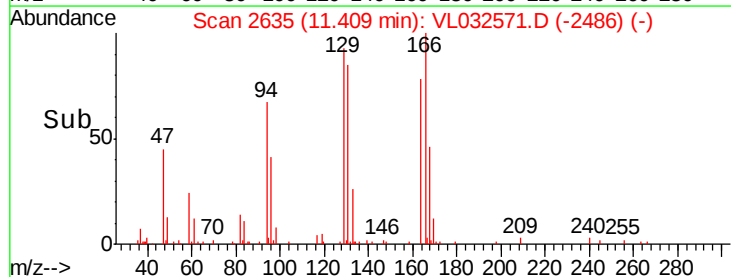
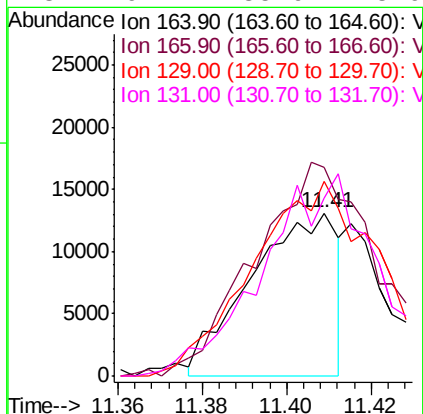
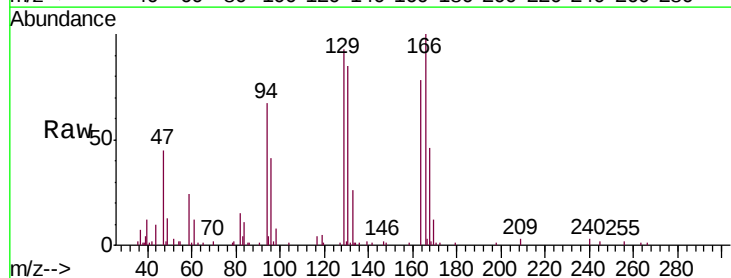
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 CIA-1

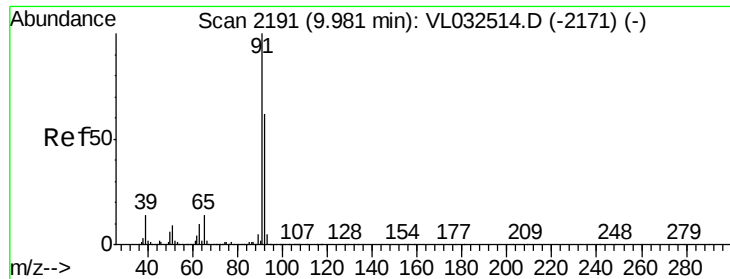
Tgt Ion: 57 Resp: 24427  
 Ion Ratio Lower Upper  
 57 100  
 41 60.3 24.4 36.6#  
 56 55.2 25.7 38.5#



#52  
 Tetrachloroethene  
 Concen: 0.240 ppbv  
 RT: 11.41 min Scan# 2635  
 Delta R.T. -0.02 min  
 Lab File: VL032571.D  
 Acq: 28 Sep 2018 5:23

Tgt Ion: 164 Resp: 18757  
 Ion Ratio Lower Upper  
 164 100  
 166 128.2 100.6 150.8  
 129 108.8 89.9 134.9  
 131 97.1 85.9 128.9





#53

Toluene

Concen: 1.387 ppbv

RT: 9.98 min Scan# 2191

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

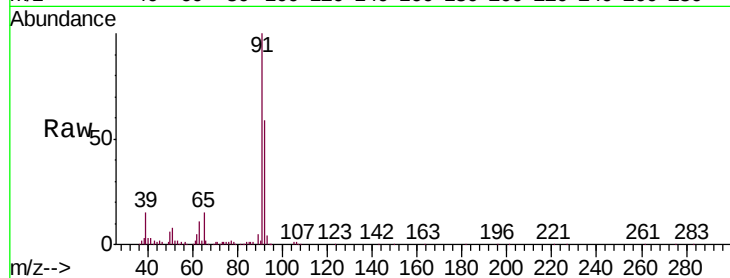
CIA-1

Tgt Ion: 91 Resp: 380096

Ion Ratio Lower Upper

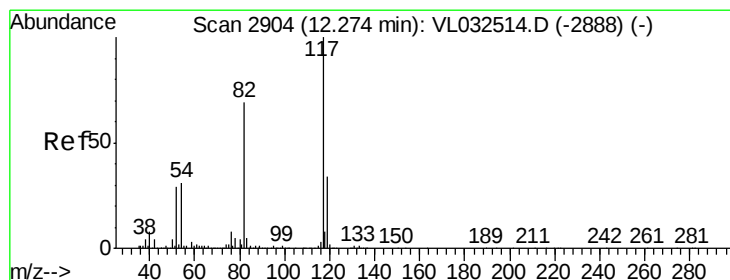
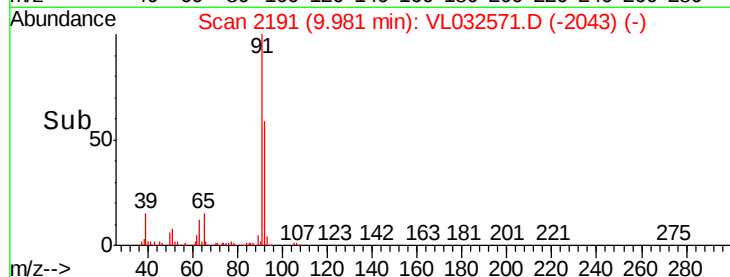
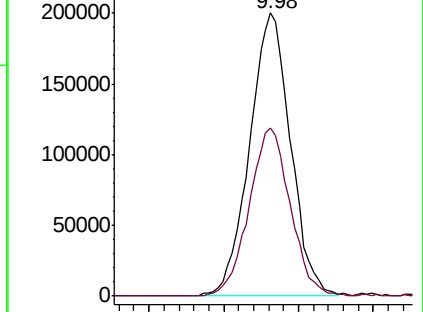
91 100

92 59.8 48.1 72.1



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.27 min Scan# 2904

Delta R.T. -0.02 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

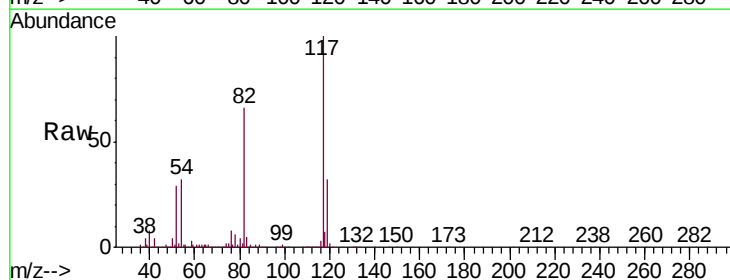
Tgt Ion: 117 Resp: 2962253

Ion Ratio Lower Upper

117 100

82 67.5 53.0 79.6

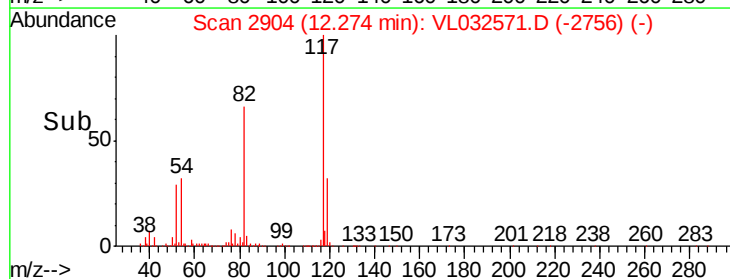
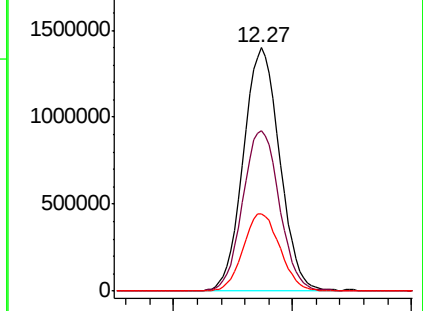
119 32.2 45.9 68.9#

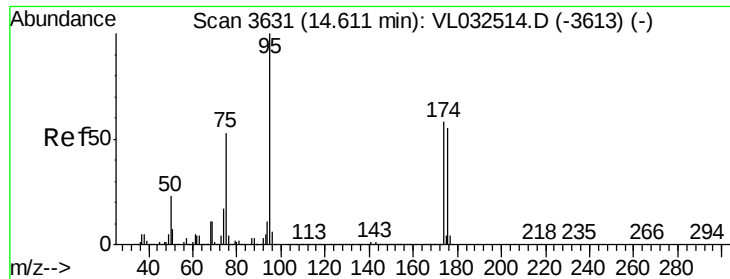


Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 9.356 ppbv

RT: 14.61 min Scan# 3630

Delta R.T. -0.03 min

Lab File: VL032571.D

Acq: 28 Sep 2018 5:23

Instrument :

MSVOA\_L

ClientSampleId :

CIA-1

Tgt Ion: 95 Resp: 2089918

Ion Ratio Lower Upper

95 100

174 58.4 46.3 69.5

175 4.1 3.4 5.0

