

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091019\  
 Data File : VL034153.D  
 Acq On : 10 Sep 2019 21:46  
 Operator : SY/AP  
 Sample : K4775-04DLDUP 10X  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV4DLDUP

Manual Integrations  
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 9/12/2019 5:17:09 AM

Quant Time: Sep 11 21:41:13 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep 0  
 QLast Update : Thu Sep 05 10:21:45 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.70  | 49   | 663723   | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.23  | 114  | 1279874  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.16 | 117  | 1265238  | 10.00 | ppbv  | -0.01    |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 14.50  | 95    | 1078977  | 10.43    | ppbv | -0.01   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 104.30% |

| Target Compounds           | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|-------|------|----------|--------|--------|--------|
| 9) Propene                 | 3.00  | 41   | 168278   | 4.065  | ppbv   | 95     |
| 10) Heptane                | 8.17  | 43   | 33038m   | 0.308  | ppbv   |        |
| 13) Ethanol                | 3.61  | 45   | 52212m   | 6.439  | ppbv   |        |
| 15) Acetone                | 3.84  | 43   | 4587234  | 57.346 | ppbv # | 87     |
| 17) tert-Butyl alcohol     | 4.31  | 59   | 45184    | 0.778  | ppbv   | 97     |
| 19) Isopropyl Alcohol      | 3.98  | 45   | 134607   | 2.493  | ppbv # | 97     |
| 26) Hexane                 | 5.72  | 57   | 42193    | 0.540  | ppbv # | 33     |
| 30) Cyclohexane            | 7.18  | 84   | 8910m    | 0.158  | ppbv   |        |
| 32) 1,1,1-Trichloroethane  | 6.56  | 97   | 5268     | 0.053  | ppbv   | 97     |
| 34) 2-Butanone             | 5.27  | 43   | 494616   | 4.020  | ppbv   | 97     |
| 36) Benzene                | 6.94  | 78   | 40894m   | 0.280  | ppbv   |        |
| 38) Trichloroethene        | 7.89  | 130  | 2195m    | 0.040  | ppbv   |        |
| 44) 2,2,4-Trimethylpentane | 7.93  | 57   | 59154m   | 0.219  | ppbv   |        |
| 51) 2-Hexanone             | 10.21 | 43   | 106499   | 0.657  | ppbv   | 99     |
| 52) Tetrachloroethene      | 11.30 | 164  | 43210m   | 0.838  | ppbv   |        |
| 53) Toluene                | 9.88  | 91   | 152089   | 0.940  | ppbv   | 95     |
| 58) Ethyl Benzene          | 12.79 | 91   | 27573m   | 0.133  | ppbv   |        |
| 59) m/p-Xylene             | 13.04 | 91   | 68613m   | 0.405  | ppbv   |        |
| 60) o-Xylene               | 13.77 | 91   | 25459m   | 0.151  | ppbv   |        |
| 74) 1,2,4-Trimethylbenzene | 16.85 | 105  | 27304m   | 0.143  | ppbv   |        |

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

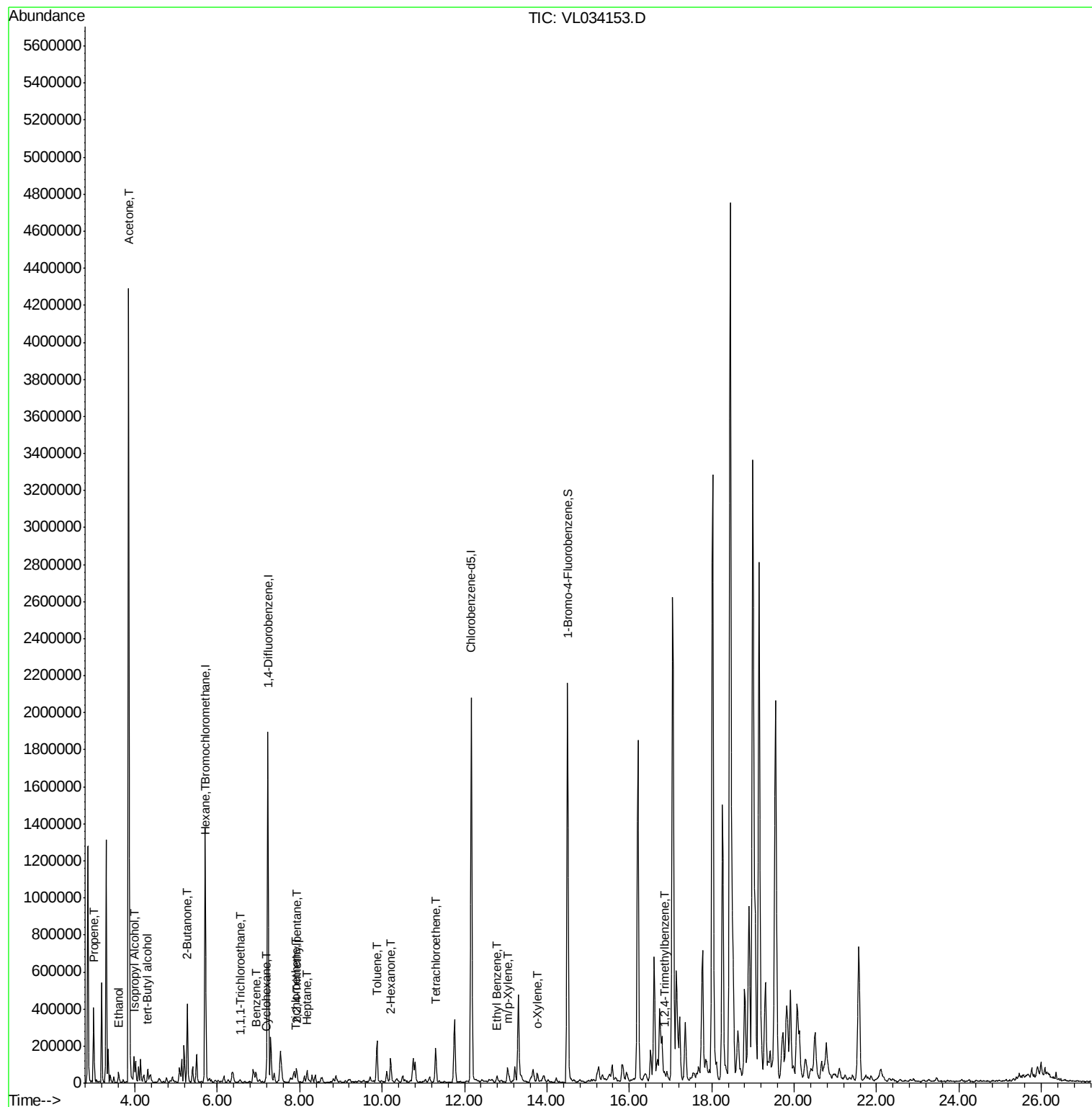
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL091019\  
Data File : VL034153.D  
Acq On : 10 Sep 2019 21:46  
Operator : SY/AP  
Sample : K4775-04DLDUP 10X  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

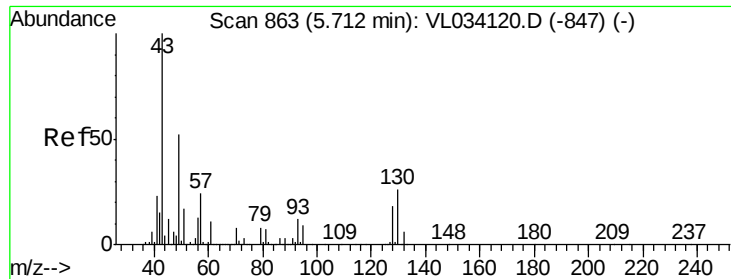
Instrument :  
MSVOA\_L  
ClientSampleId :  
SV4DLDUP

Manual Integrations  
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Quant Time: Sep 11 21:41:13 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL090519AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Thu Sep  
QLast Update : Thu Sep 05 10:21:45 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.70 min Scan# 907

Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

Instrument :

MSVOA\_L

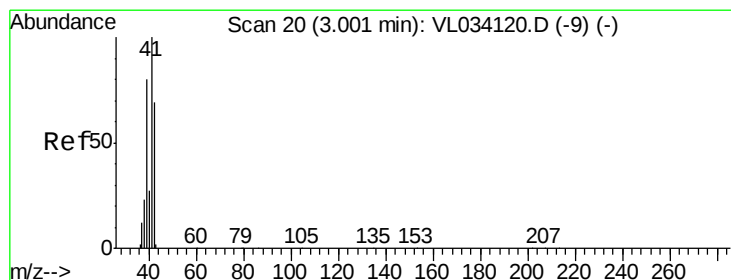
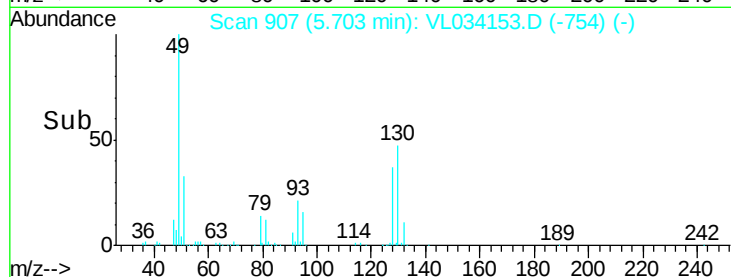
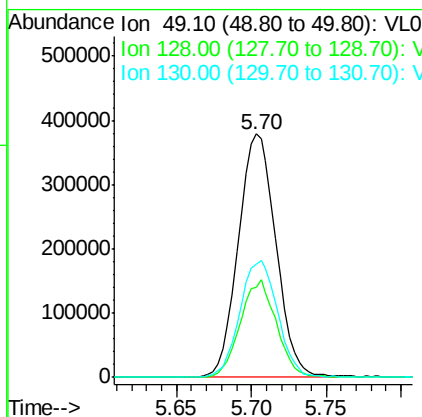
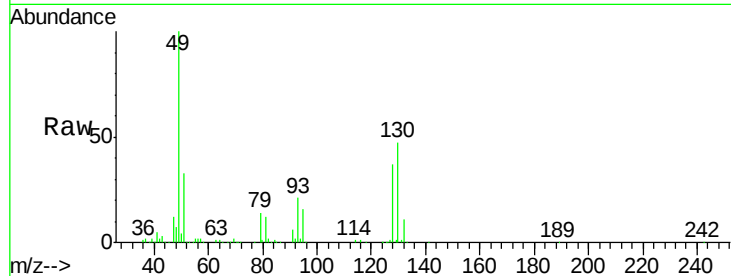
ClientSampleId :

SV4DLDUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 49      | 100   |       |       |
| 128     | 38.6  | 18.4  | 55.0  |
| 130     | 48.6  | 23.5  | 70.6  |

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#9

Propene

Concen: 4.065 ppbv

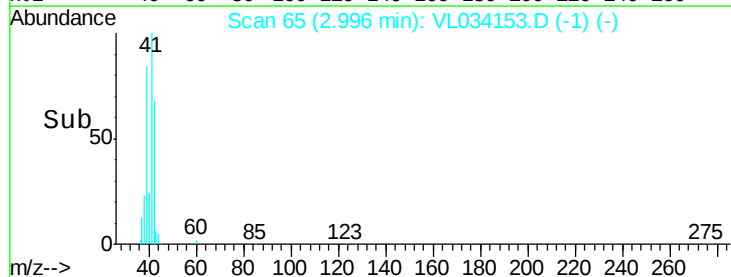
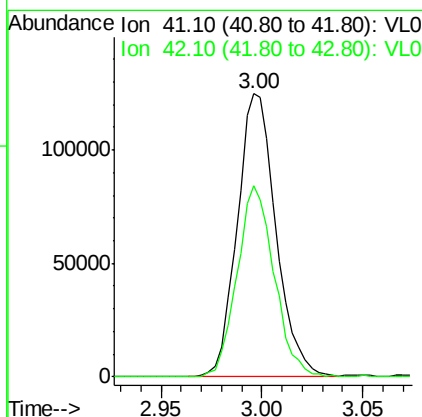
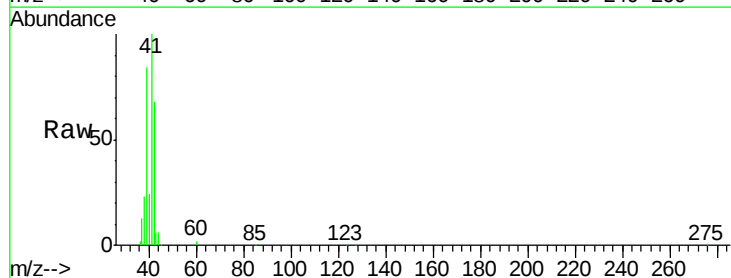
RT: 3.00 min Scan# 65

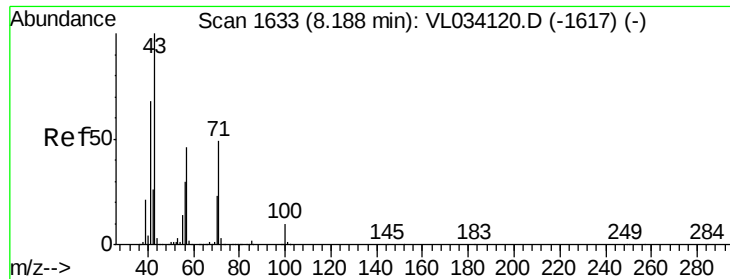
Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 41      | 100   |       |       |
| 42      | 64.5  | 54.6  | 81.8  |





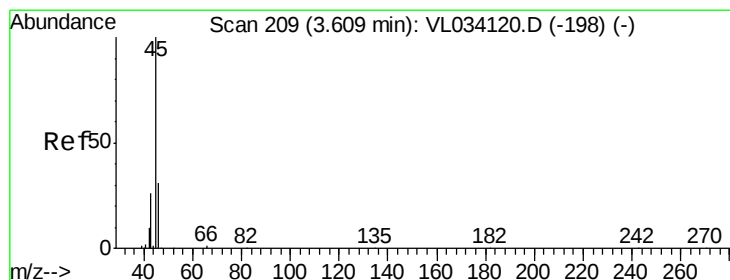
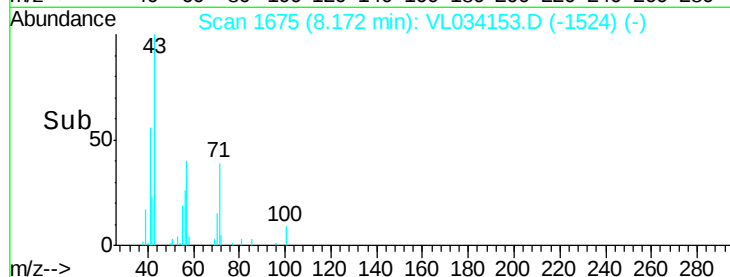
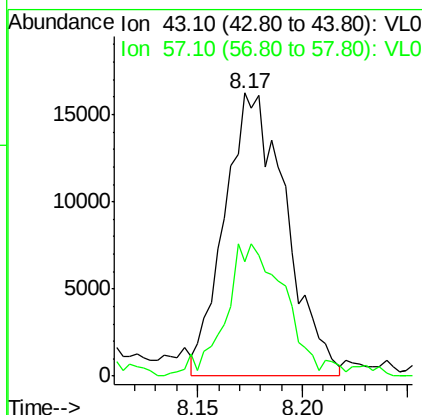
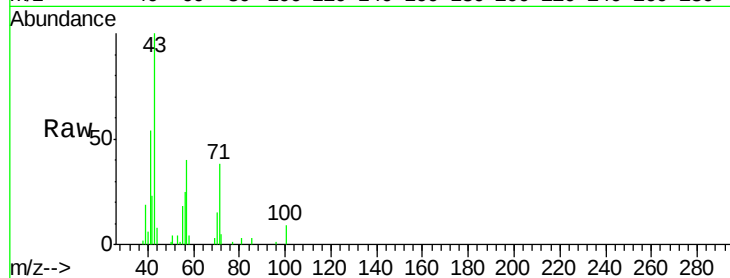
#10  
Heptane  
Concen: 0.308 ppbv m  
RT: 8.17 min Scan# 1675  
Delta R.T. -0.02 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV4DLDUP

Tot Ion: 43 Resp: 33038  
Ion Ratio Lower Upper  
43 100  
57 46.9 38.1 57.1

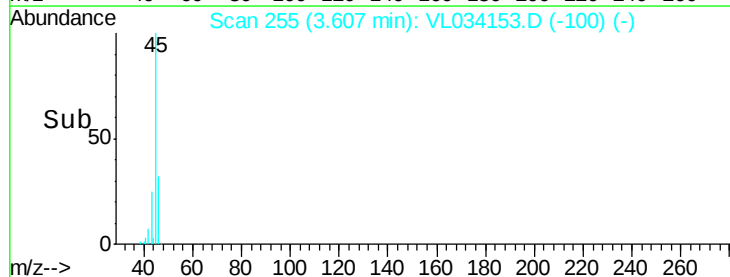
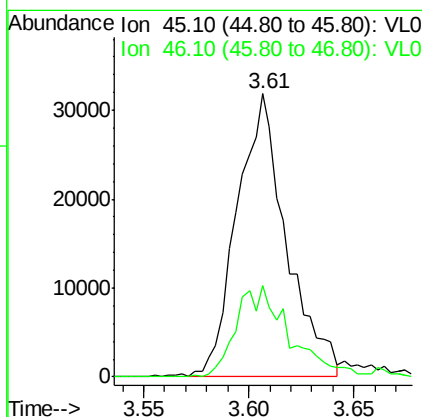
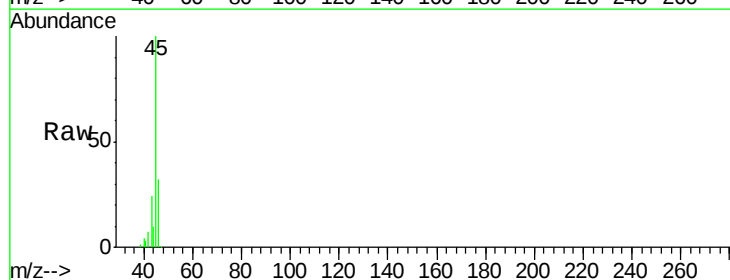
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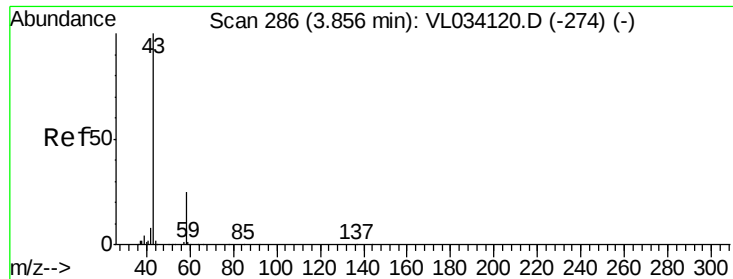
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#13  
Ethanol  
Concen: 6.439 ppbv m  
RT: 3.61 min Scan# 255  
Delta R.T. -0.00 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Tgt Ion: 45 Resp: 52212  
Ion Ratio Lower Upper  
45 100  
46 35.9 15.0 60.0





#15

Acetone

Concen: 57.346 ppbv

RT: 3.84 min Scan# 329

Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

Instrument :

MSVOA\_L

ClientSampleId :

SV4DLDUP

Tot Ion: 43 Resp: 4587234

Ion Ratio Lower Upper

43 100

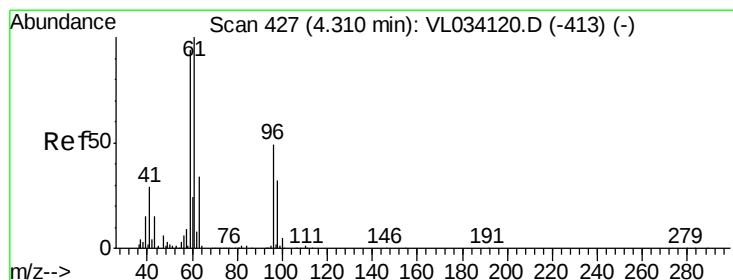
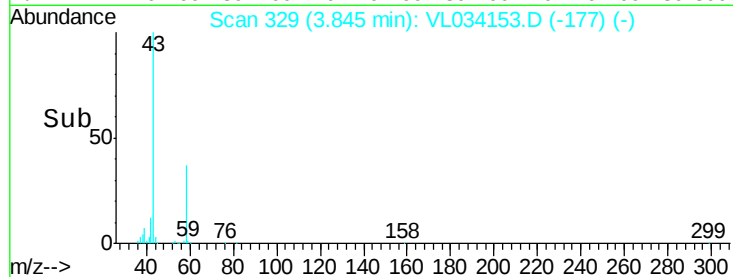
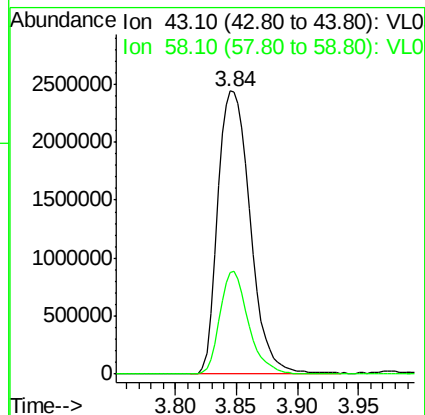
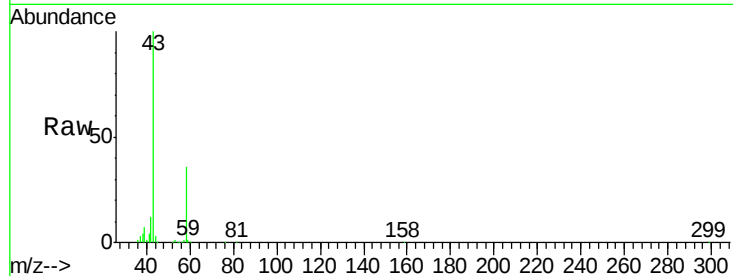
58 32.2 20.6 30.8#

Manual Integrations

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#17

tert-Butyl alcohol

Concen: 0.778 ppbv

RT: 4.31 min Scan# 473

Delta R.T. -0.00 min

Lab File: VL034153.D

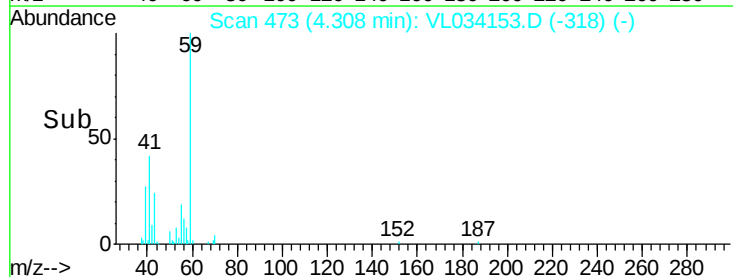
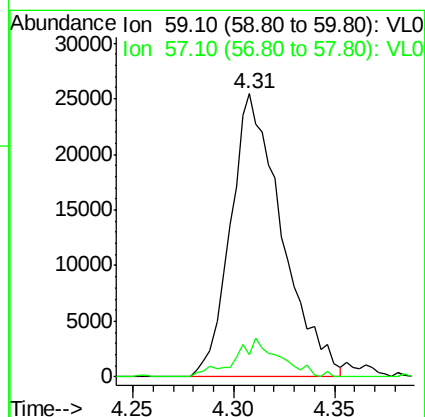
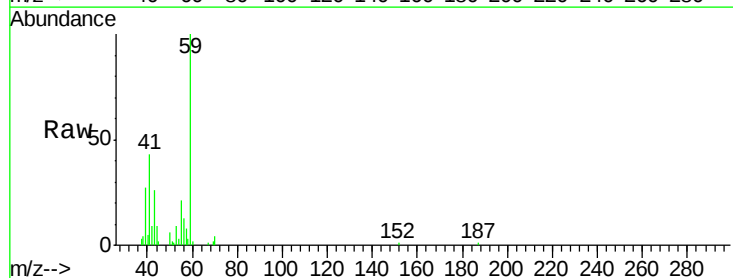
Acq: 10 Sep 2019 21:46

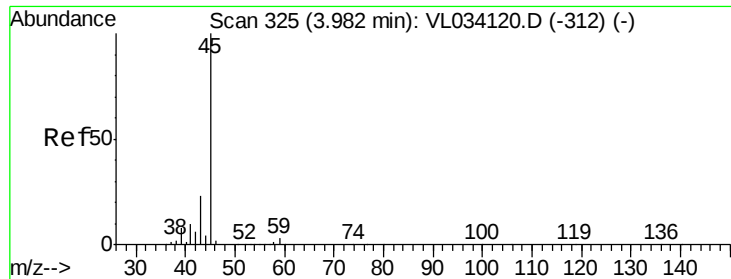
Tgt Ion: 59 Resp: 45184

Ion Ratio Lower Upper

59 100

57 12.0 8.6 12.8





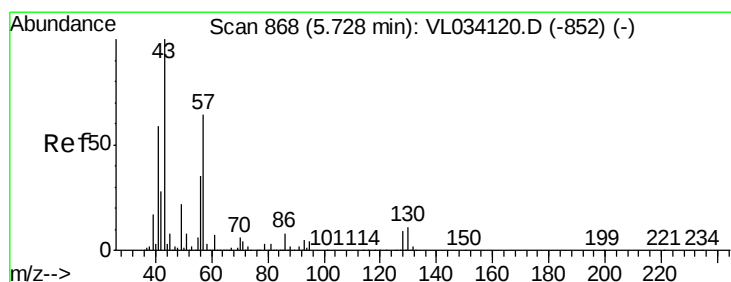
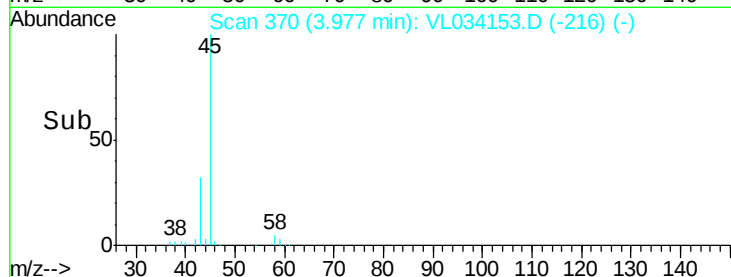
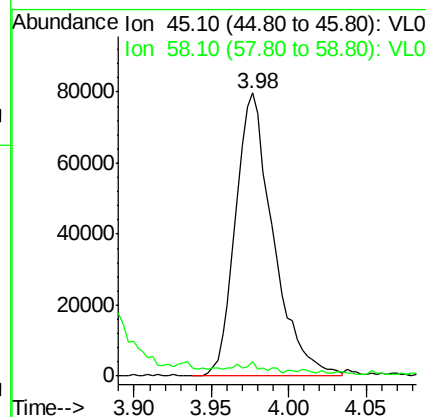
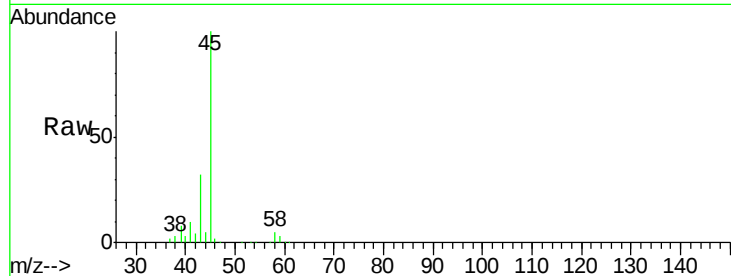
#19  
Isopropyl Alcohol  
Concen: 2.493 ppbv  
RT: 3.98 min Scan# 370  
Delta R.T. -0.01 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Instrument :  
MSVOA\_L  
ClientSampleId :  
SV4DLDUP

Tot Ion: 45 Resp: 134607  
Ion Ratio Lower Upper  
45 100  
58 0.0 1.0 1.6#

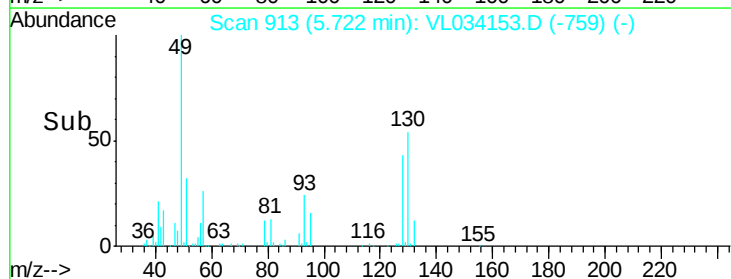
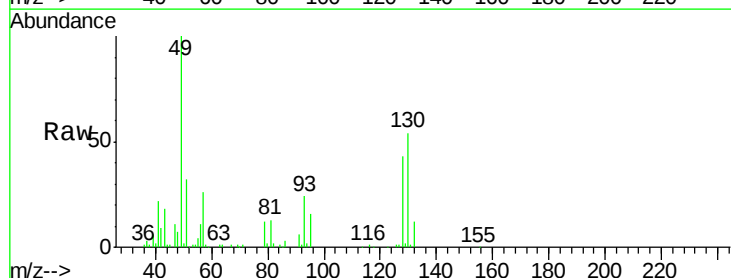
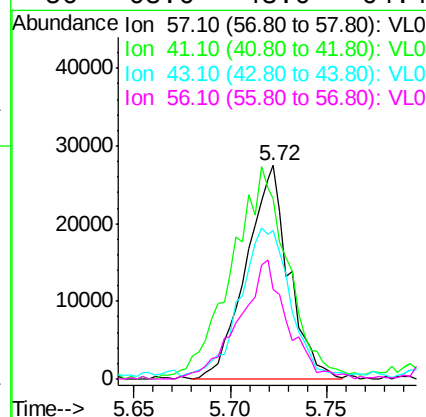
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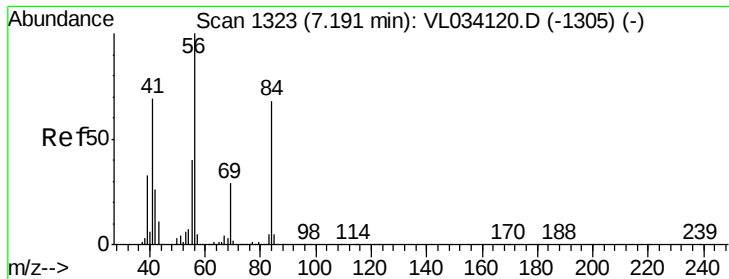
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#26  
Hexane  
Concen: 0.540 ppbv  
RT: 5.72 min Scan# 913  
Delta R.T. -0.01 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Tgt Ion: 57 Resp: 42193  
Ion Ratio Lower Upper  
57 100  
41 132.1 76.6 115.0#  
43 81.8 189.2 283.8#  
56 63.6 43.0 64.4





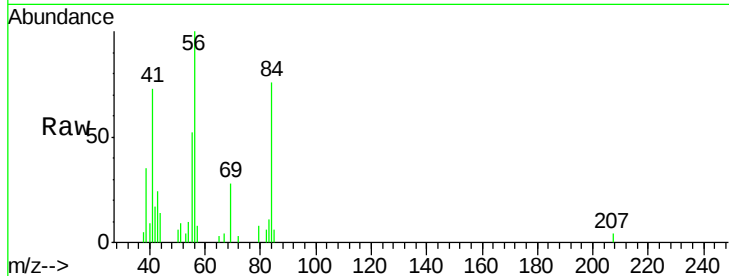
#30  
Cvclohexane  
Concen: 0.158 ppbv m  
RT: 7.18 min Scan# 1366  
Delta R.T. -0.01 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Instrument :  
MSVOA\_L  
ClientSampled :  
SV4DLDUP

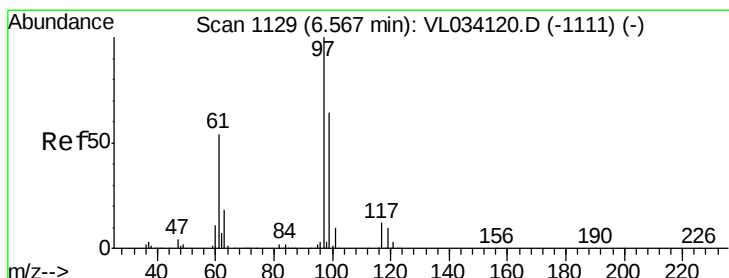
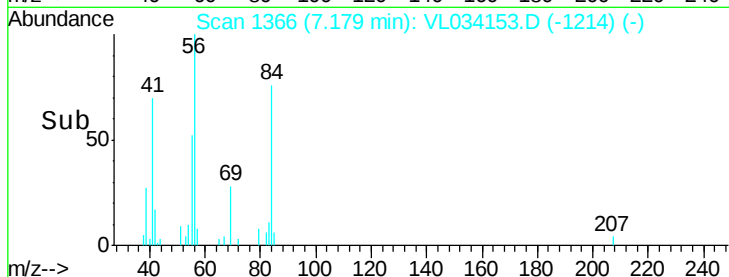
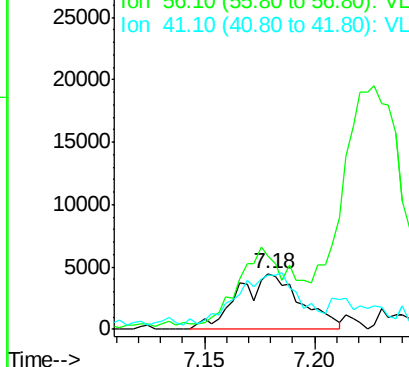
| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 84      | 100   |       |        |
| 56      | 0.0   | 122.6 | 183.8# |
| 41      | 165.8 | 79.1  | 118.7# |

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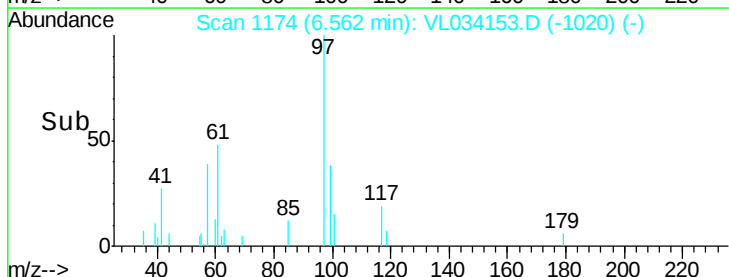
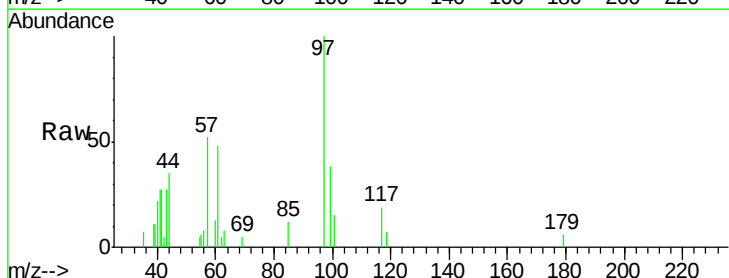
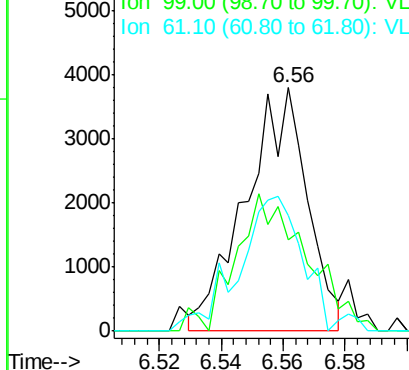
Abundance Ion 84.20 (83.90 to 84.90): VL0  
Ion 56.10 (55.80 to 56.80): VL0  
Ion 41.10 (40.80 to 41.80): VL0

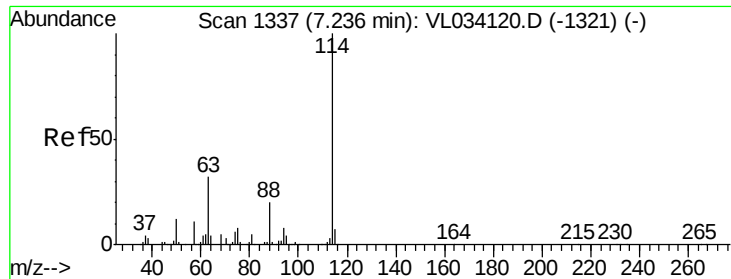


#32  
1,1,1-Trichloroethane  
Concen: 0.053 ppbv  
RT: 6.56 min Scan# 1174  
Delta R.T. -0.01 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 65.3  | 51.7  | 77.5  |
| 61      | 59.3  | 44.0  | 66.0  |

Abundance Ion 97.00 (96.70 to 97.70): VL0  
Ion 99.00 (98.70 to 99.70): VL0  
Ion 61.10 (60.80 to 61.80): VL0





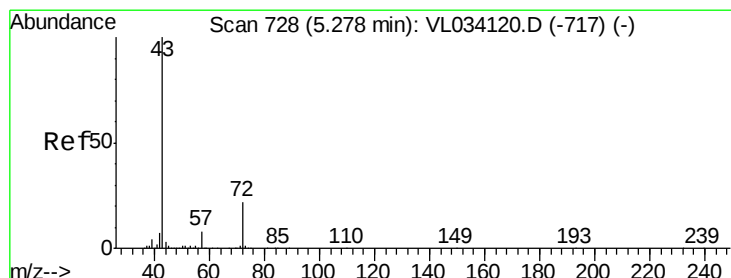
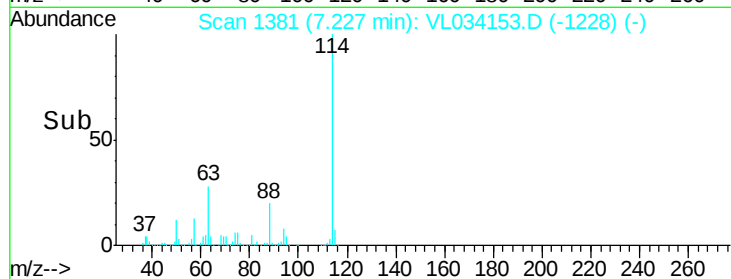
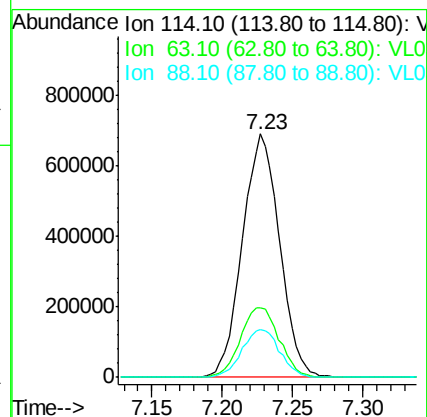
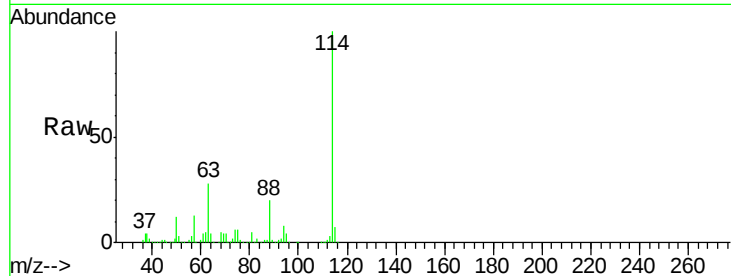
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.23 min Scan# 1381  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV4DLDUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 29.9  | 25.5  | 38.3  |
| 88      | 20.2  | 16.8  | 25.2  |

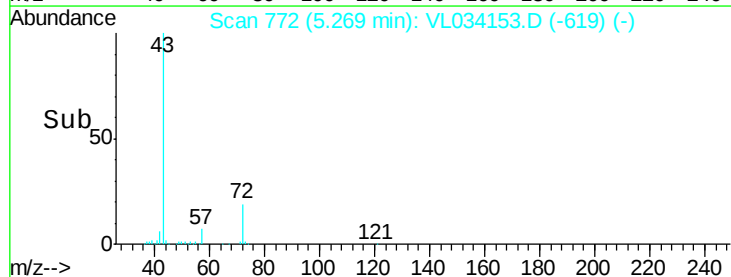
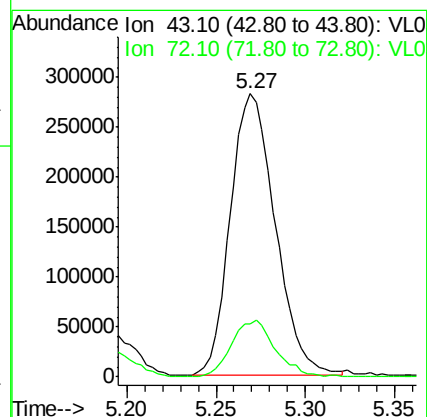
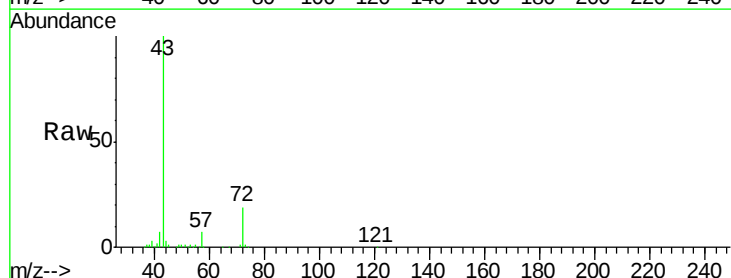
Manual Integrations  
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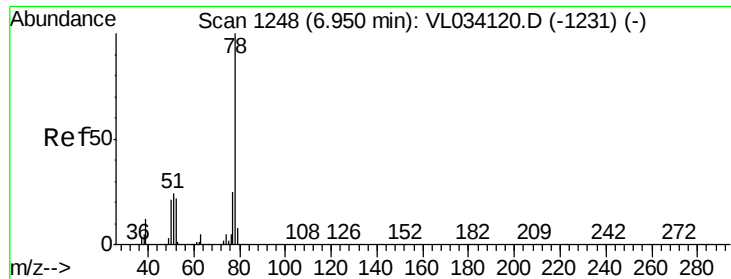
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 9/12/2019 5:17:09 AM



#34  
 2-Butanone  
 Concen: 4.020 ppbv  
 RT: 5.27 min Scan# 772  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 19.3  | 16.5  | 24.7  |





#36

Benzene

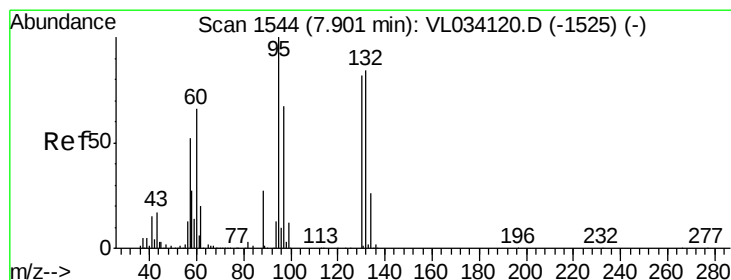
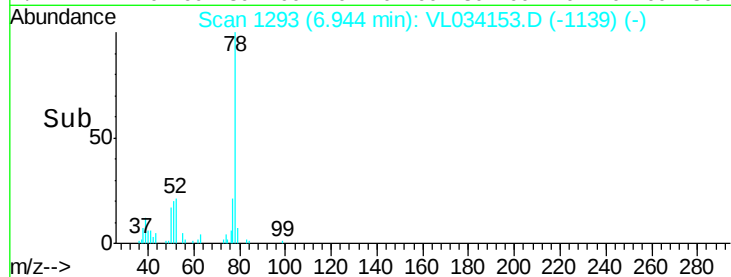
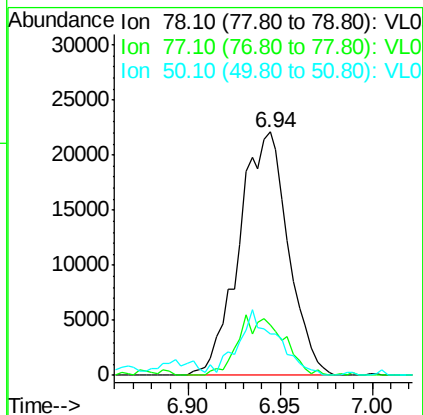
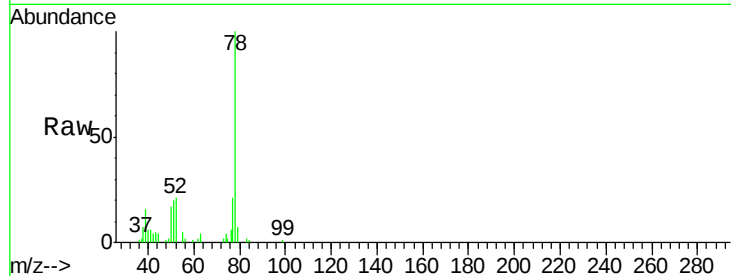
Concen: 0.280 ppbv m  
 RT: 6.94 min Scan# 1293  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV4DLDUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 20.7  | 20.3  | 30.5  |
| 50      | 17.1  | 16.9  | 25.3  |

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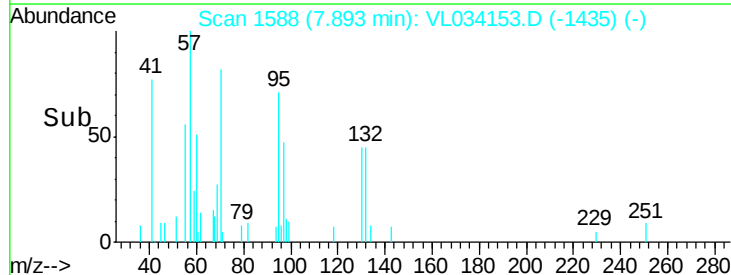
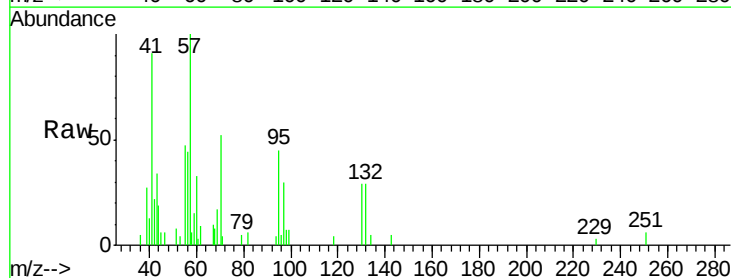
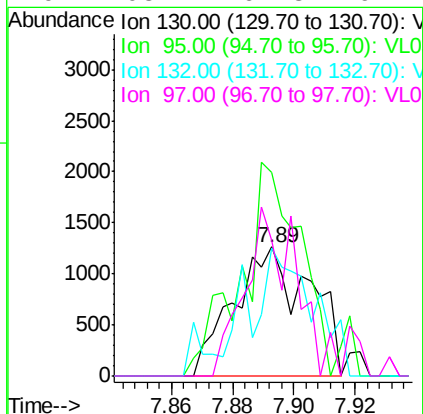


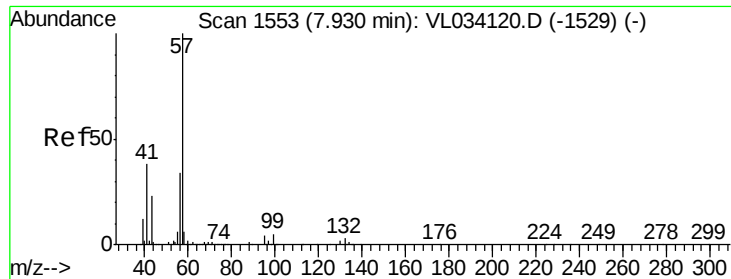
#38

Trichloroethene

Concen: 0.040 ppbv m  
 RT: 7.89 min Scan# 1588  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

| Tgt Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 130     | 100   |       |        |
| 95      | 158.0 | 97.2  | 145.8# |
| 132     | 99.5  | 81.4  | 122.2  |
| 97      | 105.1 | 64.8  | 97.2#  |





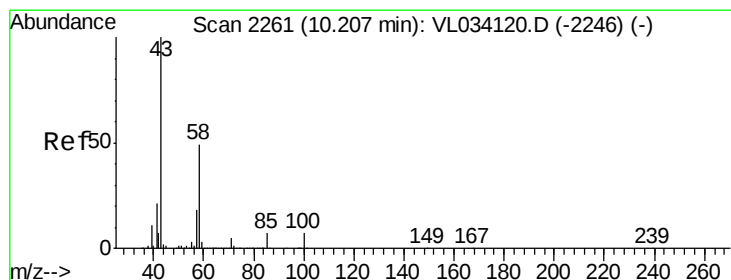
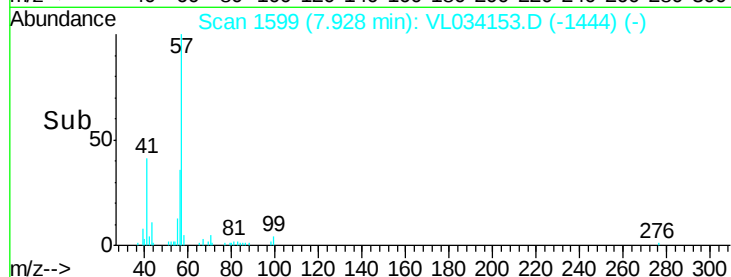
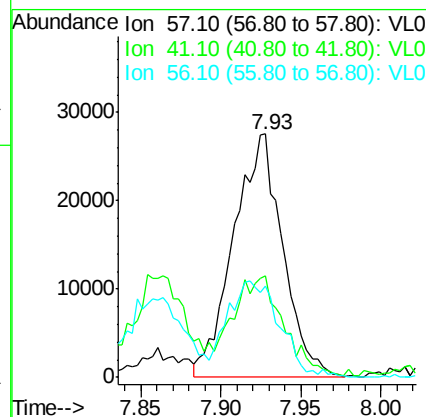
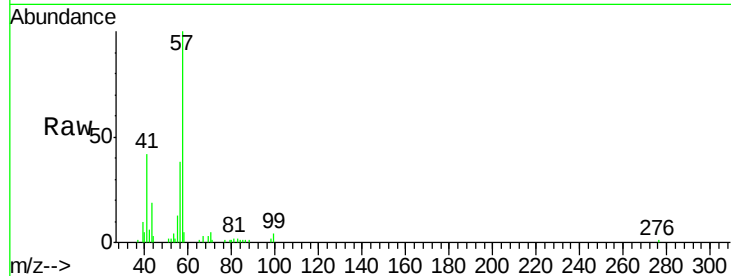
#44  
 2,2,4-Trimethylpentane  
 Concen: 0.219 ppbv m  
 RT: 7.93 min Scan# 1599  
 Delta R.T. -0.00 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV4DLDUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 0.0   | 28.4  | 42.6# |
| 56      | 42.3  | 26.3  | 39.5# |

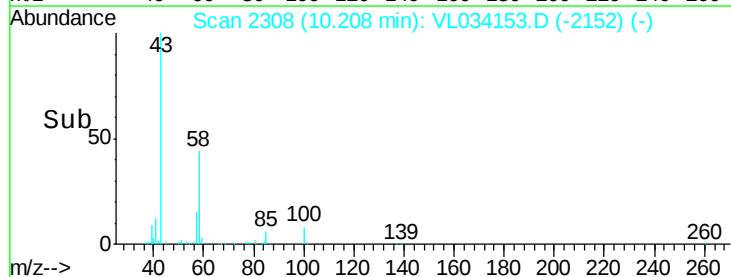
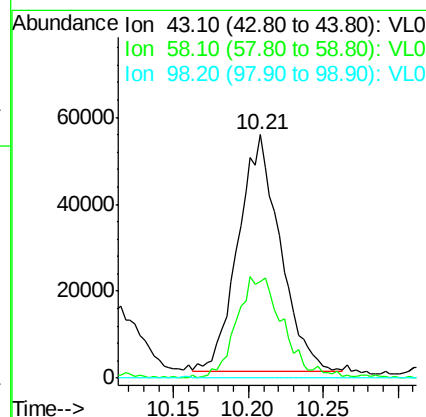
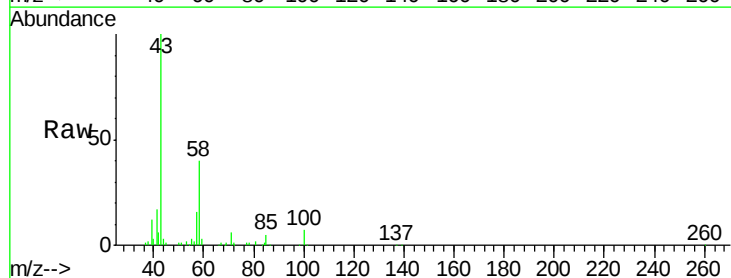
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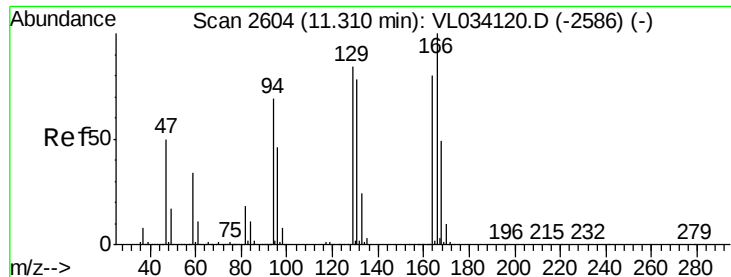
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#51  
 2-Hexanone  
 Concen: 0.657 ppbv  
 RT: 10.21 min Scan# 2308  
 Delta R.T. 0.00 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 58      | 48.4  | 38.2  | 57.2  |
| 98      | 0.1   | 0.1   | 0.1   |





#52

Tetrachloroethene

Concen: 0.838 ppbv m

RT: 11.30 min Scan# 2648

Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

Instrument :

MSVOA\_L

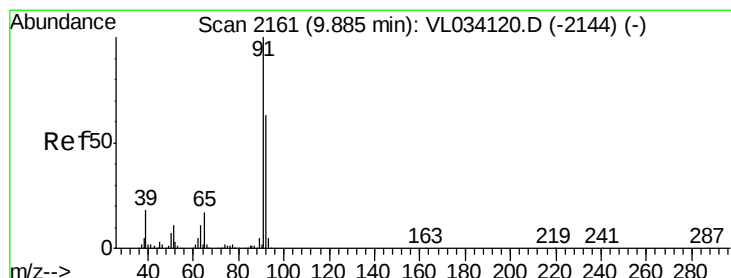
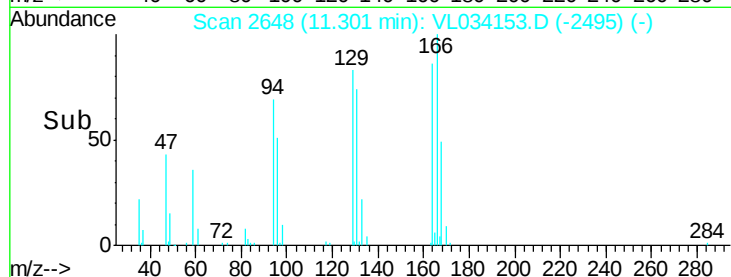
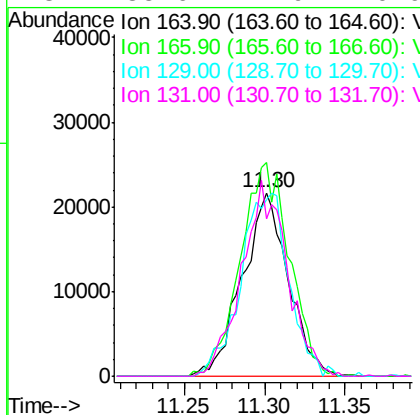
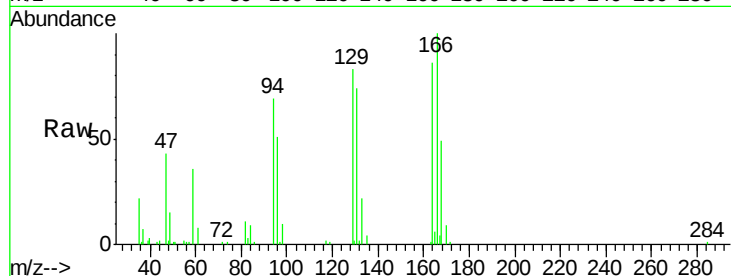
ClientSampleId :

SV4DLDUP

|          |       |       |       |
|----------|-------|-------|-------|
| Tot Ion: | 164   | Resp: | 43210 |
| Ion      | Ratio | Lower | Upper |
| 164      | 100   |       |       |
| 166      | 116.4 | 99.5  | 149.3 |
| 129      | 96.1  | 83.6  | 125.4 |
| 131      | 85.6  | 77.9  | 116.9 |

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#53

Toluene

Concen: 0.940 ppbv

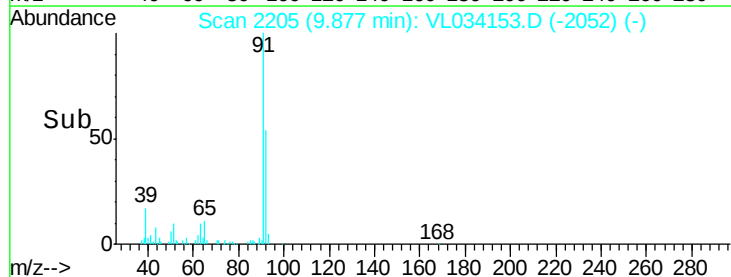
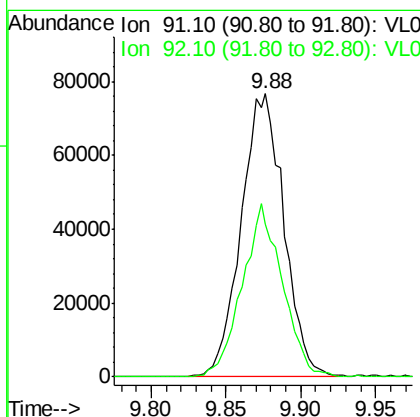
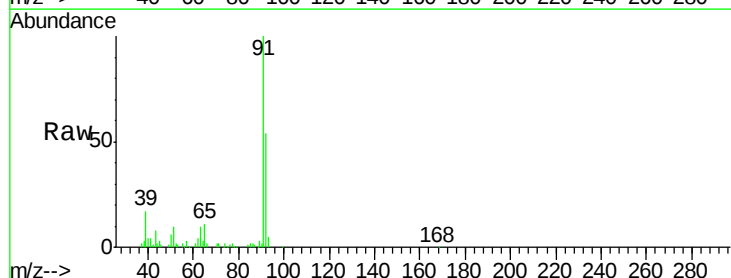
RT: 9.88 min Scan# 2205

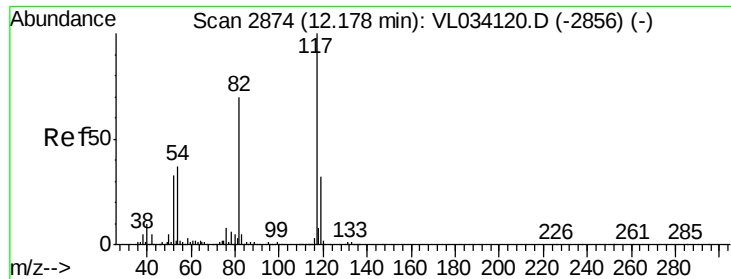
Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 91    | Resp: | 152089 |
| Ion      | Ratio | Lower | Upper  |
| 91       | 100   |       |        |
| 92       | 57.8  | 49.3  | 73.9   |





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.16 min Scan# 2916

Delta R.T. -0.01 min

Lab File: VL034153.D

Acq: 10 Sep 2019 21:46

Instrument :

MSVOA\_L

ClientSampleId :

SV4DLDUP

Tot Ion:117 Resp: 1265238

Ion Ratio Lower Upper

117 100

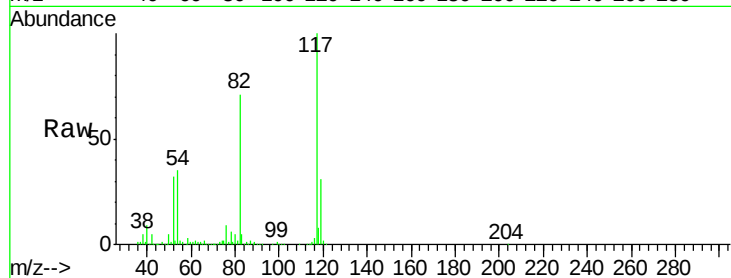
82 73.5 55.8 83.6

119 32.3 43.1 64.7#

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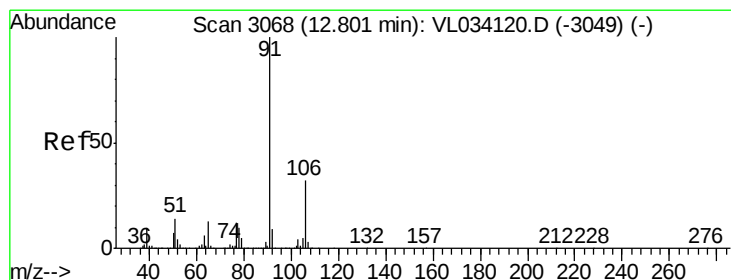
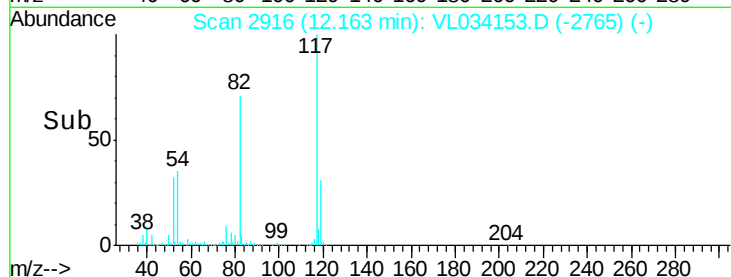
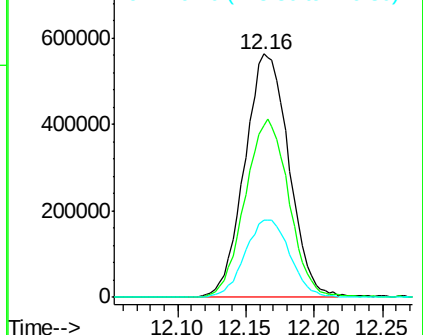
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Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



#58

Ethyl Benzene

Concen: 0.133 ppbv m

RT: 12.79 min Scan# 3111

Delta R.T. -0.01 min

Lab File: VL034153.D

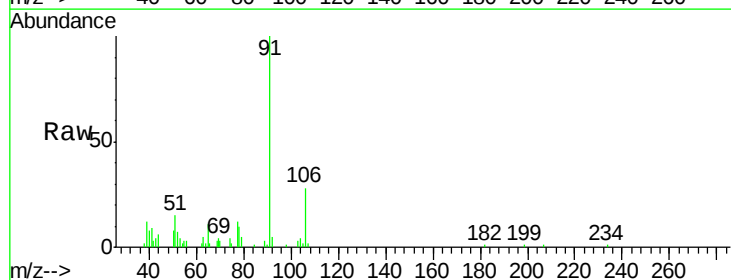
Acq: 10 Sep 2019 21:46

Tgt Ion: 91 Resp: 27573

Ion Ratio Lower Upper

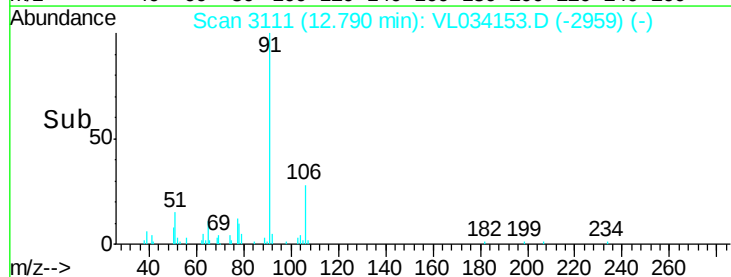
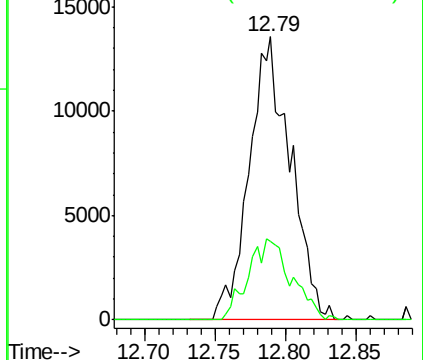
91 100

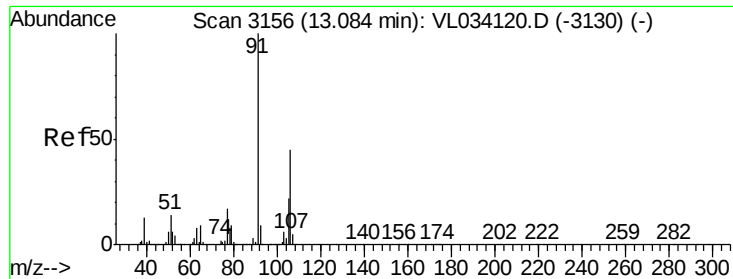
106 27.9 25.3 37.9



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





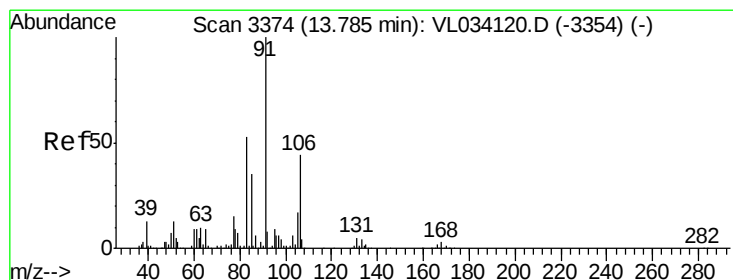
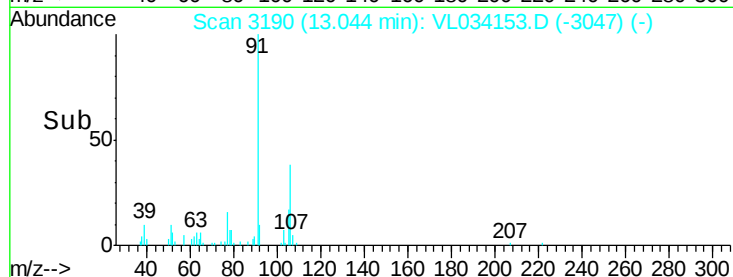
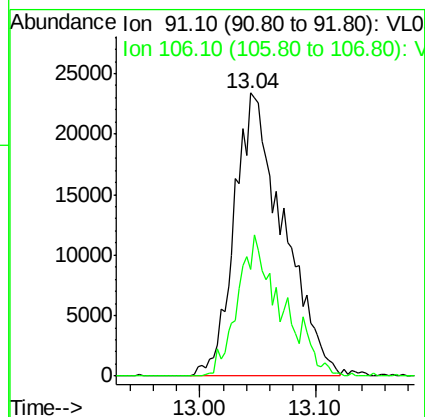
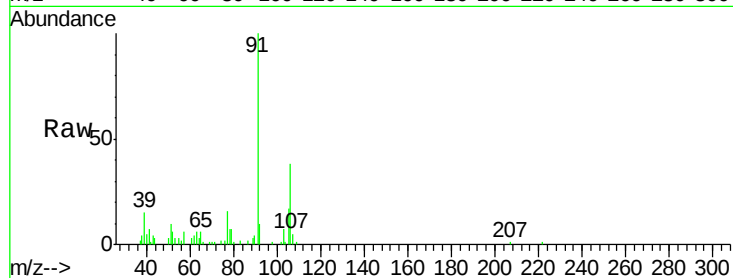
#59  
m/p-Xylene  
Concen: 0.405 ppbv m  
RT: 13.04 min Scan# 3190  
Delta R.T. -0.04 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Instrument :  
MSVOA\_L  
ClientSampled :  
SV4DLDUP

Tot Ion: 91 Resp: 68613  
Ion Ratio Lower Upper  
91 100  
106 0.0 35.4 53.2#

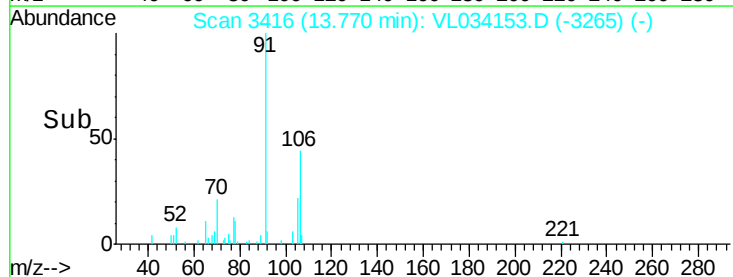
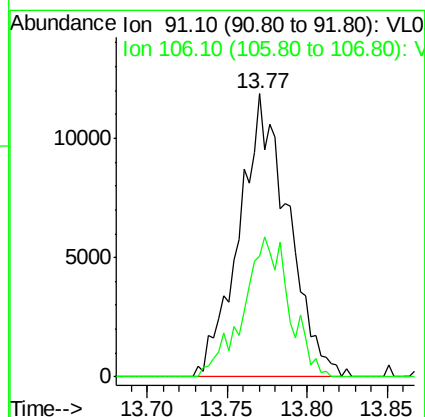
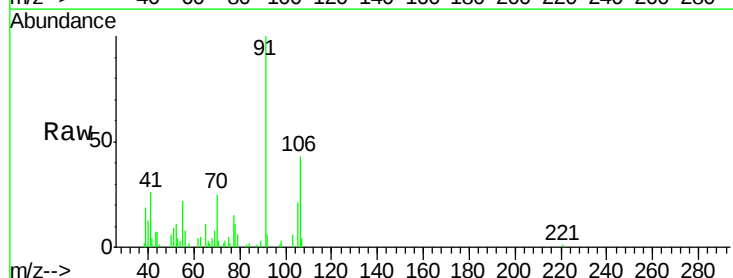
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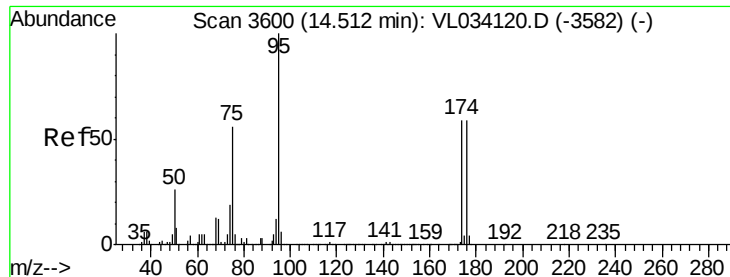
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#60  
o-Xylene  
Concen: 0.151 ppbv m  
RT: 13.77 min Scan# 3416  
Delta R.T. -0.02 min  
Lab File: VL034153.D  
Acq: 10 Sep 2019 21:46

Tgt Ion: 91 Resp: 25459  
Ion Ratio Lower Upper  
91 100  
106 0.0 21.4 64.3#





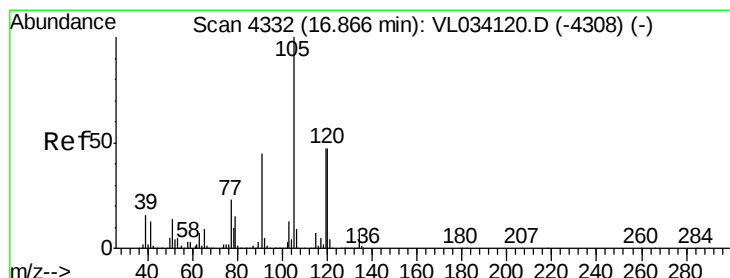
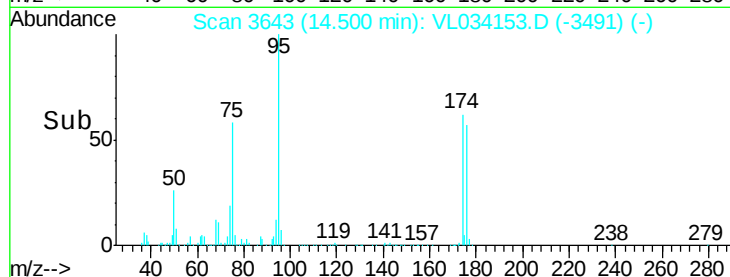
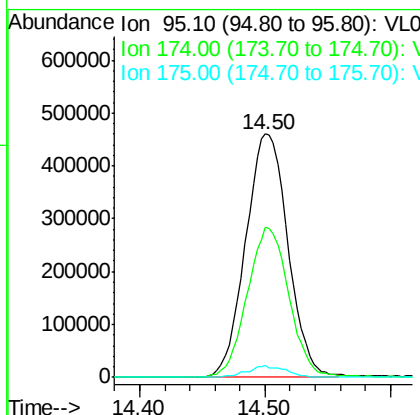
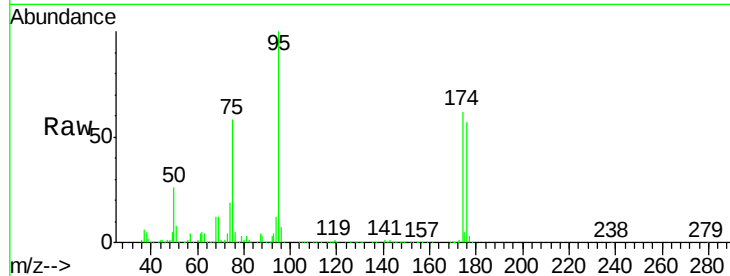
#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.431 ppbv  
 RT: 14.50 min Scan# 3643  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 SV4DLDUP

Tot Ion: 95 Resp: 1078977  
 Ion Ratio Lower Upper  
 95 100  
 174 61.5 48.1 72.1  
 175 4.4 3.5 5.3

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#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.143 ppbv m  
 RT: 16.85 min Scan# 4375  
 Delta R.T. -0.01 min  
 Lab File: VL034153.D  
 Acq: 10 Sep 2019 21:46

Tgt Ion: 105 Resp: 27304  
 Ion Ratio Lower Upper  
 105 100  
 120 28.6 37.7 56.5#  
 91 13.4 36.2 54.2#  
 77 13.2 18.5 27.7#

