

Data File : VL032881.D  
Acq On : 4 Dec 2018 18:04  
Operator : SY/AP  
Sample : J6175-02DL 10XDUP  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
MMSV-02DLDUP

Quant Time: Dec 05 05:48:29 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   | 5.77  | 49   | 1466661  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 3670621  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.25 | 117  | 3708381  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 2704268  | 9.75     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 97.50% |

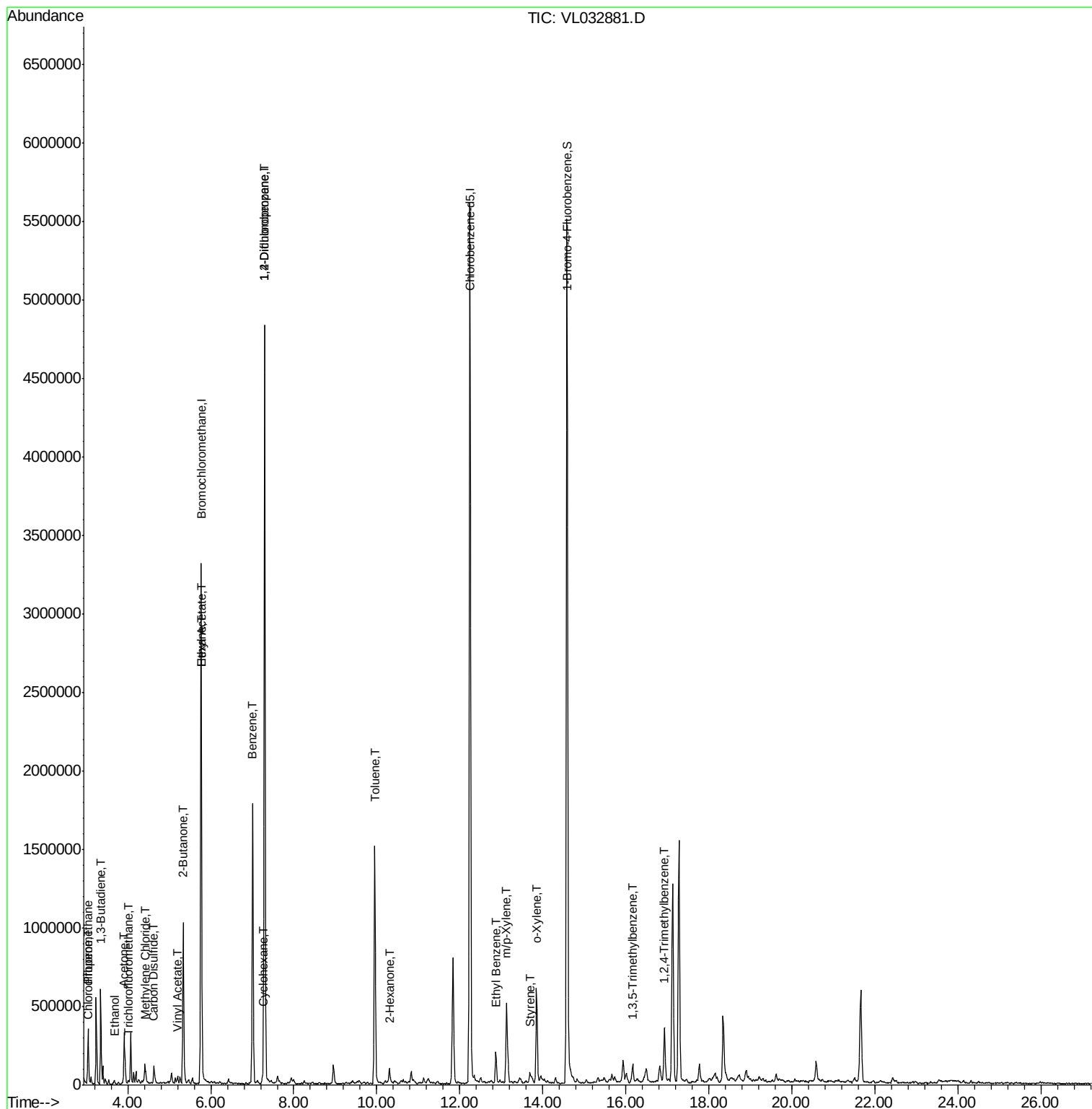
| Target Compounds           |       |     |         |       |        | Qvalue |
|----------------------------|-------|-----|---------|-------|--------|--------|
| 3) Chlorodifluoromethane   | 3.02  | 51  | 5745    | 0.049 | ppbv # | 89     |
| 9) Propene                 | 3.04  | 41  | 140876  | 3.027 | ppbv   | 95     |
| 11) Trichlorofluoromethane | 4.01  | 101 | 6309    | 0.032 | ppbv   | 85     |
| 13) Ethanol                | 3.67  | 45  | 11908   | 0.781 | ppbv # | 39     |
| 15) Acetone                | 3.91  | 43  | 319638  | 2.386 | ppbv # | 84     |
| 16) 1,3-Butadiene          | 3.35  | 39  | 150942  | 2.910 | ppbv # | 17     |
| 20) Methylene Chloride     | 4.42  | 84  | 41383   | 0.597 | ppbv   | 96     |
| 23) Vinyl Acetate          | 5.20  | 43  | 21721   | 0.089 | ppbv # | 41     |
| 25) Ethyl Acetate          | 5.79  | 43  | 21762   | 0.070 | ppbv # | 85     |
| 26) Hexane                 | 5.79  | 57  | 31574   | 0.227 | ppbv # | 5      |
| 27) Carbon Disulfide       | 4.62  | 76  | 102879  | 0.584 | ppbv # | 77     |
| 30) Cyclohexane            | 7.25  | 84  | 6792    | 0.056 | ppbv # | 1      |
| 34) 2-Butanone             | 5.34  | 43  | 1209671 | 6.354 | ppbv   | 99     |
| 36) Benzene                | 7.01  | 78  | 1481221 | 5.068 | ppbv   | 98     |
| 39) 1,2-Dichloropropane    | 7.30  | 63  | 873961  | 7.848 | ppbv # | 23     |
| 51) 2-Hexanone             | 10.30 | 43  | 80401   | 0.420 | ppbv # | 97     |
| 53) Toluene                | 9.95  | 91  | 1155555 | 3.789 | ppbv   | 99     |
| 58) Ethyl Benzene          | 12.87 | 91  | 81501   | 0.183 | ppbv   | 93     |
| 59) m/p-Xylene             | 13.12 | 91  | 476333  | 1.199 | ppbv   | 99     |
| 60) o-Xylene               | 13.85 | 91  | 426813  | 1.068 | ppbv   | 96     |
| 61) Styrene                | 13.69 | 104 | 31187   | 0.120 | ppbv   | 98     |
| 73) 1,3,5-Trimethylbenzene | 16.17 | 105 | 75135   | 0.176 | ppbv   | 97     |
| 74) 1,2,4-Trimethylbenzene | 16.93 | 105 | 229418  | 0.501 | ppbv # | 70     |

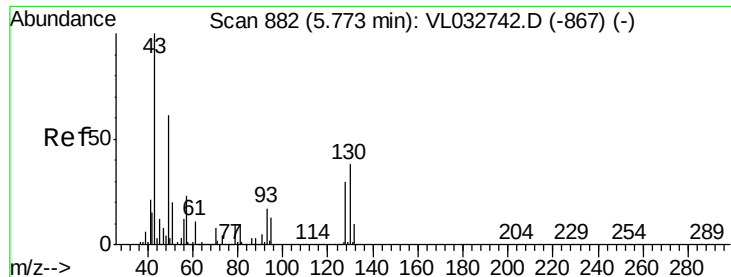
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Time: Dec 05 05:48:29 2018  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL111418AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Nov 14 07:00:23 2018  
QLast Update : Wed Nov 14 07:00:23 2018  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.01 min

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MSVOA\_L

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MMSV-02DLDUP

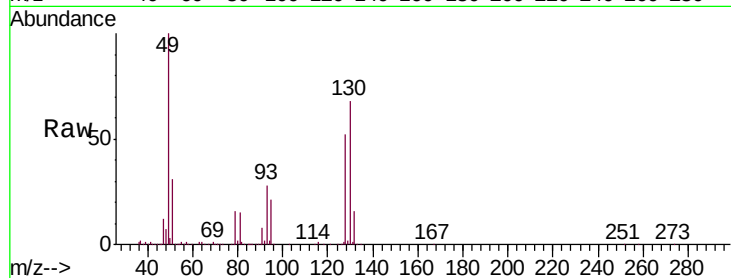
Tgt Ion: 49 Resp: 1466661

Ion Ratio Lower Upper

49 100

128 52.6 24.9 74.6

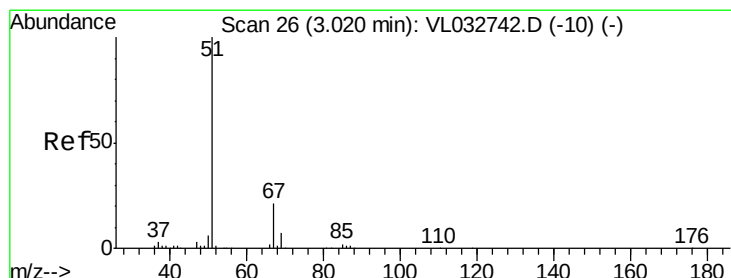
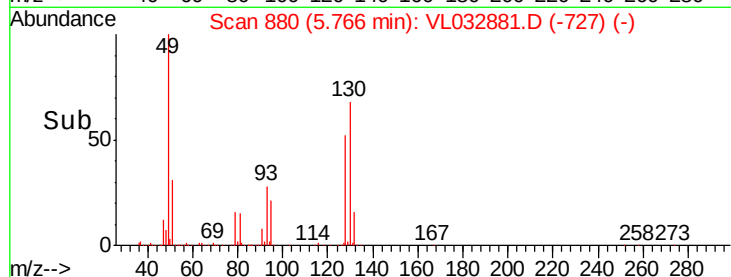
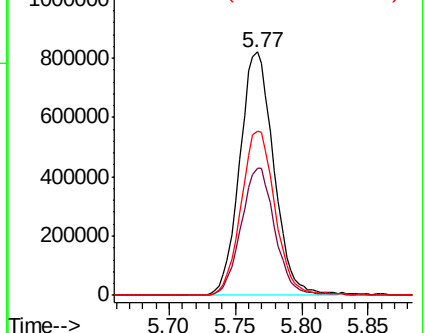
130 68.1 31.4 94.2



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



#3

Chlorodifluoromethane

Concen: 0.049 ppbv

RT: 3.02 min Scan# 26

Delta R.T. -0.00 min

Lab File: VL032881.D

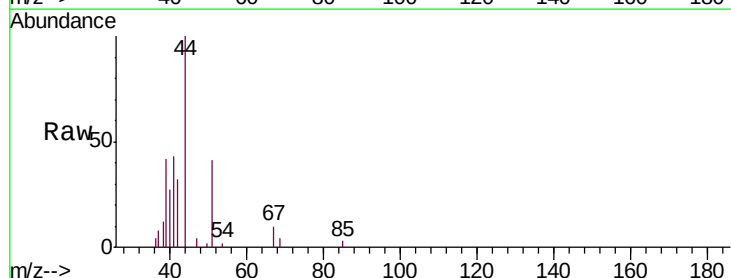
Acq: 4 Dec 2018 18:04

Tgt Ion: 51 Resp: 5745

Ion Ratio Lower Upper

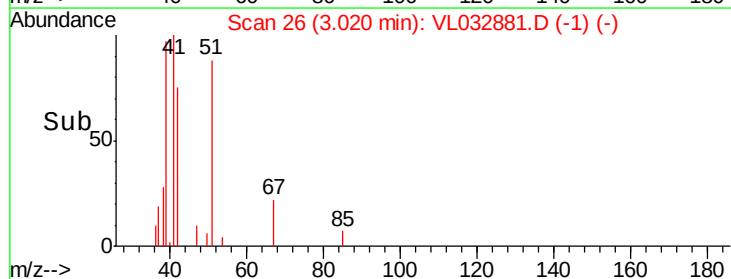
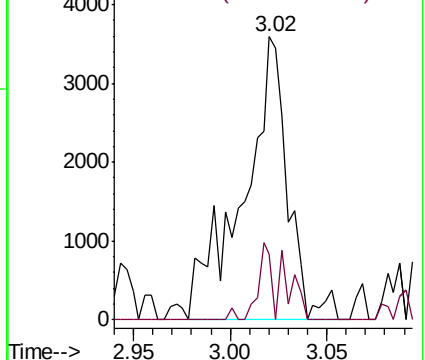
51 100

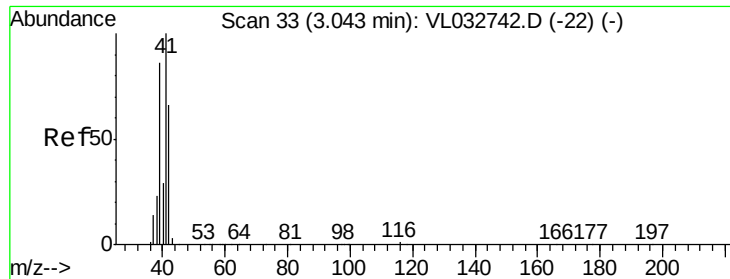
67 15.0 16.1 24.1#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0





#9

Propene

Concen: 3.027 ppbv

RT: 3.04 min Scan# 32

Delta R.T. -0.00 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

Instrument :

MSVOA\_L

ClientSampleId :

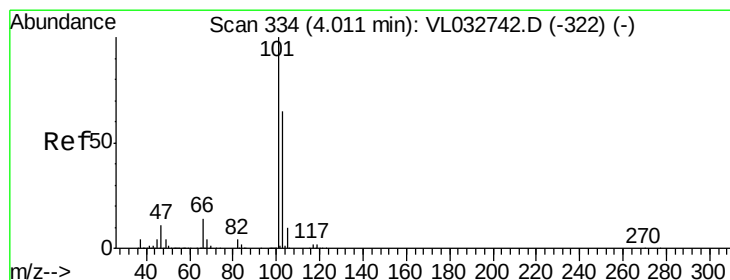
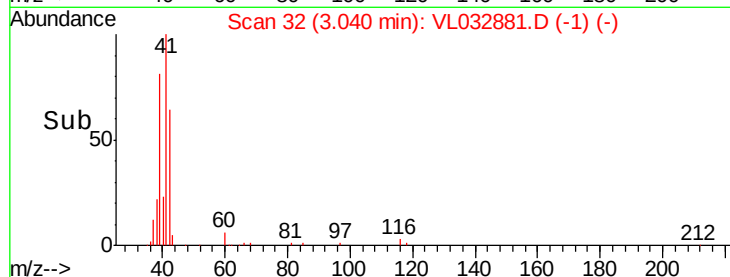
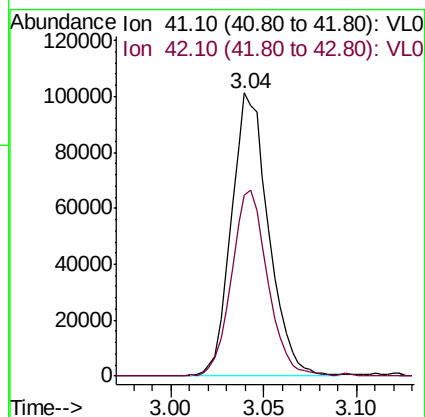
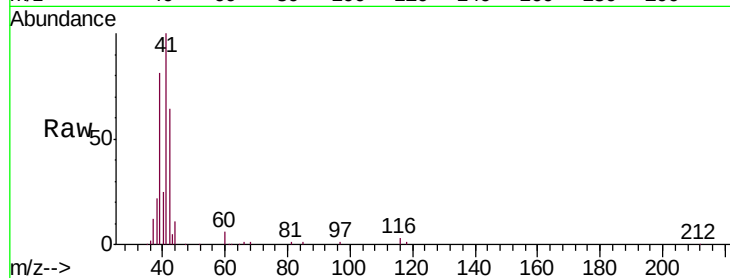
MMSV-02DLDUP

Tgt Ion: 41 Resp: 140876

Ion Ratio Lower Upper

41 100

42 64.4 55.0 82.6



#11

Trichlorofluoromethane

Concen: 0.032 ppbv

RT: 4.01 min Scan# 334

Delta R.T. -0.00 min

Lab File: VL032881.D

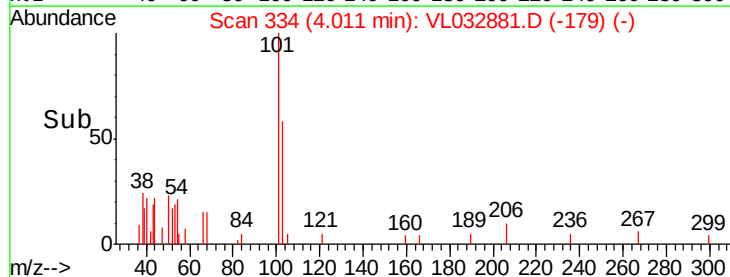
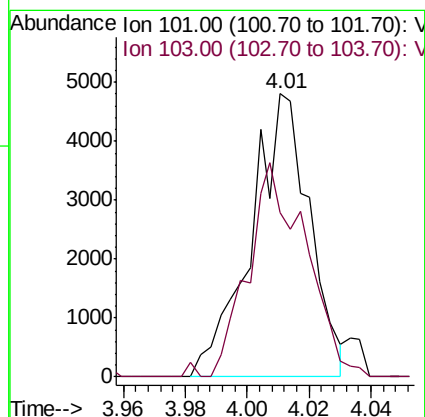
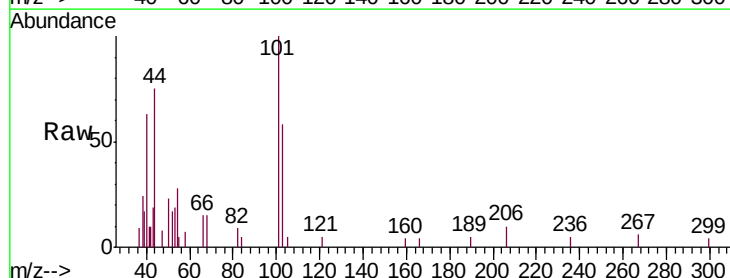
Acq: 4 Dec 2018 18:04

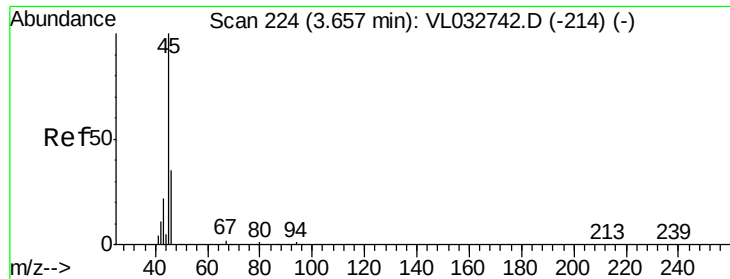
Tgt Ion: 101 Resp: 6309

Ion Ratio Lower Upper

101 100

103 52.7 51.6 77.4





#13

Ethanol

Concen: 0.781 ppbv

RT: 3.67 min Scan# 227

Delta R.T. 0.01 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

Instrument :

MSVOA\_L

ClientSampleId :

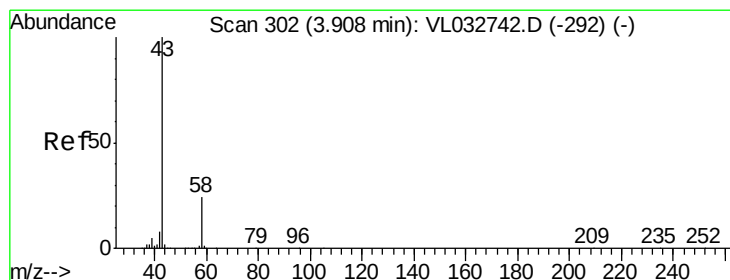
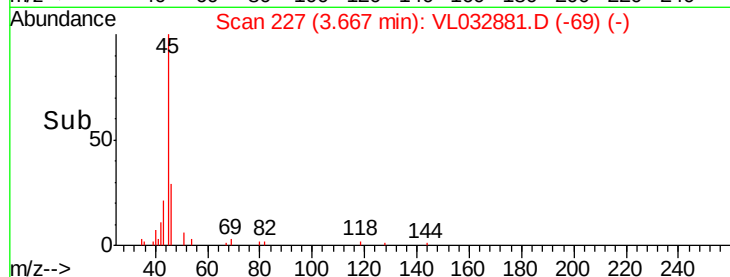
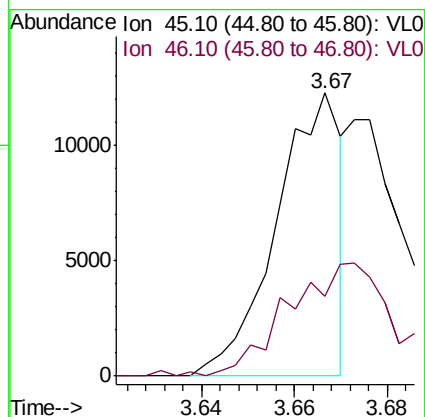
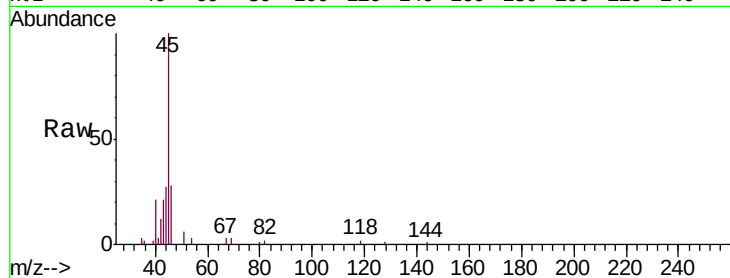
MMSV-02DLDUP

Tgt Ion: 45 Resp: 11908

Ion Ratio Lower Upper

45 100

46 0.0 14.5 57.9#



#15

Acetone

Concen: 2.386 ppbv

RT: 3.91 min Scan# 303

Delta R.T. 0.00 min

Lab File: VL032881.D

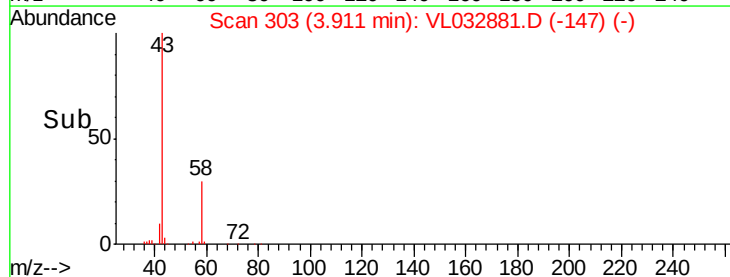
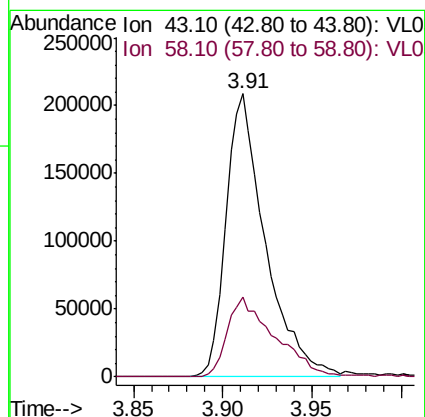
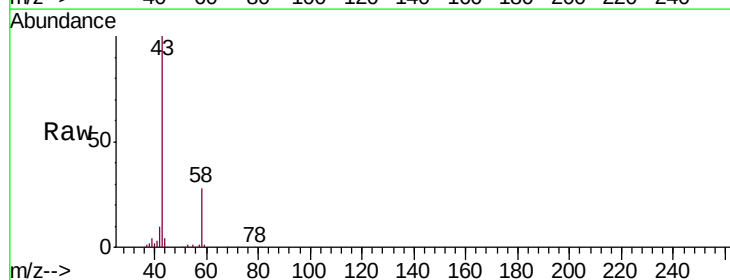
Acq: 4 Dec 2018 18:04

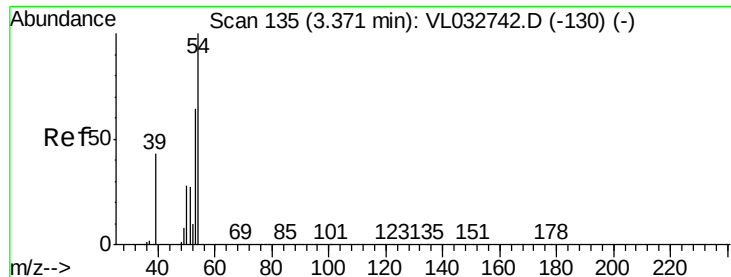
Tgt Ion: 43 Resp: 319638

Ion Ratio Lower Upper

43 100

58 34.9 21.1 31.7#

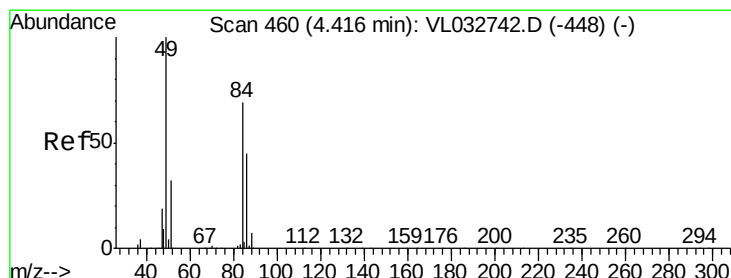
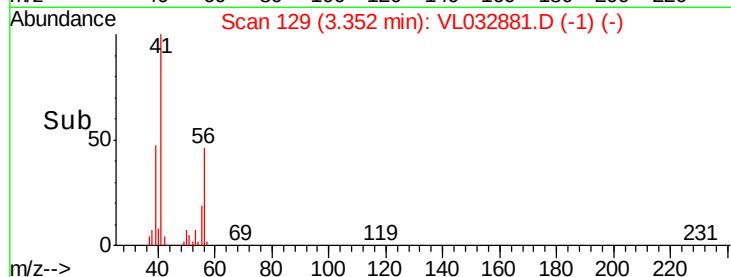
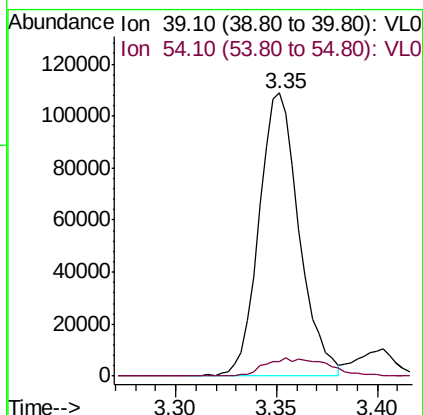
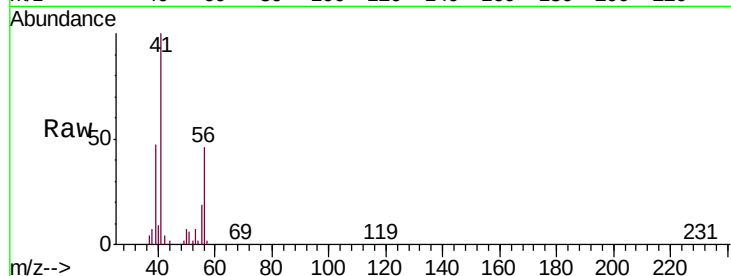




#16  
 1,3-Butadiene  
 Concen: 2.910 ppbv  
 RT: 3.35 min Scan# 129  
 Delta R.T. -0.02 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

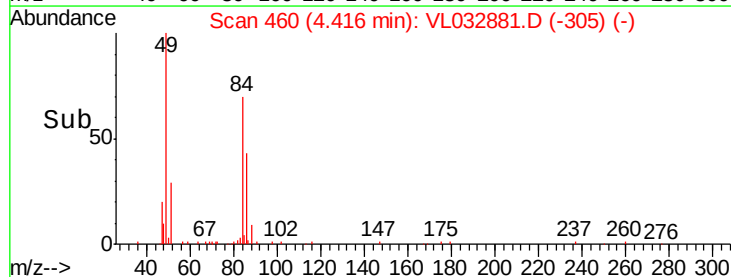
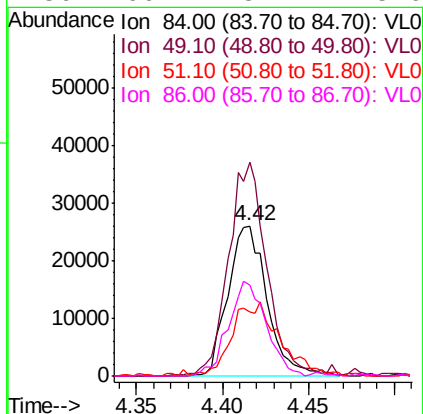
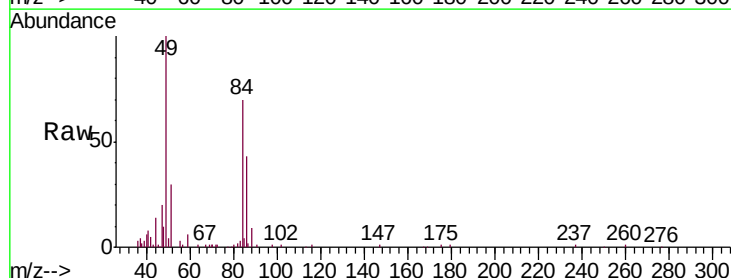
Instrument :  
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 ClientSampleId :  
 MMSV-02DLDUP

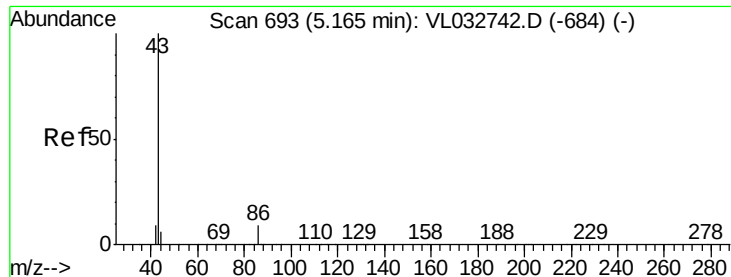
Tgt Ion: 39 Resp: 150942  
 Ion Ratio Lower Upper  
 39 100  
 54 9.9 68.9 103.3#



#20  
 Methylene Chloride  
 Concen: 0.597 ppbv  
 RT: 4.42 min Scan# 460  
 Delta R.T. -0.00 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

Tgt Ion: 84 Resp: 41383  
 Ion Ratio Lower Upper  
 84 100  
 49 141.4 115.8 173.6  
 51 41.0 36.9 55.3  
 86 60.7 52.4 78.6

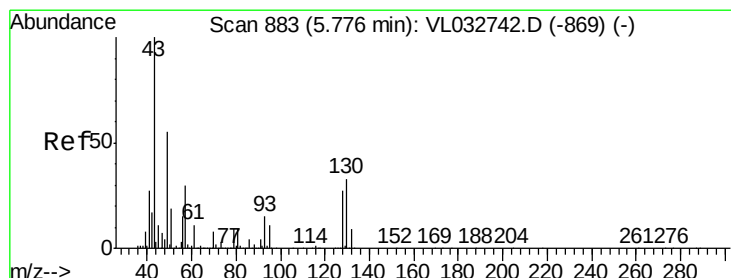
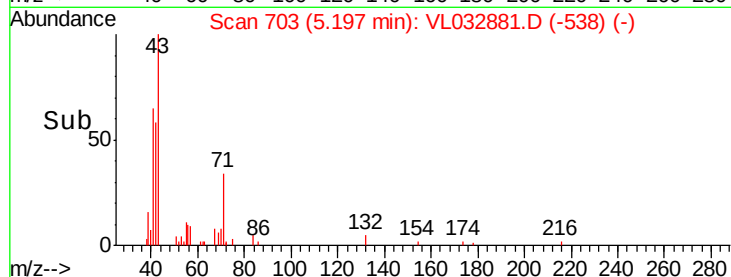
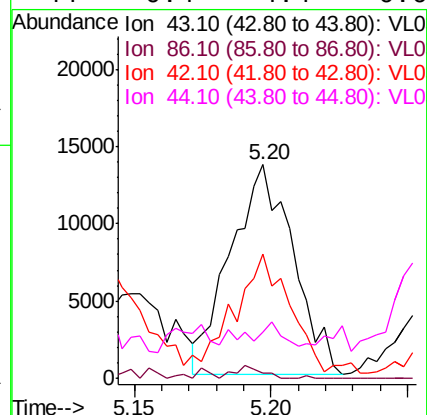
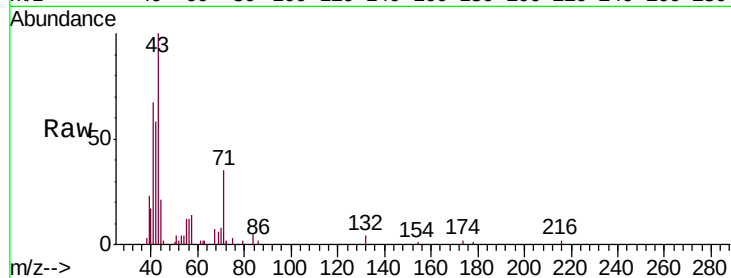




#23  
 Vinyl Acetate  
 Concen: 0.089 ppbv  
 RT: 5.20 min Scan# 703  
 Delta R.T. 0.03 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

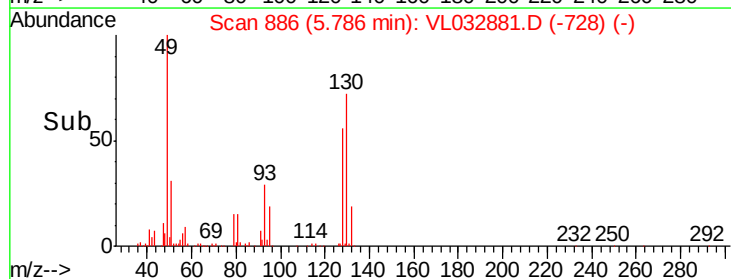
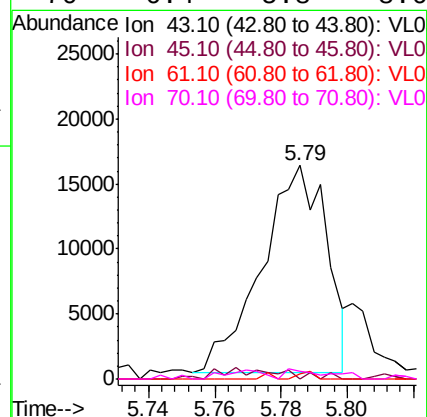
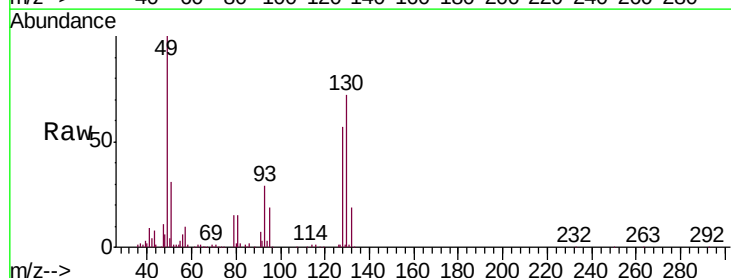
Instrument :  
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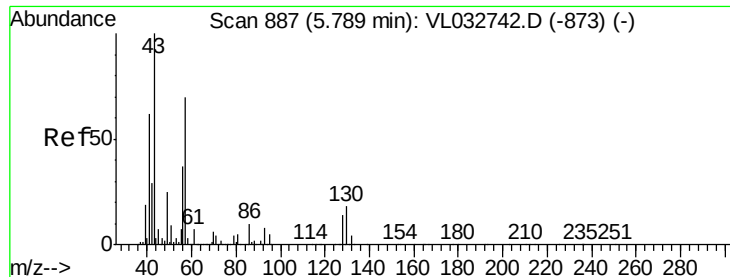
|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 21721 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 86       | 2.3   | 6.2   | 9.4#  |
| 42       | 53.1  | 7.8   | 11.6# |
| 44       | 0.4   | 4.4   | 6.6#  |



#25  
 Ethyl Acetate  
 Concen: 0.070 ppbv  
 RT: 5.79 min Scan# 886  
 Delta R.T. 0.01 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 43    | Resp: | 21762 |
| Ion      | Ratio | Lower | Upper |
| 43       | 100   |       |       |
| 45       | 5.2   | 7.9   | 11.9# |
| 61       | 0.0   | 7.8   | 11.6# |
| 70       | 6.4   | 5.8   | 8.6   |

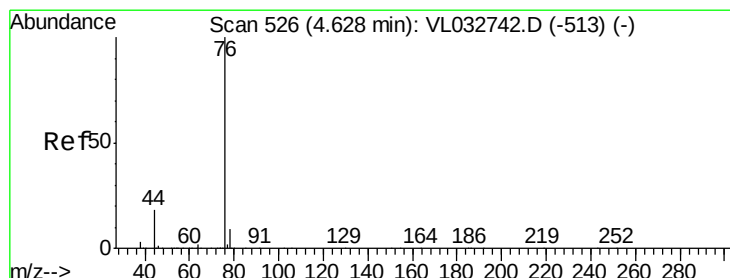
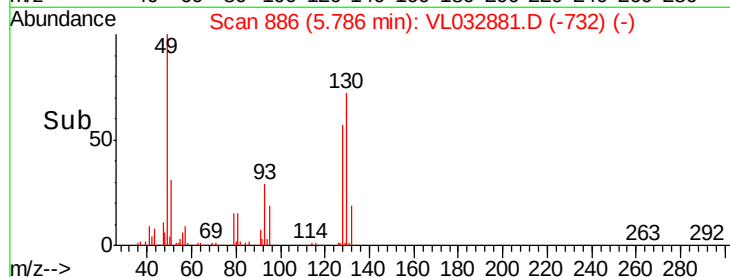
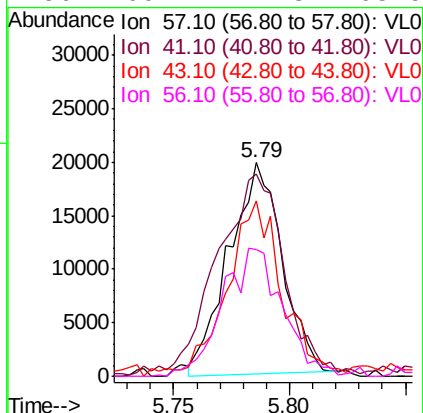
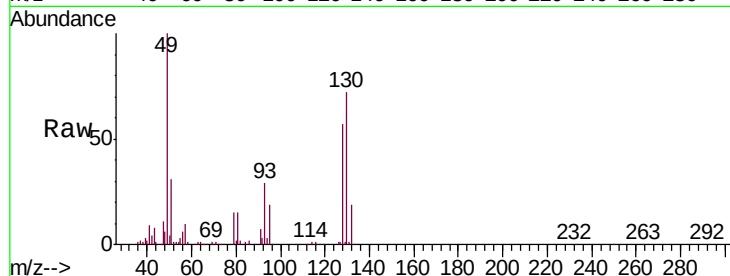




#26  
Hexane  
Concen: 0.227 ppbv  
RT: 5.79 min Scan# 886  
Delta R.T. -0.00 min  
Lab File: VL032881.D  
Acq: 4 Dec 2018 18:04

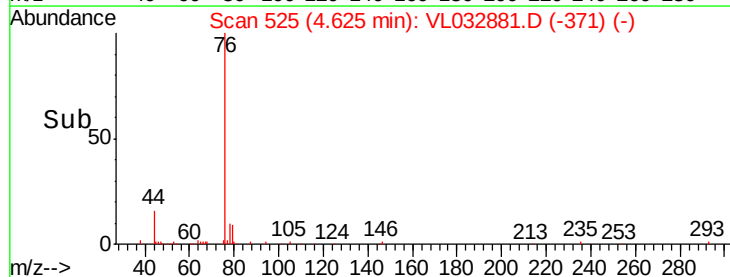
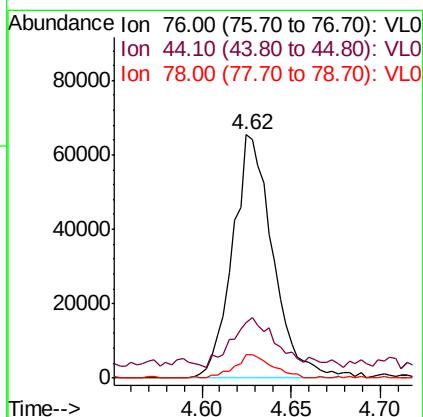
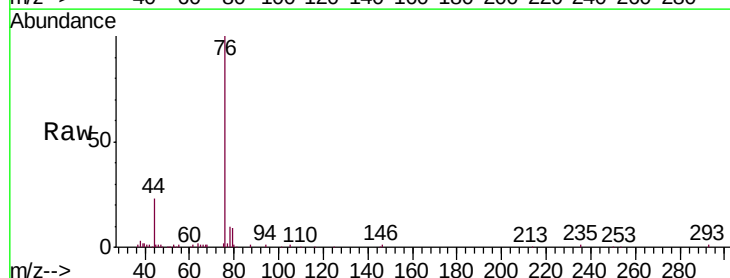
Instrument :  
MSVOA\_L  
ClientSampleId :  
MMSV-02DLDUP

Tgt Ion: 57 Resp: 31574  
Ion Ratio Lower Upper  
57 100  
41 123.0 70.3 105.5#  
43 0.0 174.0 261.0#  
56 69.2 42.3 63.5#

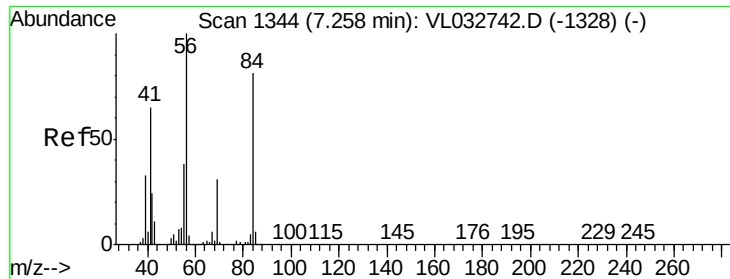


#27  
Carbon Disulfide  
Concen: 0.584 ppbv  
RT: 4.62 min Scan# 525  
Delta R.T. -0.00 min  
Lab File: VL032881.D  
Acq: 4 Dec 2018 18:04

Tgt Ion: 76 Resp: 102879  
Ion Ratio Lower Upper  
76 100  
44 33.7 14.4 21.6#  
78 9.5 7.7 11.5



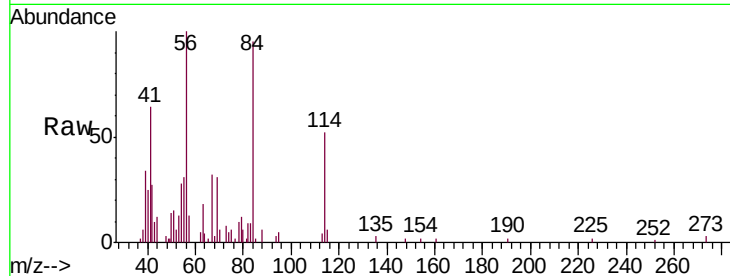




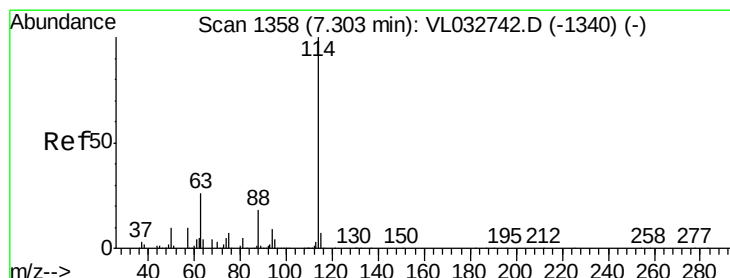
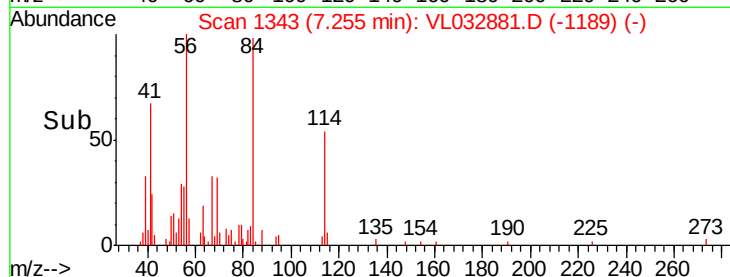
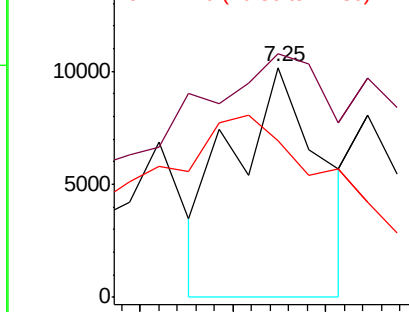
#30  
Cyclohexane  
Concen: 0.056 ppbv  
RT: 7.25 min Scan# 1343  
Delta R.T. -0.00 min  
Lab File: VL032881.D  
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Instrument :  
MSVOA\_L  
ClientSampleId :  
MMSV-02DLDUP

Tgt Ion: 84 Resp: 6792  
Ion Ratio Lower Upper  
84 100  
56 0.0 105.0 157.4#  
41 295.6 65.3 97.9#

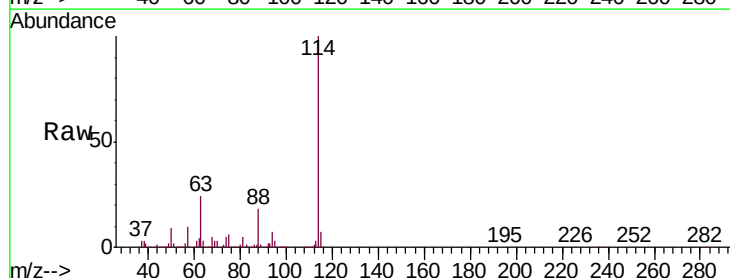


Abundance Ion 84.20 (83.90 to 84.90): VL0  
Ion 56.10 (55.80 to 56.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0

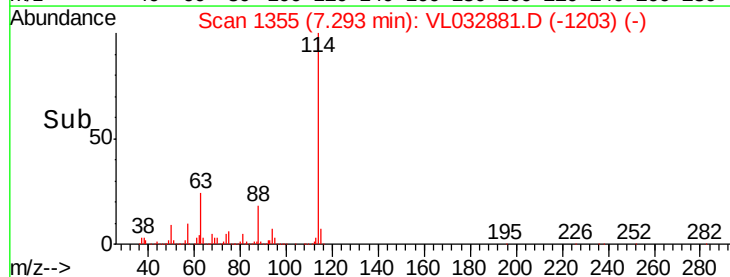
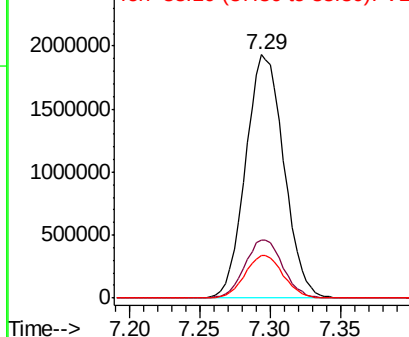


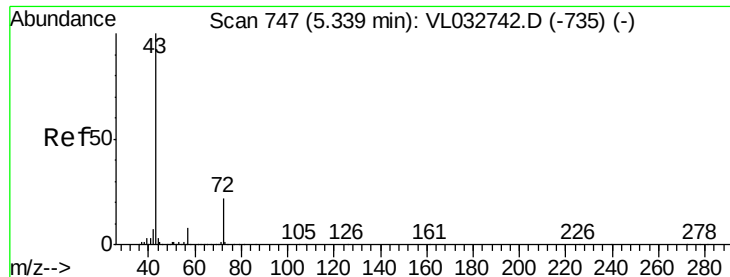
#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.29 min Scan# 1355  
Delta R.T. -0.01 min  
Lab File: VL032881.D  
Acq: 4 Dec 2018 18:04

Tgt Ion: 114 Resp: 3670621  
Ion Ratio Lower Upper  
114 100  
63 23.9 20.9 31.3  
88 17.4 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

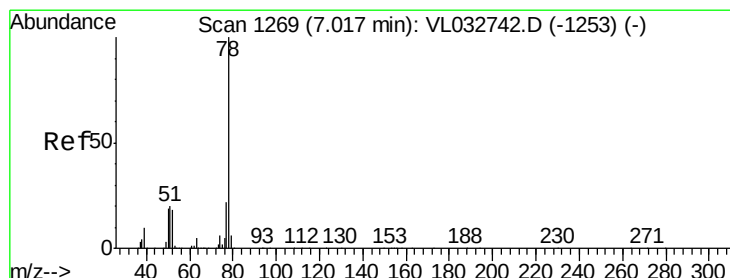
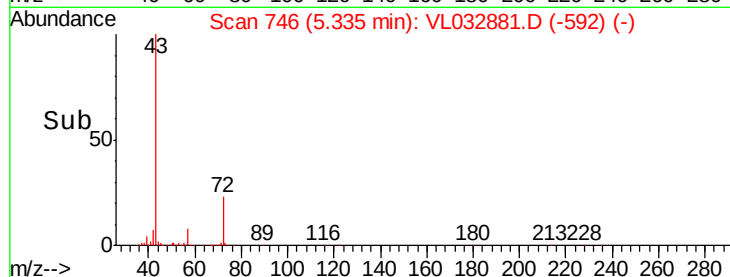
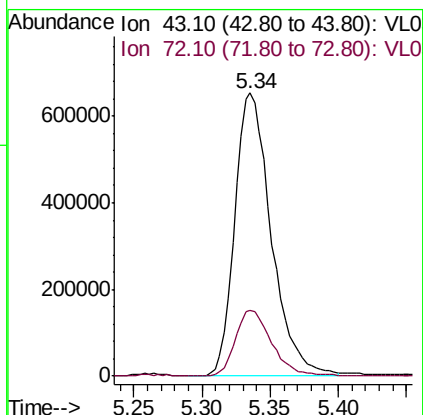
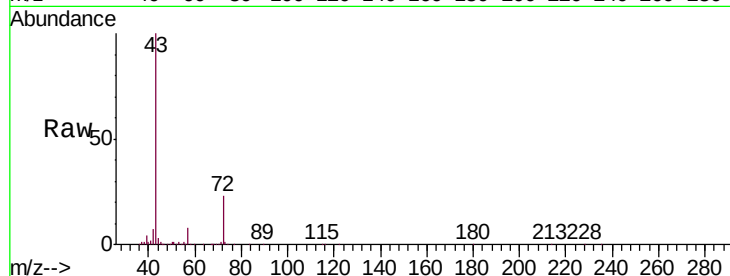




#34  
 2-Butanone  
 Concen: 6.354 ppbv  
 RT: 5.34 min Scan# 746  
 Delta R.T. -0.00 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

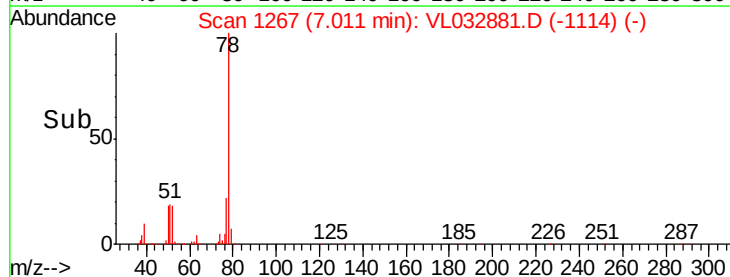
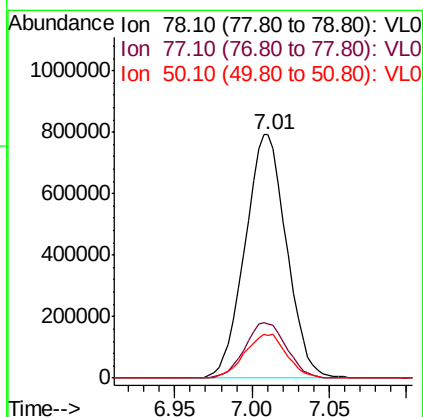
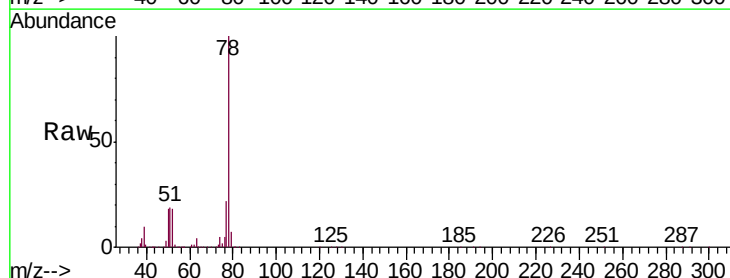
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MMSV-02DLDUP

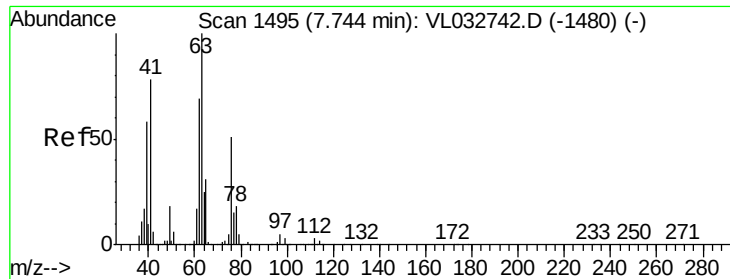
Tgt Ion: 43 Resp: 1209671  
 Ion Ratio Lower Upper  
 43 100  
 72 23.3 18.4 27.6



#36  
 Benzene  
 Concen: 5.068 ppbv  
 RT: 7.01 min Scan# 1267  
 Delta R.T. -0.01 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

Tgt Ion: 78 Resp: 1481221  
 Ion Ratio Lower Upper  
 78 100  
 77 22.3 17.8 26.8  
 50 17.5 15.4 23.0





#39

1,2-Dichloropropane

Concen: 7.848 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.45 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

Instrument :

MSVOA\_L

ClientSampleId :

MMSV-02DLDUP

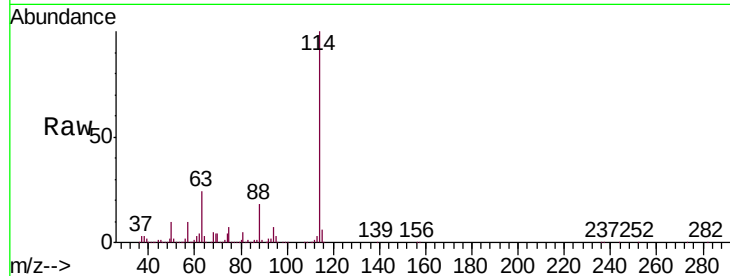
Tgt Ion: 63 Resp: 873961

Ion Ratio Lower Upper

63 100

41 0.1 62.0 93.0#

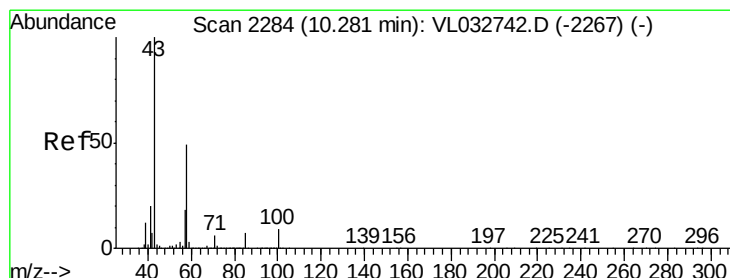
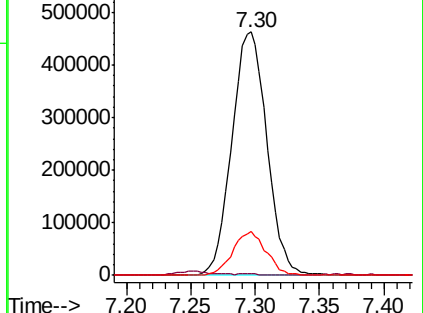
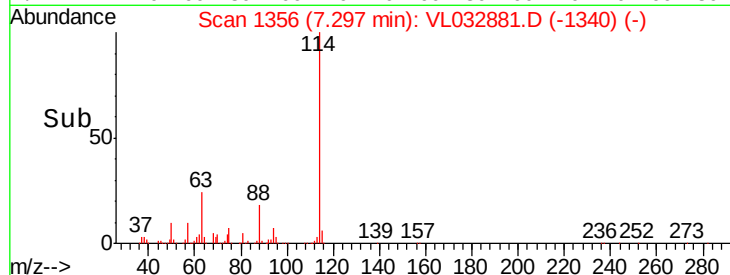
62 17.9 55.4 83.2#



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



#51

2-Hexanone

Concen: 0.420 ppbv

RT: 10.30 min Scan# 2291

Delta R.T. 0.02 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

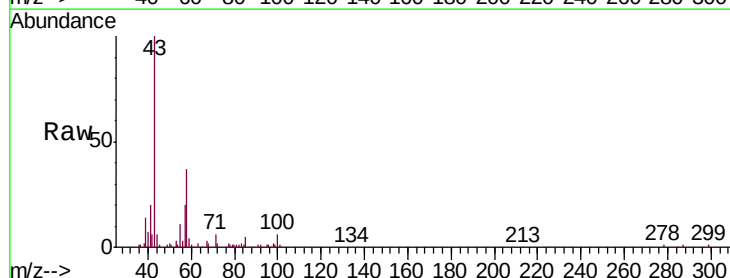
Tgt Ion: 43 Resp: 80401

Ion Ratio Lower Upper

43 100

58 46.5 38.9 58.3

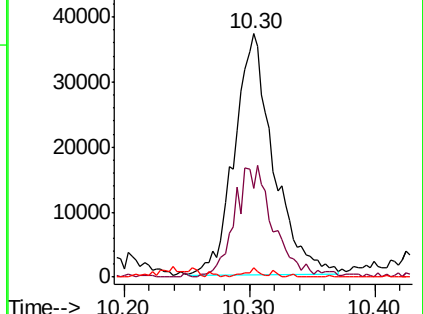
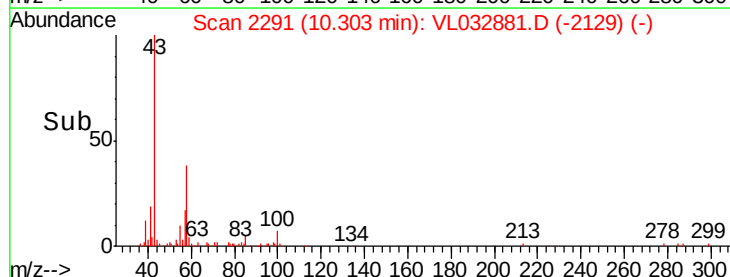
98 1.9 0.2 0.4#

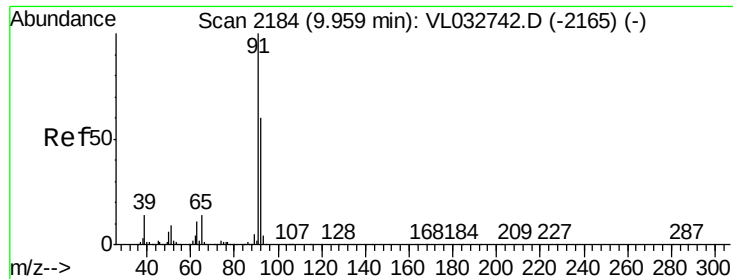


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

Ion 98.20 (97.90 to 98.90): VL0





#53

Toluene

Concen: 3.789 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

Instrument :

MSVOA\_L

ClientSampleId :

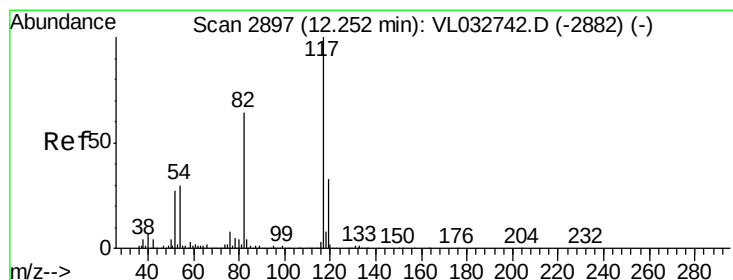
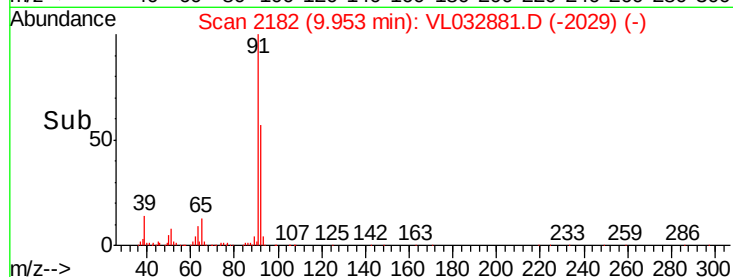
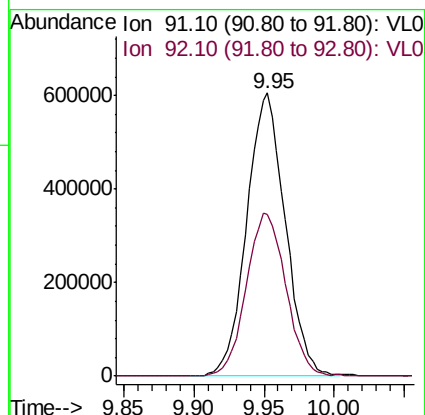
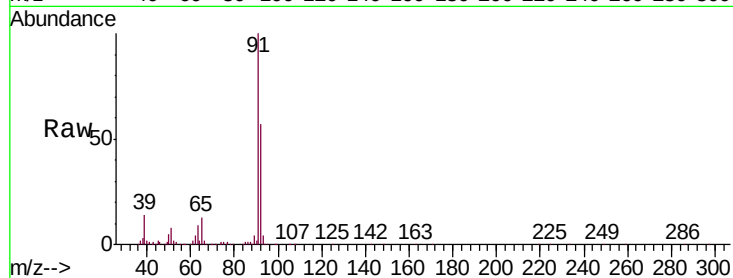
MMSV-02DLDUP

Tgt Ion: 91 Resp: 1155555

Ion Ratio Lower Upper

91 100

92 59.4 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.25 min Scan# 2895

Delta R.T. -0.01 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

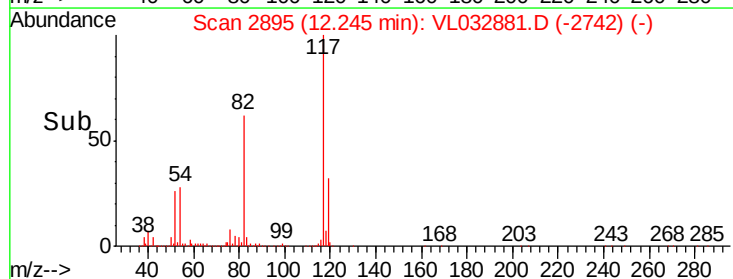
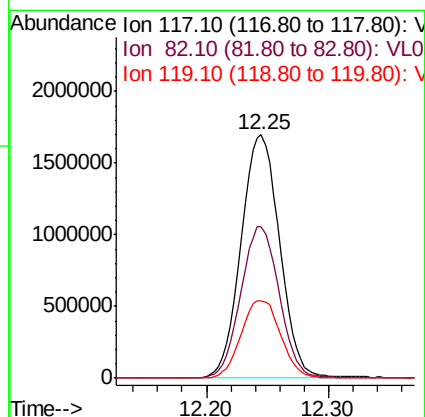
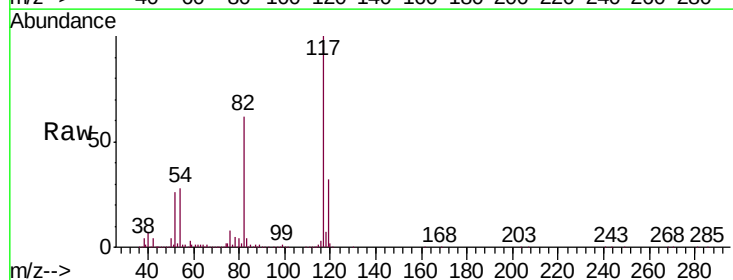
Tgt Ion: 117 Resp: 3708381

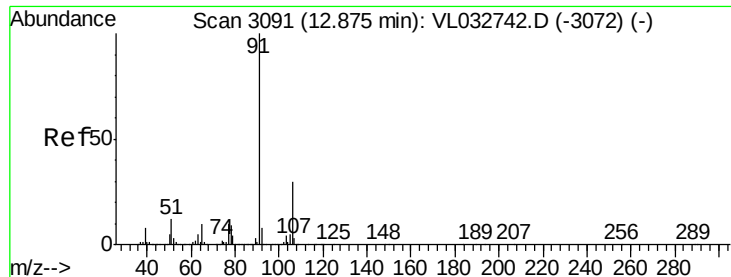
Ion Ratio Lower Upper

117 100

82 62.3 51.0 76.6

119 33.0 28.0 42.0





#58

Ethyl Benzene

Concen: 0.183 ppbv

RT: 12.87 min Scan# 3089

Delta R.T. -0.01 min

Lab File: VL032881.D

Acq: 4 Dec 2018 18:04

Instrument :

MSVOA\_L

ClientSampleId :

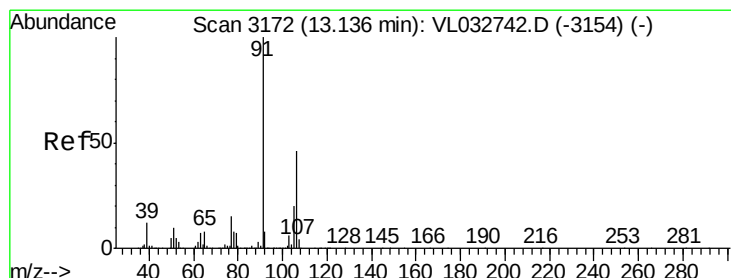
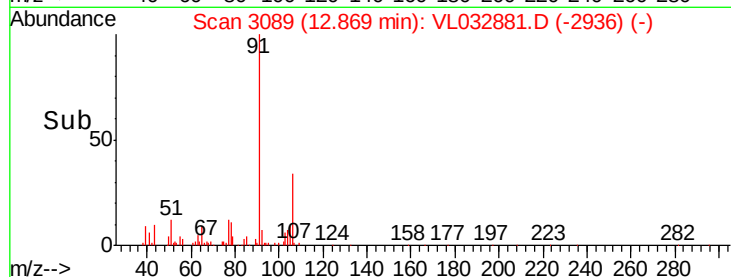
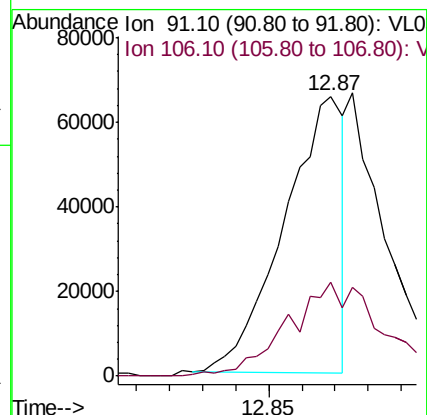
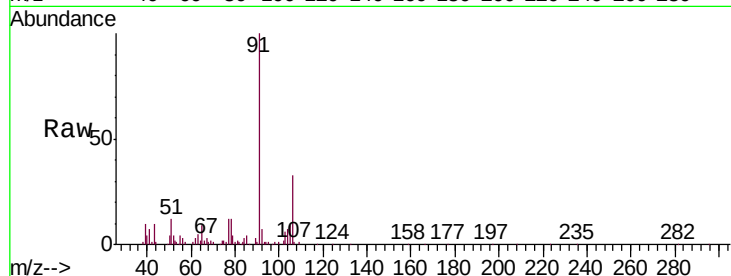
MMSV-02DLDUP

Tgt Ion: 91 Resp: 81501

Ion Ratio Lower Upper

91 100

106 33.1 23.6 35.4



#59

m/p-Xylene

Concen: 1.199 ppbv

RT: 13.12 min Scan# 3168

Delta R.T. -0.01 min

Lab File: VL032881.D

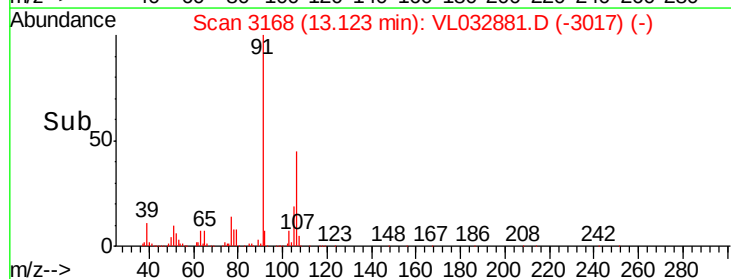
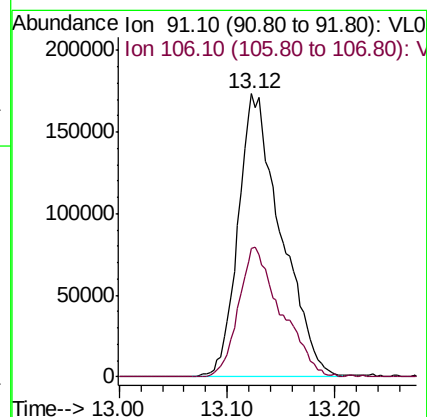
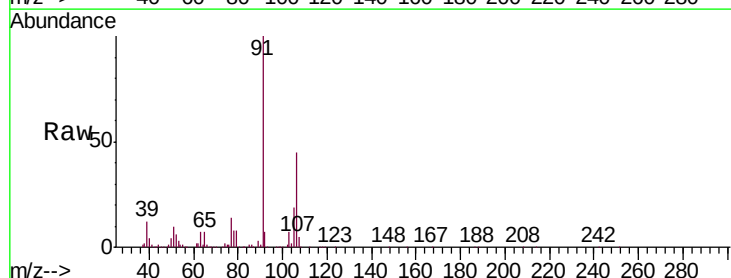
Acq: 4 Dec 2018 18:04

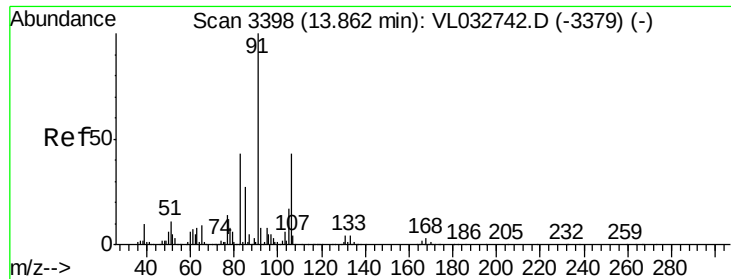
Tgt Ion: 91 Resp: 476333

Ion Ratio Lower Upper

91 100

106 45.7 36.1 54.1

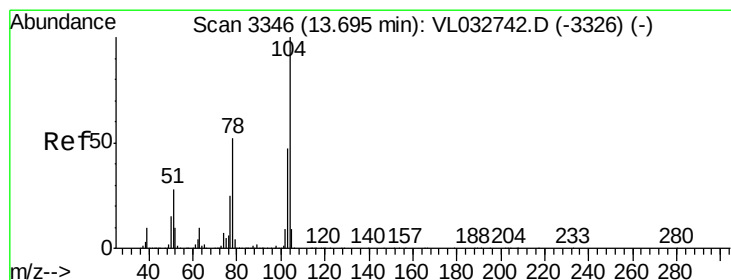
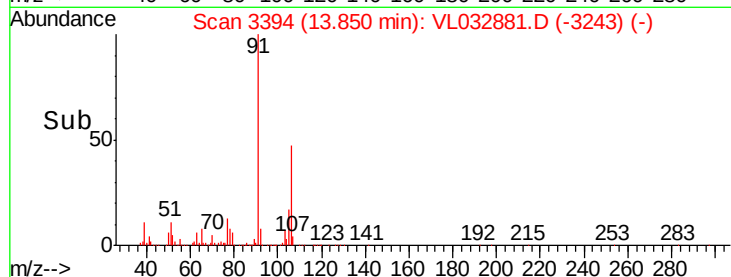
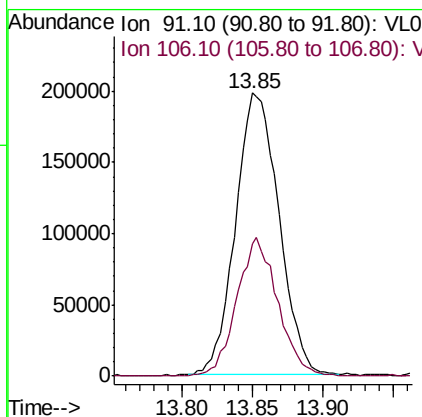
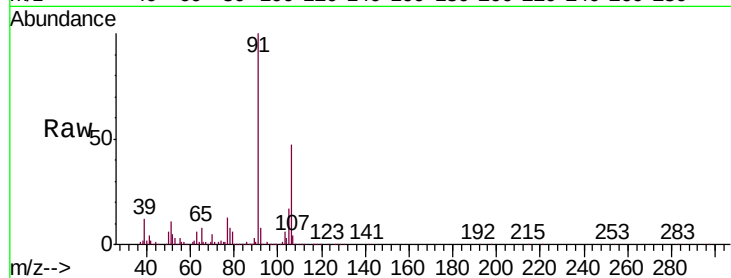




#60  
o-Xylene  
Concen: 1.068 ppbv  
RT: 13.85 min Scan# 3394  
Delta R.T. -0.01 min  
Lab File: VL032881.D  
Acq: 4 Dec 2018 18:04

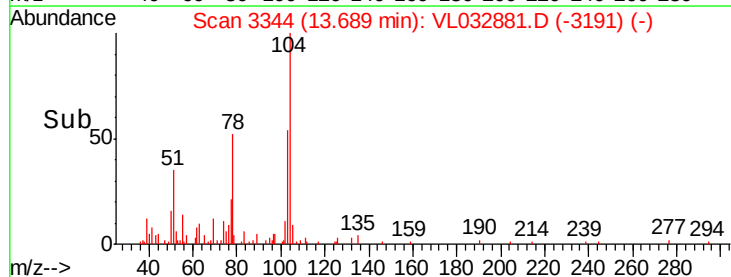
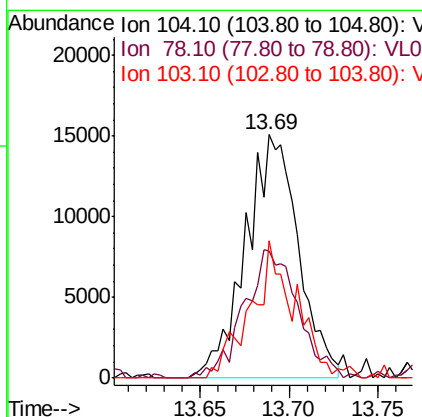
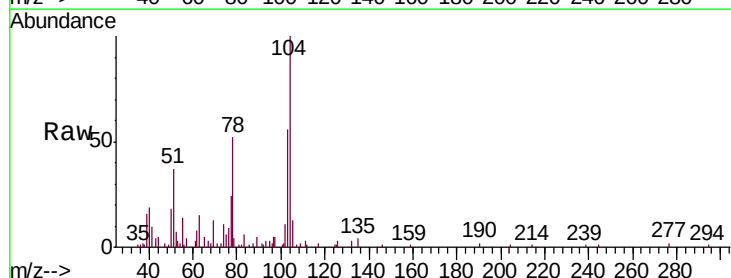
Instrument :  
MSVOA\_L  
ClientSampleId :  
MMSV-02DLDUP

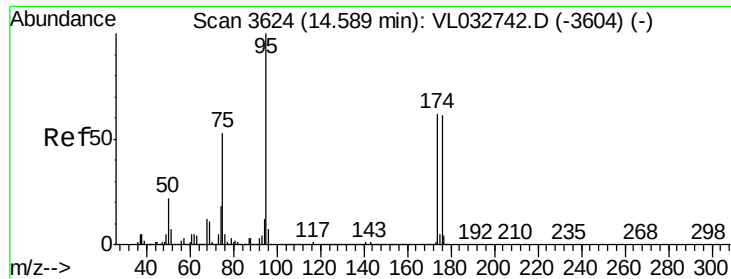
Tgt Ion: 91 Resp: 426813  
Ion Ratio Lower Upper  
91 100  
106 46.7 21.9 65.7



#61  
Styrene  
Concen: 0.120 ppbv  
RT: 13.69 min Scan# 3344  
Delta R.T. -0.01 min  
Lab File: VL032881.D  
Acq: 4 Dec 2018 18:04

Tgt Ion: 104 Resp: 31187  
Ion Ratio Lower Upper  
104 100  
78 54.2 42.2 63.4  
103 48.6 38.2 57.2

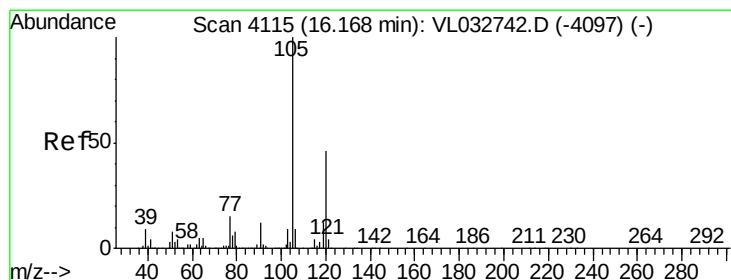
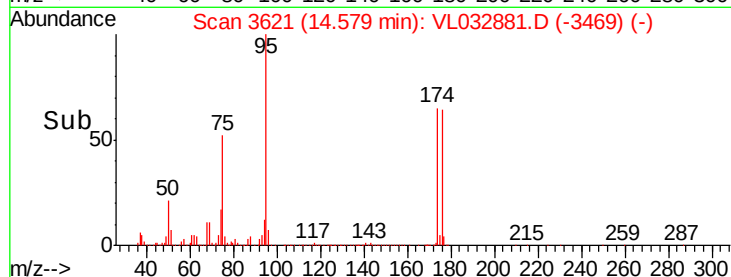
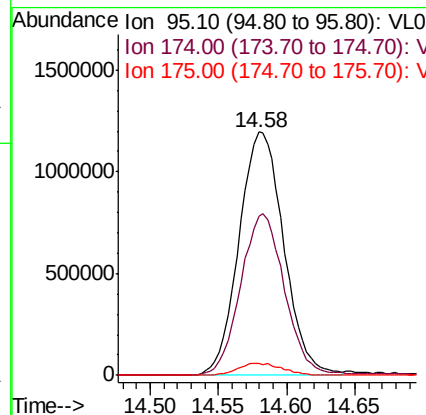
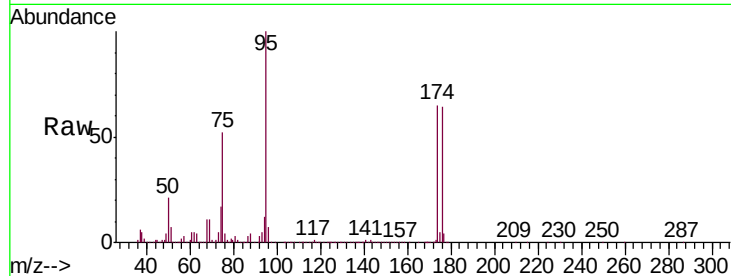




#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 9.750 ppbv  
 RT: 14.58 min Scan# 3621  
 Delta R.T. -0.01 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

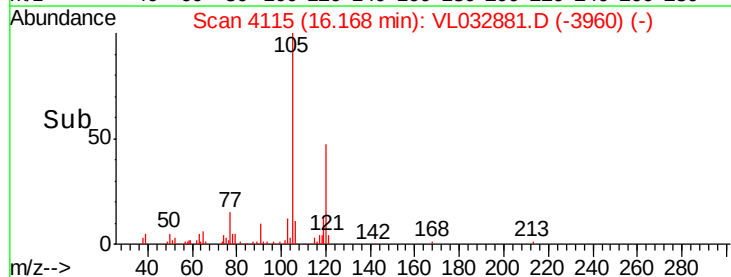
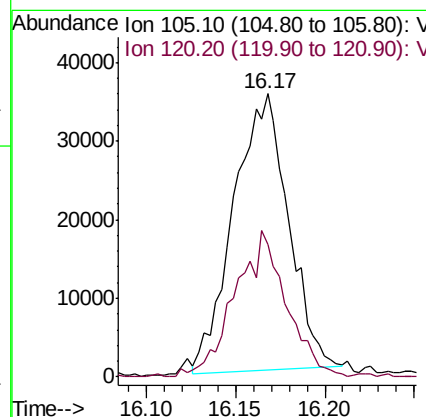
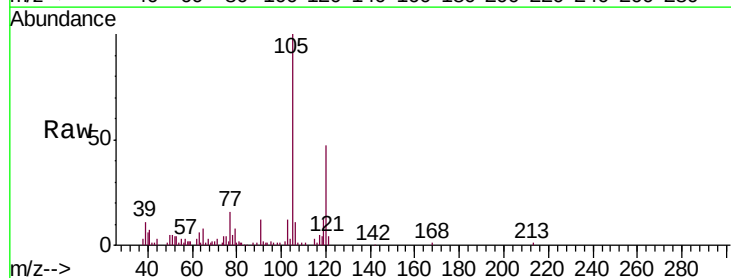
Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MMSV-02DLDUP

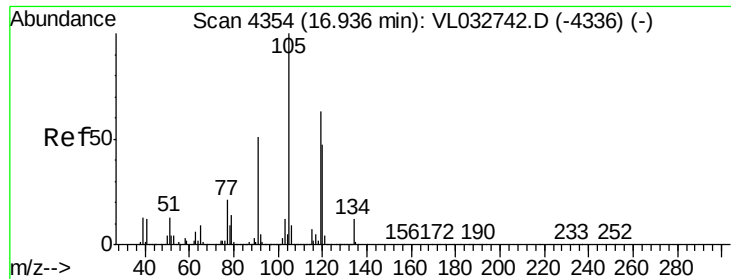
Tgt Ion: 95 Resp: 2704268  
 Ion Ratio Lower Upper  
 95 100  
 174 67.2 50.7 76.1  
 175 5.1 3.8 5.6



#73  
 1,3,5-Trimethylbenzene  
 Concen: 0.176 ppbv  
 RT: 16.17 min Scan# 4115  
 Delta R.T. -0.00 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

Tgt Ion: 105 Resp: 75135  
 Ion Ratio Lower Upper  
 105 100  
 120 47.7 36.6 55.0





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.501 ppbv  
 RT: 16.93 min Scan# 4352  
 Delta R.T. -0.01 min  
 Lab File: VL032881.D  
 Acq: 4 Dec 2018 18:04

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 MMSV-02DLDUP

|           |       |       |        |
|-----------|-------|-------|--------|
| Tgt Ion:  | 105   | Resp: | 229418 |
| Ion Ratio | Lower | Upper |        |
| 105       | 100   |       |        |
| 120       | 43.9  | 37.6  | 56.4   |
| 91        | 11.7  | 42.5  | 63.7#  |
| 77        | 13.0  | 17.4  | 26.2#  |

