

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032919\  
 Data File : VL033507.D  
 Acq On : 29 Mar 2019 18:14  
 Operator : SY/AP  
 Sample : K2042-19  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AAS-1-ROOF-TOP

Manual Integrations  
 APPROVED

MMDadoda  
 4/2/2019 8:40:13 AM

Quant Time: Mar 31 14:59:38 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Mar 2  
 QLast Update : Tue Mar 26 16:00:50 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 809421   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 1883851  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.24 | 117  | 1876996  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 1455318  | 9.89     | ppbv | 0.00   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 98.90% |

| Target Compounds           |       |     |        |        |        | Ovalue |
|----------------------------|-------|-----|--------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 3.08  | 85  | 64929  | 0.550  | ppbv   | 97     |
| 3) Chlorodifluoromethane   | 3.01  | 51  | 35301m | 0.379  | ppbv   |        |
| 4) Chloromethane           | 3.17  | 50  | 30178  | 0.612  | ppbv   | 93     |
| 9) Propene                 | 3.05  | 41  | 32656m | 0.834  | ppbv   |        |
| 11) Trichlorofluoromethane | 4.00  | 101 | 38497  | 0.265  | ppbv   | 98     |
| 13) Ethanol                | 3.65  | 45  | 199531 | 19.703 | ppbv   | 65     |
| 15) Acetone                | 3.90  | 43  | 225737 | 2.319  | ppbv   | 98     |
| 19) Isopropyl Alcohol      | 4.03  | 45  | 64712  | 1.051  | ppbv # | 89     |
| 20) Methylene Chloride     | 4.41  | 84  | 37180m | 0.900  | ppbv   |        |
| 26) Hexane                 | 5.78  | 57  | 33169  | 0.413  | ppbv # | 43     |
| 34) 2-Butanone             | 5.34  | 43  | 23699  | 0.209  | ppbv   | 99     |
| 35) Carbon Tetrachloride   | 7.12  | 117 | 10005m | 0.075  | ppbv   |        |
| 36) Benzene                | 6.99  | 78  | 38290m | 0.242  | ppbv   |        |
| 53) Toluene                | 9.94  | 91  | 56430  | 0.307  | ppbv   | 99     |
| 59) m/p-Xylene             | 13.13 | 91  | 24597m | 0.110  | ppbv   |        |

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

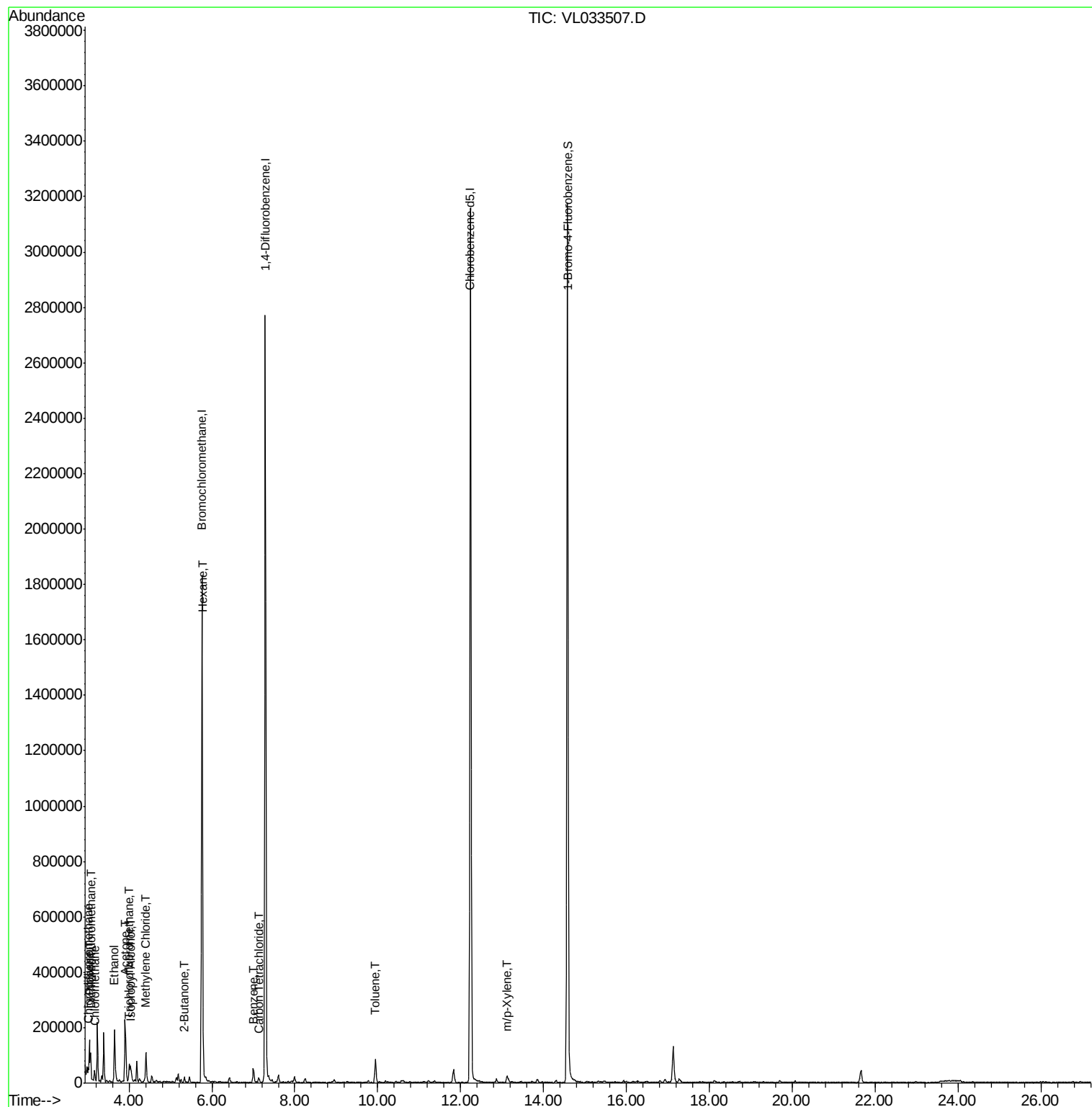
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL032919\  
Data File : VL033507.D  
Acq On : 29 Mar 2019 18:14  
Operator : SY/AP  
Sample : K2042-19  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

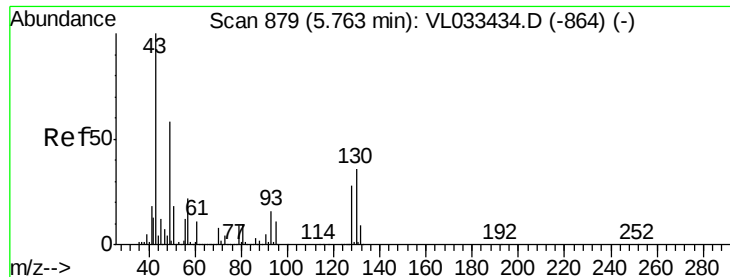
Instrument :  
MSVOA\_L  
ClientSampleId :  
AAS-1-ROOF-TOP

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Quant Time: Mar 31 14:59:38 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL032519AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Tue Mar  
QLast Update : Tue Mar 26 16:00:50 2019  
Response via : Initial Calibration





#1

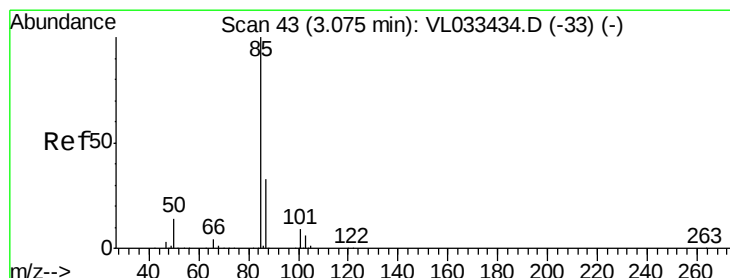
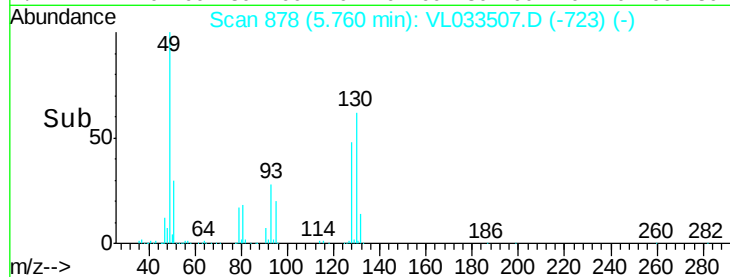
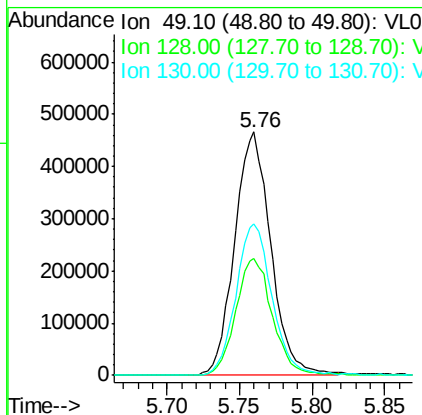
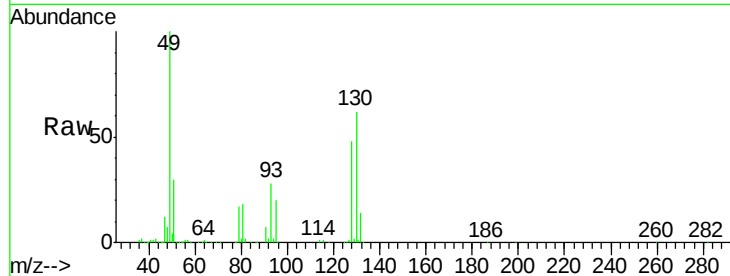
Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.76 min Scan# 878  
 Delta R.T. -0.00 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AAS-1-ROOF-TOP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 48.6  | 24.0  | 72.0  |
| 130     | 62.2  | 31.2  | 93.6  |

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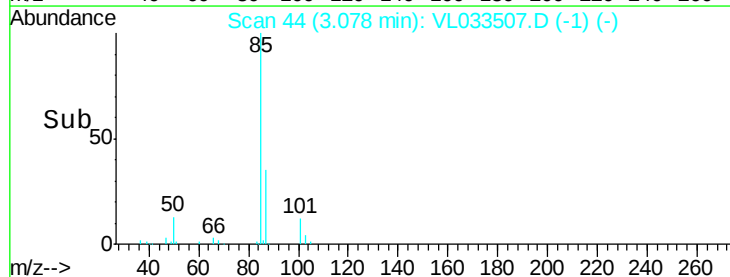
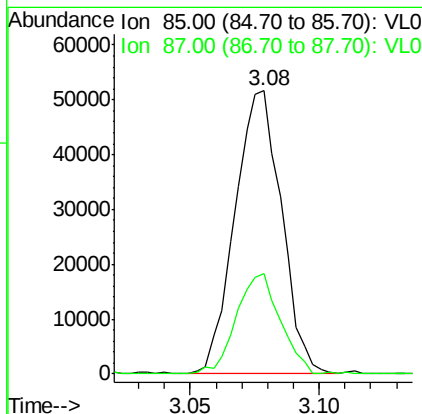
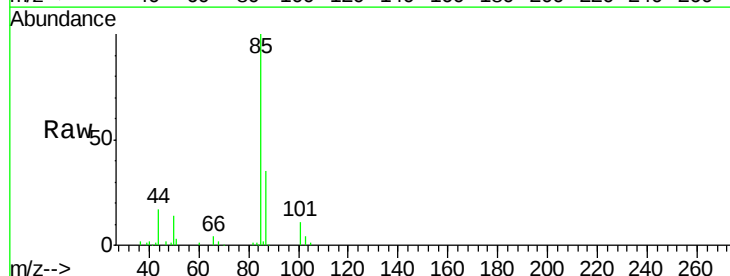
MMDadoda  
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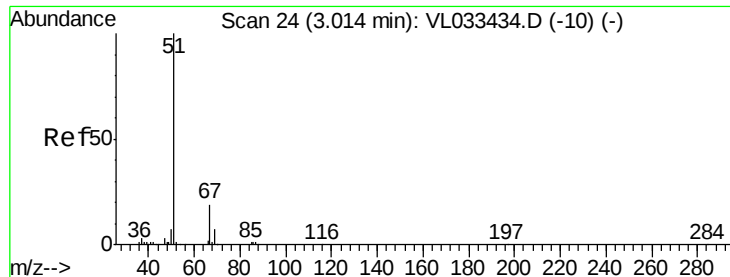


#2

Dichlorodifluoromethane  
 Concen: 0.550 ppbv  
 RT: 3.08 min Scan# 44  
 Delta R.T. 0.00 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 85      | 100   |       |       |
| 87      | 35.2  | 26.7  | 40.1  |





#3

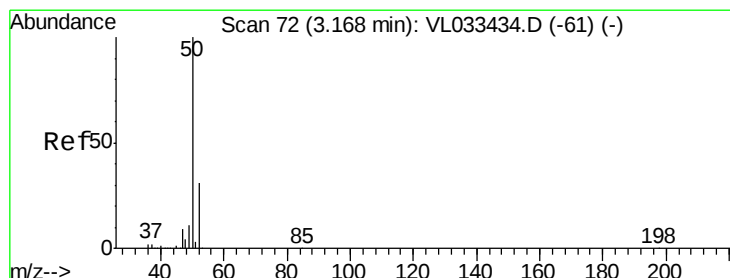
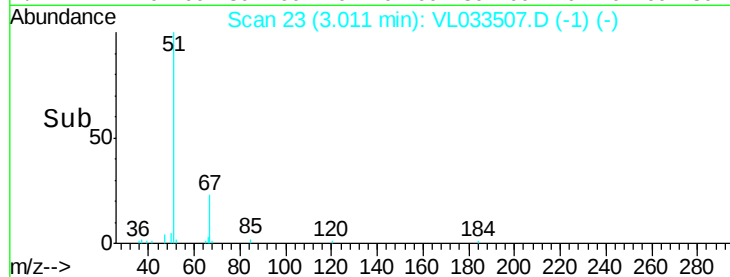
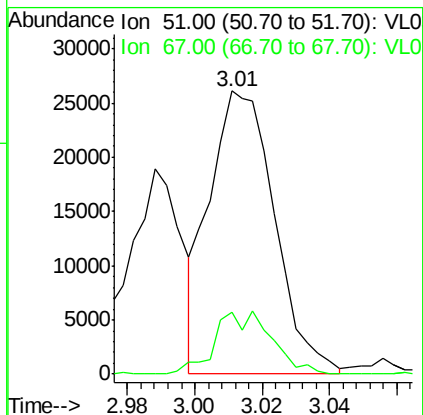
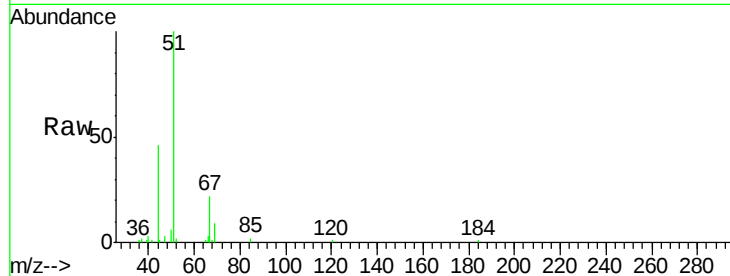
Chlorodifluoromethane  
 Concen: 0.379 ppbv  
 RT: 3.01 min Scan# 23  
 Delta R.T. -0.00 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AAS-1-ROOF-TOP

| Tot Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 51      | 51  | 100   |       |       |
| 67      | 67  | 19.4  | 15.7  | 23.5  |

Manual Integrations  
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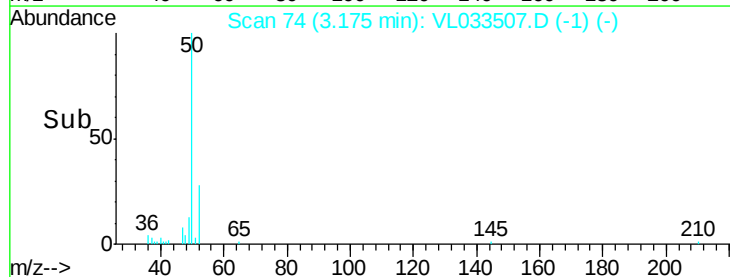
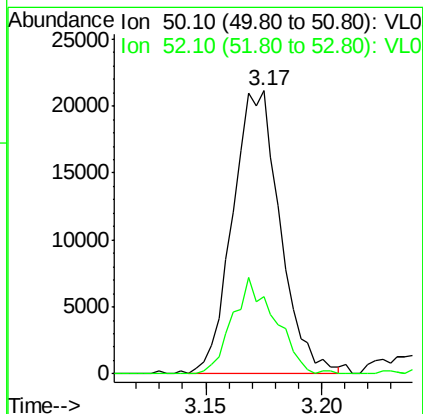
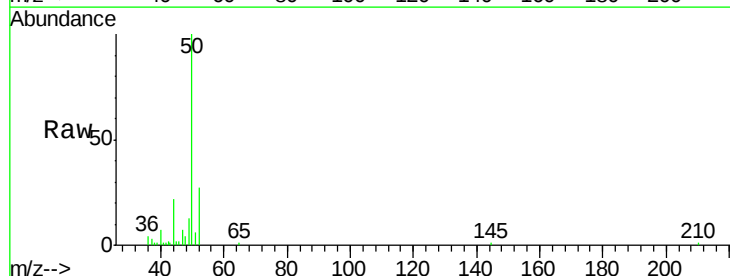
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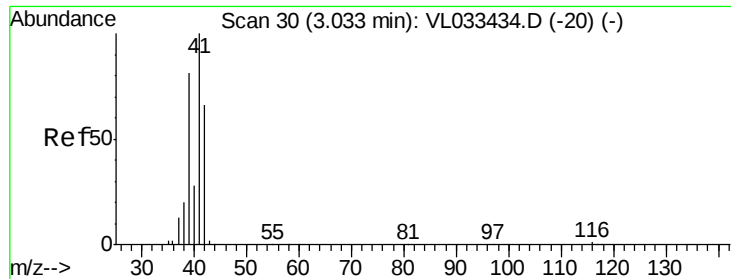


#4

Chloromethane  
 Concen: 0.612 ppbv  
 RT: 3.17 min Scan# 74  
 Delta R.T. 0.01 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

| Tgt Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 50      | 50  | 100   |       |       |
| 52      | 52  | 27.3  | 25.0  | 37.6  |





#9

Propene

Concen: 0.834 ppbv m

RT: 3.05 min Scan# 34

Delta R.T. 0.01 min

Lab File: VL033507.D

Acq: 29 Mar 2019 18:14

Instrument :

MSVOA\_L

ClientSampleId :

AAS-1-ROOF-TOP

Tot Ion: 41 Resp: 32656

Ion Ratio Lower Upper

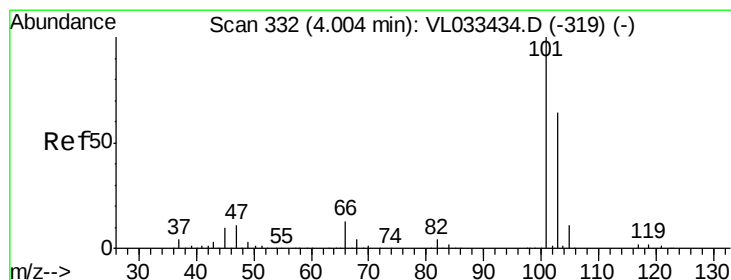
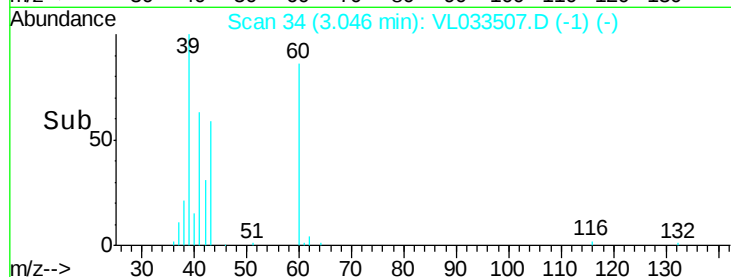
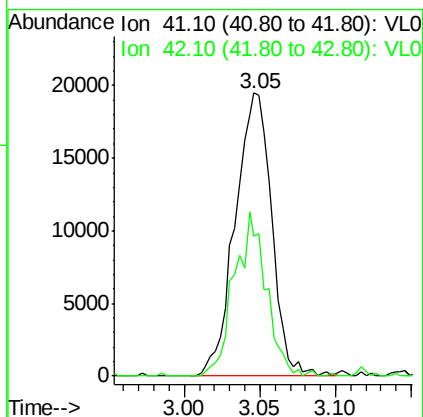
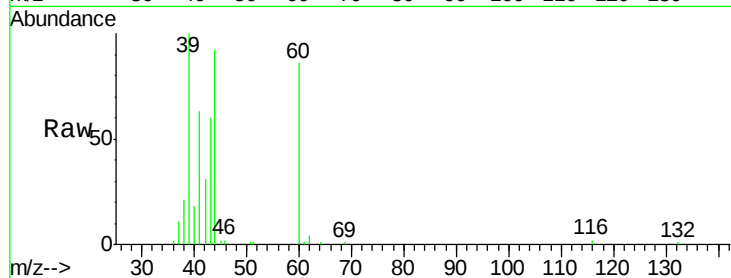
41 100

42 110.6 53.9 80.9#

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#11

Trichlorofluoromethane

Concen: 0.265 ppbv

RT: 4.00 min Scan# 332

Delta R.T. 0.00 min

Lab File: VL033507.D

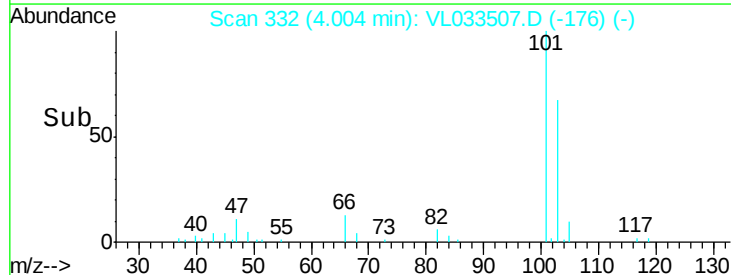
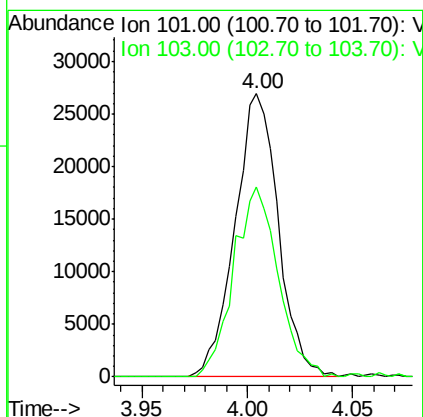
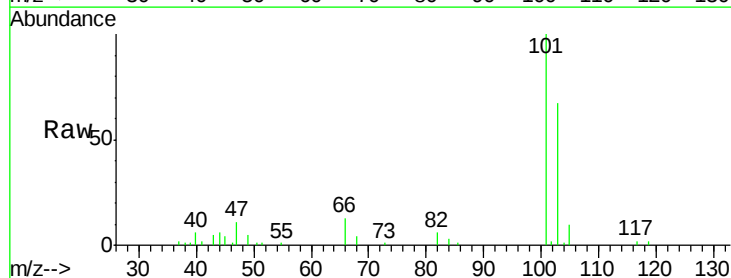
Acq: 29 Mar 2019 18:14

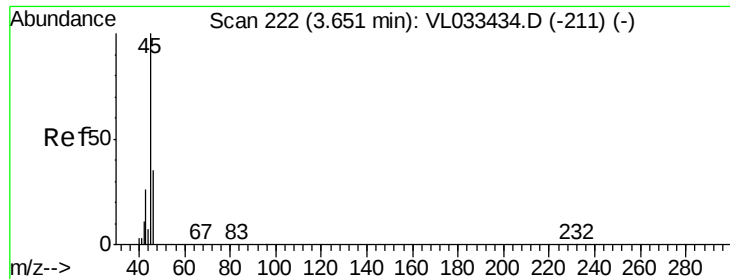
Tgt Ion: 101 Resp: 38497

Ion Ratio Lower Upper

101 100

103 65.6 51.3 76.9





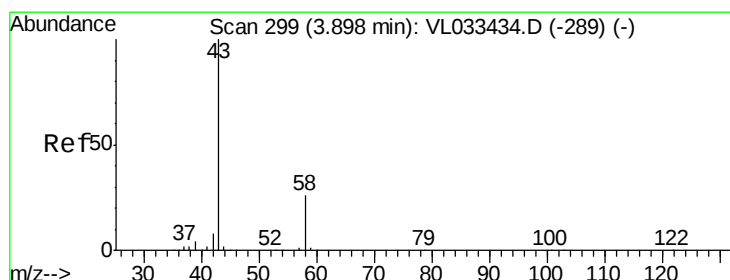
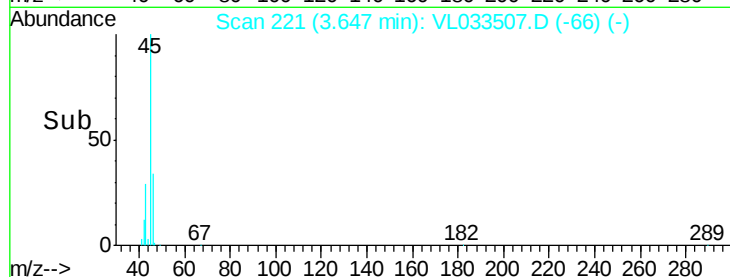
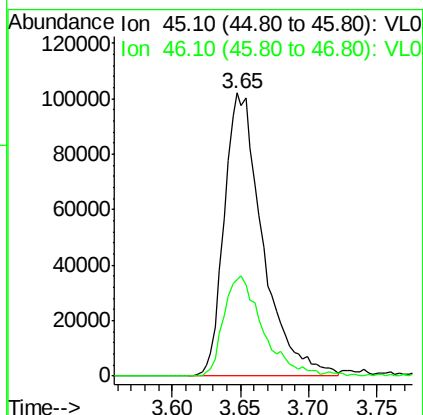
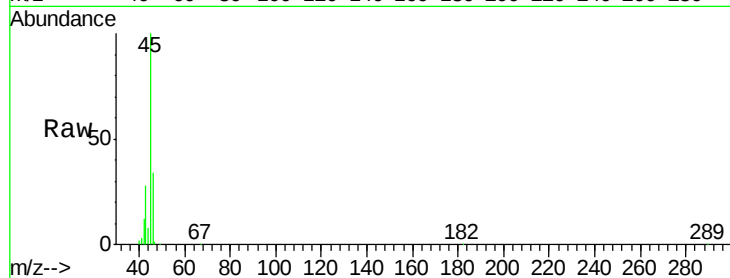
#13  
Ethanol  
Concen: 19.703 ppbv  
RT: 3.65 min Scan# 221  
Delta R.T. -0.00 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
AAS-1-ROOF-TOP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 45      | 100   |       |       |
| 46      | 36.7  | 25.4  | 101.8 |

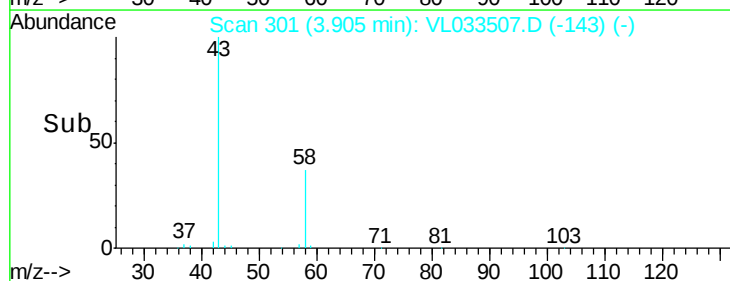
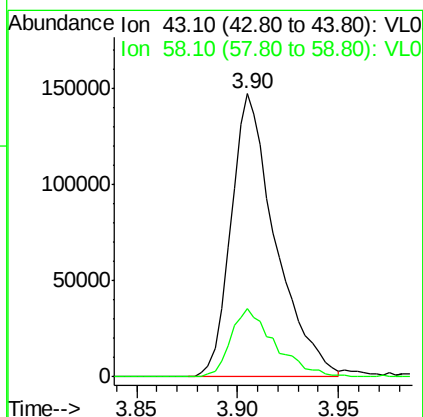
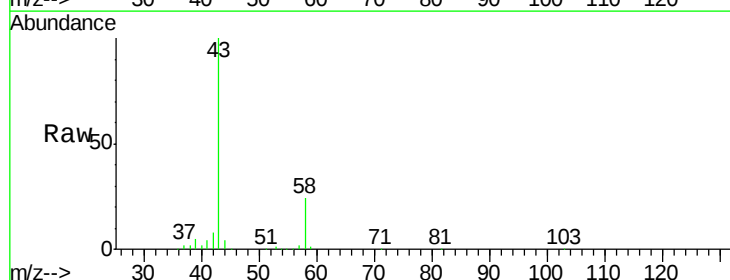
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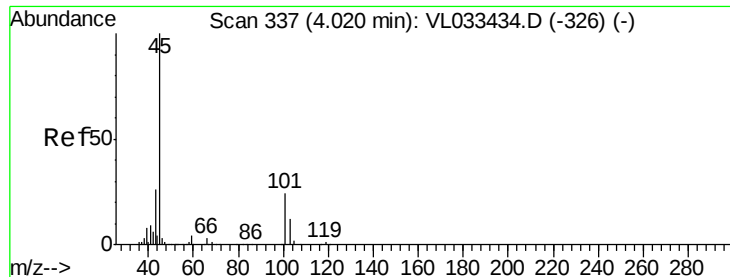
MMDadoda  
4/2/2019 8:40:13 AM



#15  
Acetone  
Concen: 2.319 ppbv  
RT: 3.90 min Scan# 301  
Delta R.T. 0.01 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 24.7  | 20.5  | 30.7  |





#19

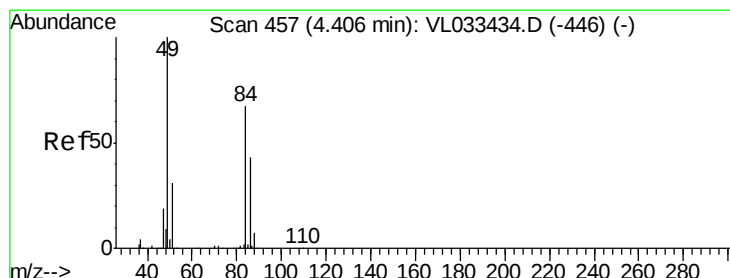
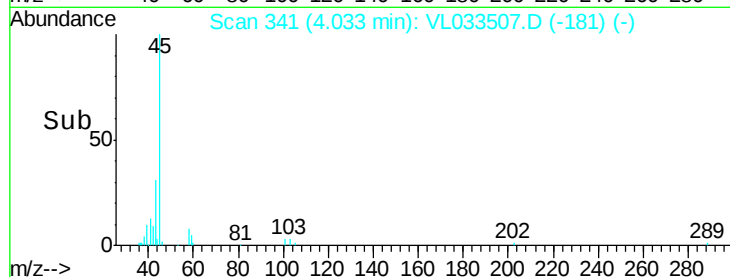
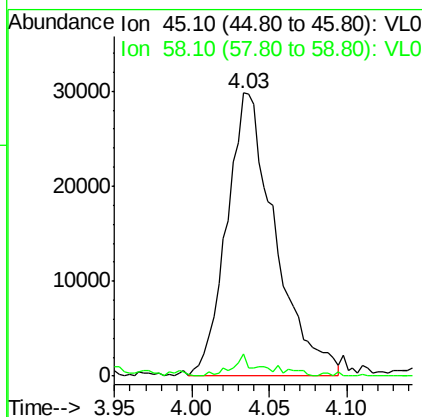
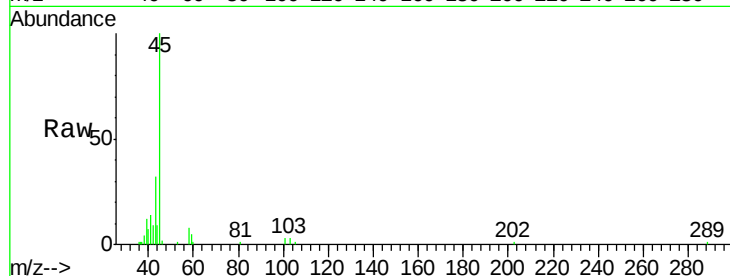
Isopropyl Alcohol  
 Concen: 1.051 ppbv  
 RT: 4.03 min Scan# 341  
 Delta R.T. 0.01 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 AAS-1-ROOF-TOP

Tot Ion: 45 Resp: 64712  
 Ion Ratio Lower Upper  
 45 100  
 58 5.7 1.4 2.2#

Manual Integrations  
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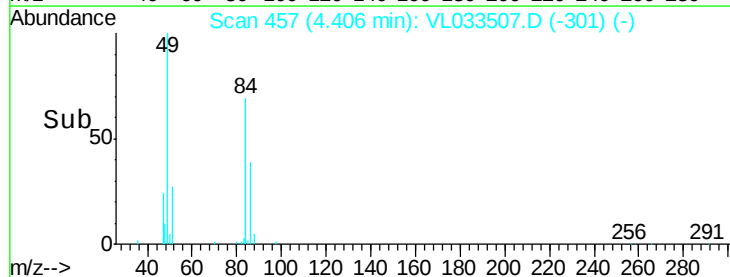
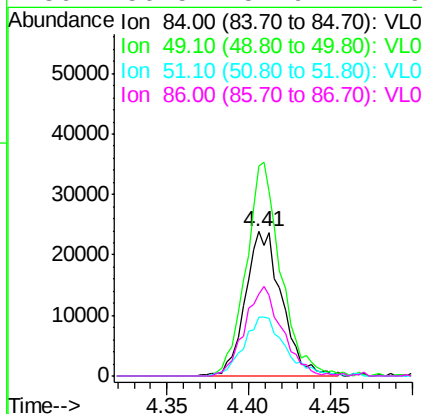
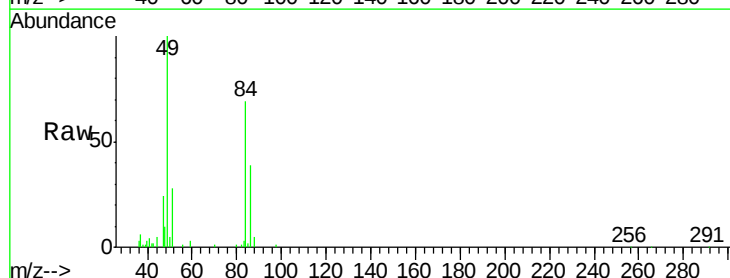
MMDadoda  
 4/2/2019 8:40:13 AM

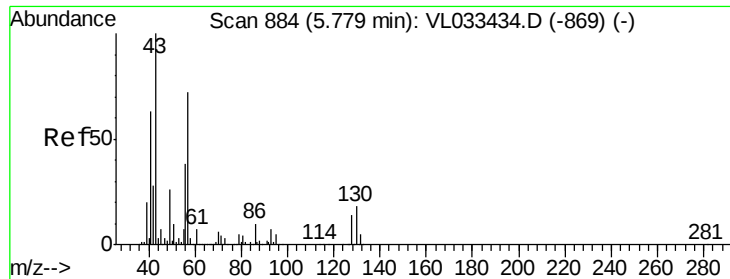


#20

Methylene Chloride  
 Concen: 0.900 ppbv m  
 RT: 4.41 min Scan# 457  
 Delta R.T. 0.00 min  
 Lab File: VL033507.D  
 Acq: 29 Mar 2019 18:14

Tgt Ion: 84 Resp: 37180  
 Ion Ratio Lower Upper  
 84 100  
 49 144.9 120.0 180.0  
 51 41.1 36.7 55.1  
 86 56.5 51.9 77.9





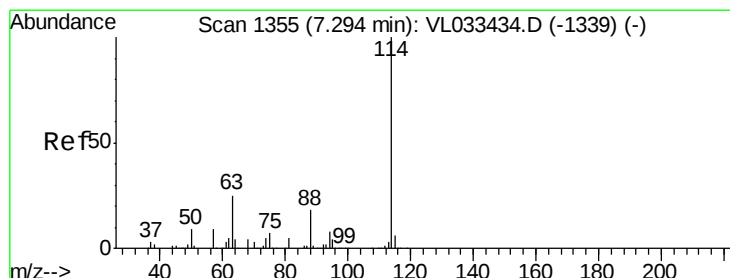
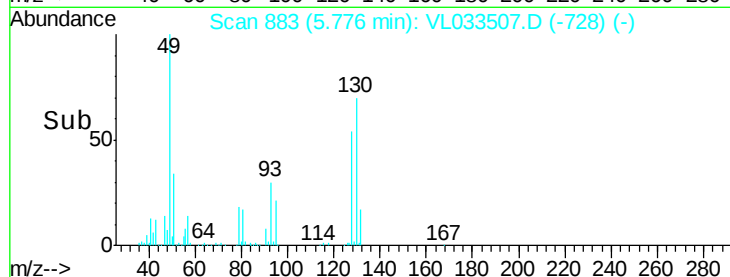
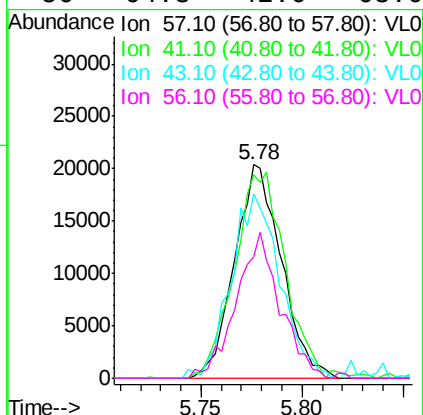
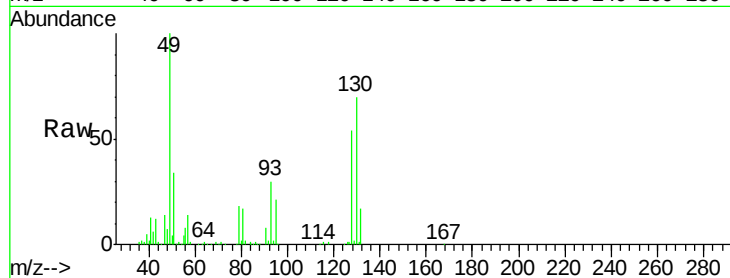
#26  
Hexane  
Concen: 0.413 ppbv  
RT: 5.78 min Scan# 883  
Delta R.T. -0.00 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
AAS-1-ROOF-TOP

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 57      | 100   |       |        |
| 41      | 105.4 | 70.7  | 106.1  |
| 43      | 94.6  | 182.6 | 274.0# |
| 56      | 64.3  | 42.0  | 63.0#  |

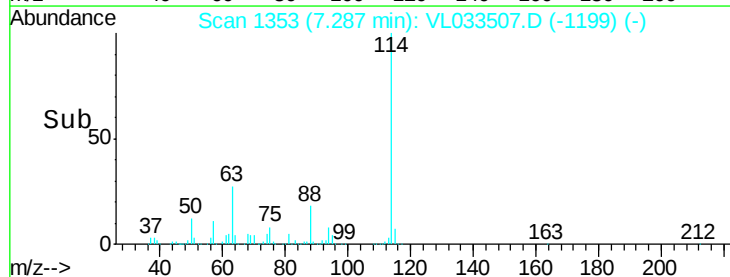
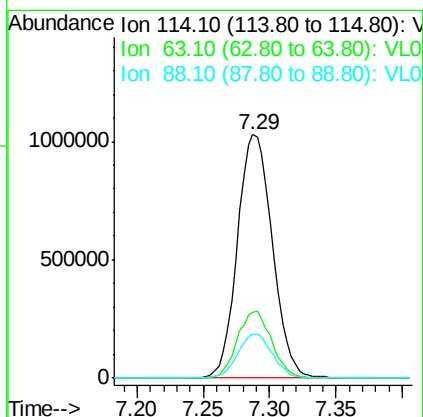
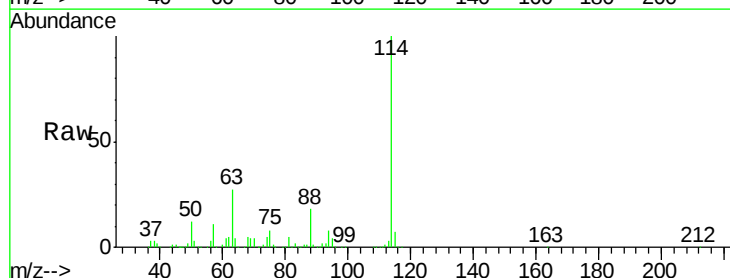
Manual Integrations  
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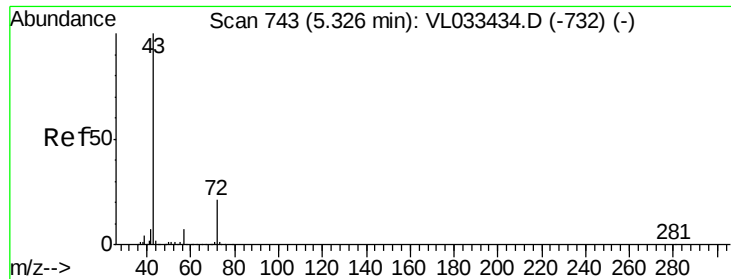
MMDadoda  
4/2/2019 8:40:13 AM



#33  
1,4-Difluorobenzene  
Concen: 10.000 ppbv  
RT: 7.29 min Scan# 1353  
Delta R.T. -0.01 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 27.1  | 21.5  | 32.3  |
| 88      | 18.0  | 14.5  | 21.7  |





#34

2-Butanone

Concen: 0.209 ppbv

RT: 5.34 min Scan# 747

Delta R.T. 0.01 min

Lab File: VL033507.D

Acq: 29 Mar 2019 18:14

Tot Ion: 43 Resp: 23699

Ion Ratio Lower Upper

43 100

72 22.1 17.4 26.2

Instrument :

MSVOA\_L

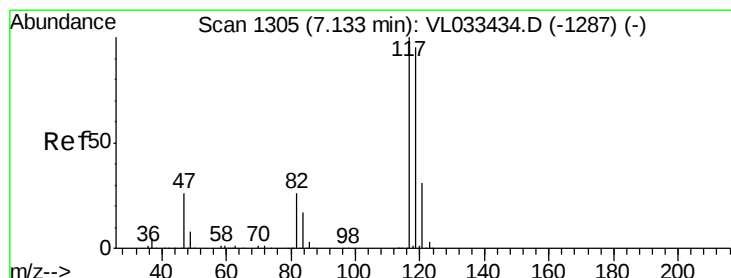
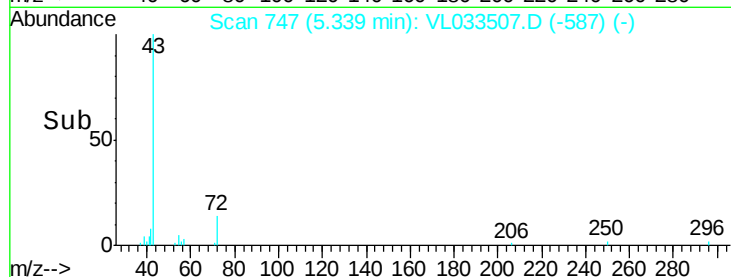
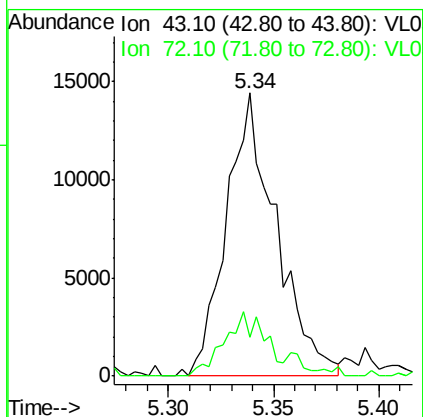
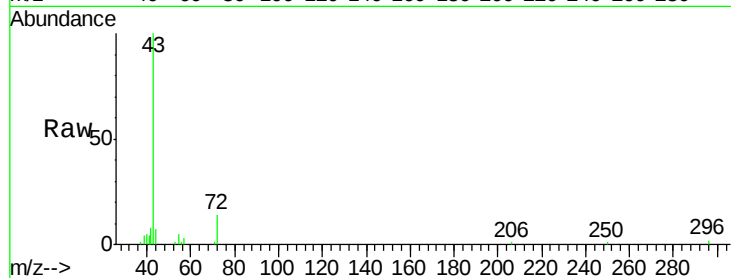
ClientSampleId :

AAS-1-ROOF-TOP

Manual Integrations  
APPROVED

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#35

Carbon Tetrachloride

Concen: 0.075 ppbv m

RT: 7.12 min Scan# 1302

Delta R.T. -0.01 min

Lab File: VL033507.D

Acq: 29 Mar 2019 18:14

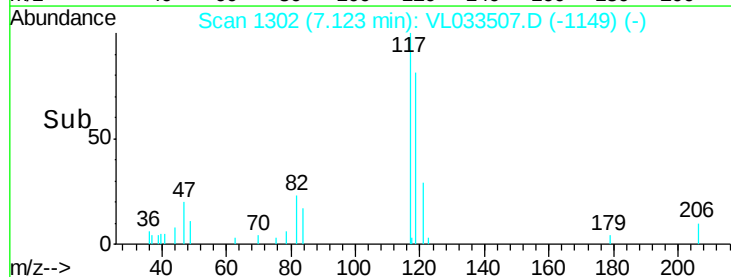
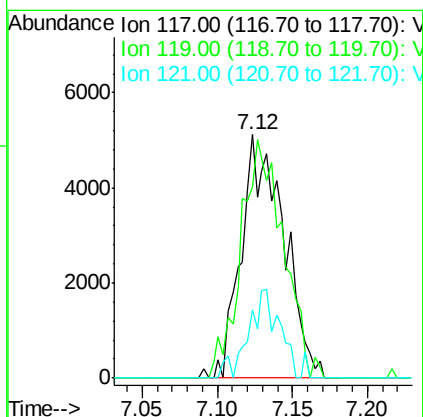
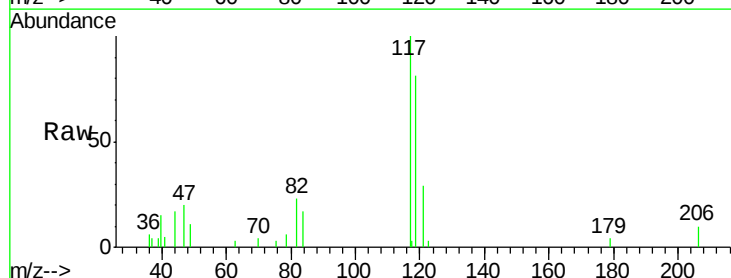
Tgt Ion: 117 Resp: 10005

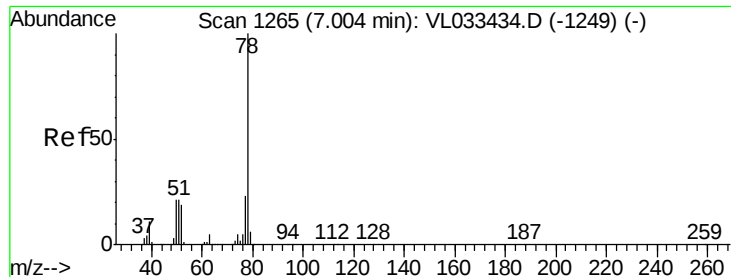
Ion Ratio Lower Upper

117 100

119 81.0 75.8 113.8

121 28.8 24.7 37.1





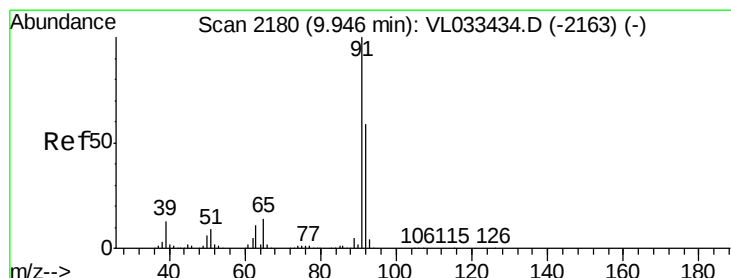
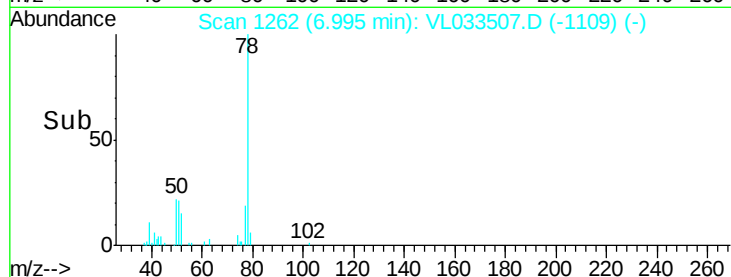
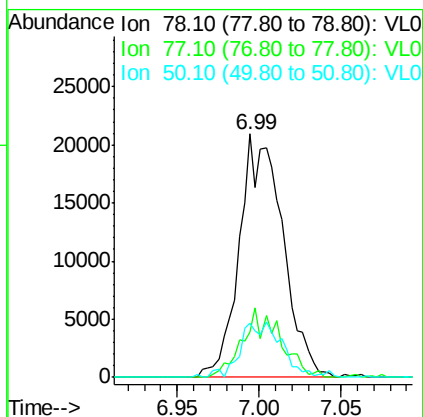
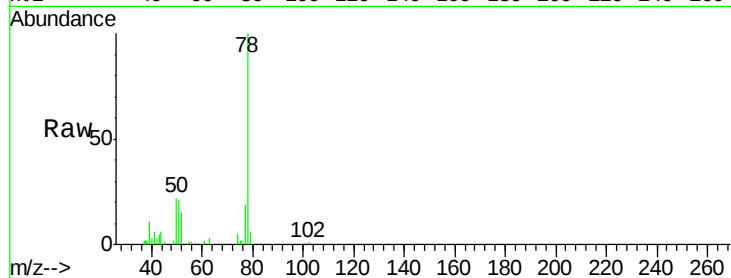
#36  
Benzene  
Concen: 0.242 ppbv m  
RT: 6.99 min Scan# 1262  
Delta R.T. -0.01 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
AAS-1-ROOF-TOP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 18.6  | 18.1  | 27.1  |
| 50      | 22.3  | 16.7  | 25.1  |

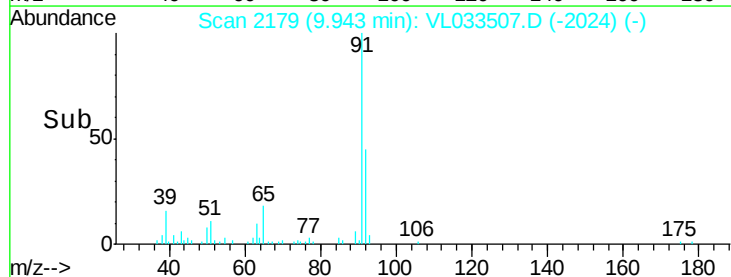
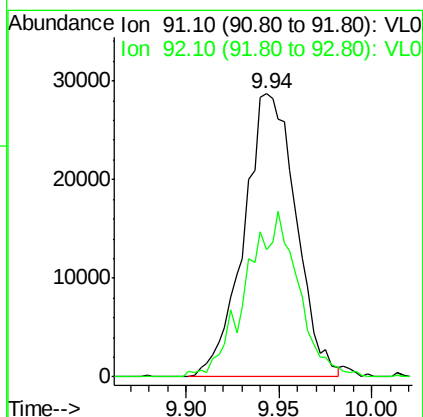
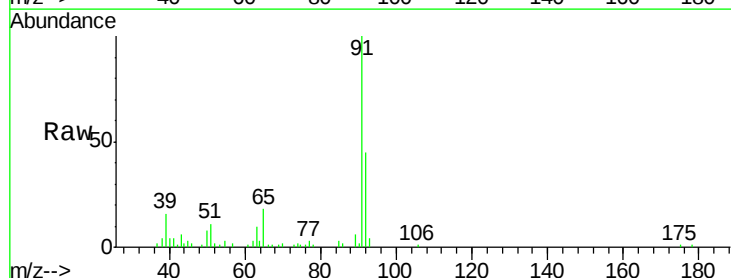
Manual Integrations  
APPROVED

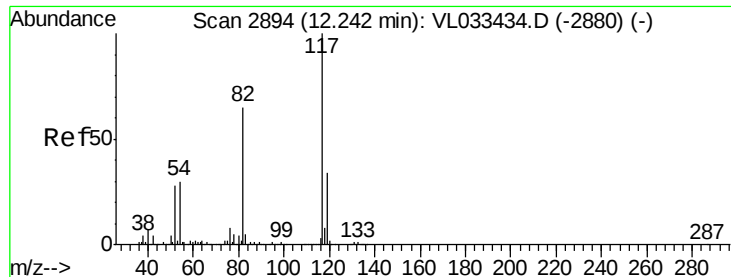
MMDadoda  
4/2/2019 8:40:13 AM



#53  
Toluene  
Concen: 0.307 ppbv  
RT: 9.94 min Scan# 2179  
Delta R.T. -0.00 min  
Lab File: VL033507.D  
Acq: 29 Mar 2019 18:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 92      | 58.2  | 47.4  | 71.0  |





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2893

Delta R.T. -0.00 min

Lab File: VL033507.D

Acq: 29 Mar 2019 18:14

Instrument :

MSVOA\_L

ClientSampleId :

AAS-1-ROOF-TOP

Tot Ion:117 Resp: 1876996

Ion Ratio Lower Upper

117 100

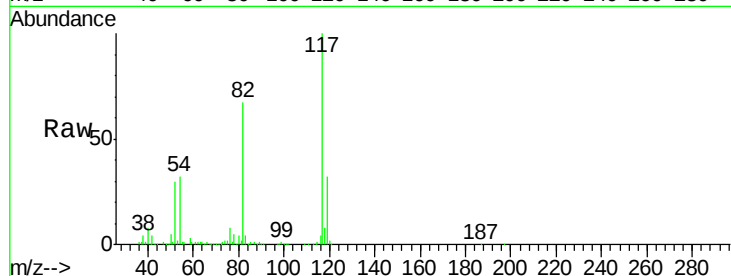
82 67.3 51.5 77.3

119 31.9 25.5 38.3

Manual Integrations  
APPROVED

MMDadoda

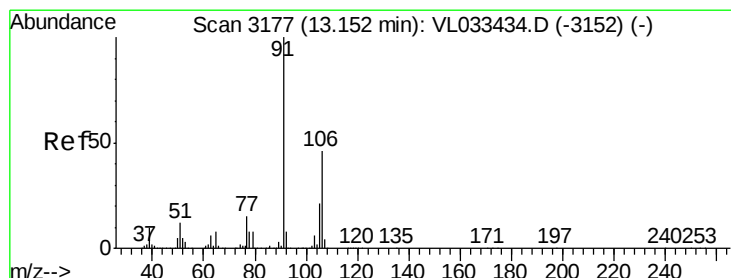
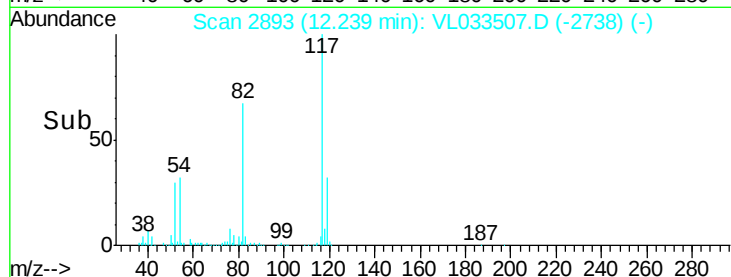
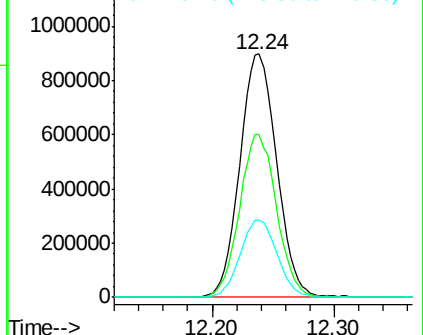
4/2/2019 8:40:13 AM



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



#59

m/p-Xylene

Concen: 0.110 ppbv m

RT: 13.13 min Scan# 3170

Delta R.T. -0.02 min

Lab File: VL033507.D

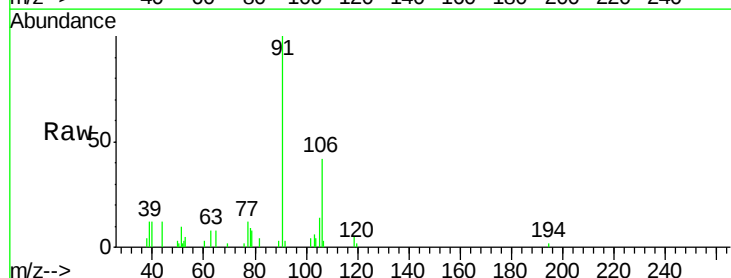
Acq: 29 Mar 2019 18:14

Tgt Ion: 91 Resp: 24597

Ion Ratio Lower Upper

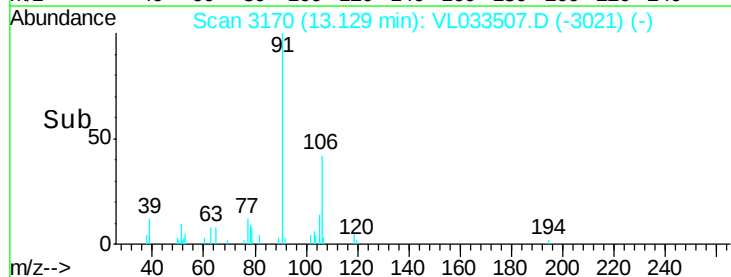
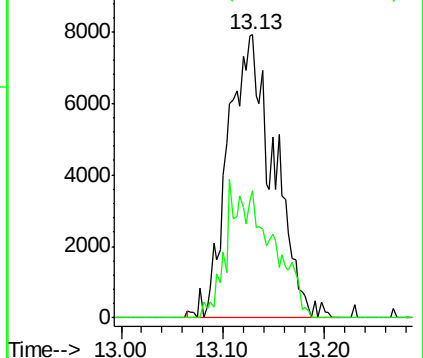
91 100

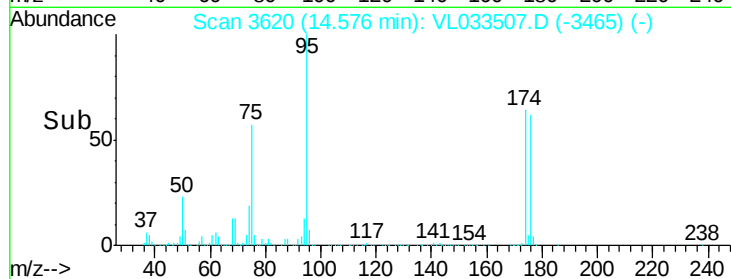
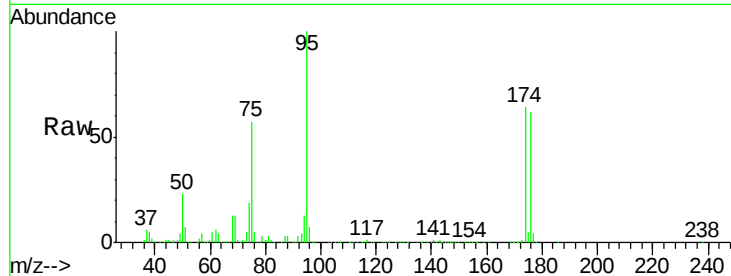
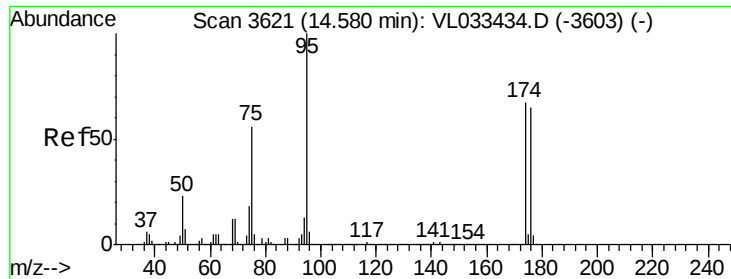
106 0.0 0.0 0.0



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#68

1-Bromo-4-Fluorobenzene

Concen: 9.890 ppbv

RT: 14.58 min Scan# 3620

Delta R.T. -0.00 min

Lab File: VL033507.D

Acq: 29 Mar 2019 18:14

Tot Ion: 95 Resp: 1455318

Ion Ratio Lower Upper

95 100

174 65.6 52.9 79.3

175 4.8 3.8 5.6

Instrument :

MSVOA\_L

ClientSampleId :

AAS-1-ROOF-TOP

Manual Integrations

APPROVED

MMDadoda

4/2/2019 8:40:13 AM

