

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121719\  
 Data File : VL034499.D  
 Acq On : 17 Dec 2019 19:14  
 Operator : SY/AP  
 Sample : K6319-02  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-IAH-DUP

Manual Integrations  
 APPROVED

MMDadoda  
 12/19/2019 3:47:19 PM

Quant Time: Dec 18 05:22:40 2019  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL111919AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LTue Nov 19 14:15:35 2019  
 QLast Update : Tue Nov 19 14:15:35 2019  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 919368   | 10.00 | ppbv  | -0.01    |
| 33) 1,4-Difluorobenzene | 7.19  | 114  | 1839550  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.13 | 117  | 1816770  | 10.00 | ppbv  | 0.00     |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 68) 1-Bromo-4-Fluorobenzene | 14.47  | 95    | 1566765  | 10.25    | ppbv | -0.01   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 102.50% |

| Target Compounds           | R.T.  | QIon | Response | Conc    | Units  | Ovalue |
|----------------------------|-------|------|----------|---------|--------|--------|
| 2) Dichlorodifluoromethane | 3.02  | 85   | 36264    | 0.218   | ppbv   | 95     |
| 3) Chlorodifluoromethane   | 2.96  | 51   | 36054m   | 0.314   | ppbv   |        |
| 4) Chloromethane           | 3.11  | 50   | 28692    | 0.424   | ppbv   | 99     |
| 9) Propene                 | 2.99  | 41   | 79009m   | 1.551   | ppbv   |        |
| 10) Heptane                | 8.15  | 43   | 42078m   | 0.320   | ppbv   |        |
| 11) Trichlorofluoromethane | 3.93  | 101  | 36254    | 0.219   | ppbv   | 96     |
| 13) Ethanol                | 3.60  | 45   | 6006830  | 423.428 | ppbv   | 91     |
| 15) Acetone                | 3.83  | 43   | 934496   | 7.098   | ppbv   | 92     |
| 17) tert-Butyl alcohol     | 4.30  | 59   | 35433m   | 0.320   | ppbv   |        |
| 19) Isopropyl Alcohol      | 3.97  | 45   | 127907   | 1.516   | ppbv # | 1      |
| 20) Methylene Chloride     | 4.33  | 84   | 41242    | 0.883   | ppbv # | 87     |
| 26) Hexane                 | 5.69  | 57   | 33754    | 0.334   | ppbv # | 75     |
| 29) Chloroform             | 5.75  | 83   | 108216   | 0.662   | ppbv   | 97     |
| 34) 2-Butanone             | 5.25  | 43   | 34236    | 0.226   | ppbv   | 99     |
| 35) Carbon Tetrachloride   | 7.03  | 117  | 12717m   | 0.080   | ppbv   |        |
| 36) Benzene                | 6.90  | 78   | 35575m   | 0.193   | ppbv   |        |
| 52) Tetrachloroethene      | 11.27 | 164  | 5998m    | 0.075   | ppbv   |        |
| 53) Toluene                | 9.84  | 91   | 207613   | 0.994   | ppbv   | 98     |
| 59) m/p-Xylene             | 13.01 | 91   | 41970m   | 0.172   | ppbv   |        |

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

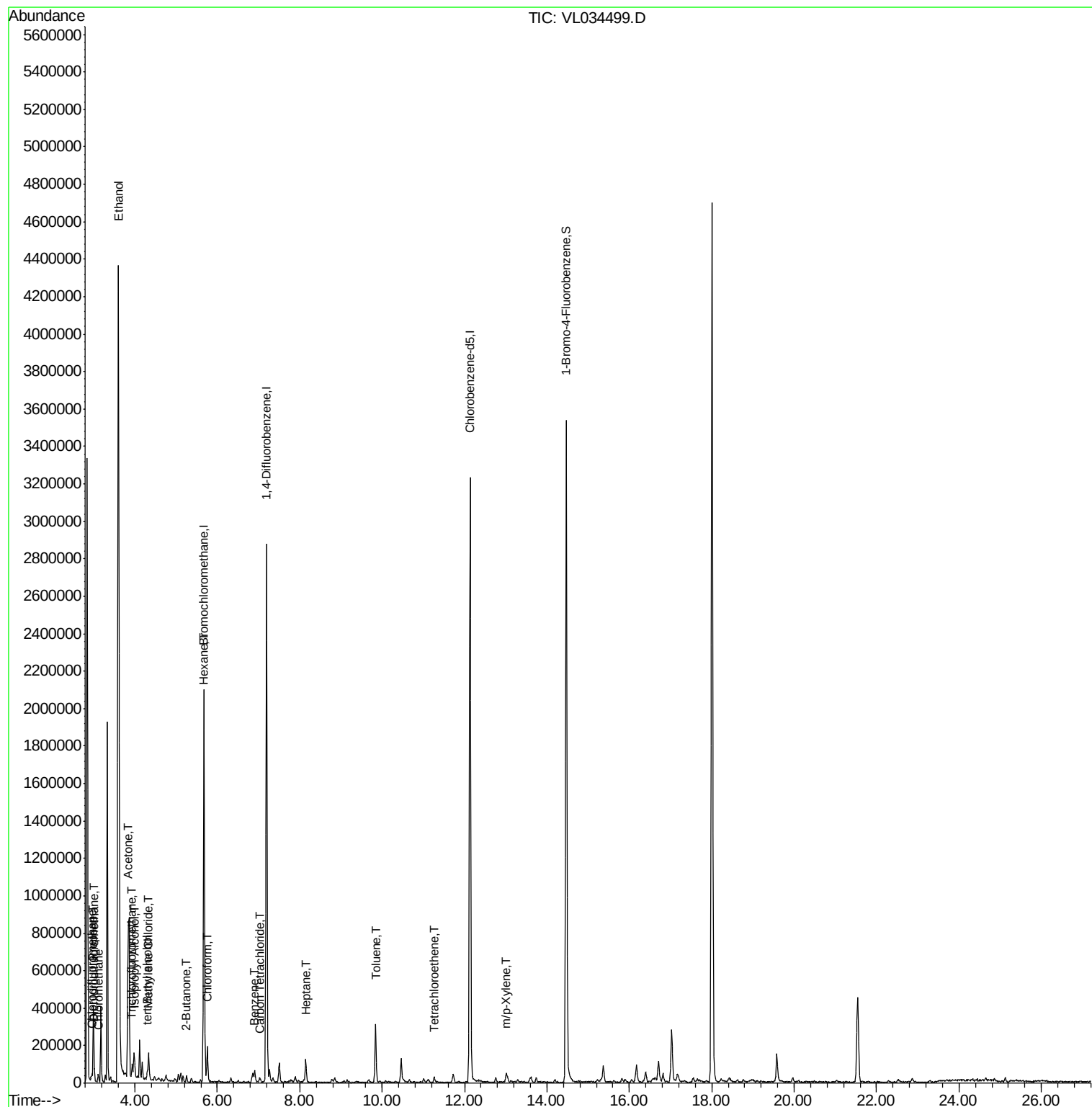
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL121719\  
Data File : VL034499.D  
Acq On : 17 Dec 2019 19:14  
Operator : SY/AP  
Sample : K6319-02  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

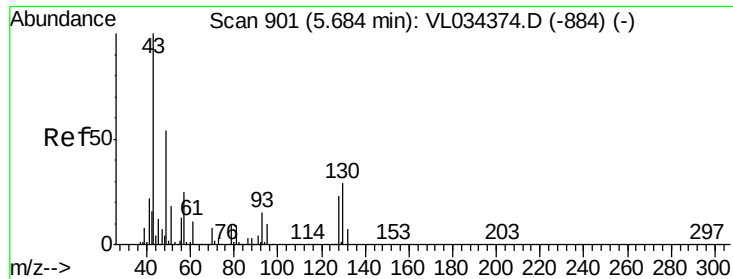
Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-IAH-DUP

Manual Integrations  
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12/19/2019 3:47:19 PM

Quant Time: Dec 18 05:22:40 2019  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL111919AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LTue Nov  
QLast Update : Tue Nov 19 14:15:35 2019  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 897

Delta R.T. -0.01 min

Lab File: VL034499.D

Acq: 17 Dec 2019 19:14

Instrument :

MSVOA\_L

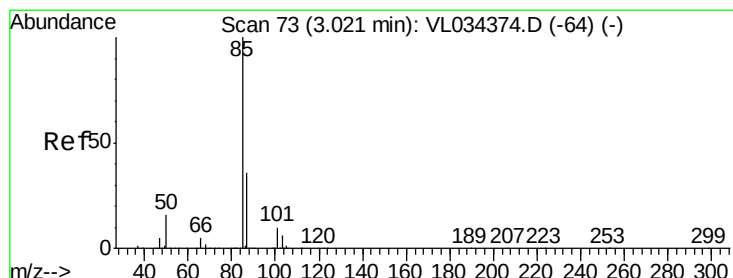
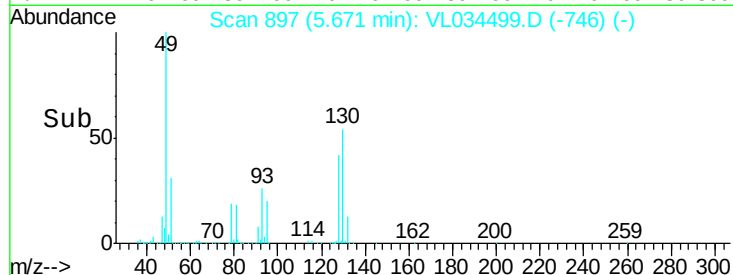
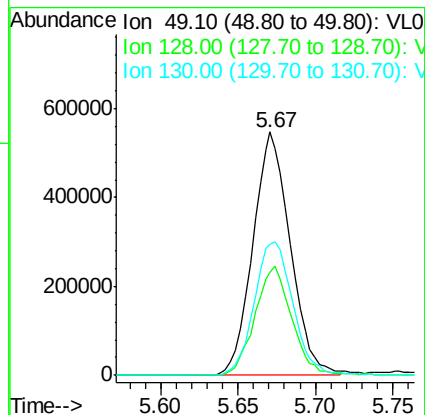
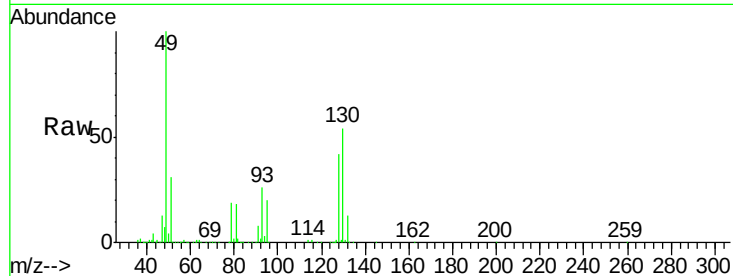
ClientSampleId :

LIHA-IAH-DUP

|          |       |       |        |
|----------|-------|-------|--------|
| Tot Ion: | 49    | Resp: | 919368 |
| Ion      | Ratio | Lower | Upper  |
| 49       | 100   |       |        |
| 128      | 44.8  | 21.8  | 65.3   |
| 130      | 57.5  | 28.0  | 84.0   |

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#2

Dichlorodifluoromethane

Concen: 0.218 ppbv

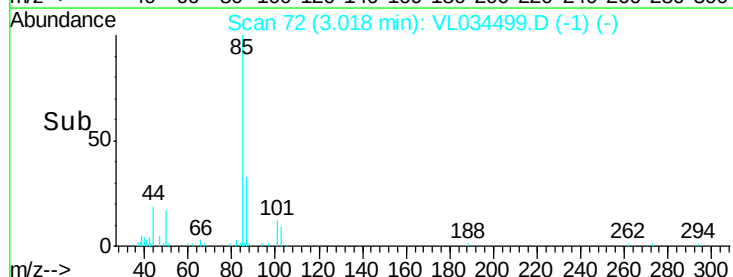
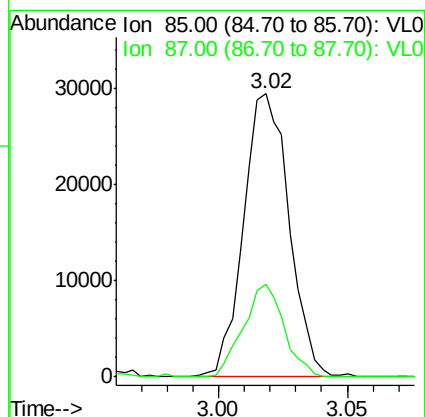
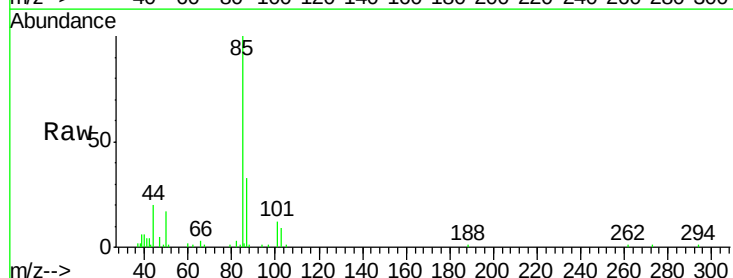
RT: 3.02 min Scan# 72

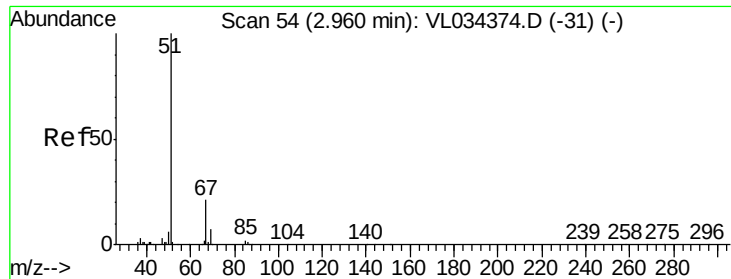
Delta R.T. -0.00 min

Lab File: VL034499.D

Acq: 17 Dec 2019 19:14

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 85    | Resp: | 36264 |
| Ion      | Ratio | Lower | Upper |
| 85       | 100   |       |       |
| 87       | 32.9  | 28.5  | 42.7  |





#3

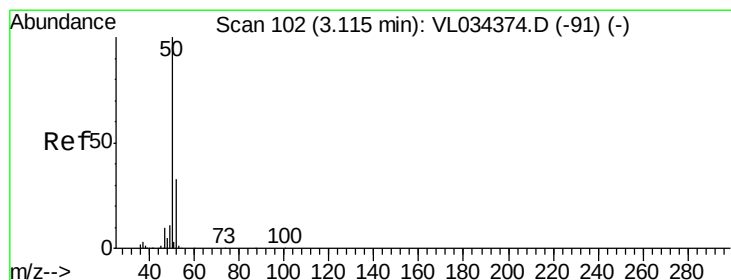
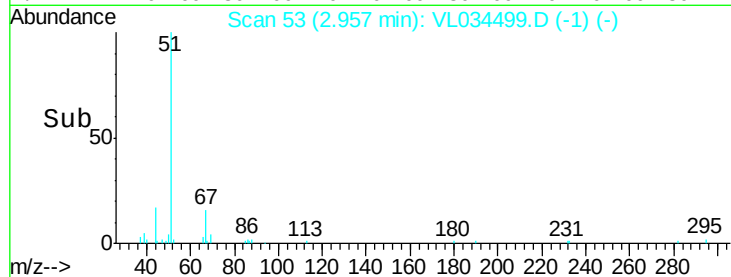
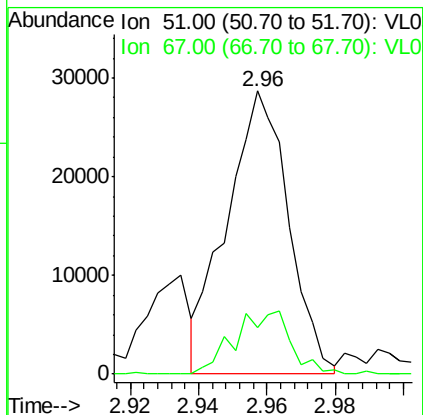
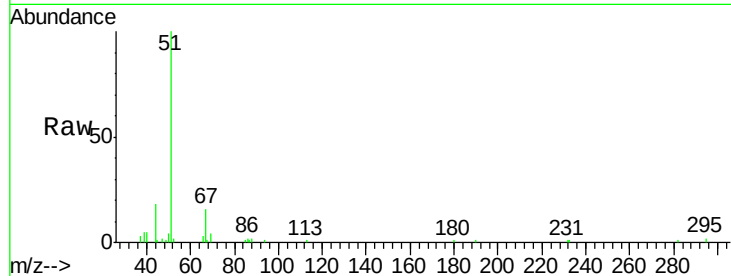
Chlorodifluoromethane  
 Concen: 0.314 ppbv  
 RT: 2.96 min Scan# 53  
 Delta R.T. -0.00 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-IAH-DUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 51      | 100   |       |       |
| 67      | 20.6  | 16.2  | 24.2  |

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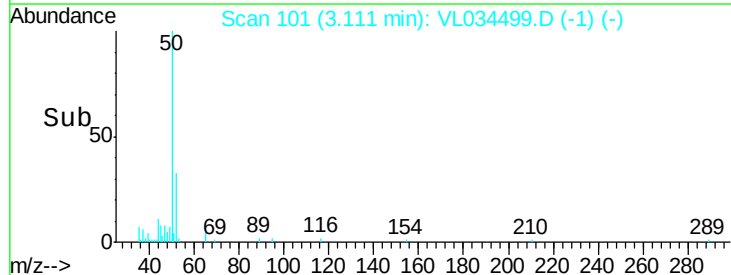
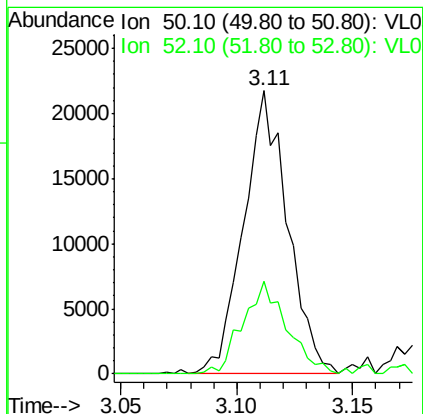
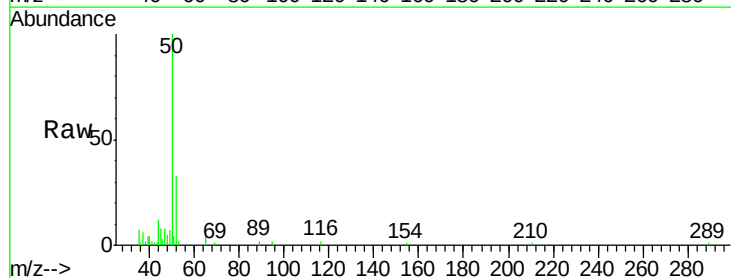
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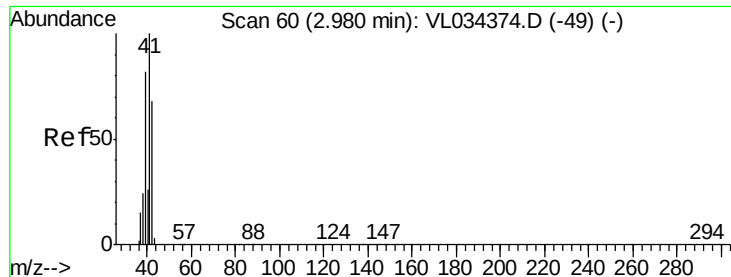


#4

Chloromethane  
 Concen: 0.424 ppbv  
 RT: 3.11 min Scan# 101  
 Delta R.T. -0.00 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 50      | 100   |       |       |
| 52      | 32.7  | 26.8  | 40.2  |





#9

Propene

Concen: 1.551 ppbv m

RT: 2.99 min Scan# 63

Delta R.T. 0.01 min

Lab File: VL034499.D

Acq: 17 Dec 2019 19:14

Instrument :

MSVOA\_L

ClientSampleId :

LIHA-IAH-DUP

Tot Ion: 41 Resp: 79009

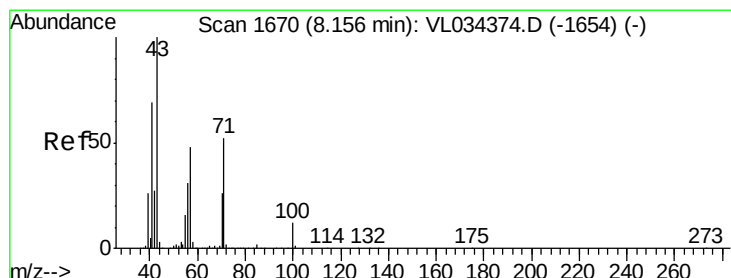
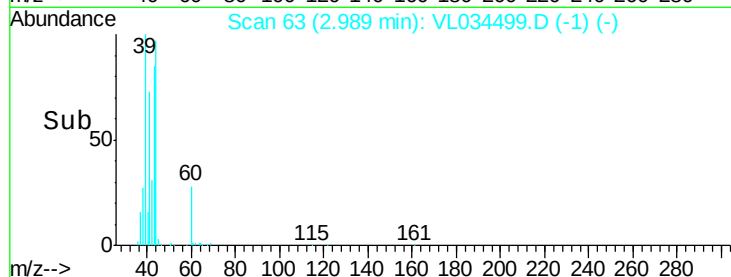
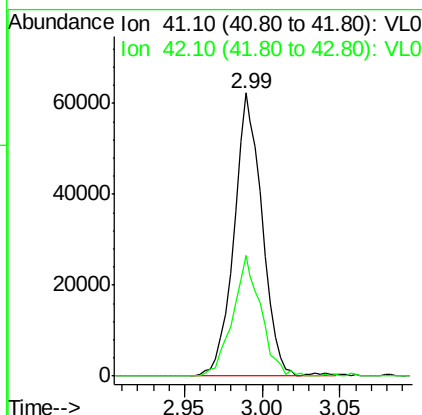
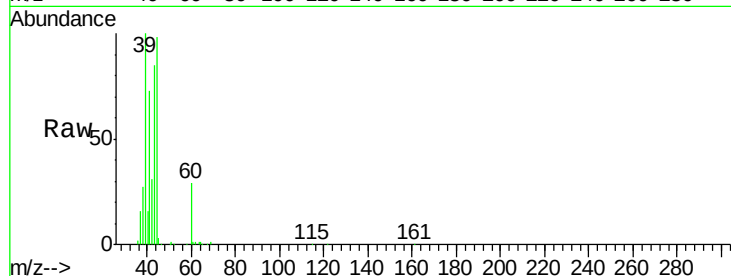
Ion Ratio Lower Upper

41 100

42 83.2 54.6 82.0#

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#10

Heptane

Concen: 0.320 ppbv m

RT: 8.15 min Scan# 1668

Delta R.T. -0.01 min

Lab File: VL034499.D

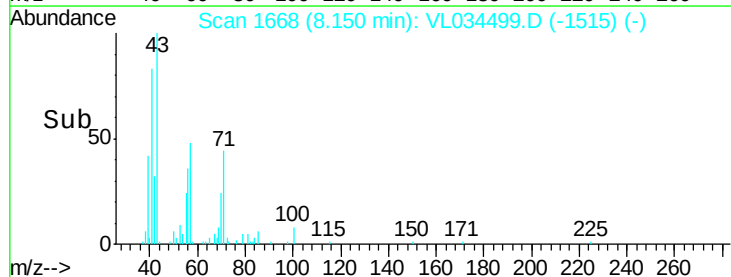
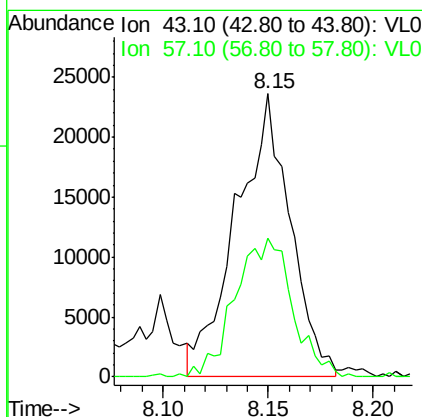
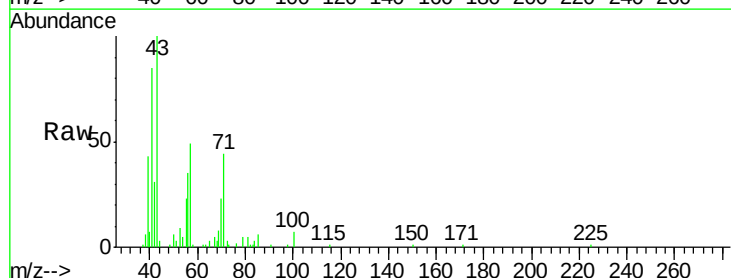
Acq: 17 Dec 2019 19:14

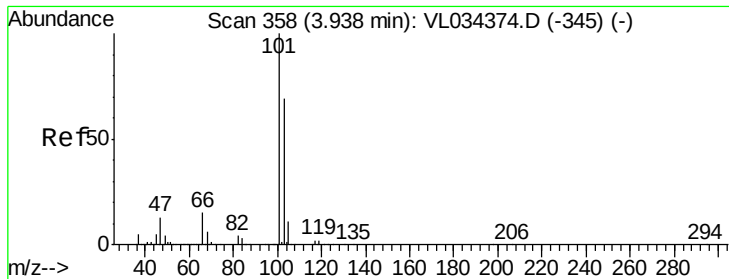
Tgt Ion: 43 Resp: 42078

Ion Ratio Lower Upper

43 100

57 0.0 40.2 60.2#





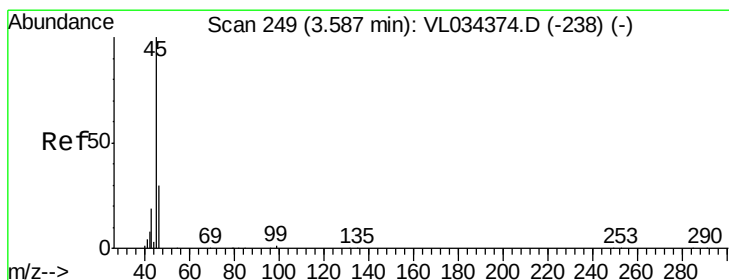
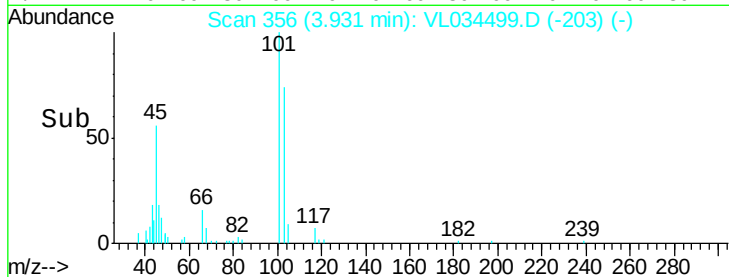
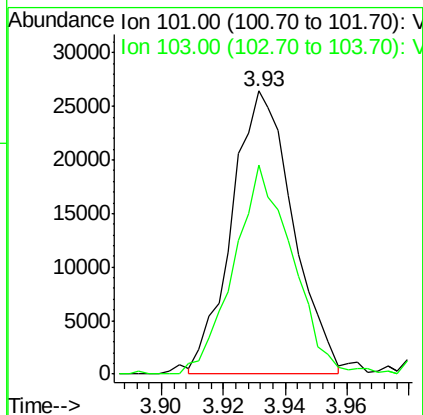
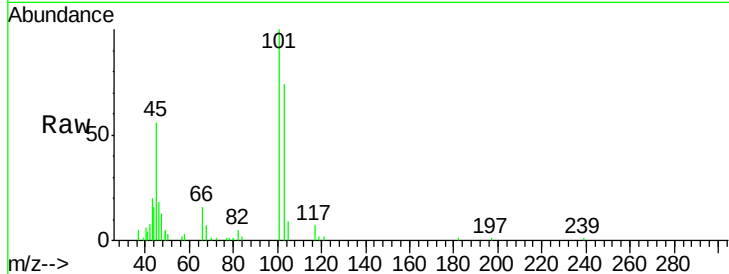
#11  
 Trichlorofluoromethane  
 Concen: 0.219 ppbv  
 RT: 3.93 min Scan# 356  
 Delta R.T. -0.01 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-IAH-DUP

Tot Ion: 101 Resp: 36254  
 Ion Ratio Lower Upper  
 101 100  
 103 72.7 55.4 83.0

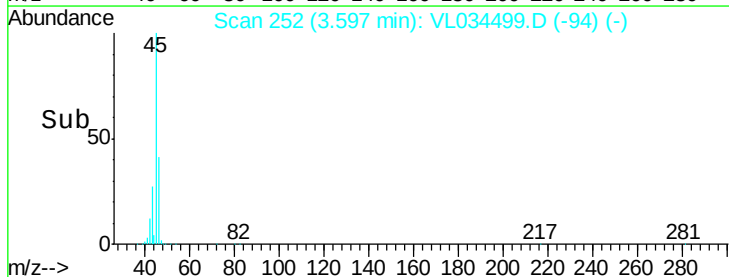
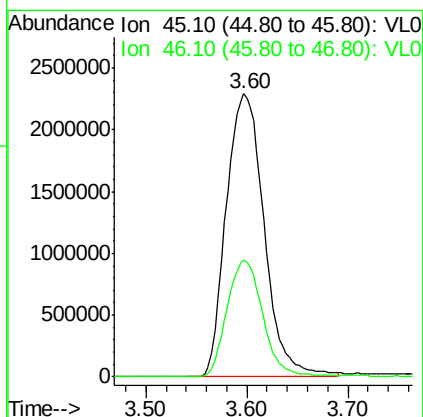
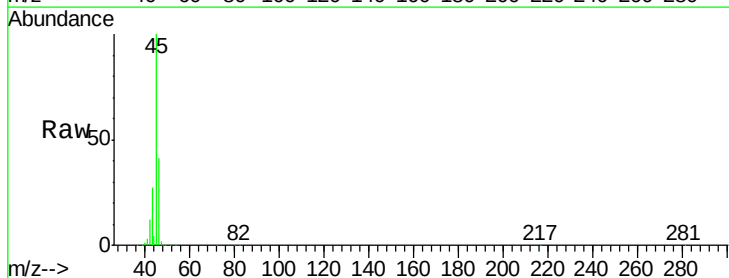
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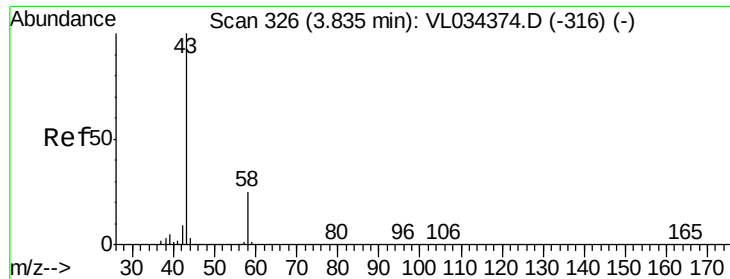
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#13  
 Ethanol  
 Concen: 423.428 ppbv  
 RT: 3.60 min Scan# 252  
 Delta R.T. 0.01 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

Tgt Ion: 45 Resp: 6006830  
 Ion Ratio Lower Upper  
 45 100  
 46 39.6 13.8 55.4





#15

Acetone

Concen: 7.098 ppbv

RT: 3.83 min Scan# 325

Delta R.T. -0.00 min

Lab File: VL034499.D

Acq: 17 Dec 2019 19:14

Instrument :

MSVOA\_L

ClientSampleId :

LIHA-IAH-DUP

Tot Ion: 43 Resp: 934496

Ion Ratio Lower Upper

43 100

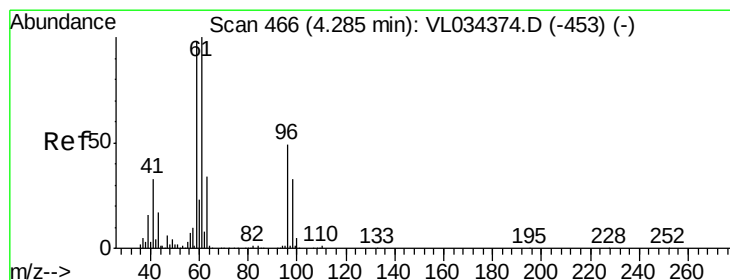
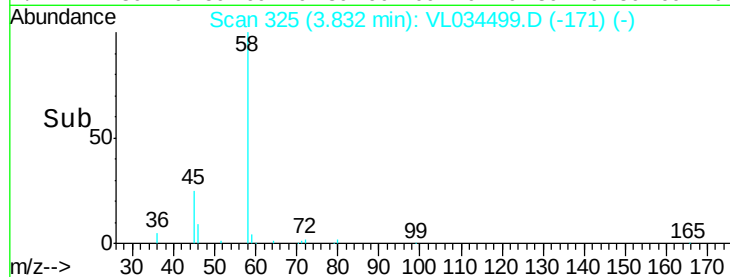
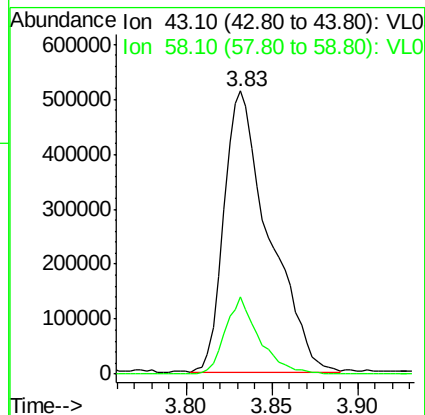
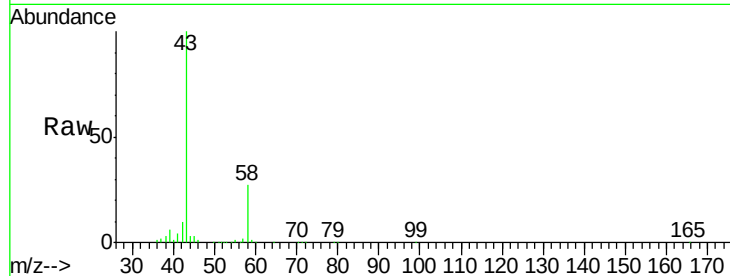
58 21.0 20.2 30.4

Manual Integrations

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#17

tert-Butyl alcohol

Concen: 0.320 ppbv m

RT: 4.30 min Scan# 471

Delta R.T. 0.02 min

Lab File: VL034499.D

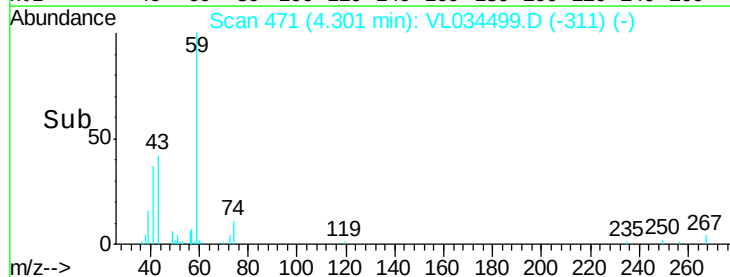
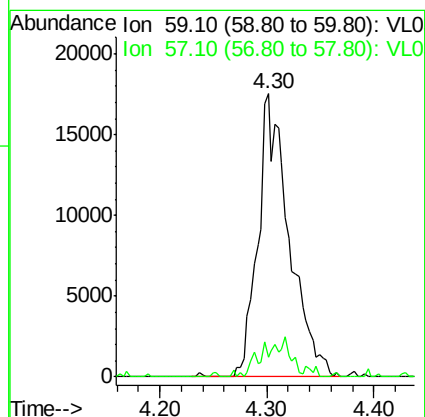
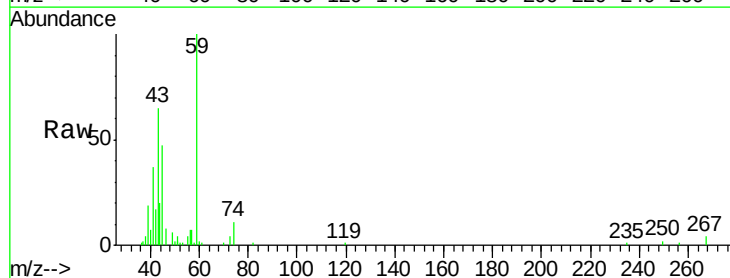
Acq: 17 Dec 2019 19:14

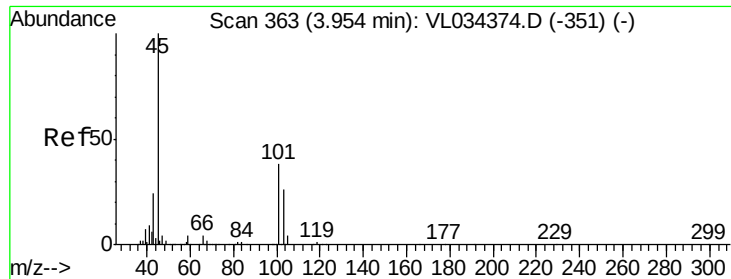
Tgt Ion: 59 Resp: 35433

Ion Ratio Lower Upper

59 100

57 0.0 8.8 13.2#





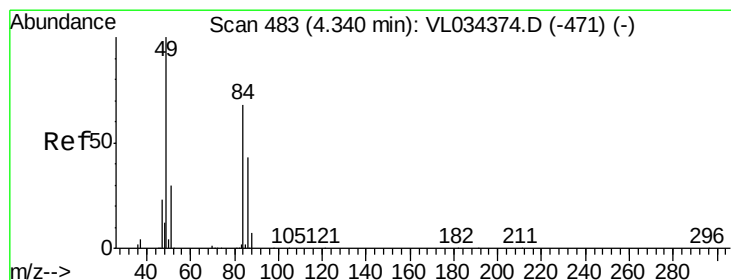
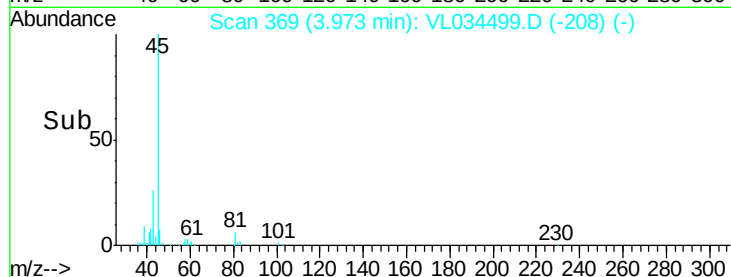
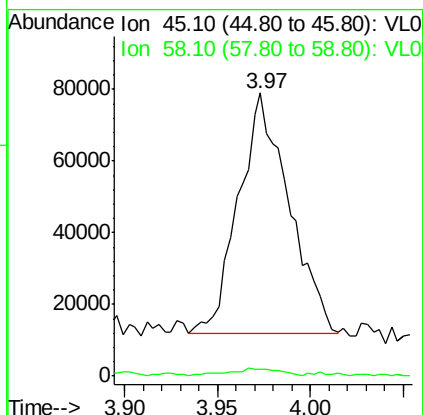
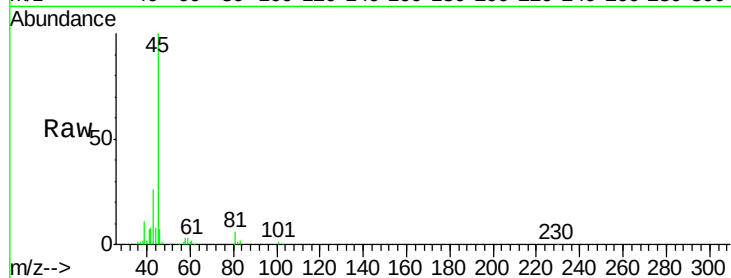
#19  
Isopropyl Alcohol  
Concen: 1.516 ppbv  
RT: 3.97 min Scan# 369  
Delta R.T. 0.02 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-IAH-DUP

Tot Ion: 45 Resp: 127907  
Ion Ratio Lower Upper  
45 100  
58 154.0 1.3 1.9#

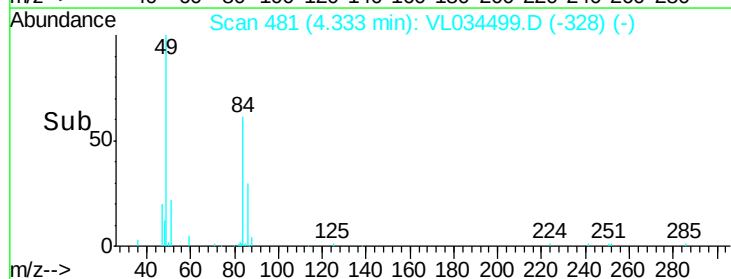
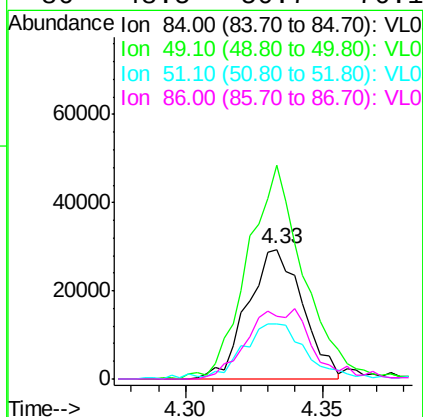
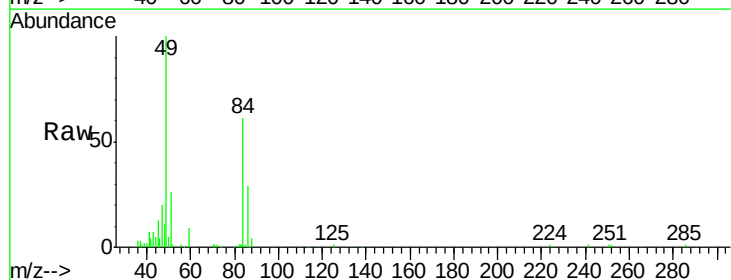
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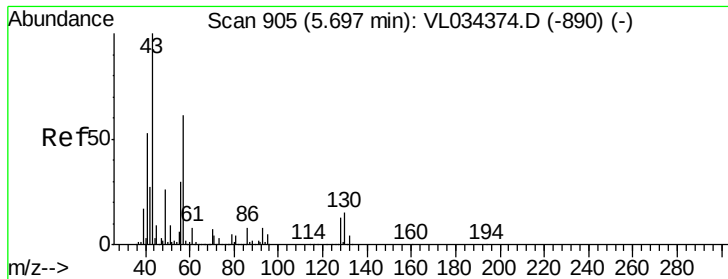


#20  
Methylene Chloride  
Concen: 0.883 ppbv  
RT: 4.33 min Scan# 481  
Delta R.T. -0.01 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Tgt Ion: 84 Resp: 41242  
Ion Ratio Lower Upper  
84 100  
49 161.5 116.8 175.2  
51 40.2 35.6 53.4  
86 48.5 50.7 76.1#







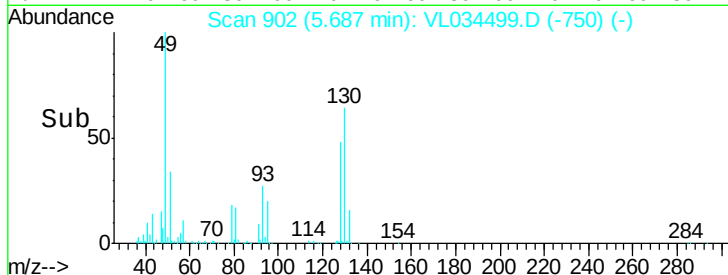
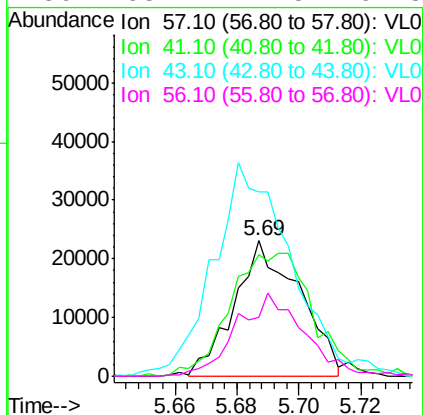
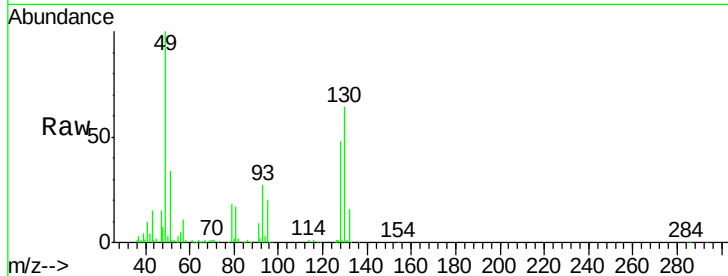
#26  
Hexane  
Concen: 0.334 ppbv  
RT: 5.69 min Scan# 902  
Delta R.T. -0.01 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-IAH-DUP

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 57      | 100   |       |        |
| 41      | 117.0 | 75.0  | 112.4# |
| 43      | 189.1 | 186.6 | 279.8  |
| 56      | 63.7  | 41.5  | 62.3#  |

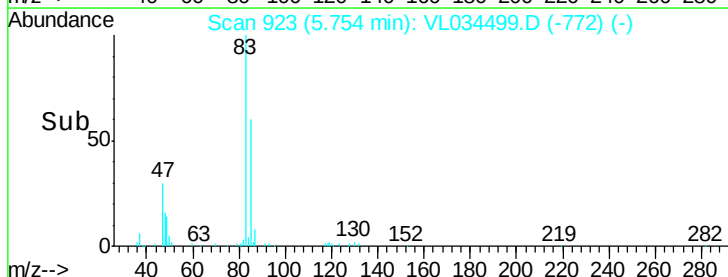
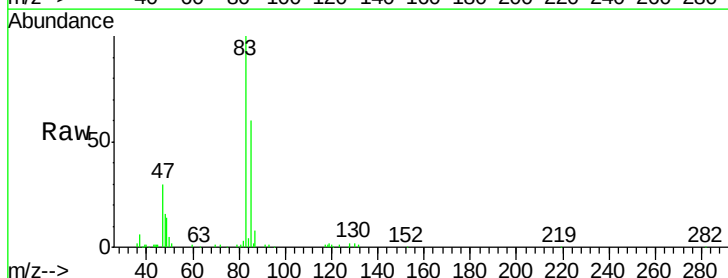
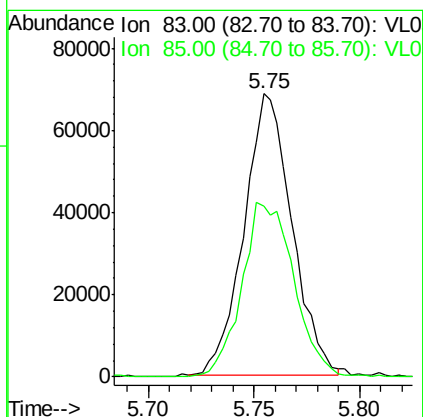
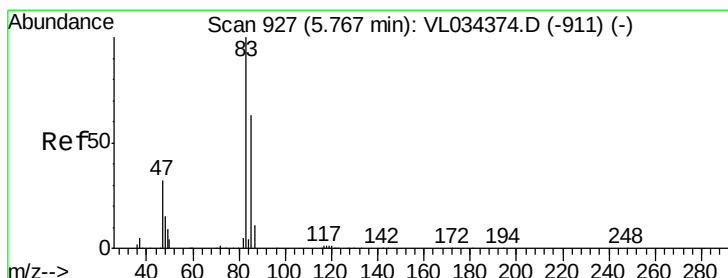
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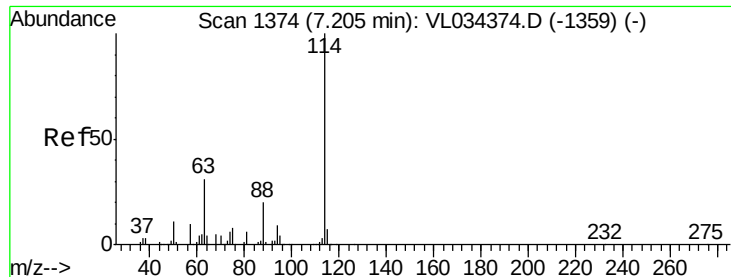
MMDadoda  
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#29  
Chloroform  
Concen: 0.662 ppbv  
RT: 5.75 min Scan# 923  
Delta R.T. -0.01 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 83      | 100   |       |       |
| 85      | 60.6  | 50.4  | 75.6  |





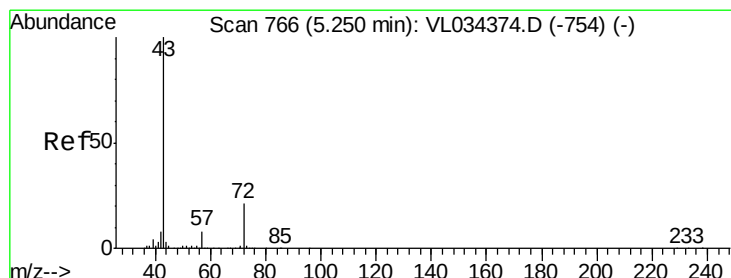
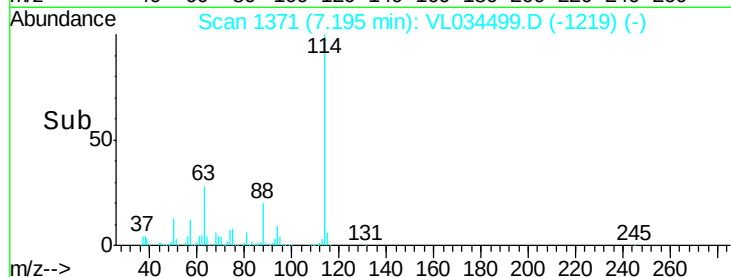
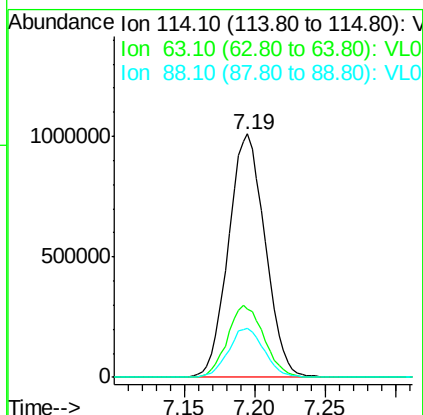
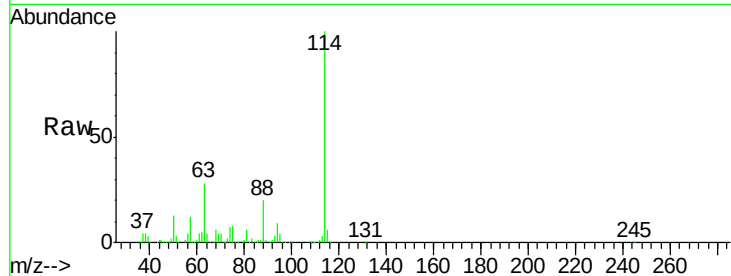
#33  
 1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.19 min Scan# 1371  
 Delta R.T. -0.01 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-IAH-DUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 114     | 100   |       |       |
| 63      | 29.7  | 24.2  | 36.4  |
| 88      | 19.7  | 15.9  | 23.9  |

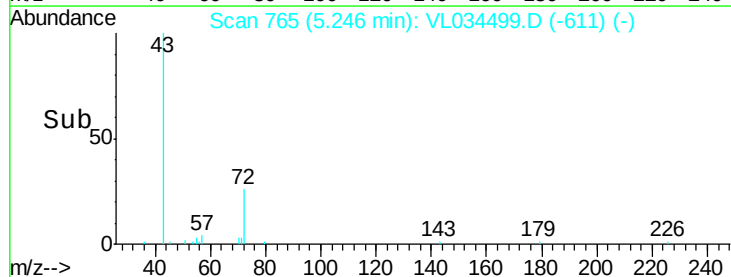
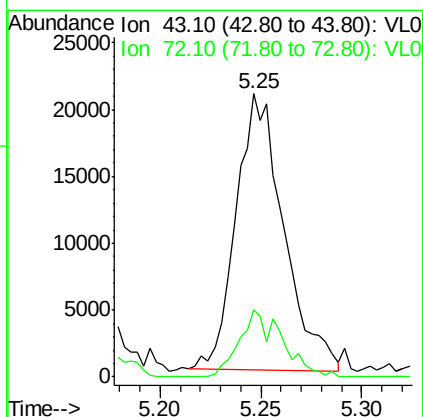
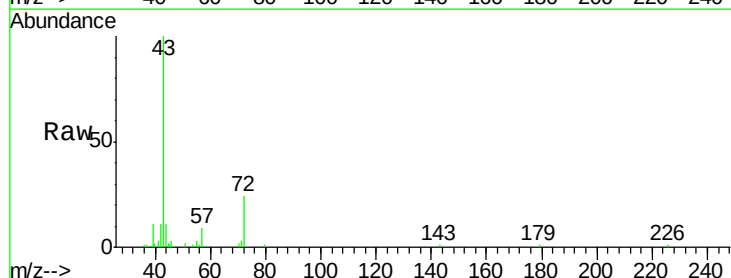
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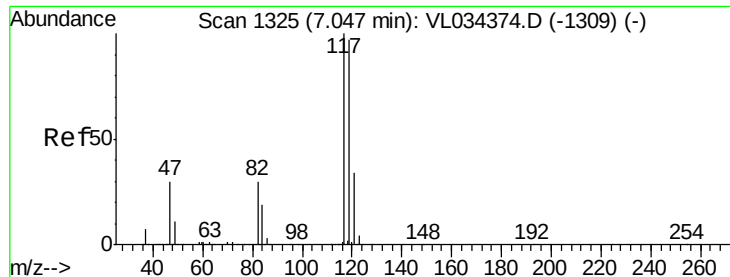
MMDadoda  
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#34  
 2-Butanone  
 Concen: 0.226 ppbv  
 RT: 5.25 min Scan# 765  
 Delta R.T. -0.00 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 43      | 100   |       |       |
| 72      | 21.9  | 17.0  | 25.6  |





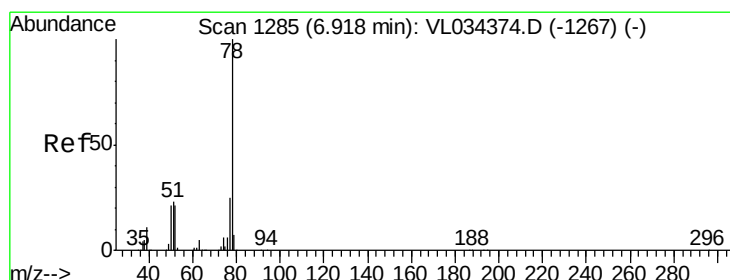
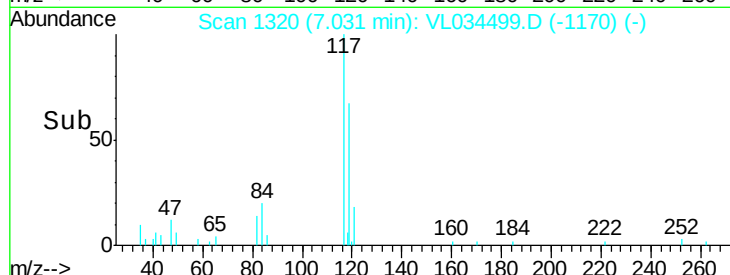
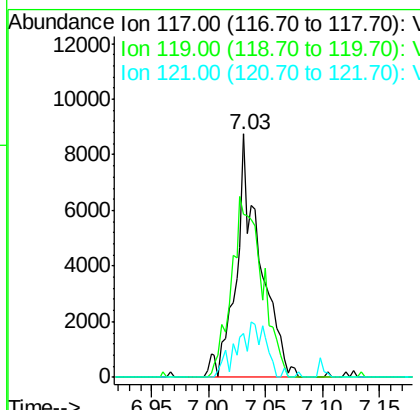
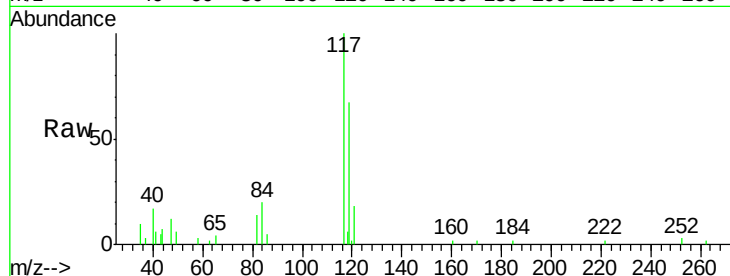
#35  
Carbon Tetrachloride  
Concen: 0.080 ppbv m  
RT: 7.03 min Scan# 1320  
Delta R.T. -0.02 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-IAH-DUP

| Tot Ion | Ratio | Lower | Upper  |
|---------|-------|-------|--------|
| 117     | 100   |       |        |
| 119     | 67.1  | 77.3  | 115.9# |
| 121     | 18.0  | 27.4  | 41.2#  |

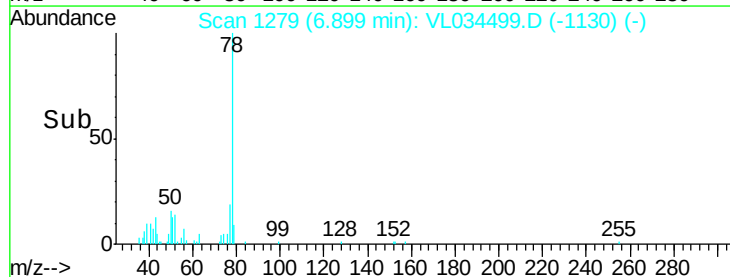
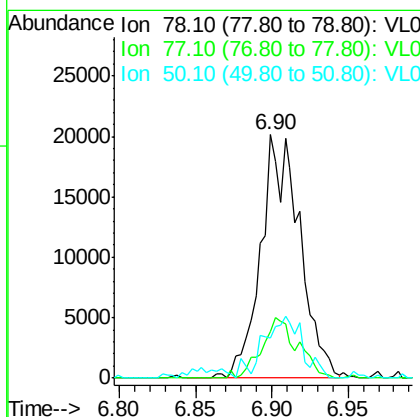
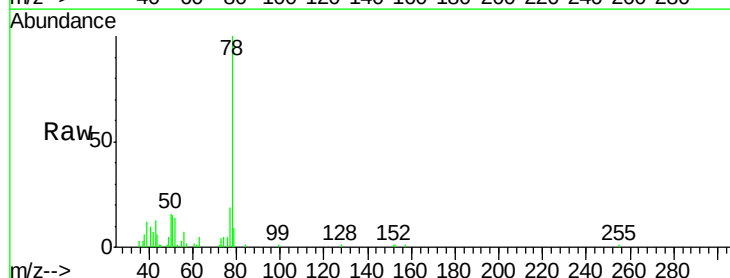
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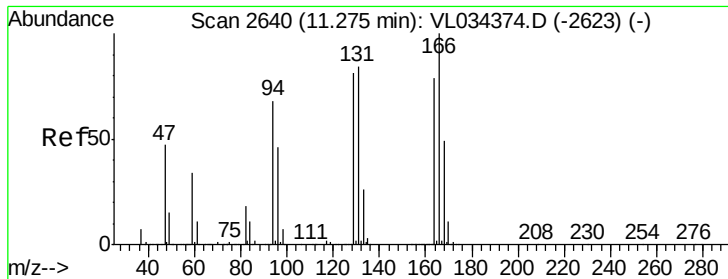
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#36  
Benzene  
Concen: 0.193 ppbv m  
RT: 6.90 min Scan# 1279  
Delta R.T. -0.02 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 19.4  | 20.2  | 30.4# |
| 50      | 16.4  | 17.1  | 25.7# |





#52

Tetrachloroethene

Concen: 0.075 ppbv m

RT: 11.27 min Scan# 2639

Delta R.T. -0.00 min

Lab File: VL034499.D

Acq: 17 Dec 2019 19:14

Instrument :

MSVOA\_L

ClientSampleId :

LIHA-IAH-DUP

Tot Ion:164 Resp: 5998

Ion Ratio Lower Upper

164 100

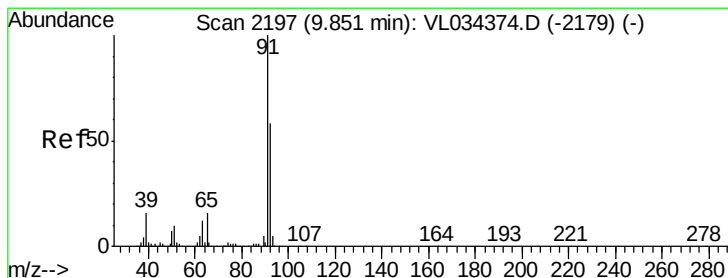
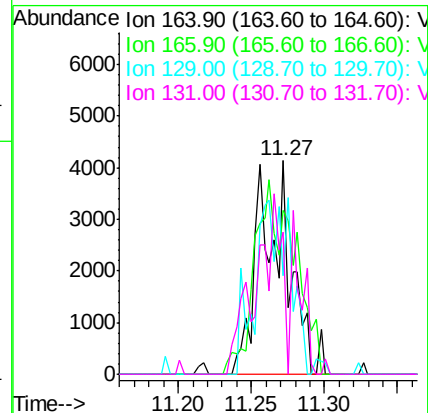
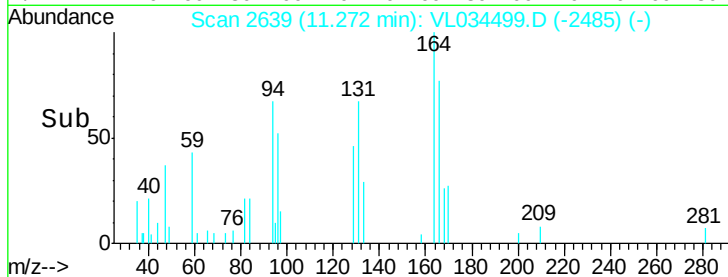
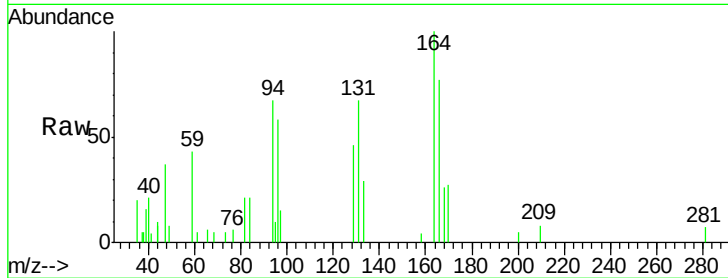
166 76.6 101.7 152.5#

129 46.0 82.6 123.8#

131 66.7 85.2 127.8#

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#53

Toluene

Concen: 0.994 ppbv

RT: 9.84 min Scan# 2194

Delta R.T. -0.01 min

Lab File: VL034499.D

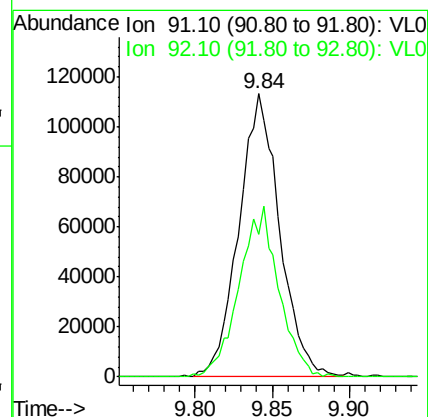
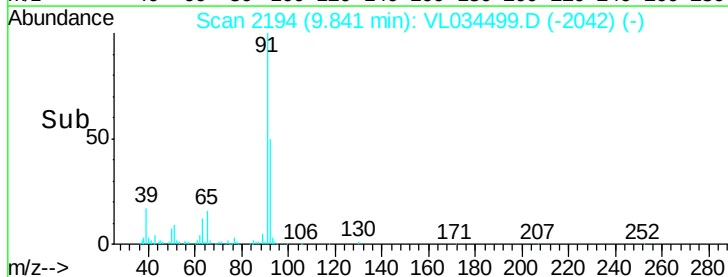
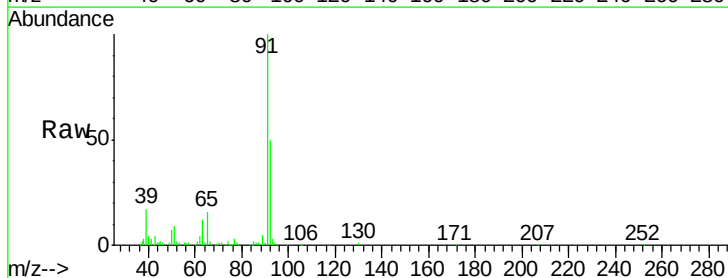
Acq: 17 Dec 2019 19:14

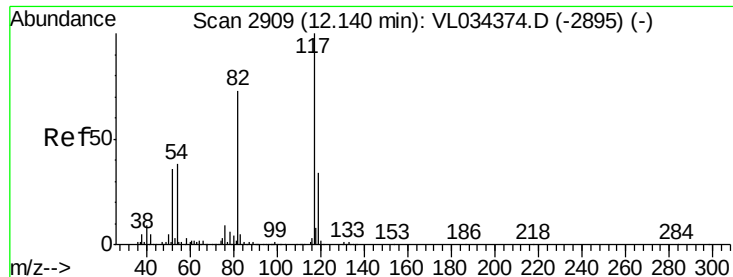
Tgt Ion: 91 Resp: 207613

Ion Ratio Lower Upper

91 100

92 58.5 47.9 71.9





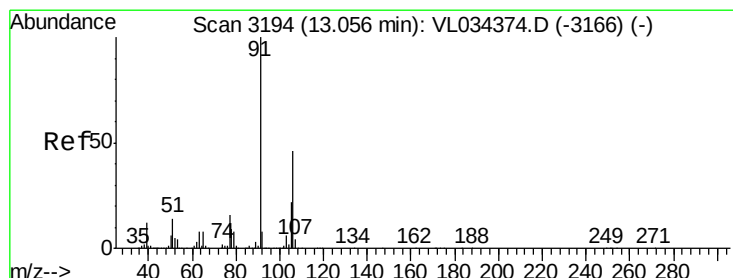
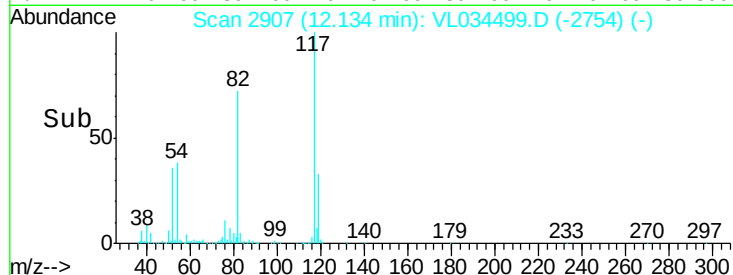
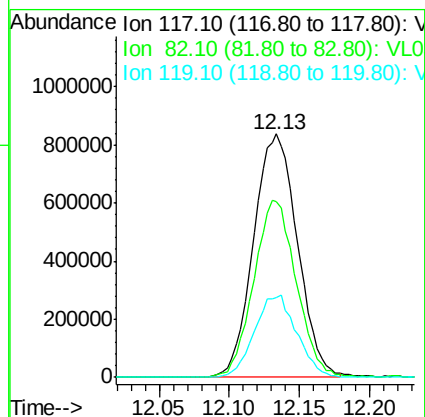
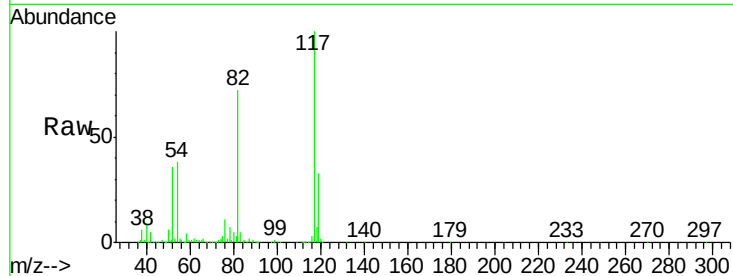
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.13 min Scan# 2907  
Delta R.T. -0.01 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Instrument :  
MSVOA\_L  
ClientSampleId :  
LIHA-IAH-DUP

Tot Ion:117 Resp: 1816770  
Ion Ratio Lower Upper  
117 100  
82 71.3 57.5 86.3  
119 32.7 25.4 38.2

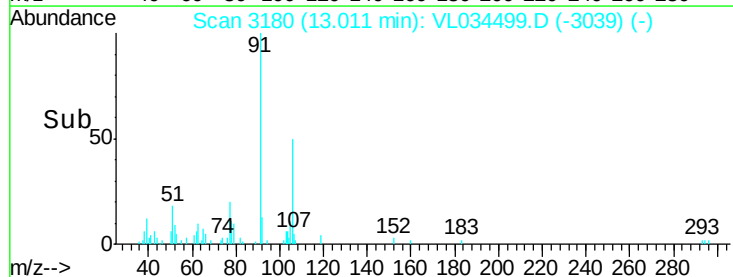
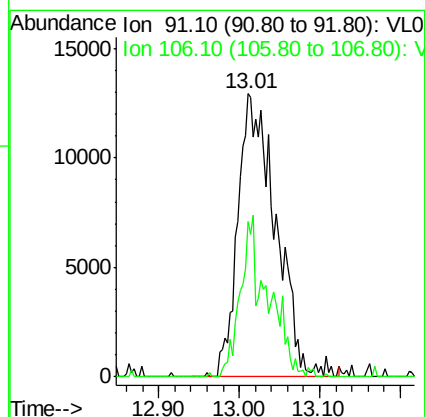
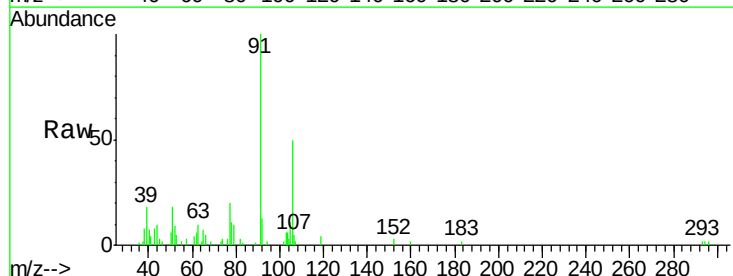
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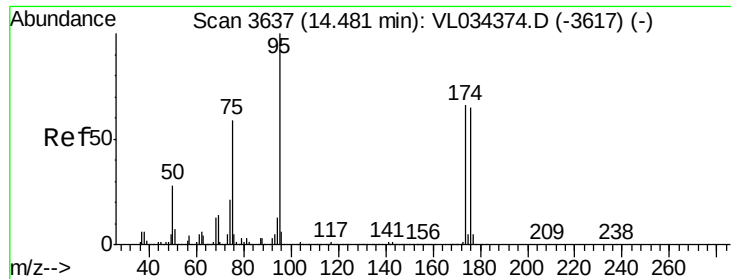
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#59  
m/p-Xylene  
Concen: 0.172 ppbv m  
RT: 13.01 min Scan# 3180  
Delta R.T. -0.05 min  
Lab File: VL034499.D  
Acq: 17 Dec 2019 19:14

Tgt Ion: 91 Resp: 41970  
Ion Ratio Lower Upper  
91 100  
106 0.0 34.6 51.8#





#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 10.251 ppbv  
 RT: 14.47 min Scan# 3633  
 Delta R.T. -0.01 min  
 Lab File: VL034499.D  
 Acq: 17 Dec 2019 19:14

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 LIHA-IAH-DUP

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 95      | 100   |       |       |
| 174     | 65.1  | 52.2  | 78.2  |
| 175     | 4.7   | 3.8   | 5.8   |

Manual Integrations  
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