

Data File : VL032853.D  
Acq On : 30 Nov 2018 17:43  
Operator : SY/AP  
Sample : J6132-02 10X  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
DSV-01DL

Quant Time: Dec 01 02:24:19 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL111418AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Nov 14 07:00:23 2018  
QLast Update : Wed Nov 14 07:00:23 2018  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 1502616  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.30  | 114  | 3782804  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.25 | 117  | 3624651  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 2780746  | 10.26    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 102.60% |

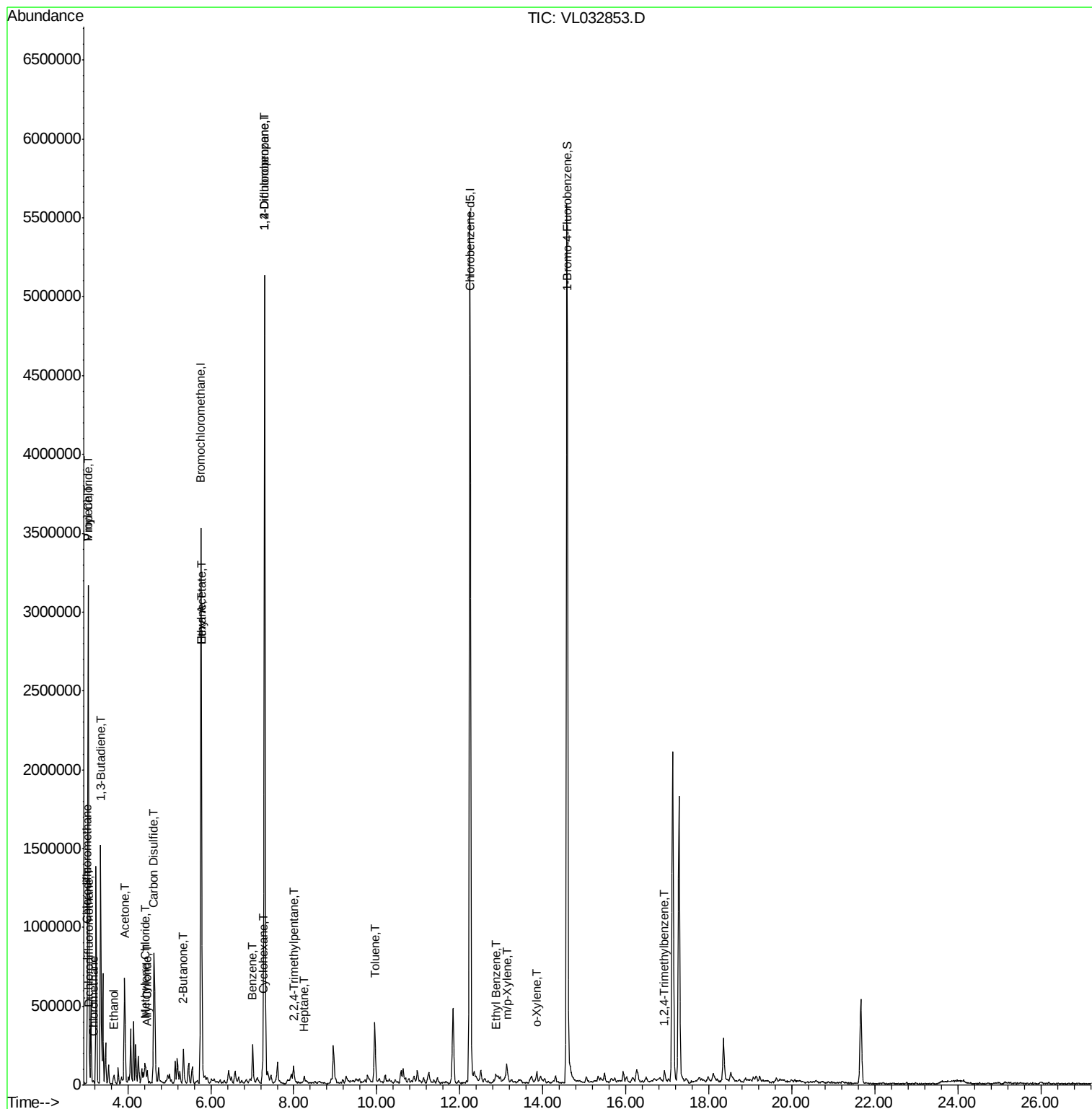
| Target Compounds           |       |     |         |              | Qvalue |
|----------------------------|-------|-----|---------|--------------|--------|
| 2) Dichlorodifluoromethane | 3.08  | 85  | 10566   | 0.049 ppbv # | 84     |
| 3) Chlorodifluoromethane   | 3.02  | 51  | 6804    | 0.057 ppbv   | 93     |
| 4) Chloromethane           | 3.17  | 50  | 11828   | 0.179 ppbv # | 82     |
| 5) Vinyl Chloride          | 3.05  | 62  | 24135   | 0.345 ppbv # | 44     |
| 9) Propene                 | 3.04  | 41  | 1191823 | 25.000 ppbv  | 90     |
| 10) Heptane                | 8.25  | 43  | 6921    | 0.038 ppbv # | 26     |
| 13) Ethanol                | 3.66  | 45  | 52887   | 3.387 ppbv   | 87     |
| 15) Acetone                | 3.91  | 43  | 496895  | 3.621 ppbv   | 99     |
| 16) 1,3-Butadiene          | 3.35  | 39  | 462467  | 8.703 ppbv # | 24     |
| 20) Methylene Chloride     | 4.41  | 84  | 38250   | 0.538 ppbv   | 85     |
| 21) Allyl Chloride         | 4.47  | 41  | 5351    | 0.046 ppbv # | 1      |
| 25) Ethyl Acetate          | 5.79  | 43  | 106176  | 0.332 ppbv # | 79     |
| 26) Hexane                 | 5.79  | 57  | 145564  | 1.022 ppbv # | 41     |
| 27) Carbon Disulfide       | 4.62  | 76  | 892037  | 4.941 ppbv   | 97     |
| 30) Cyclohexane            | 7.26  | 84  | 40866   | 0.328 ppbv # | 21     |
| 34) 2-Butanone             | 5.34  | 43  | 240915  | 1.228 ppbv   | 100    |
| 36) Benzene                | 7.01  | 78  | 193016  | 0.641 ppbv   | 97     |
| 39) 1,2-Dichloropropane    | 7.29  | 63  | 899102  | 7.834 ppbv # | 23     |
| 44) 2,2,4-Trimethylpentane | 7.99  | 57  | 56849   | 0.113 ppbv # | 37     |
| 53) Toluene                | 9.95  | 91  | 237549  | 0.756 ppbv   | 99     |
| 58) Ethyl Benzene          | 12.87 | 91  | 17317   | 0.040 ppbv # | 88     |
| 59) m/p-Xylene             | 13.13 | 91  | 85910   | 0.221 ppbv # | 84     |
| 60) o-Xylene               | 13.86 | 91  | 53156   | 0.136 ppbv   | 97     |
| 74) 1,2,4-Trimethylbenzene | 16.93 | 105 | 19169   | 0.043 ppbv # | 75     |

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

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#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

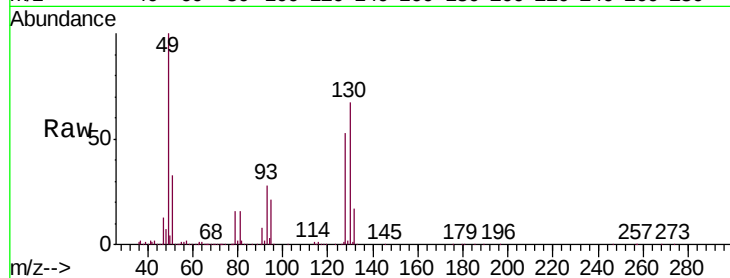
Tgt Ion: 49 Resp: 1502616

Ion Ratio Lower Upper

49 100

128 52.8 24.9 74.6

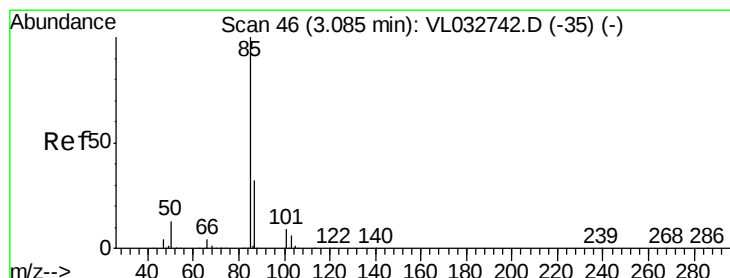
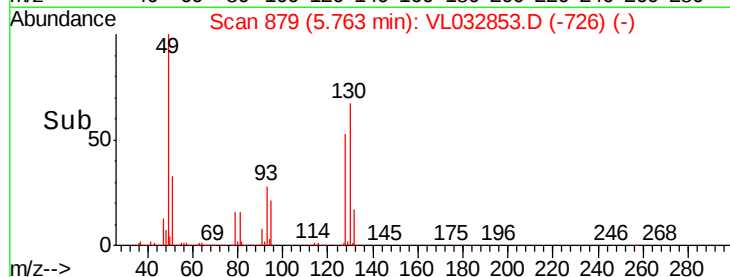
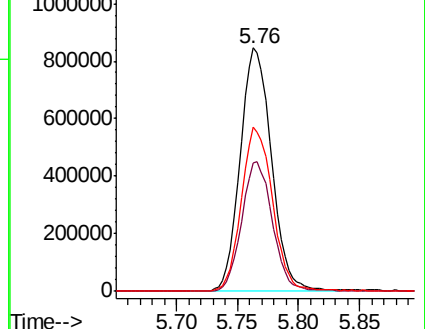
130 67.6 31.4 94.2



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.049 ppbv

RT: 3.08 min Scan# 45

Delta R.T. -0.00 min

Lab File: VL032853.D

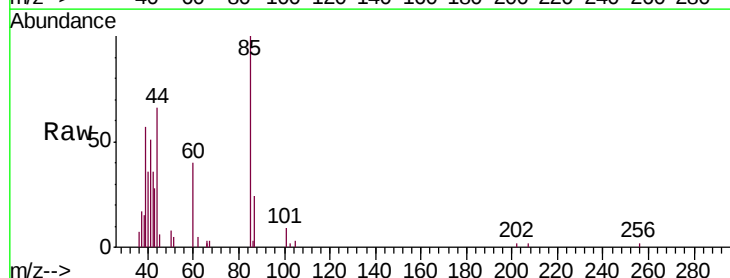
Acq: 30 Nov 2018 17:43

Tgt Ion: 85 Resp: 10566

Ion Ratio Lower Upper

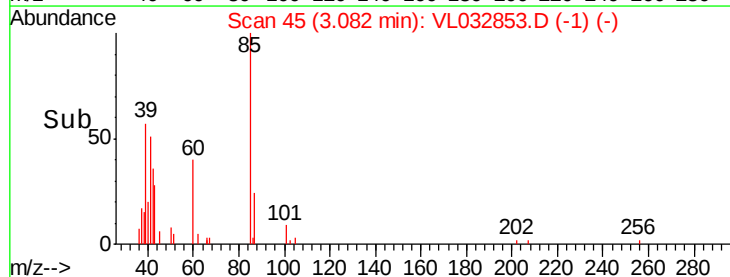
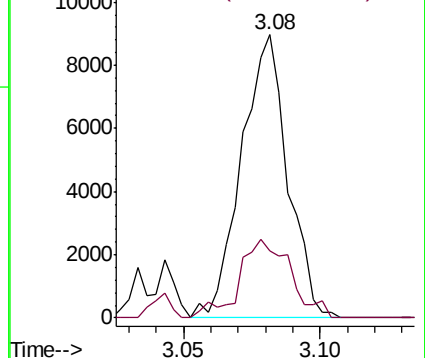
85 100

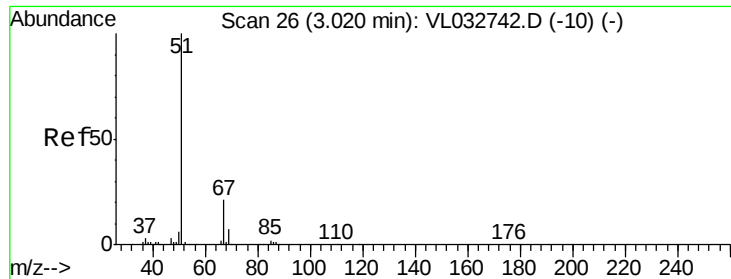
87 23.6 26.0 39.0#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.057 ppbv

RT: 3.02 min Scan# 25

Delta R.T. -0.00 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

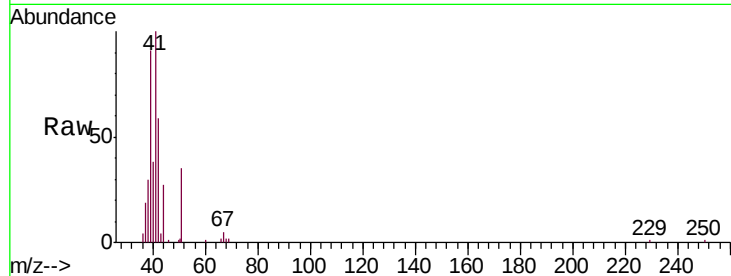
DSV-01DL

Tgt Ion: 51 Resp: 6804

Ion Ratio Lower Upper

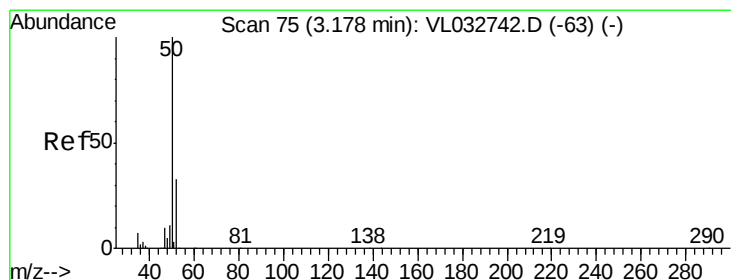
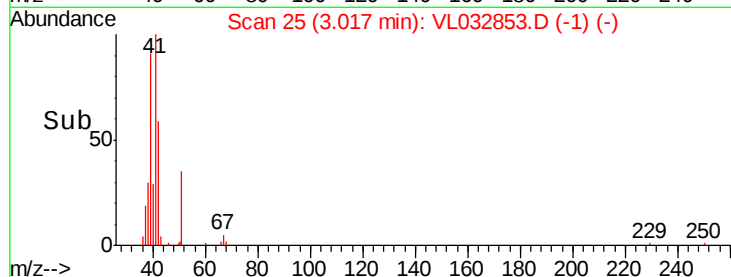
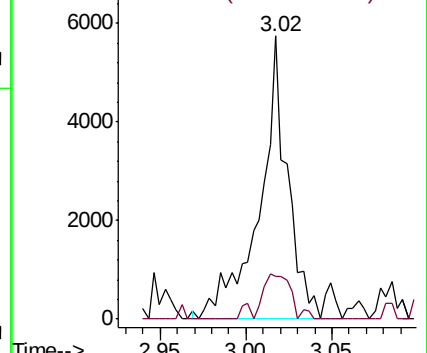
51 100

67 16.7 16.1 24.1



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.179 ppbv

RT: 3.17 min Scan# 73

Delta R.T. -0.01 min

Lab File: VL032853.D

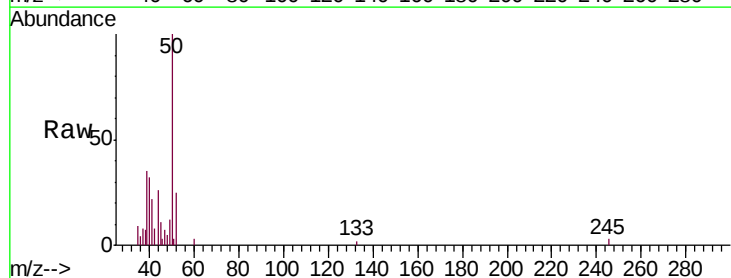
Acq: 30 Nov 2018 17:43

Tgt Ion: 50 Resp: 11828

Ion Ratio Lower Upper

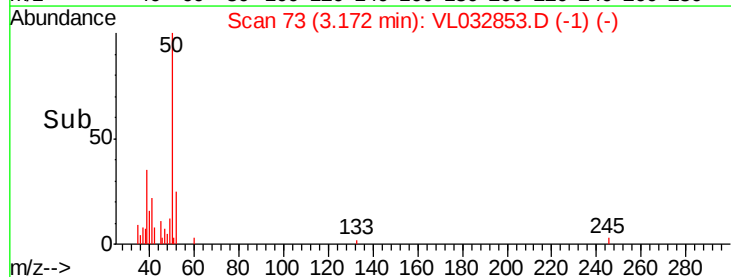
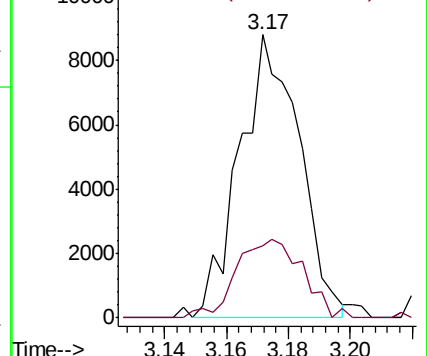
50 100

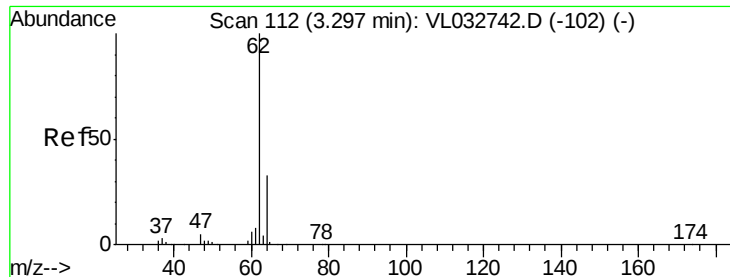
52 23.1 26.6 40.0#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.345 ppbv

RT: 3.05 min Scan# 34

Delta R.T. -0.25 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

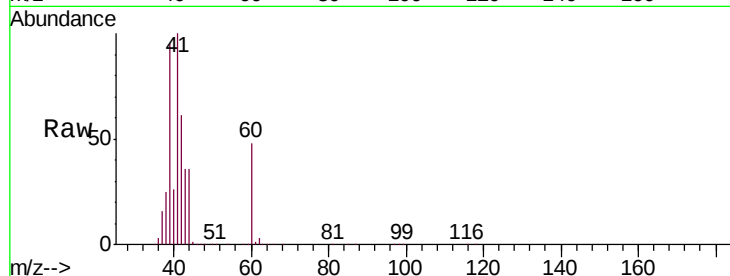
DSV-01DL

Tgt Ion: 62 Resp: 24135

Ion Ratio Lower Upper

62 100

64 1.4 26.2 39.4#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 64.10 (63.80 to 64.80): VL0

3.05

20000

15000

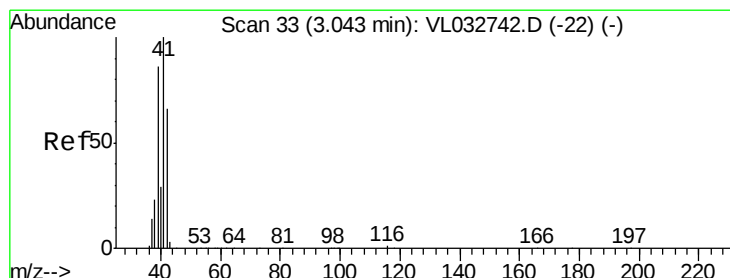
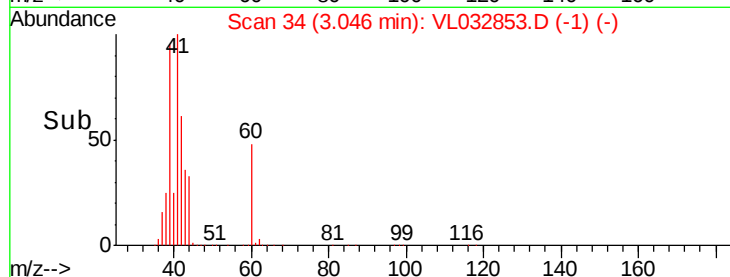
10000

5000

0

Time-->

3.00 3.05 3.10



#9

Propene

Concen: 25.000 ppbv

RT: 3.04 min Scan# 32

Delta R.T. -0.00 min

Lab File: VL032853.D

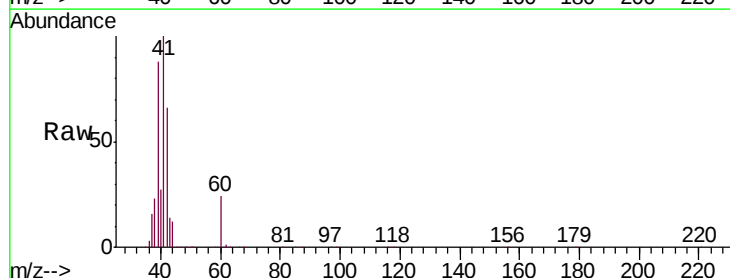
Acq: 30 Nov 2018 17:43

Tgt Ion: 41 Resp: 1191823

Ion Ratio Lower Upper

41 100

42 60.9 55.0 82.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

3.04

800000

600000

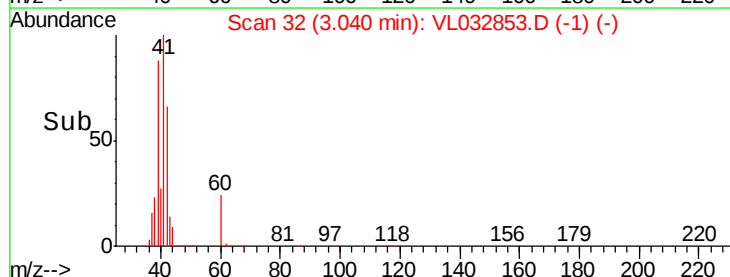
400000

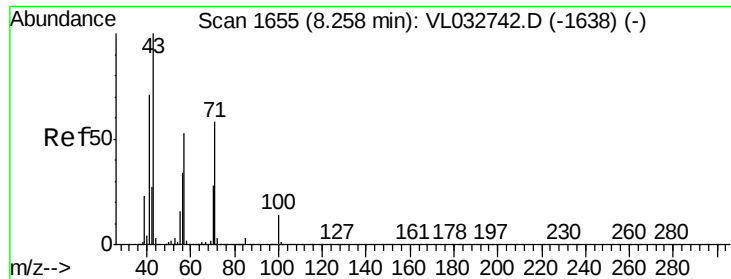
200000

0

Time-->

3.00 3.05 3.10

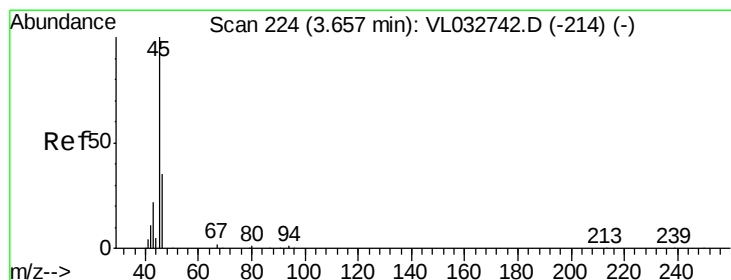
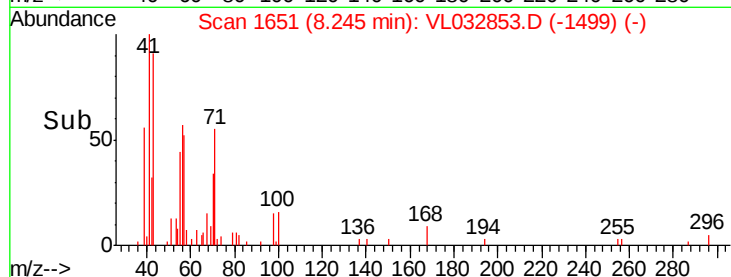
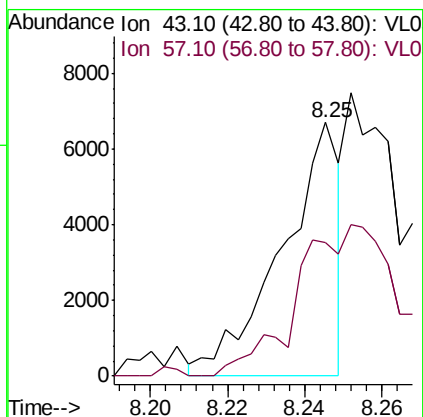
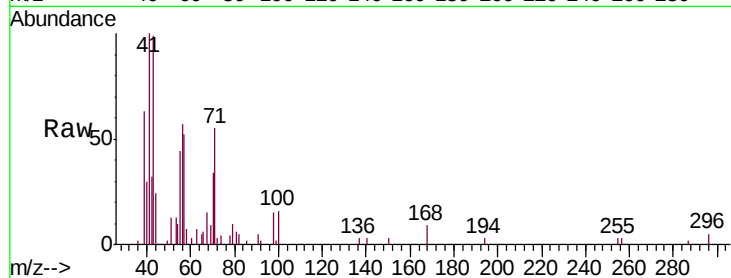




#10  
Heptane  
Concen: 0.038 ppbv  
RT: 8.25 min Scan# 1651  
Delta R.T. -0.01 min  
Lab File: VL032853.D  
Acq: 30 Nov 2018 17:43

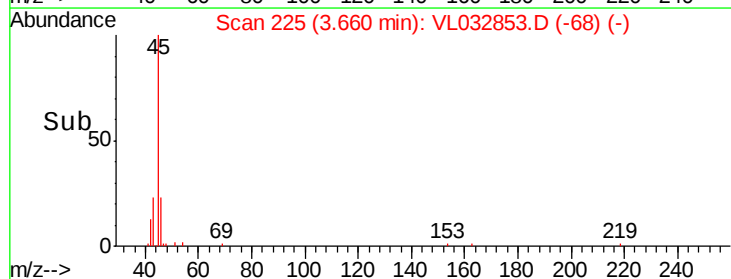
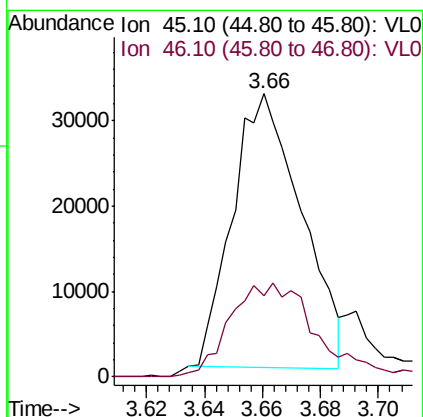
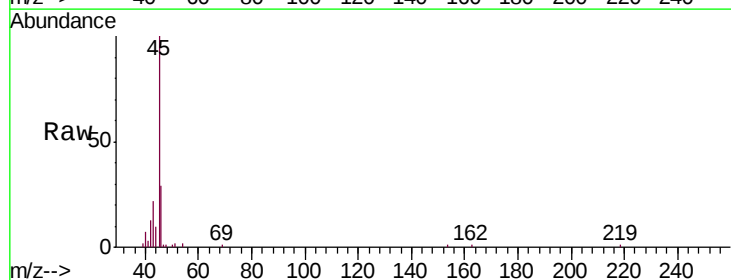
Instrument :  
MSVOA\_L  
ClientSampleId :  
DSV-01DL

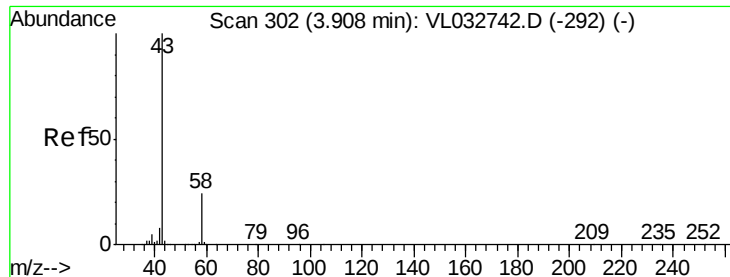
Tgt Ion: 43 Resp: 6921  
Ion Ratio Lower Upper  
43 100  
57 0.0 41.8 62.8#



#13  
Ethanol  
Concen: 3.387 ppbv  
RT: 3.66 min Scan# 225  
Delta R.T. 0.00 min  
Lab File: VL032853.D  
Acq: 30 Nov 2018 17:43

Tgt Ion: 45 Resp: 52887  
Ion Ratio Lower Upper  
45 100  
46 43.7 14.5 57.9





#15

Acetone

Concen: 3.621 ppbv

RT: 3.91 min Scan# 304

Delta R.T. 0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

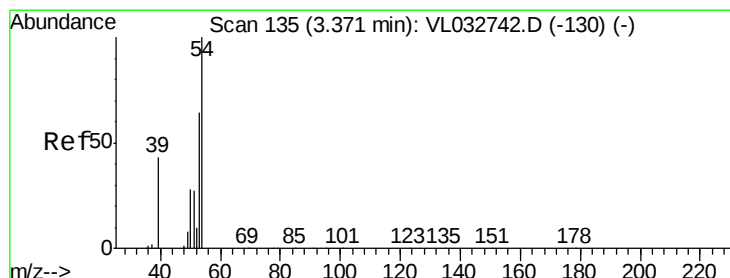
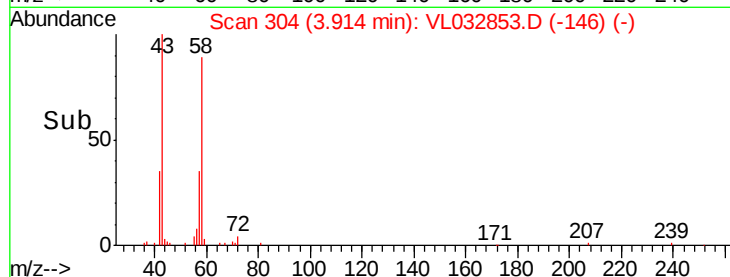
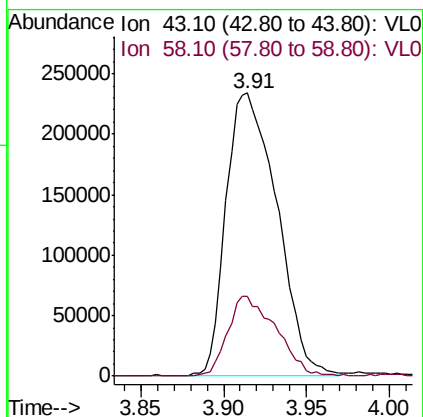
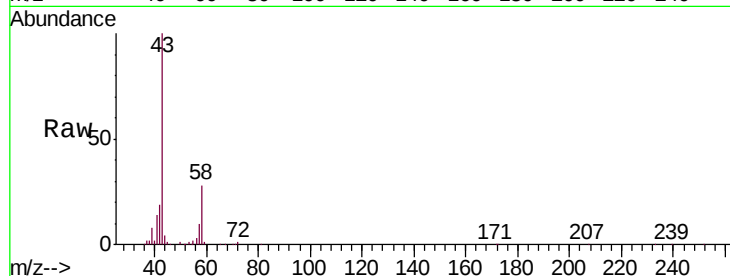
DSV-01DL

Tgt Ion: 43 Resp: 496895

Ion Ratio Lower Upper

43 100

58 27.2 21.1 31.7



#16

1,3-Butadiene

Concen: 8.703 ppbv

RT: 3.35 min Scan# 128

Delta R.T. -0.02 min

Lab File: VL032853.D

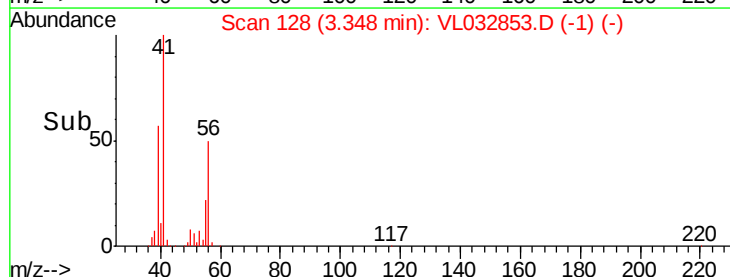
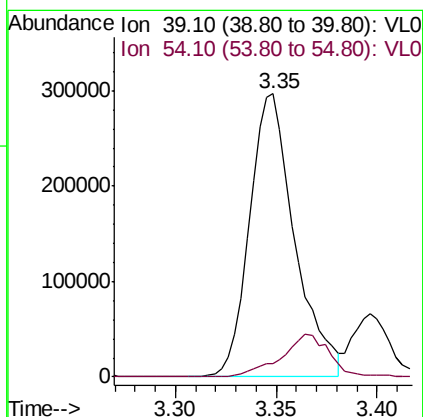
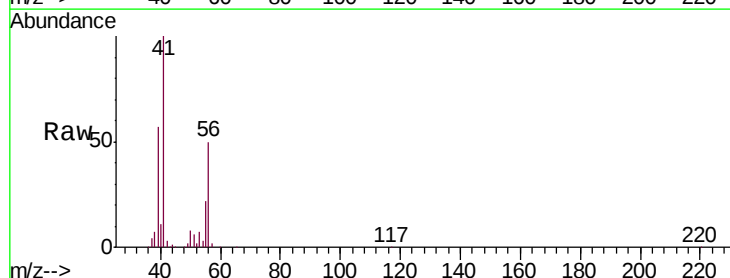
Acq: 30 Nov 2018 17:43

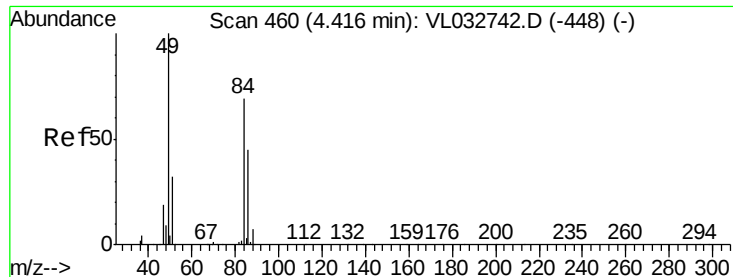
Tgt Ion: 39 Resp: 462467

Ion Ratio Lower Upper

39 100

54 16.2 68.9 103.3#

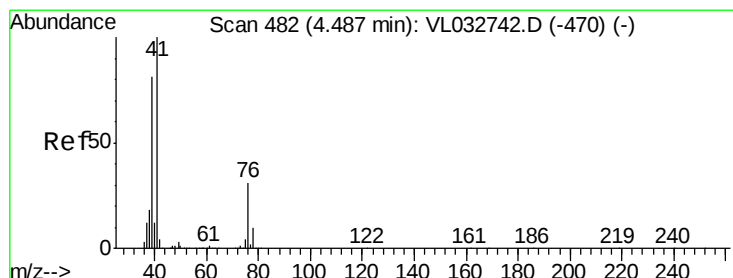
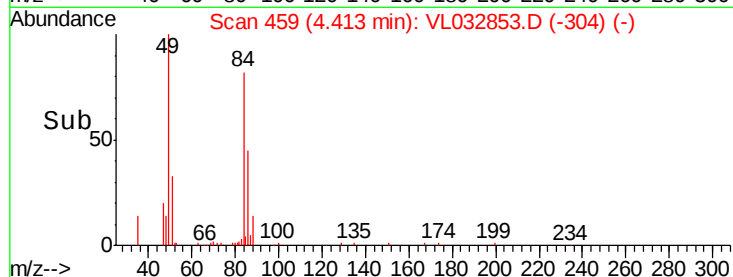
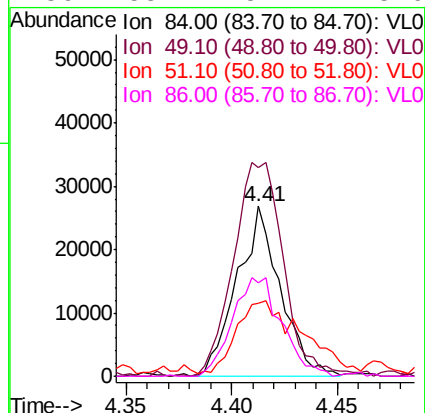
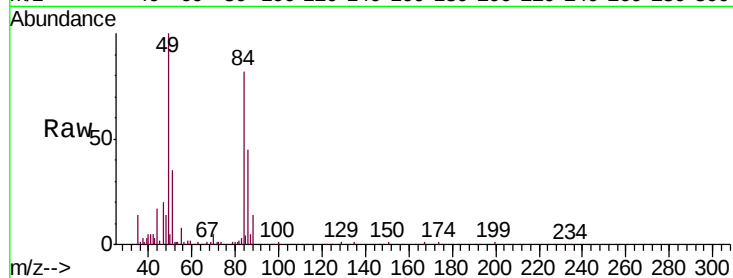




#20  
Methylene Chloride  
Concen: 0.538 ppbv  
RT: 4.41 min Scan# 459  
Delta R.T. -0.00 min  
Lab File: VL032853.D  
Acq: 30 Nov 2018 17:43

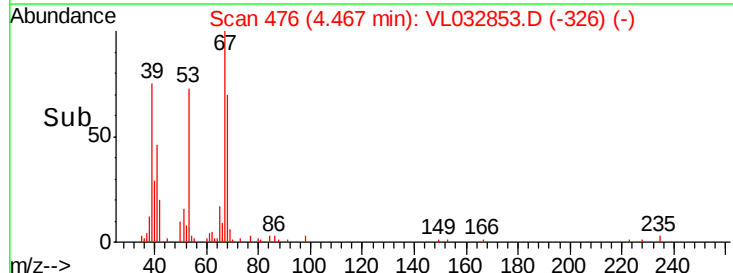
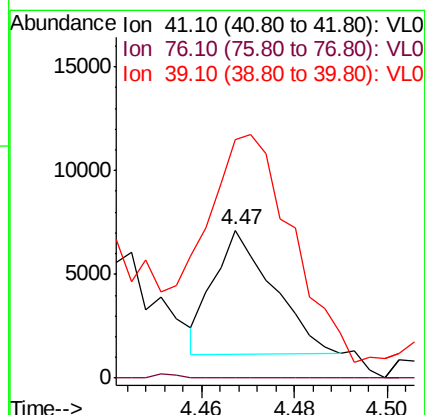
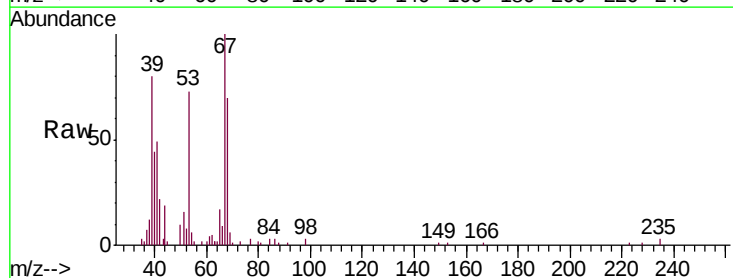
Instrument :  
MSVOA\_L  
ClientSampleId :  
DSV-01DL

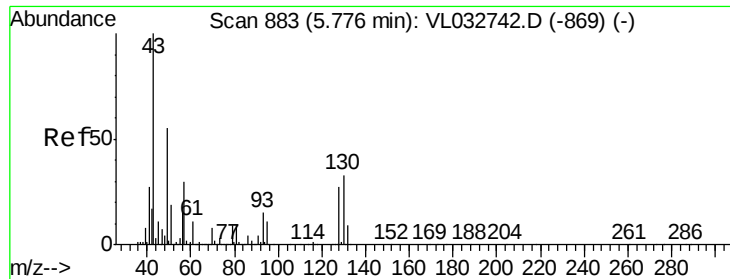
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 84    | Resp: | 38250 |
| Ion      | Ratio | Lower | Upper |
| 84       | 100   |       |       |
| 49       | 122.4 | 115.8 | 173.6 |
| 51       | 39.4  | 36.9  | 55.3  |
| 86       | 55.2  | 52.4  | 78.6  |



#21  
Allyl Chloride  
Concen: 0.046 ppbv  
RT: 4.47 min Scan# 476  
Delta R.T. -0.02 min  
Lab File: VL032853.D  
Acq: 30 Nov 2018 17:43

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 41    | Resp: | 5351  |
| Ion      | Ratio | Lower | Upper |
| 41       | 100   |       |       |
| 76       | 0.0   | 24.4  | 36.6# |
| 39       | 290.5 | 63.5  | 95.3# |





#25

Ethyl Acetate

Concen: 0.332 ppbv

RT: 5.79 min Scan# 886

Delta R.T. 0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

Tgt Ion: 43 Resp: 106176

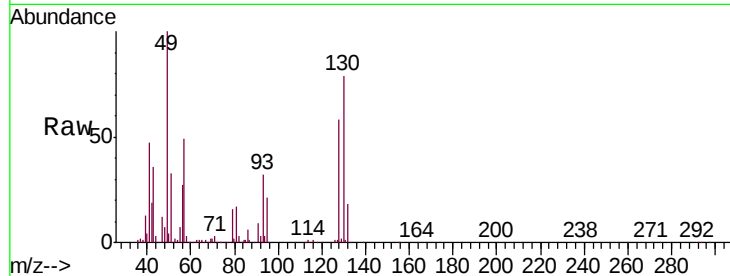
Ion Ratio Lower Upper

43 100

45 0.0 7.9 11.9#

61 1.6 7.8 11.6#

70 3.0 5.8 8.6#

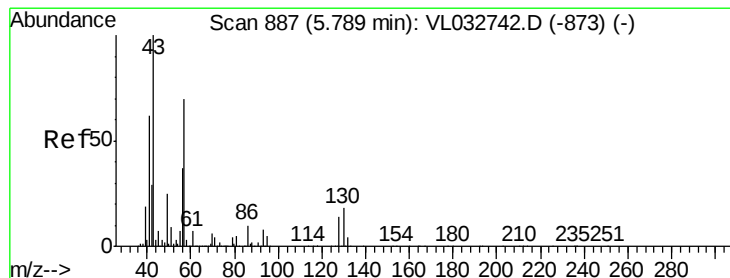
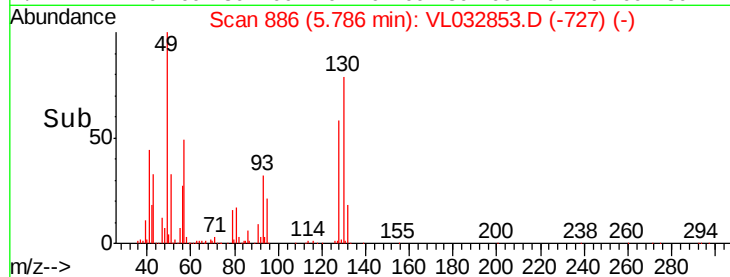
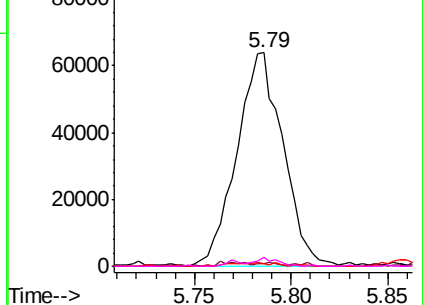


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 1.022 ppbv

RT: 5.79 min Scan# 886

Delta R.T. -0.00 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Tgt Ion: 57 Resp: 145564

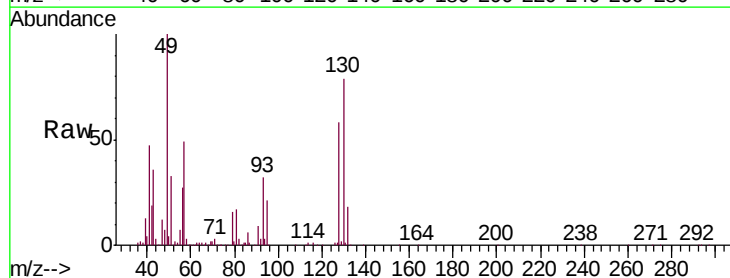
Ion Ratio Lower Upper

57 100

41 99.0 70.3 105.5

43 71.8 174.0 261.0#

56 58.3 42.3 63.5

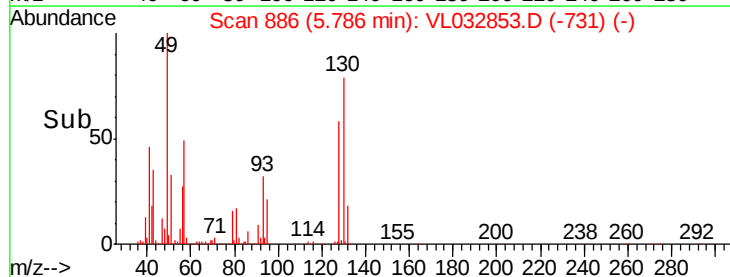
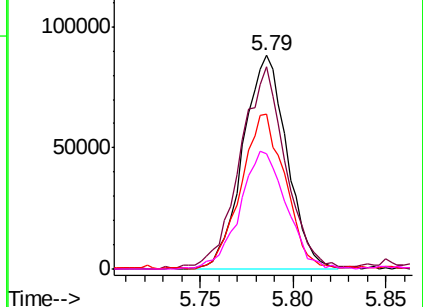


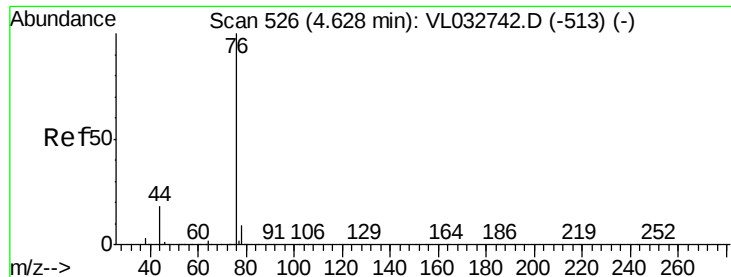
Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 4.941 ppbv

RT: 4.62 min Scan# 525

Delta R.T. -0.00 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

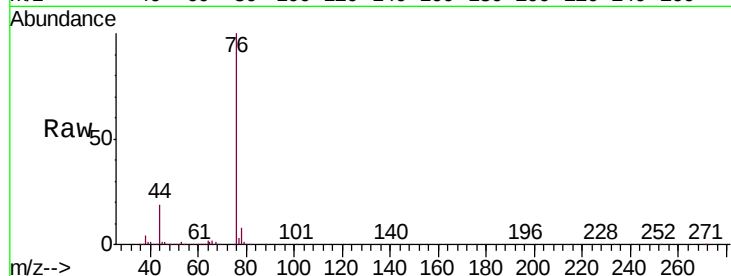
Tgt Ion: 76 Resp: 892037

Ion Ratio Lower Upper

76 100

44 19.7 14.4 21.6

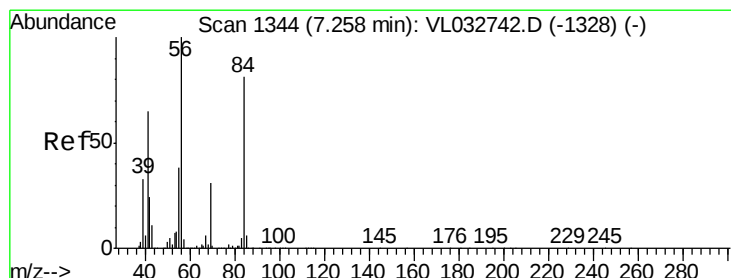
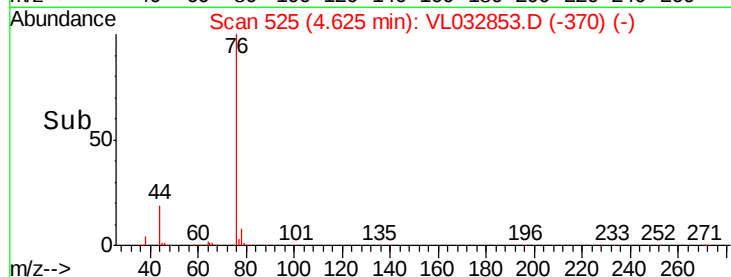
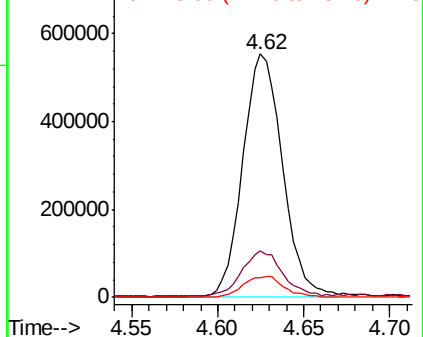
78 9.0 7.7 11.5



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: 0.328 ppbv

RT: 7.26 min Scan# 1343

Delta R.T. -0.00 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

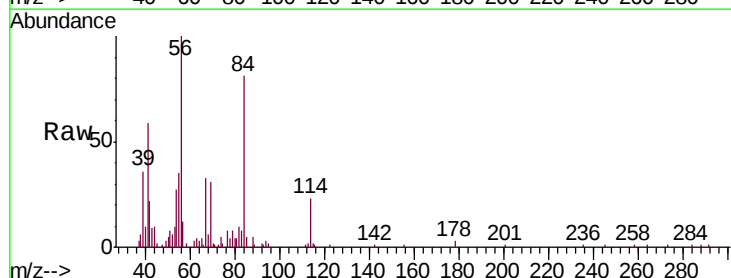
Tgt Ion: 84 Resp: 40866

Ion Ratio Lower Upper

84 100

56 0.0 105.0 157.4#

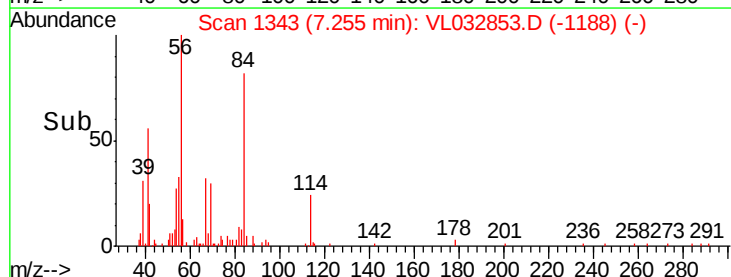
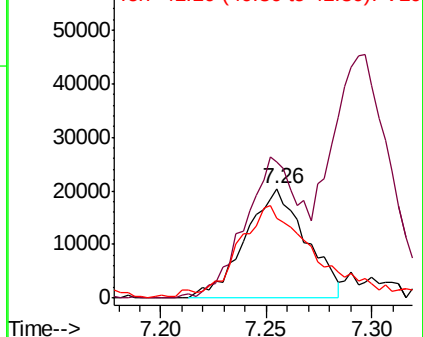
41 104.3 65.3 97.9#

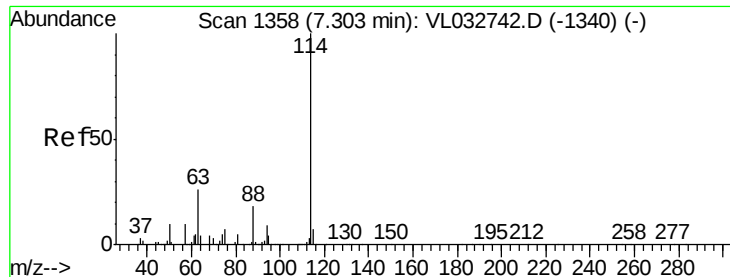


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

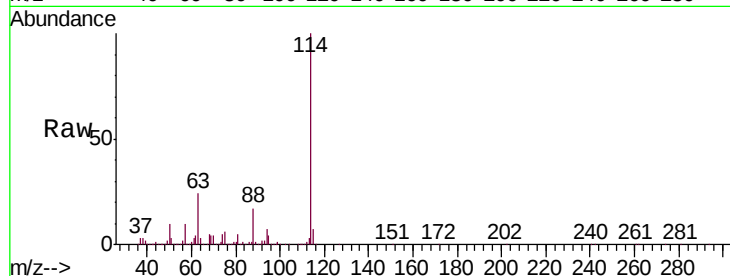
Tgt Ion:114 Resp: 3782804

Ion Ratio Lower Upper

114 100

63 24.1 20.9 31.3

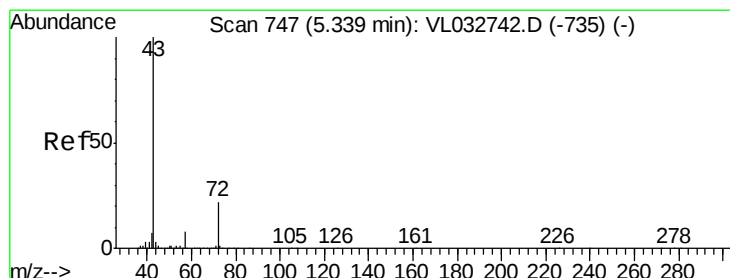
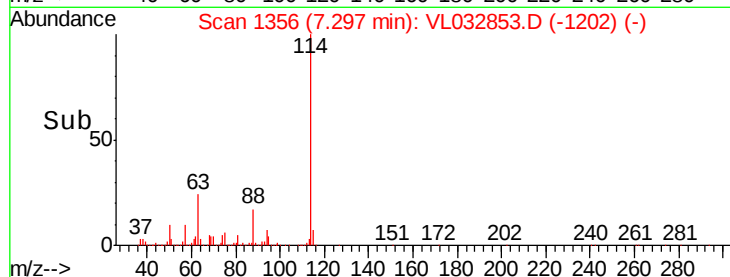
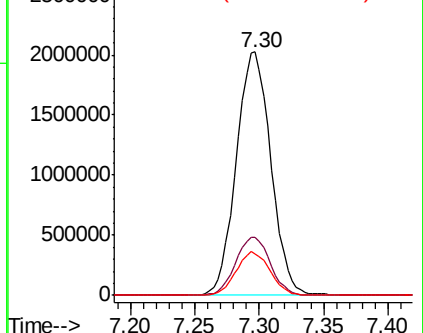
88 17.5 14.4 21.6



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 1.228 ppbv

RT: 5.34 min Scan# 748

Delta R.T. 0.00 min

Lab File: VL032853.D

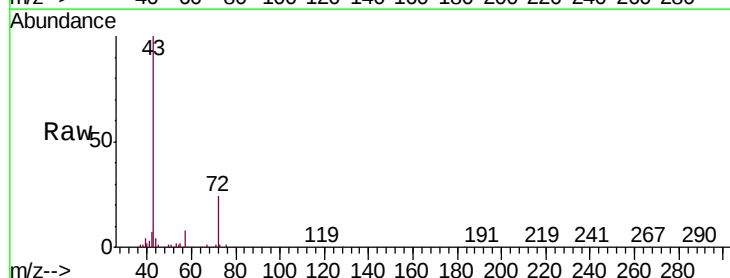
Acq: 30 Nov 2018 17:43

Tgt Ion: 43 Resp: 240915

Ion Ratio Lower Upper

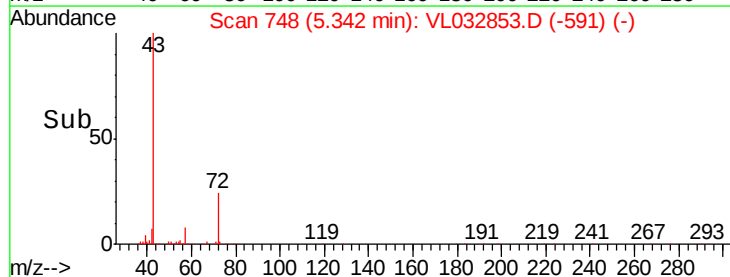
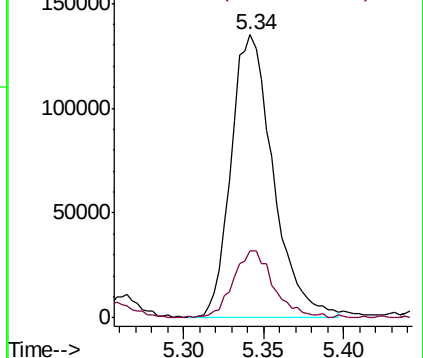
43 100

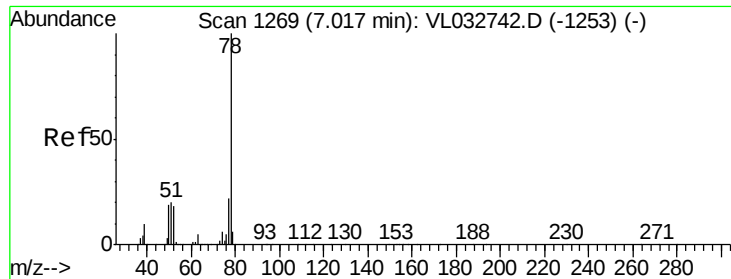
72 23.0 18.4 27.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.641 ppbv

RT: 7.01 min Scan# 1266

Delta R.T. -0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

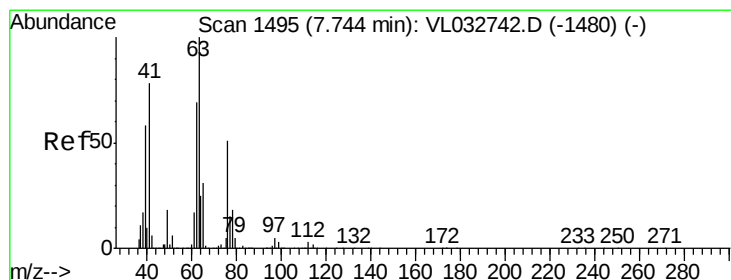
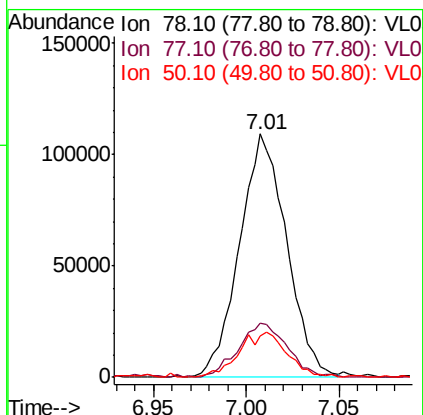
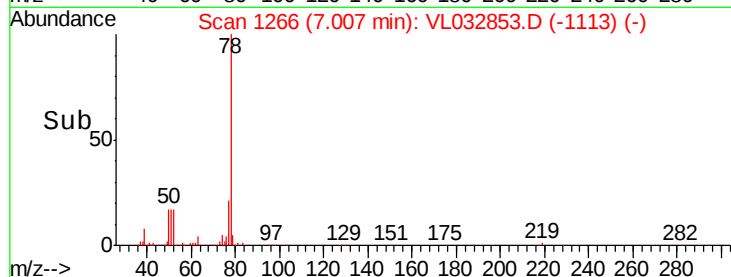
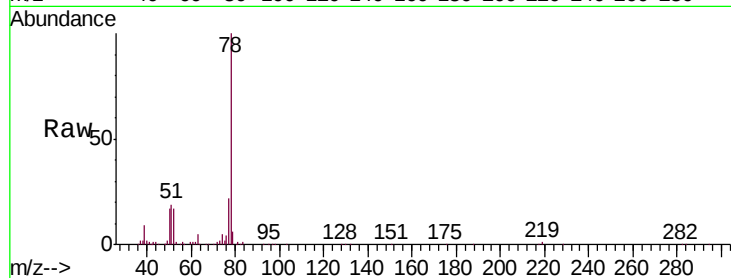
Tgt Ion: 78 Resp: 193016

Ion Ratio Lower Upper

78 100

77 21.9 17.8 26.8

50 16.6 15.4 23.0



#39

1,2-Dichloropropane

Concen: 7.834 ppbv

RT: 7.29 min Scan# 1355

Delta R.T. -0.45 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

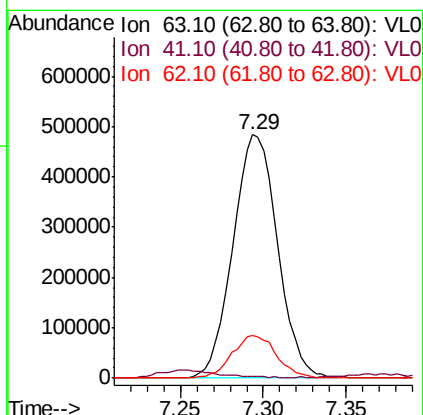
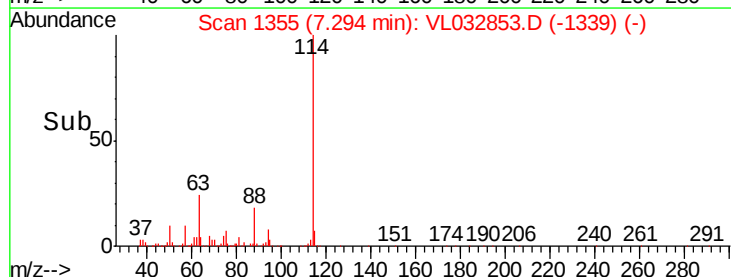
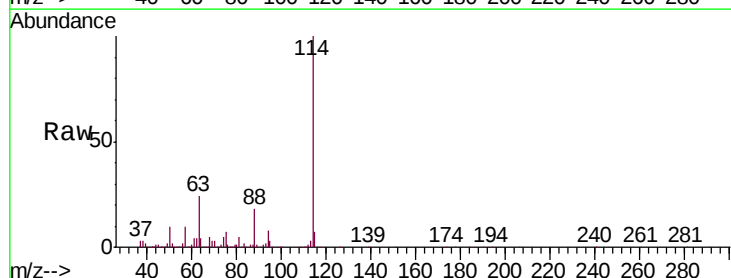
Tgt Ion: 63 Resp: 899102

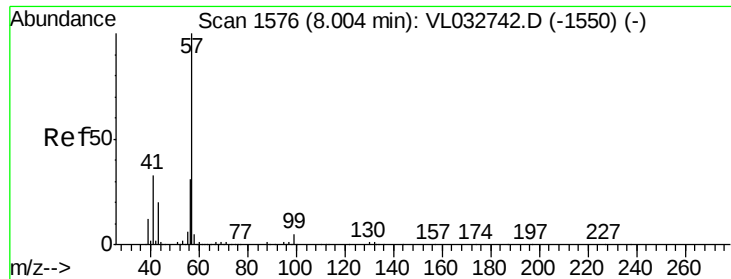
Ion Ratio Lower Upper

63 100

41 0.0 62.0 93.0#

62 17.2 55.4 83.2#

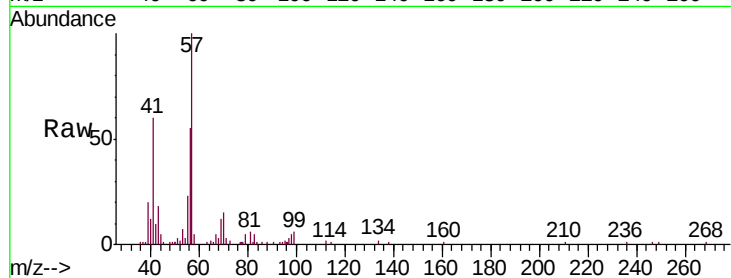




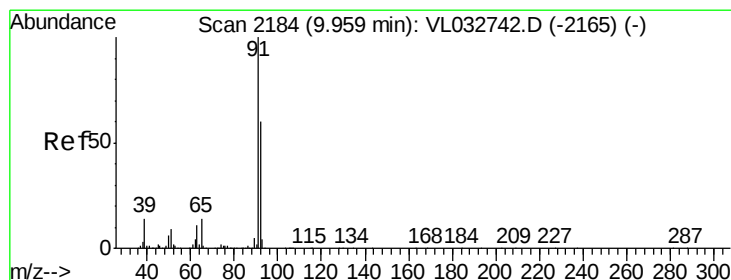
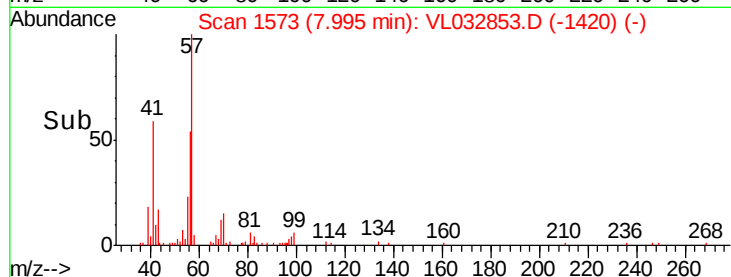
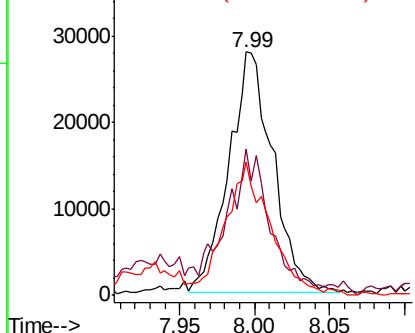
#44  
 2,2,4-Trimethylpentane  
 Concen: 0.113 ppbv  
 RT: 7.99 min Scan# 1573  
 Delta R.T. -0.01 min  
 Lab File: VL032853.D  
 Acq: 30 Nov 2018 17:43

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 DSV-01DL

Tgt Ion: 57 Resp: 56849  
 Ion Ratio Lower Upper  
 57 100  
 41 76.9 26.6 39.8#  
 56 57.5 24.8 37.2#

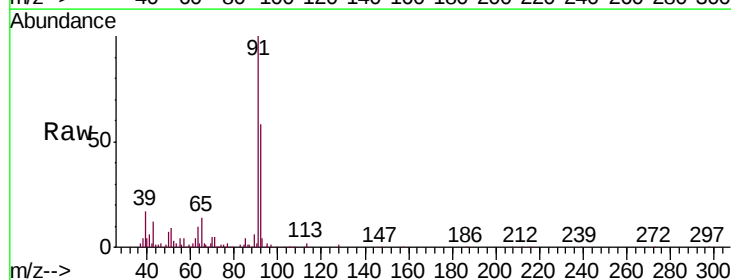


Abundance Ion 57.10 (56.80 to 57.80): VL0  
 Ion 41.10 (40.80 to 41.80): VL0  
 Ion 56.10 (55.80 to 56.80): VL0

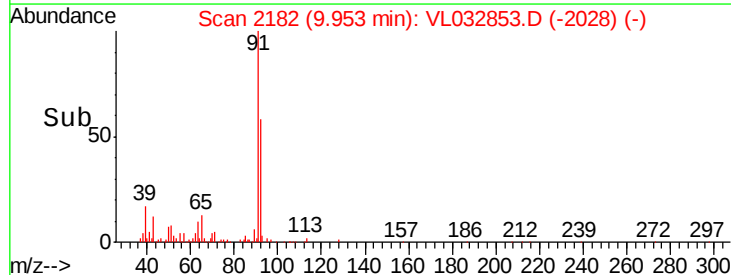
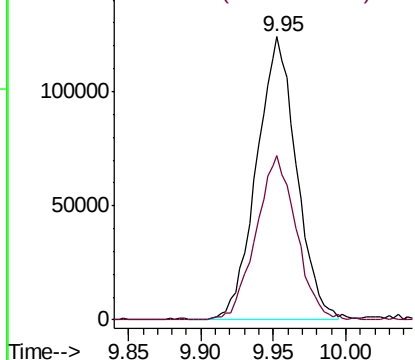


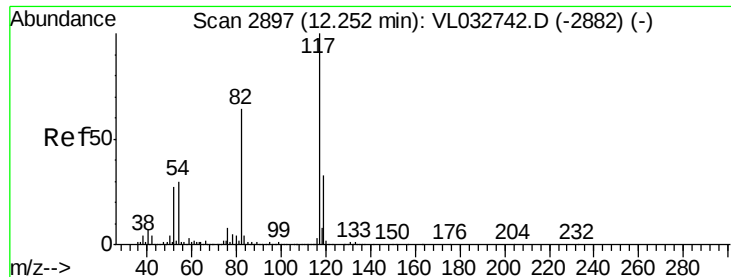
#53  
 Toluene  
 Concen: 0.756 ppbv  
 RT: 9.95 min Scan# 2182  
 Delta R.T. -0.01 min  
 Lab File: VL032853.D  
 Acq: 30 Nov 2018 17:43

Tgt Ion: 91 Resp: 237549  
 Ion Ratio Lower Upper  
 91 100  
 92 58.9 47.9 71.9



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: 12.25 min Scan# 2895

Delta R.T. -0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

DSV-01DL

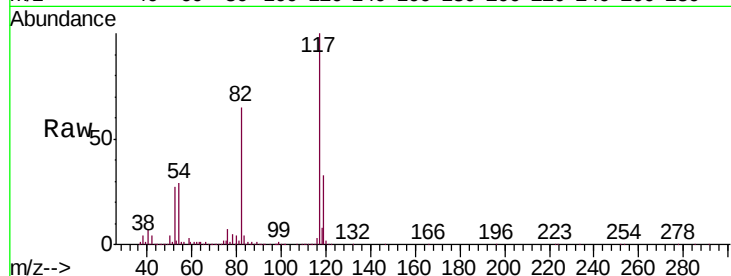
Tgt Ion:117 Resp: 3624651

Ion Ratio Lower Upper

117 100

82 62.8 51.0 76.6

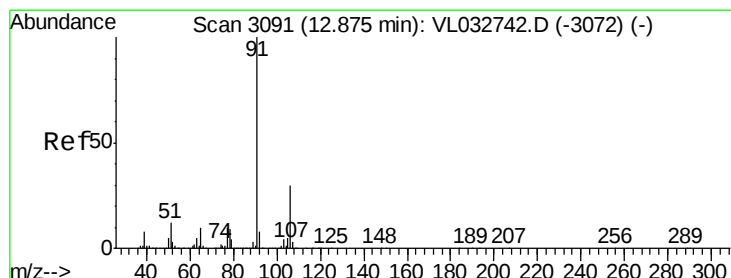
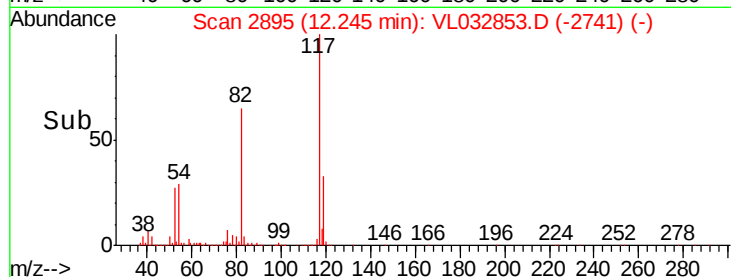
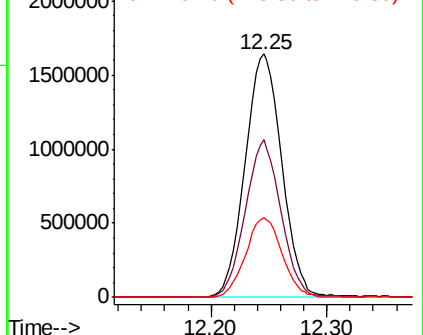
119 32.7 28.0 42.0



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



#58

Ethyl Benzene

Concen: 0.040 ppbv

RT: 12.87 min Scan# 3088

Delta R.T. -0.01 min

Lab File: VL032853.D

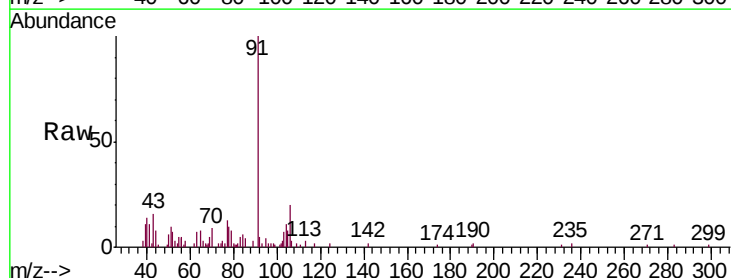
Acq: 30 Nov 2018 17:43

Tgt Ion: 91 Resp: 17317

Ion Ratio Lower Upper

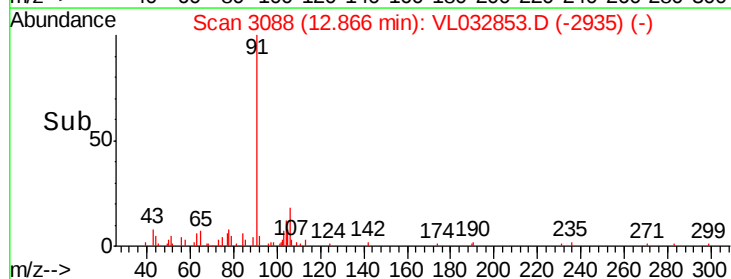
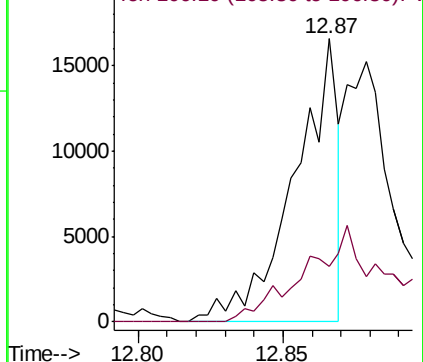
91 100

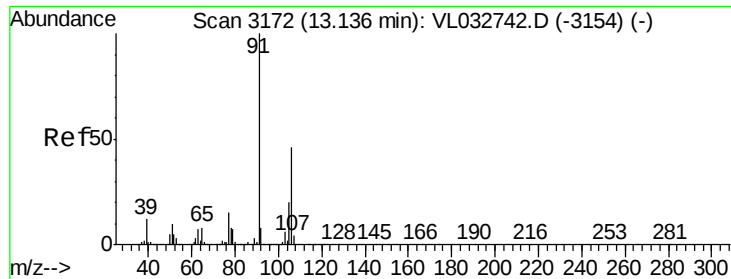
106 22.9 23.6 35.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#59

m/p-Xylene

Concen: 0.221 ppbv

RT: 13.13 min Scan# 3170

Delta R.T. -0.01 min

Lab File: VL032853.D

Acq: 30 Nov 2018 17:43

Instrument :

MSVOA\_L

ClientSampleId :

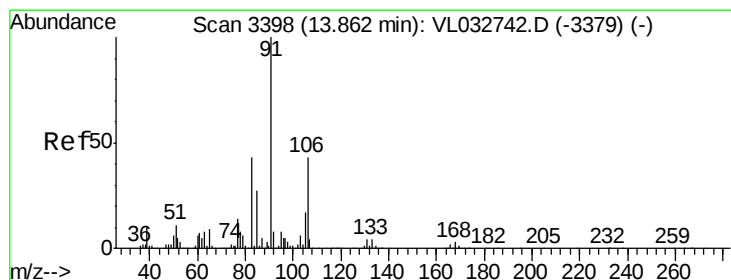
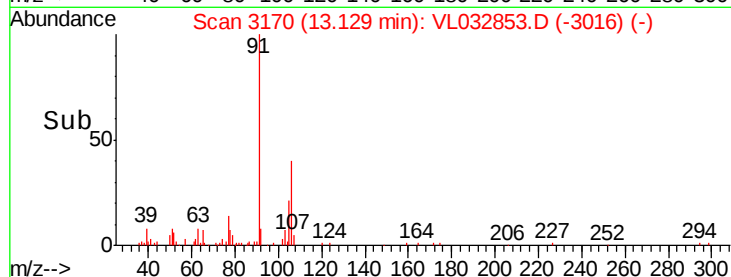
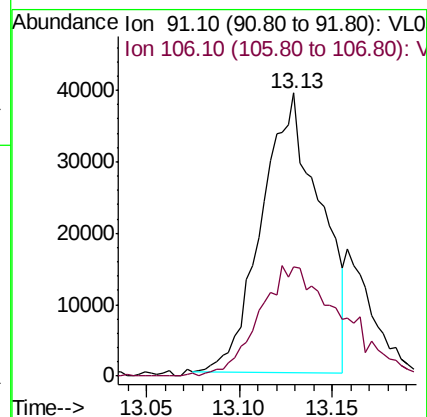
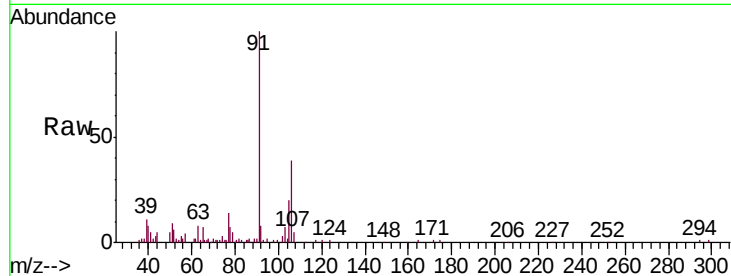
DSV-01DL

Tgt Ion: 91 Resp: 85910

Ion Ratio Lower Upper

91 100

106 55.6 36.1 54.1#



#60

o-Xylene

Concen: 0.136 ppbv

RT: 13.86 min Scan# 3396

Delta R.T. -0.01 min

Lab File: VL032853.D

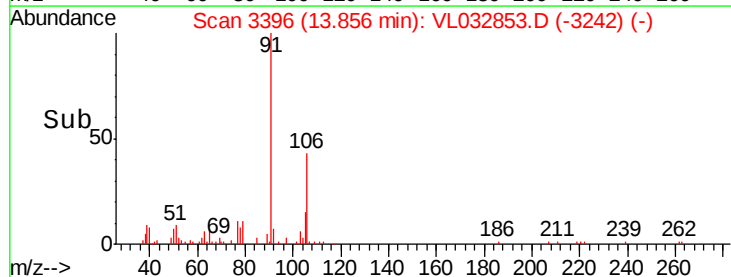
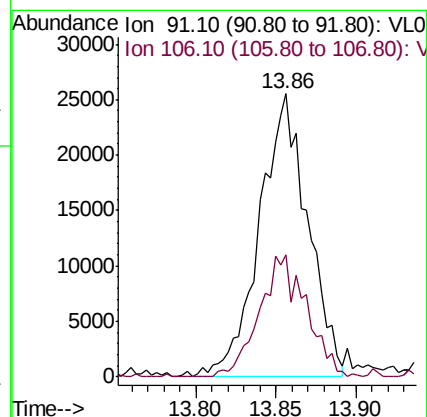
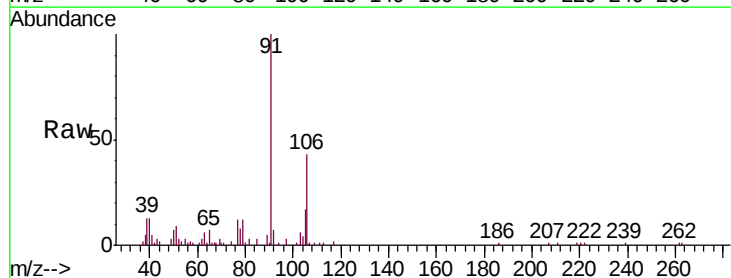
Acq: 30 Nov 2018 17:43

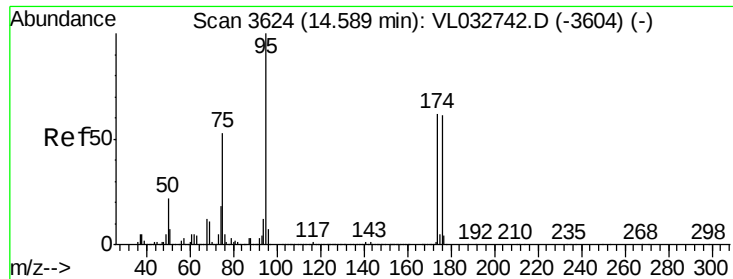
Tgt Ion: 91 Resp: 53156

Ion Ratio Lower Upper

91 100

106 41.8 21.9 65.7

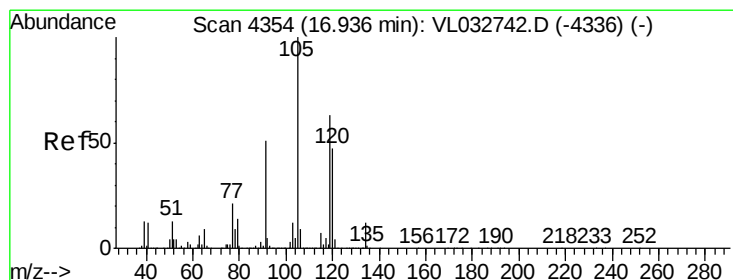
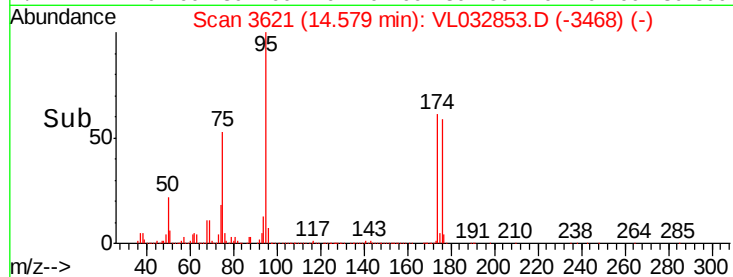
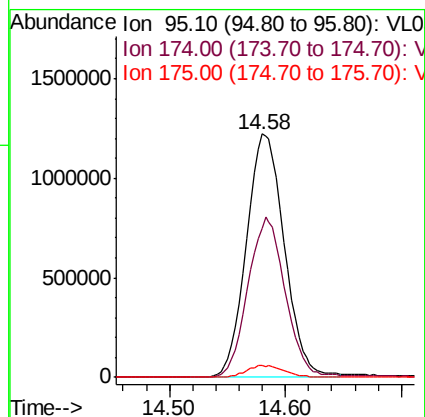
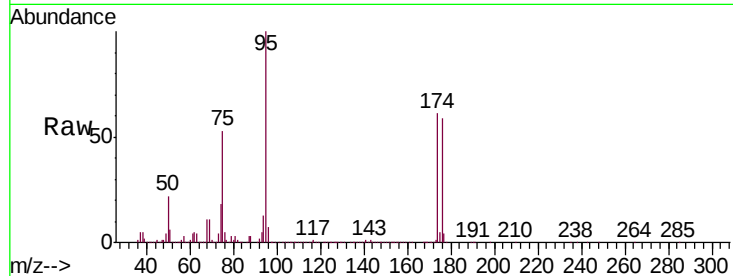




#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.257 ppbv  
 RT: 14.58 min Scan# 3621  
 Delta R.T. -0.01 min  
 Lab File: VL032853.D  
 Acq: 30 Nov 2018 17:43

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 DSV-01DL

Tgt Ion: 95 Resp: 2780746  
 Ion Ratio Lower Upper  
 95 100  
 174 64.7 50.7 76.1  
 175 5.0 3.8 5.6



#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.043 ppbv  
 RT: 16.93 min Scan# 4352  
 Delta R.T. -0.01 min  
 Lab File: VL032853.D  
 Acq: 30 Nov 2018 17:43

Tgt Ion: 105 Resp: 19169  
 Ion Ratio Lower Upper  
 105 100  
 120 42.2 37.6 56.4  
 91 17.9 42.5 63.7#  
 77 23.8 17.4 26.2

