

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL050219\  
 Data File : VL033648.D  
 Acq On : 3 May 2019 4:22  
 Operator : SY/AP  
 Sample : K2628-12  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 A-12

Manual Integrations  
 APPROVED

MMDadoda  
 5/4/2019 7:19:04 AM

Quant Time: May 03 08:15:26 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL050119AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May 03 08:15:26 2019  
 QLast Update : Thu May 02 06:29:02 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.76  | 49   | 891086   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.29  | 114  | 2102486  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.23 | 117  | 2069397  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 14.57  | 95    | 1739216  | 11.04    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 110.40% |

| Target Compounds           | R.T. | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 3.07 | 85   | 77394    | 0.576  | ppbv   | 96     |
| 3) Chlorodifluoromethane   | 3.01 | 51   | 55052m   | 0.517  | ppbv   |        |
| 4) Chloromethane           | 3.17 | 50   | 29152    | 0.502  | ppbv # | 88     |
| 11) Trichlorofluoromethane | 4.00 | 101  | 42115    | 0.264  | ppbv   | 91     |
| 13) Ethanol                | 3.65 | 45   | 657106   | 47.507 | ppbv   | 100    |
| 15) Acetone                | 3.90 | 43   | 598038   | 5.513  | ppbv   | 99     |
| 19) Isopropyl Alcohol      | 4.03 | 45   | 138256   | 1.857  | ppbv # | 91     |
| 20) Methylene Chloride     | 4.41 | 84   | 51845    | 1.226  | ppbv # | 90     |
| 26) Hexane                 | 5.78 | 57   | 68562    | 0.791  | ppbv # | 47     |
| 34) 2-Butanone             | 5.33 | 43   | 30219m   | 0.234  | ppbv   |        |
| 35) Carbon Tetrachloride   | 7.12 | 117  | 12176m   | 0.073  | ppbv   |        |
| 36) Benzene                | 7.00 | 78   | 16482m   | 0.092  | ppbv   |        |
| 53) Toluene                | 9.94 | 91   | 1425897  | 6.307  | ppbv   | 99     |

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

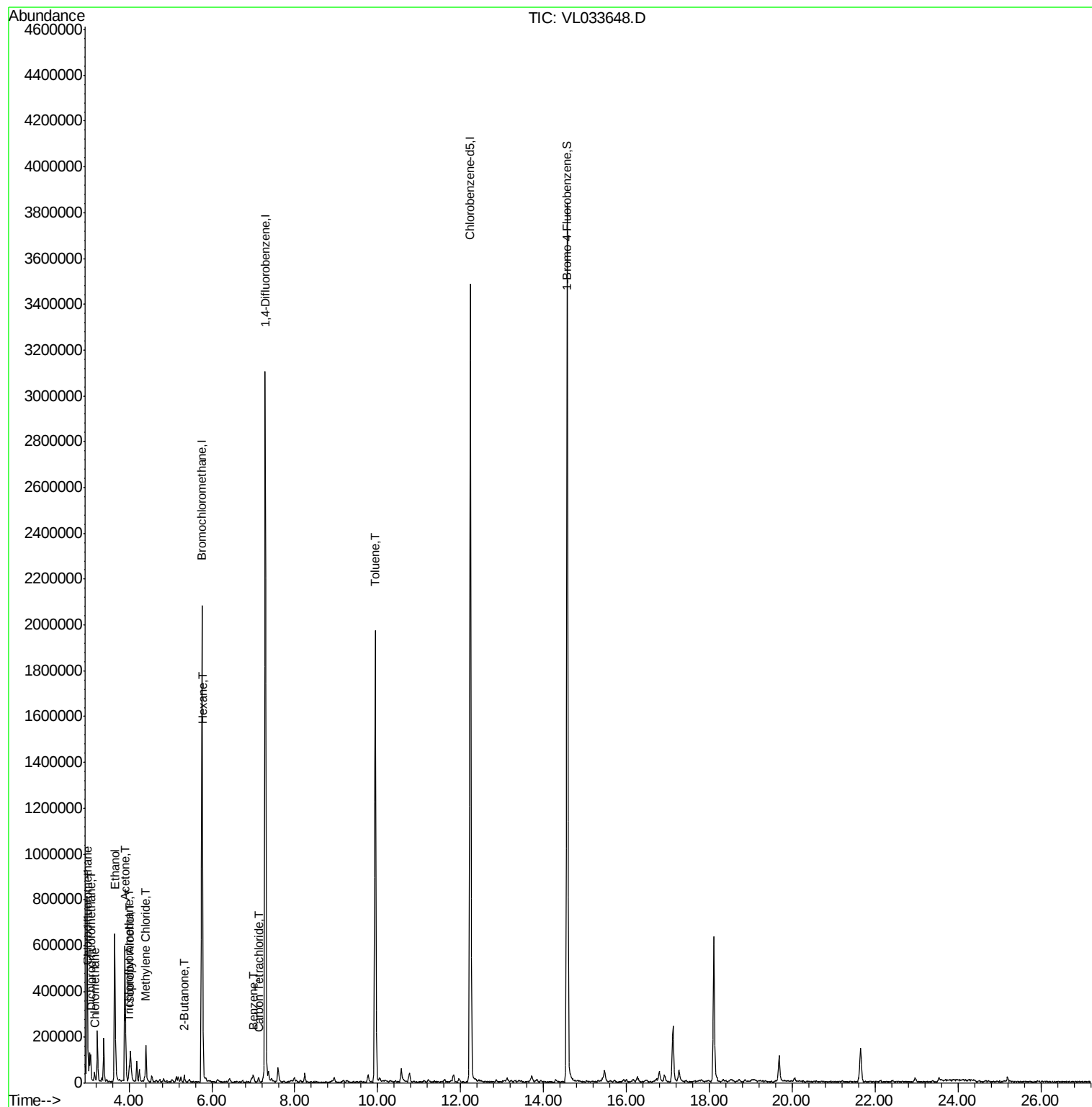
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL050219\  
Data File : VL033648.D  
Acq On : 3 May 2019 4:22  
Operator : SY/AP  
Sample : K2628-12  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

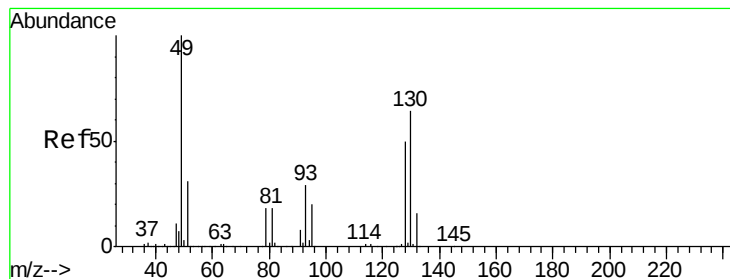
Instrument :  
MSVOA\_L  
ClientSampleId :  
A-12

Manual Integrations  
APPROVED

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5/4/2019 7:19:04 AM

Quant Time: May 03 08:15:26 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL050119AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu May  
QLast Update : Thu May 02 06:29:02 2019  
Response via : Initial Calibration





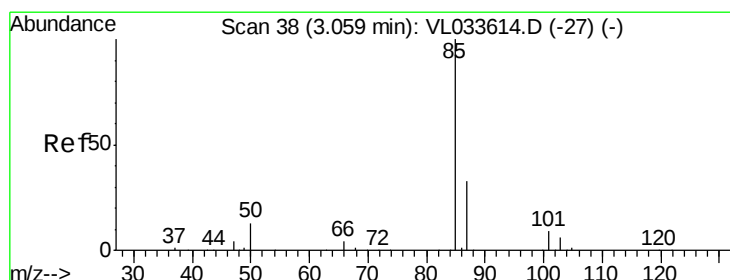
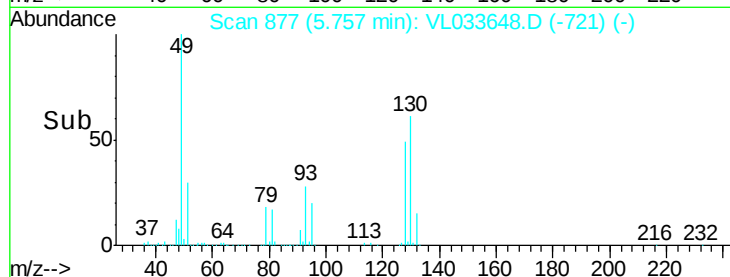
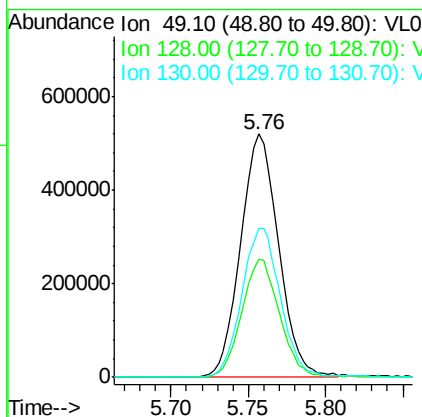
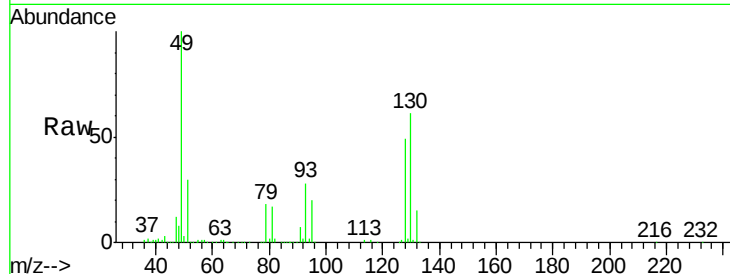
#1  
 Bromochloromethane  
 Concen: 10.000 ppbv  
 RT: 5.76 min Scan# 877  
 Delta R.T. 0.00 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

Instrument :  
 MSVOA\_L  
 ClientSampled :  
 A-12

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 49    | Resp: | 891086 |
| Ion Ratio | Lower | Upper |        |
| 49        | 100   |       |        |
| 128       | 48.4  | 25.0  | 75.0   |
| 130       | 63.0  | 31.9  | 95.9   |

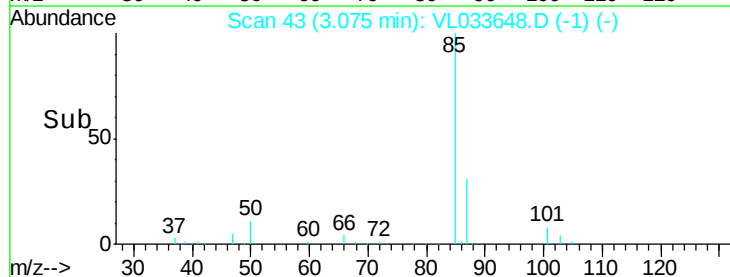
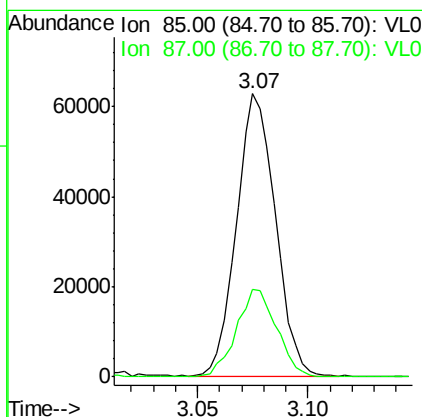
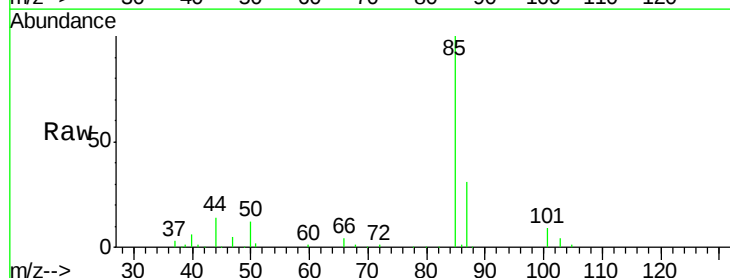
Manual Integrations  
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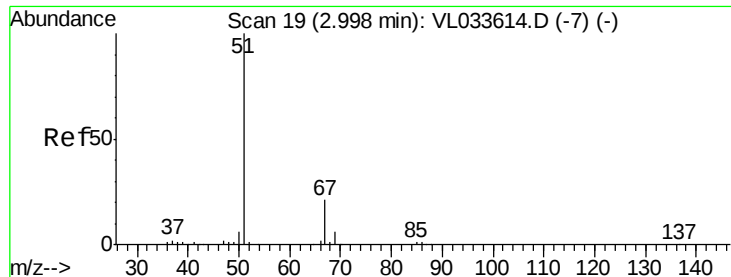
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#2  
 Dichlorodifluoromethane  
 Concen: 0.576 ppbv  
 RT: 3.07 min Scan# 43  
 Delta R.T. 0.02 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 85    | Resp: | 77394 |
| Ion Ratio | Lower | Upper |       |
| 85        | 100   |       |       |
| 87        | 31.1  | 26.8  | 40.2  |





#3

Chlorodifluoromethane

Concen: 0.517 ppbv

RT: 3.01 min Scan# 23

Delta R.T. 0.01 min

Lab File: VL033648.D

Acq: 3 May 2019 4:22

Instrument :

MSVOA\_L

ClientSampleId :

A-12

Tot Ion: 51 Resp: 55052

Ion Ratio Lower Upper

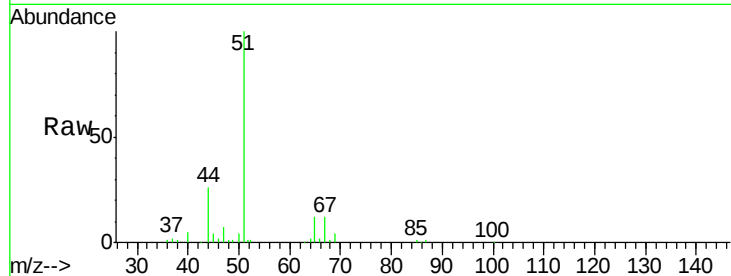
51 100

67 21.9 15.6 23.4

Manual Integrations  
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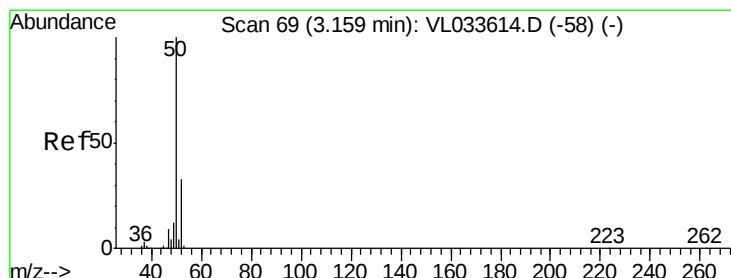
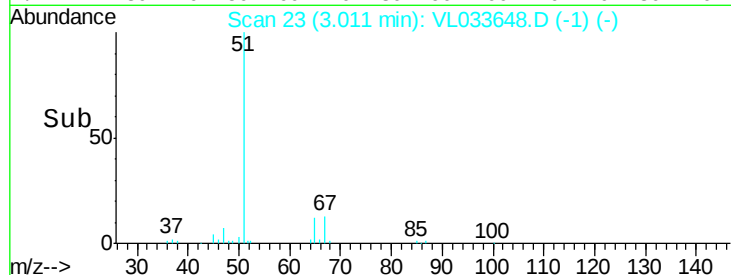
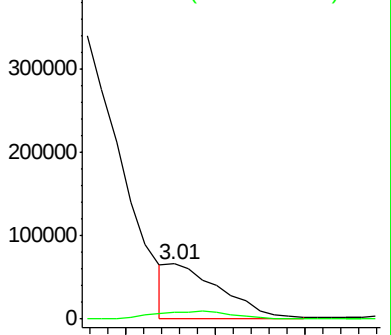
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.502 ppbv

RT: 3.17 min Scan# 74

Delta R.T. 0.02 min

Lab File: VL033648.D

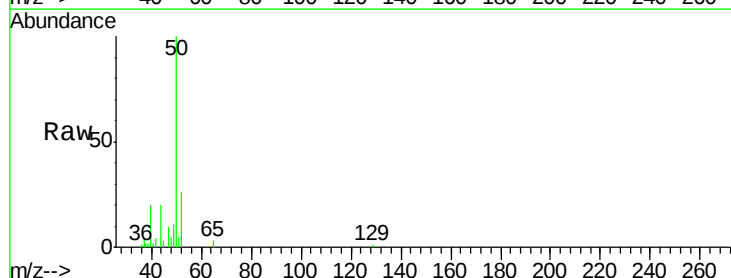
Acq: 3 May 2019 4:22

Tgt Ion: 50 Resp: 29152

Ion Ratio Lower Upper

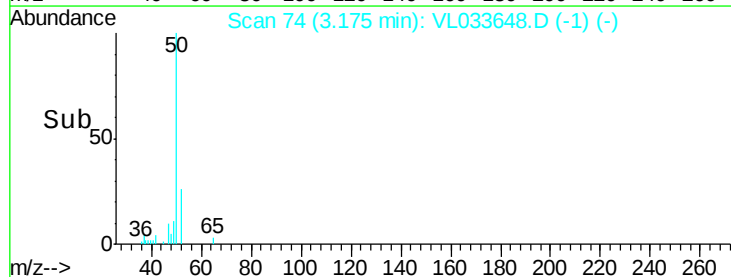
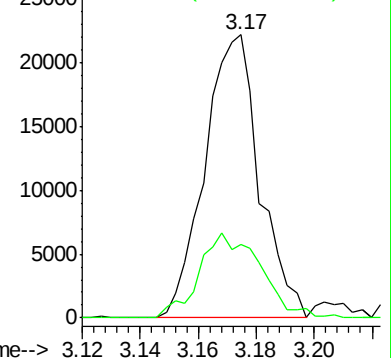
50 100

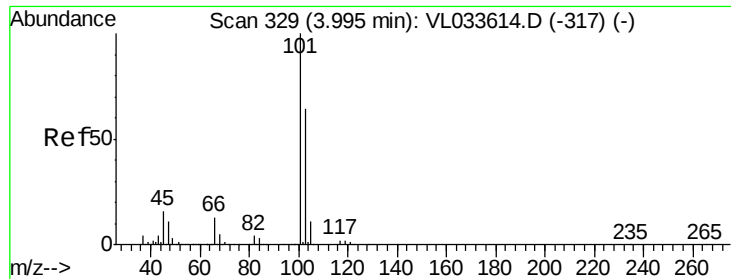
52 25.9 26.0 39.0#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





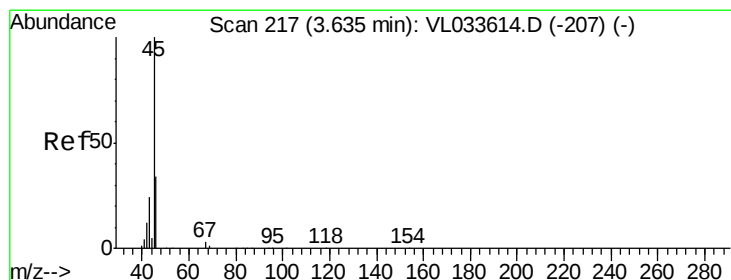
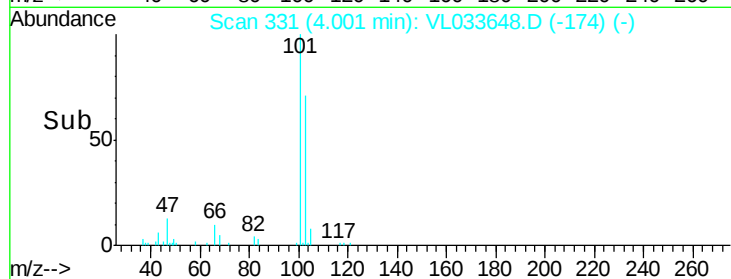
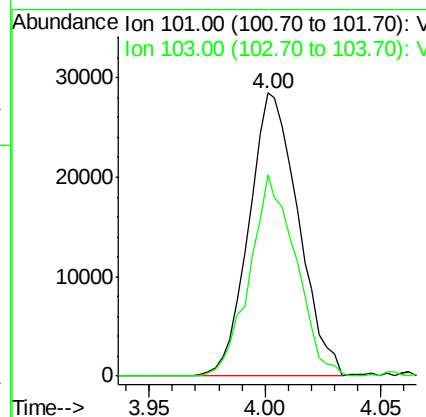
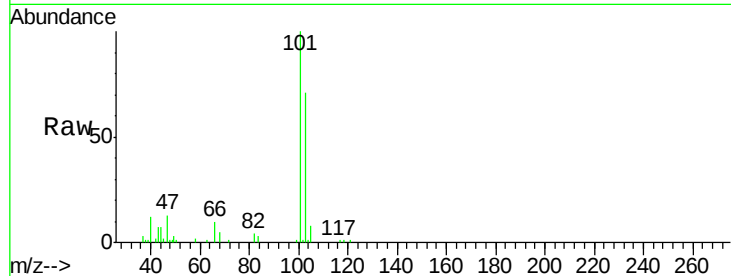
#11  
 Trichlorofluoromethane  
 Concen: 0.264 ppbv  
 RT: 4.00 min Scan# 331  
 Delta R.T. 0.01 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 A-12

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 101     | 100   |       |       |
| 103     | 71.0  | 51.2  | 76.8  |

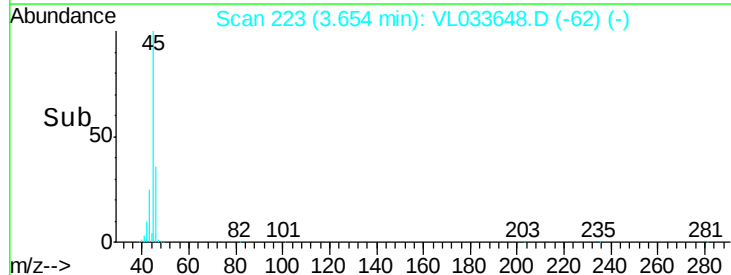
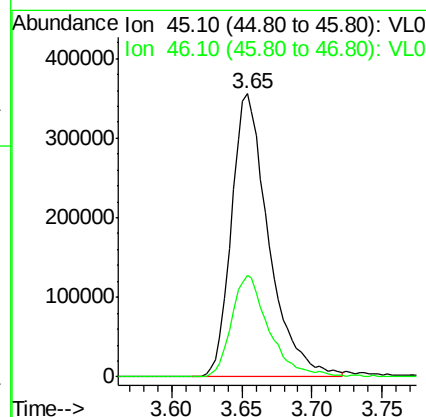
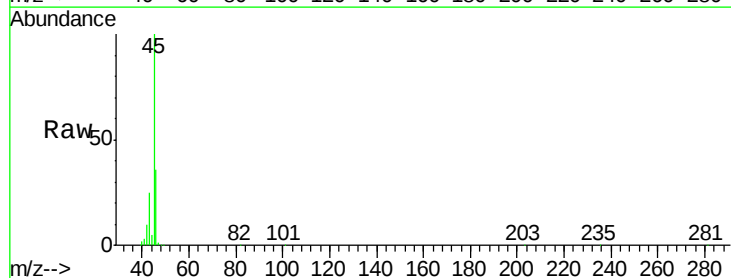
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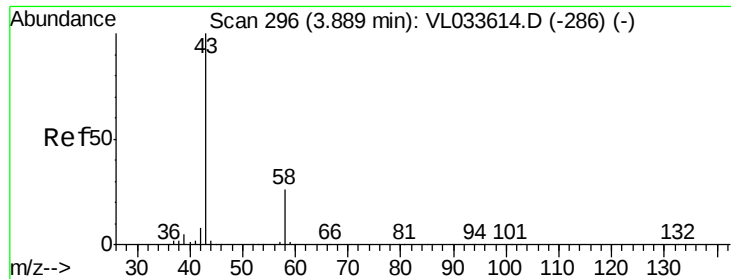
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#13  
 Ethanol  
 Concen: 47.507 ppbv  
 RT: 3.65 min Scan# 223  
 Delta R.T. 0.02 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 45      | 100   |       |       |
| 46      | 36.4  | 14.6  | 58.2  |





#15

Acetone

Concen: 5.513 ppbv

RT: 3.90 min Scan# 300

Delta R.T. 0.01 min

Lab File: VL033648.D

Acq: 3 May 2019 4:22

Instrument :

MSVOA\_L

ClientSampleId :

A-12

Tot Ion: 43 Resp: 598038

Ion Ratio Lower Upper

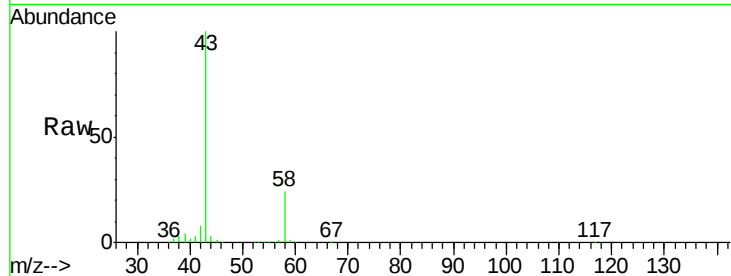
43 100

58 26.2 21.2 31.8

Manual Integrations  
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Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.90

400000

300000

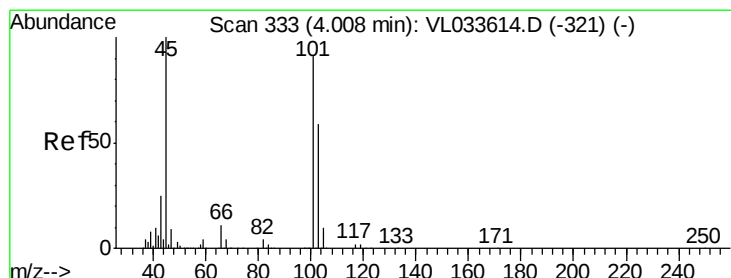
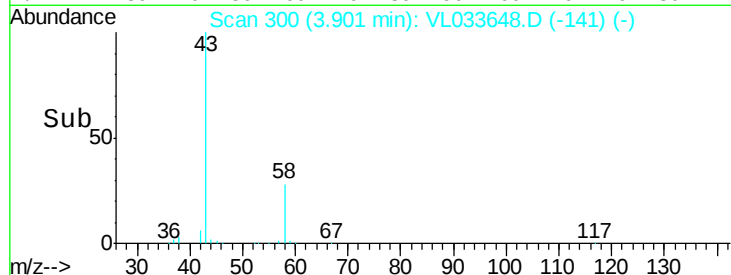
200000

100000

0

3.85 3.90 3.95

Time-->



#19

Isopropyl Alcohol

Concen: 1.857 ppbv

RT: 4.03 min Scan# 340

Delta R.T. 0.02 min

Lab File: VL033648.D

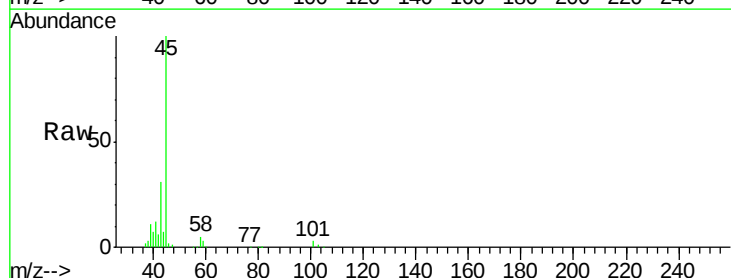
Acq: 3 May 2019 4:22

Tgt Ion: 45 Resp: 138256

Ion Ratio Lower Upper

45 100

58 5.4 1.8 2.6#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

4.03

80000

60000

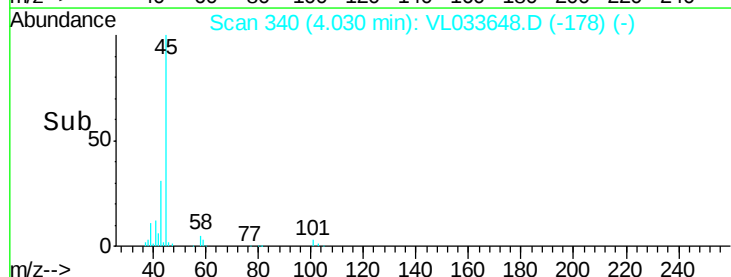
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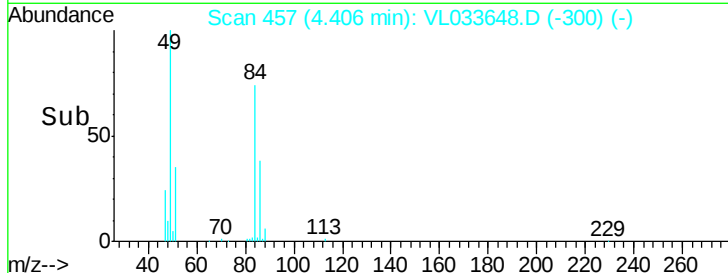
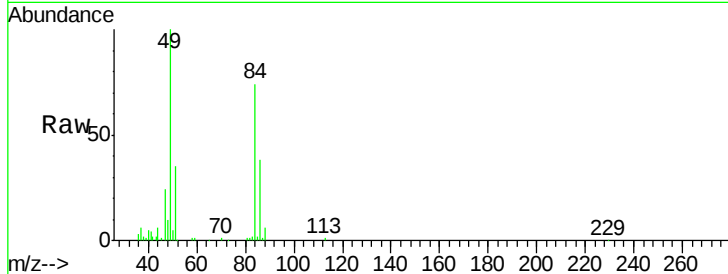
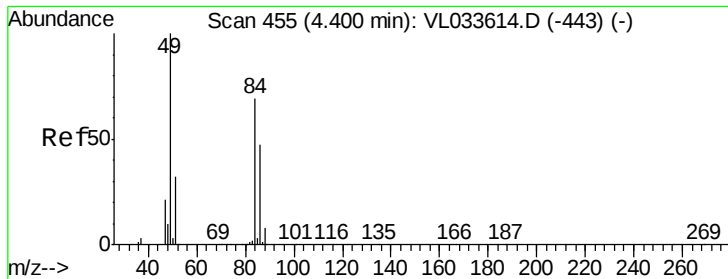
20000

0

4.00 4.05 4.10

Time-->





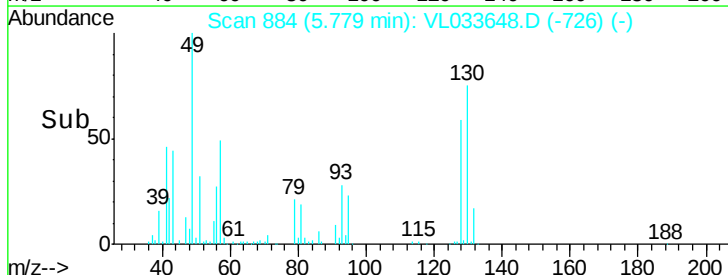
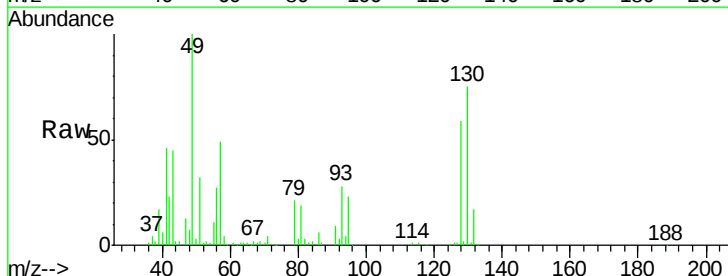
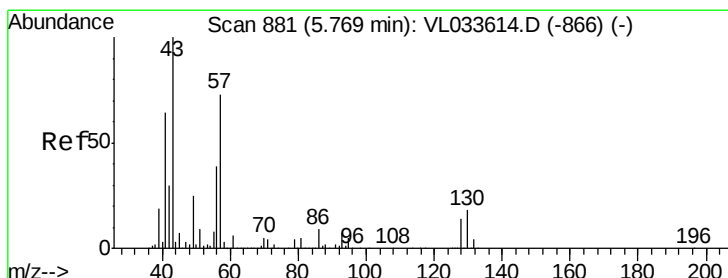
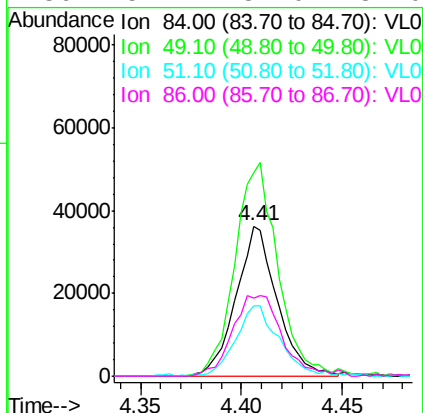
#20  
Methvlene Chloride  
Concen: 1.226 ppbv  
RT: 4.41 min Scan# 457  
Delta R.T. 0.01 min  
Lab File: VL033648.D  
Acq: 3 May 2019 4:22

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 84      | 100   |       |       |
| 49      | 135.2 | 116.2 | 174.2 |
| 51      | 47.4  | 37.0  | 55.6  |
| 86      | 52.1  | 54.0  | 81.0# |

Instrument :  
MSVOA\_L  
ClientSampleId :  
A-12

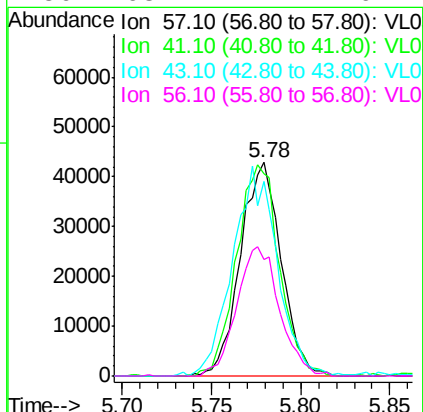
Manual Integrations  
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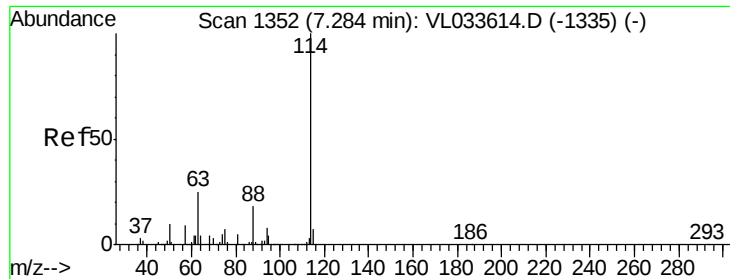
MMDadoda  
5/4/2019 7:19:04 AM



#26  
Hexane  
Concen: 0.791 ppbv  
RT: 5.78 min Scan# 884  
Delta R.T. 0.01 min  
Lab File: VL033648.D  
Acq: 3 May 2019 4:22

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 57      | 100   |       |        |
| 41      | 104.0 | 70.6  | 106.0  |
| 43      | 106.9 | 186.0 | 279.0# |
| 56      | 63.1  | 42.7  | 64.1   |





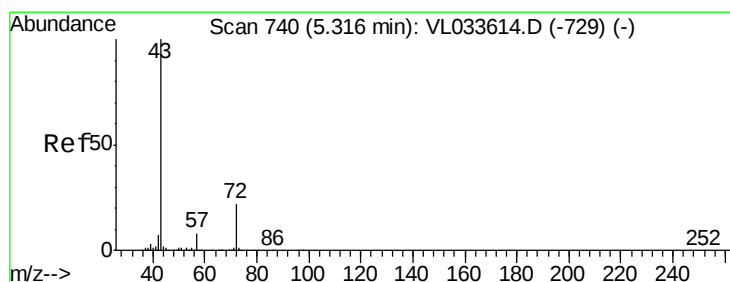
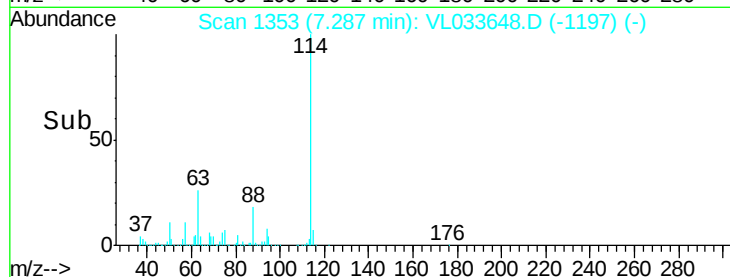
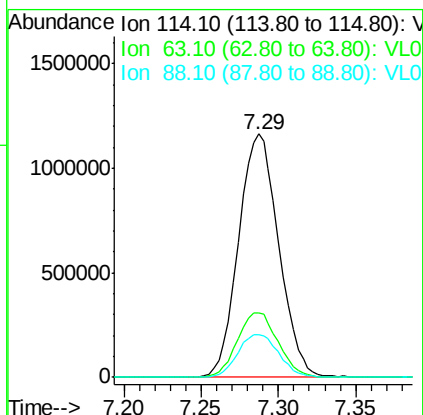
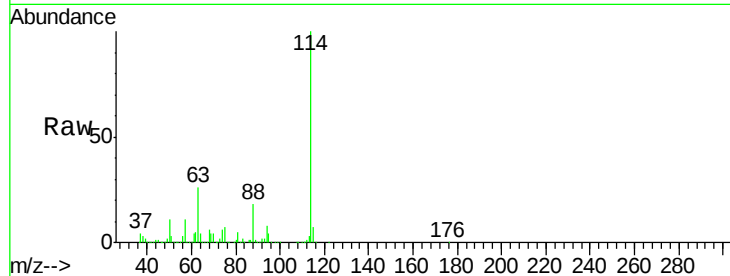
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.29 min Scan# 1353  
 Delta R.T. 0.00 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 A-12

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 27.1  | 21.1  | 31.7  |
| 88      | 18.0  | 14.2  | 21.4  |

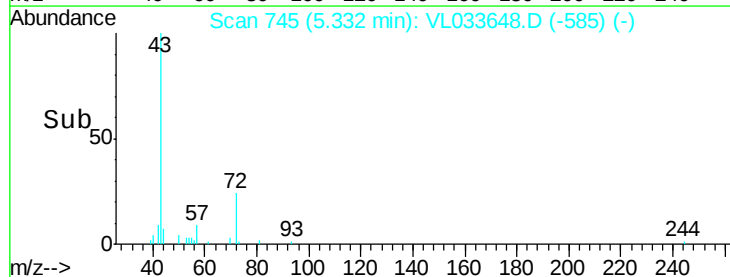
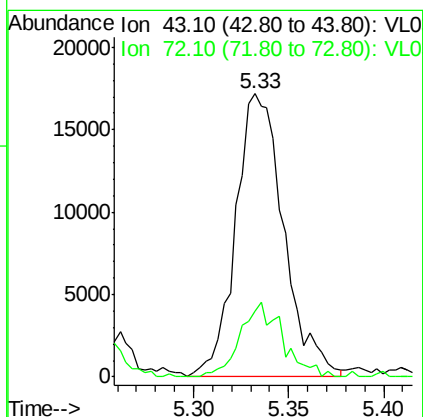
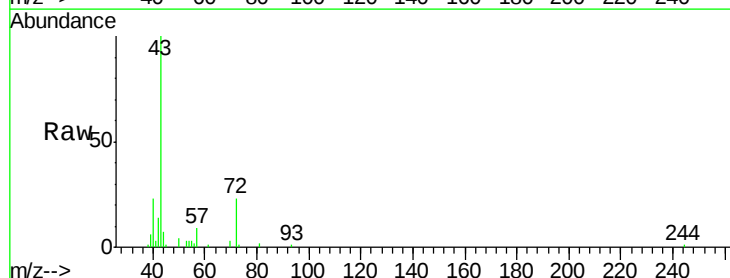
Manual Integrations  
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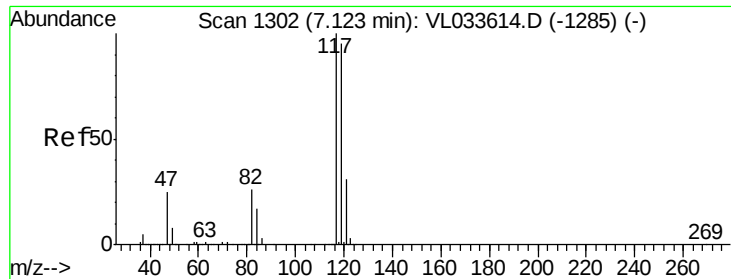
MMDadoda  
 5/4/2019 7:19:04 AM



#34  
 2-Butanone  
 Concen: 0.234 ppbv m  
 RT: 5.33 min Scan# 745  
 Delta R.T. 0.02 min  
 Lab File: VL033648.D  
 Acq: 3 May 2019 4:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 22.9  | 17.8  | 26.8  |





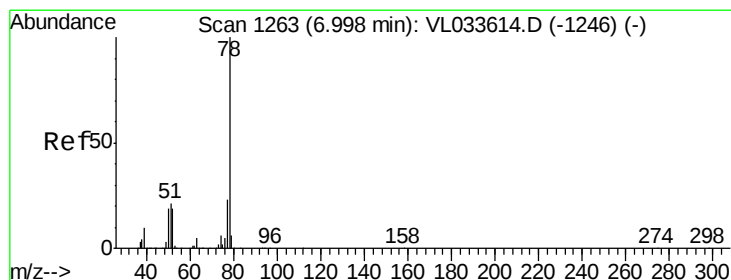
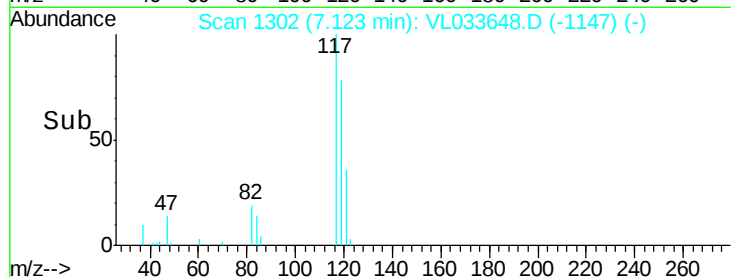
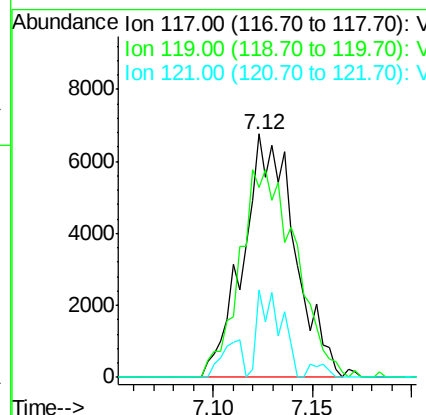
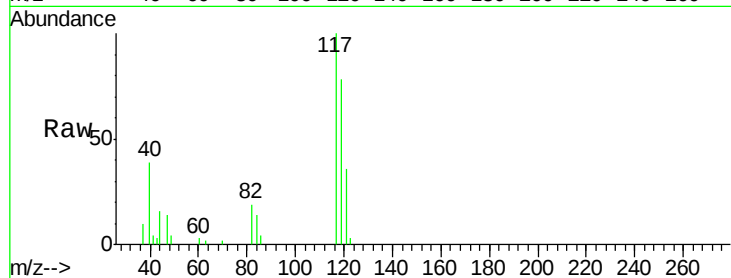
#35  
Carbon Tetrachloride  
Concen: 0.073 ppbv m  
RT: 7.12 min Scan# 1302  
Delta R.T. -0.00 min  
Lab File: VL033648.D  
Acq: 3 May 2019 4:22

Instrument :  
MSVOA\_L  
ClientSampleId :  
A-12

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 119     | 77.9  | 76.2  | 114.4 |
| 121     | 36.1  | 24.9  | 37.3  |

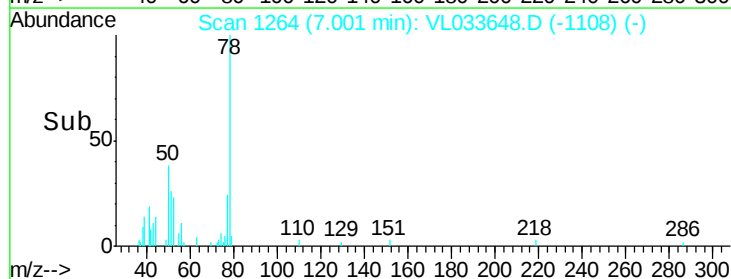
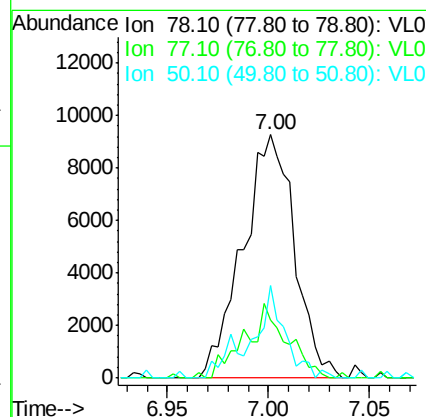
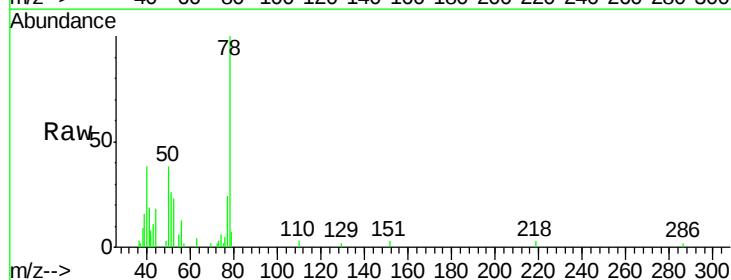
Manual Integrations  
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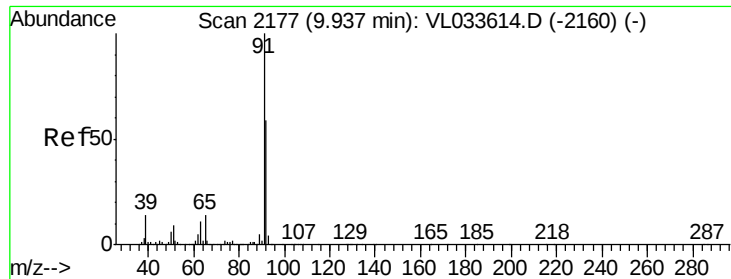
MMDadoda  
5/4/2019 7:19:04 AM



#36  
Benzene  
Concen: 0.092 ppbv m  
RT: 7.00 min Scan# 1264  
Delta R.T. 0.00 min  
Lab File: VL033648.D  
Acq: 3 May 2019 4:22

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 23.7  | 18.1  | 27.1  |
| 50      | 38.0  | 15.1  | 22.7# |





#53

Toluene

Concen: 6.307 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. 0.00 min

Lab File: VL033648.D

Acq: 3 May 2019 4:22

Instrument :

MSVOA\_L

ClientSampleId :

A-12

Tot Ion: 91 Resp: 1425897

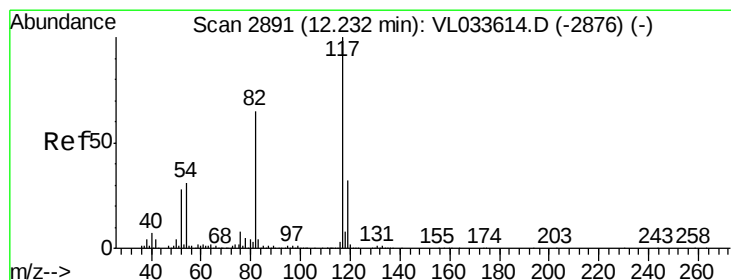
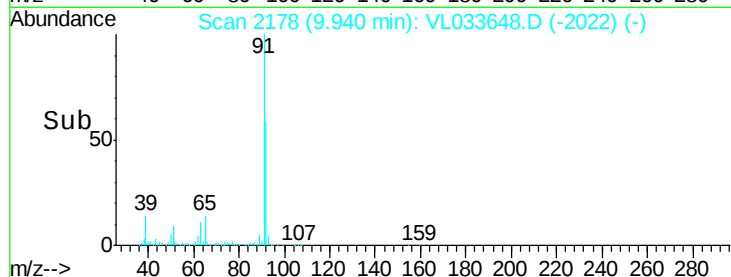
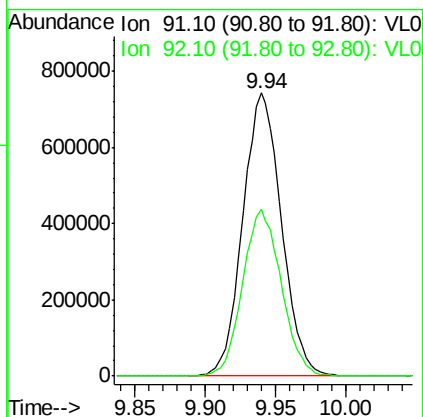
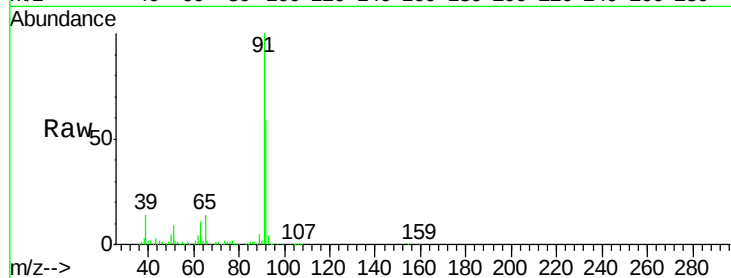
Ion Ratio Lower Upper

91 100

92 59.0 47.8 71.6

Manual Integrations  
APPROVED

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5/4/2019 7:19:04 AM



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.23 min Scan# 2891

Delta R.T. -0.00 min

Lab File: VL033648.D

Acq: 3 May 2019 4:22

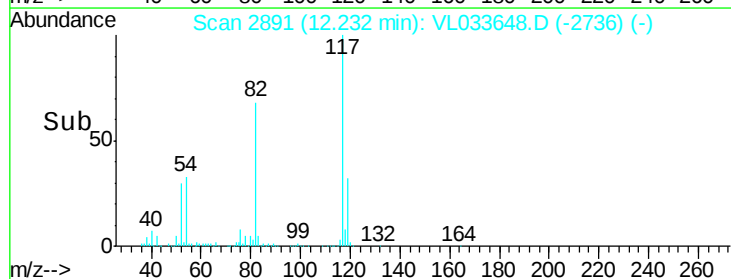
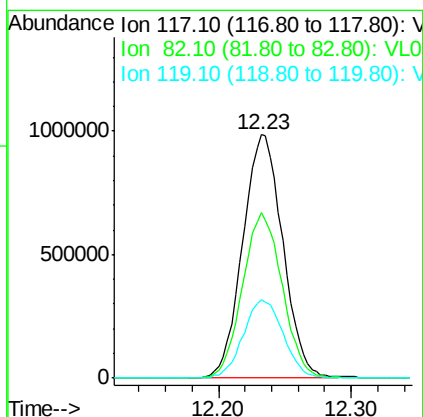
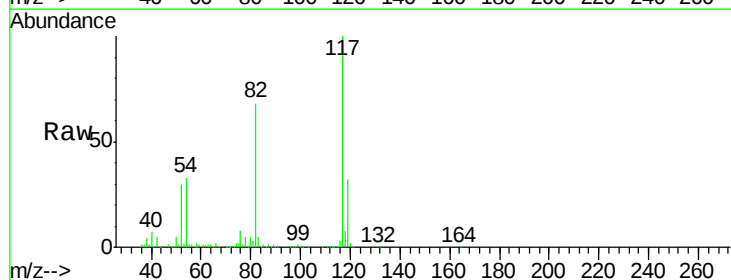
Tgt Ion: 117 Resp: 2069397

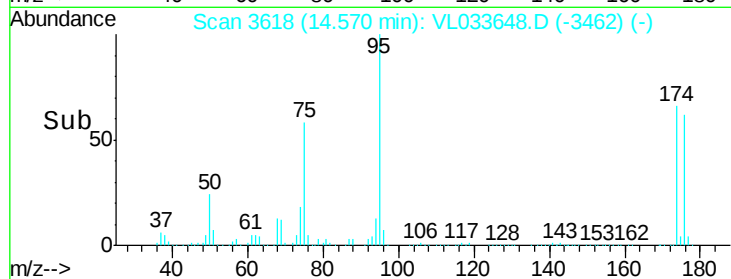
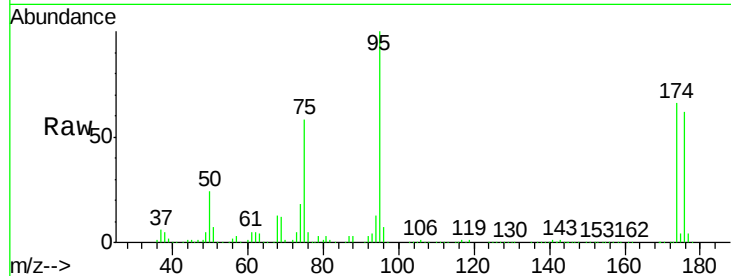
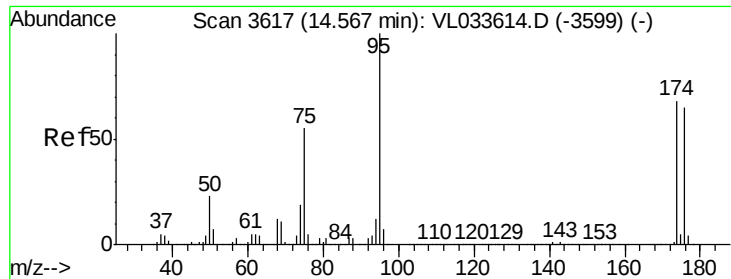
Ion Ratio Lower Upper

117 100

82 67.5 52.6 78.8

119 32.2 28.3 42.5





#68

1-Bromo-4-Fluorobenzene

Concen: 11.040 ppbv

RT: 14.57 min Scan# 3618

Delta R.T. 0.00 min

Lab File: VL033648.D

Acq: 3 May 2019 4:22

Tot Ion: 95 Resp: 1739216

Ion Ratio Lower Upper

95 100

174 65.6 53.9 80.9

175 4.6 4.0 6.0

Instrument :

MSVOA\_L

ClientSampleId :

A-12

Manual Integrations  
APPROVED

MMDadoda  
5/4/2019 7:19:04 AM

