

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121718\  
 Data File : VL033020.D  
 Acq On : 18 Dec 2018 7:04  
 Operator : SY/AP  
 Sample : J6444-06  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 YT-CBA-LTM5-03

Manual Integrations  
 APPROVED

MMDadoda  
 12/19/2018 5:38:01 PM

Quant Time: Dec 19 16:12:26 2018  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Dec 0  
 QLast Update : Fri Dec 07 09:35:17 2018  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.77  | 49   | 1108295  | 10.00 | ppbv  | 0.00     |
| 33) 1,4-Difluorobenzene | 7.30  | 114  | 2626282  | 10.00 | ppbv  | 0.00     |
| 55) Chlorobenzene-d5    | 12.25 | 117  | 1951969  | 10.00 | ppbv  | 0.00     |

System Monitoring Compounds

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| 68) 1-Bromo-4-Fluorobenzene | 14.58  | 95    | 1857276  | 12.88    | ppbv | 0.00    |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 128.80% |

| Target Compounds           | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 3.08  | 85   | 90743    | 0.613  | ppbv   | 98     |
| 3) Chlorodifluoromethane   | 3.01  | 51   | 56786m   | 0.677  | ppbv   |        |
| 4) Chloromethane           | 3.17  | 50   | 28647    | 0.586  | ppbv   | 95     |
| 9) Propene                 | 3.05  | 41   | 839381m  | 25.291 | ppbv   |        |
| 11) Trichlorofluoromethane | 4.01  | 101  | 39944    | 0.287  | ppbv   | 84     |
| 13) Ethanol                | 3.66  | 45   | 561937   | 49.175 | ppbv   | 97     |
| 15) Acetone                | 3.91  | 43   | 878979   | 9.240  | ppbv   | 96     |
| 19) Isopropyl Alcohol      | 4.04  | 45   | 155935   | 2.610  | ppbv # | 1      |
| 20) Methylene Chloride     | 4.42  | 84   | 753489   | 16.206 | ppbv   | 97     |
| 26) Hexane                 | 5.79  | 57   | 521142   | 5.023  | ppbv # | 47     |
| 34) 2-Butanone             | 5.35  | 43   | 55342m   | 0.484  | ppbv   |        |
| 35) Carbon Tetrachloride   | 7.14  | 117  | 14960m   | 0.072  | ppbv   |        |
| 36) Benzene                | 7.01  | 78   | 117433   | 0.608  | ppbv   | 96     |
| 44) 2,2,4-Trimethylpentane | 8.00  | 57   | 63034    | 0.192  | ppbv # | 70     |
| 52) Tetrachloroethene      | 11.38 | 164  | 4928m    | 0.070  | ppbv   |        |
| 53) Toluene                | 9.96  | 91   | 14490629 | 70.731 | ppbv   | 92     |
| 58) Ethyl Benzene          | 12.87 | 91   | 34699m   | 0.167  | ppbv   |        |
| 59) m/p-Xylene             | 13.13 | 91   | 105400m  | 0.558  | ppbv   |        |
| 60) o-Xylene               | 13.85 | 91   | 42817m   | 0.225  | ppbv   |        |
| 74) 1,2,4-Trimethylbenzene | 16.94 | 105  | 76413    | 0.326  | ppbv # | 68     |

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

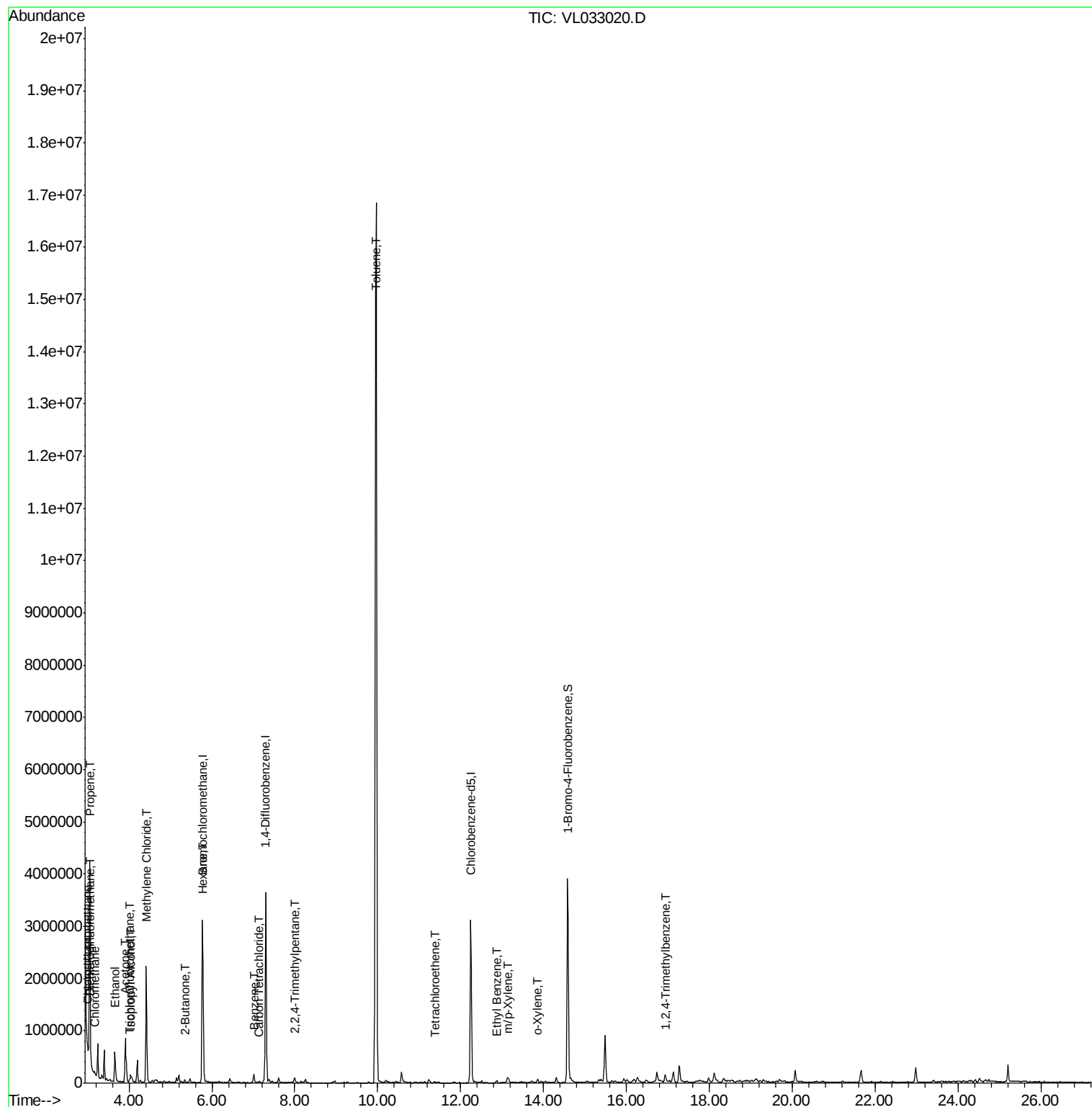
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL121718\  
Data File : VL033020.D  
Acq On : 18 Dec 2018 7:04  
Operator : SY/AP  
Sample : J6444-06  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

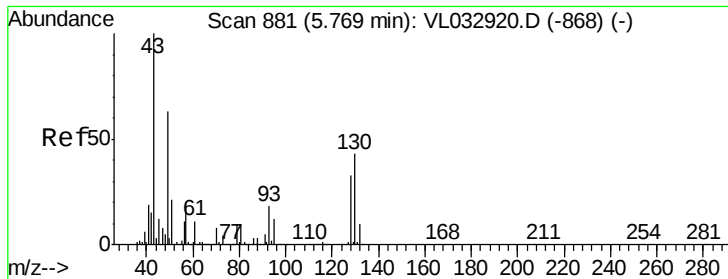
Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

Manual Integrations  
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12/19/2018 5:38:01 PM

Quant Time: Dec 19 16:12:26 2018  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Fri Dec  
QLast Update : Fri Dec 07 09:35:17 2018  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion: 49 Resp: 1108295

Ion Ratio Lower Upper

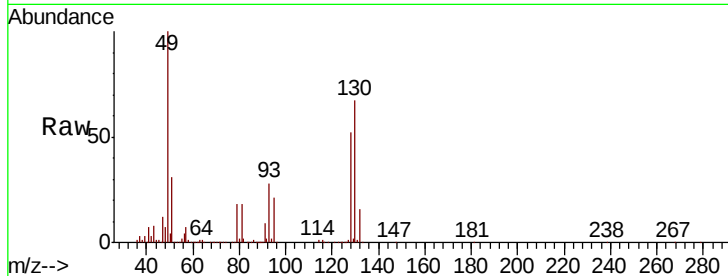
49 100

128 52.8 26.3 78.8

130 67.3 33.9 101.7

Manual Integrations  
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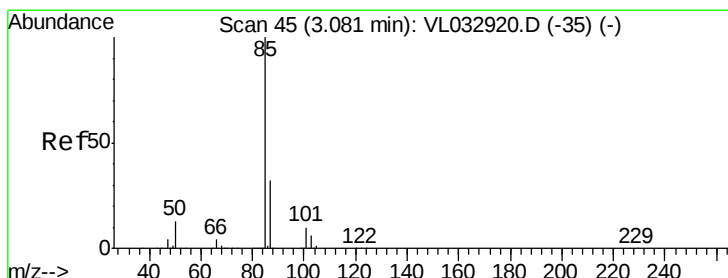
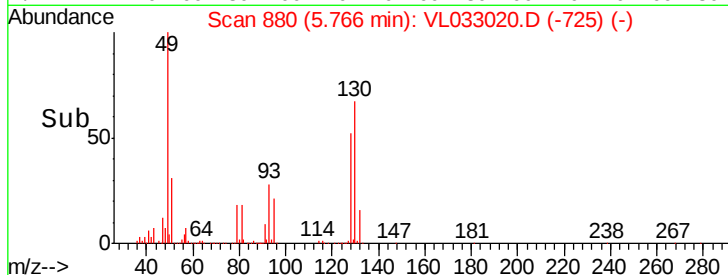
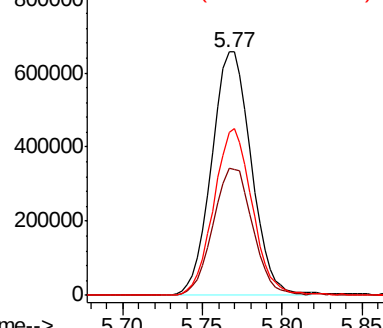
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12/19/2018 5:38:01 PM



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.613 ppbv

RT: 3.08 min Scan# 45

Delta R.T. 0.00 min

Lab File: VL033020.D

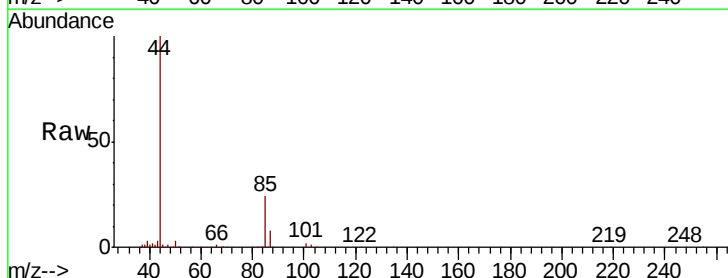
Acq: 18 Dec 2018 7:04

Tgt Ion: 85 Resp: 90743

Ion Ratio Lower Upper

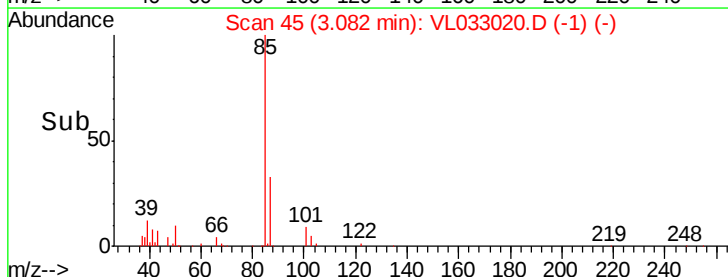
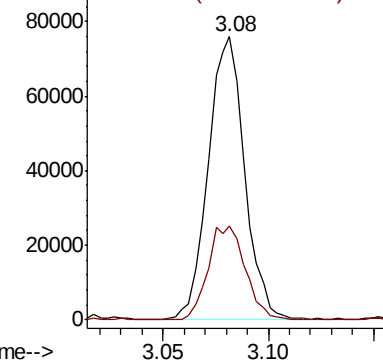
85 100

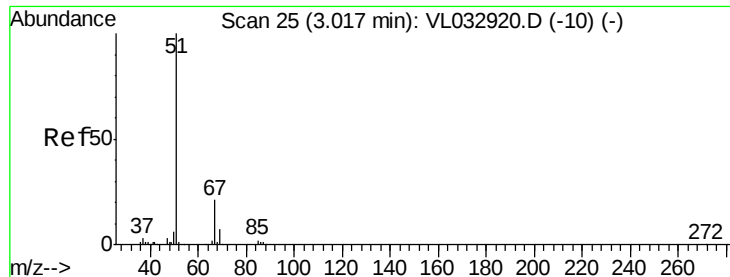
87 33.1 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.677 ppbv

RT: 3.01 min Scan# 24

Delta R.T. -0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion: 51 Resp: 56786

Ion Ratio Lower Upper

51 100

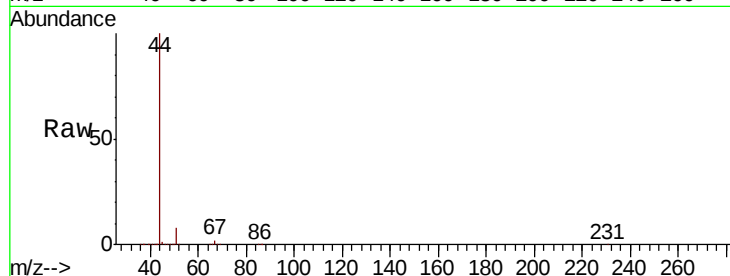
67 21.4 16.8 25.2

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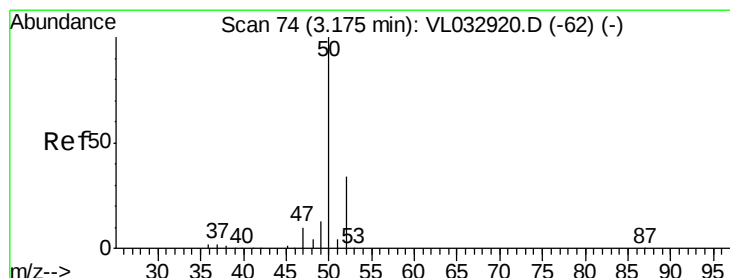
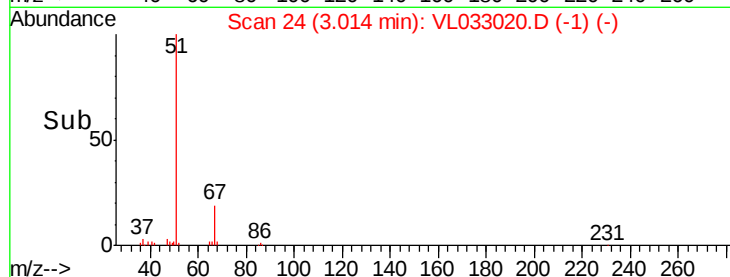
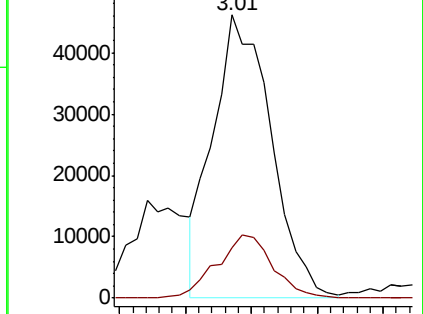
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.586 ppbv

RT: 3.17 min Scan# 73

Delta R.T. -0.00 min

Lab File: VL033020.D

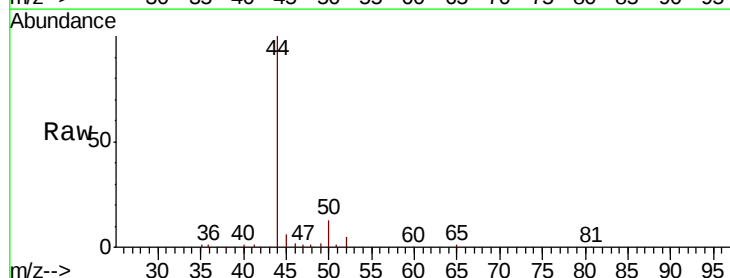
Acq: 18 Dec 2018 7:04

Tgt Ion: 50 Resp: 28647

Ion Ratio Lower Upper

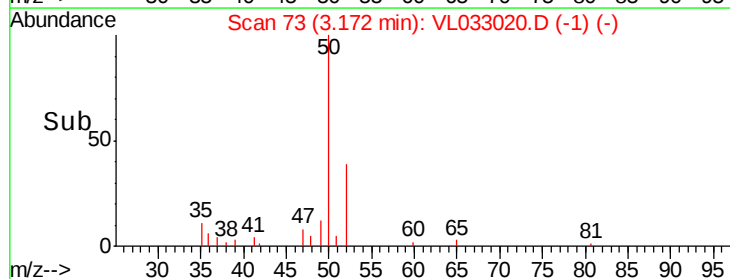
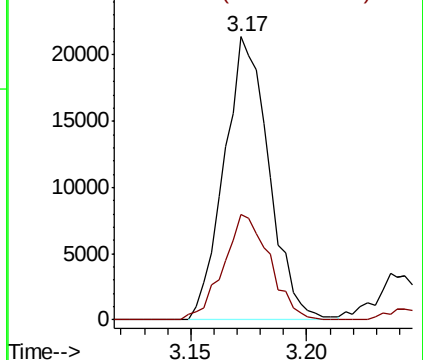
50 100

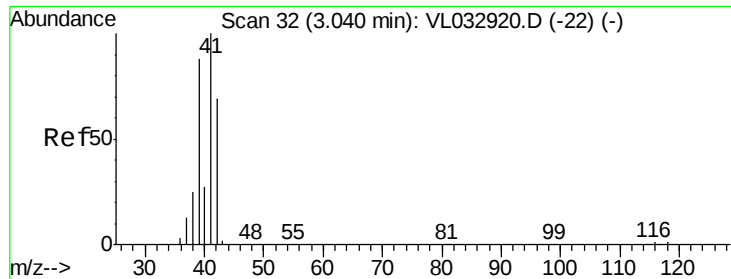
52 37.0 27.3 40.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 25.291 ppbv m

RT: 3.05 min Scan# 36

Delta R.T. 0.01 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion: 41 Resp: 839381

Ion Ratio Lower Upper

41 100

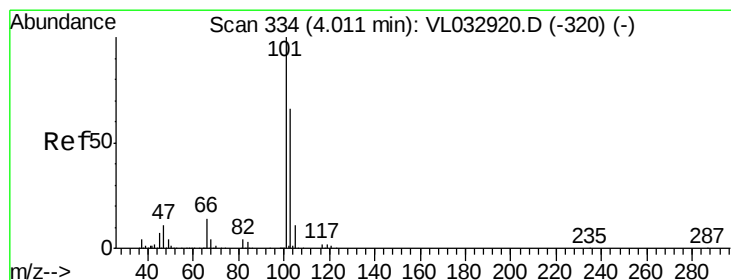
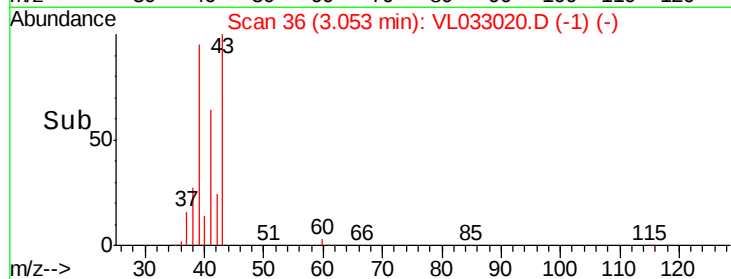
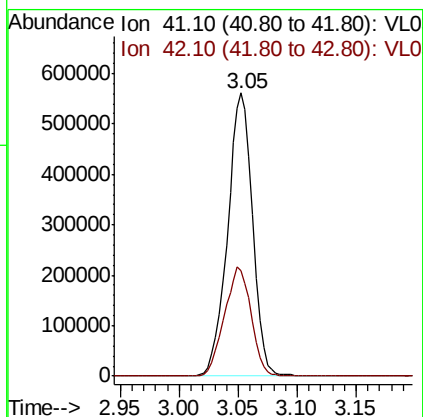
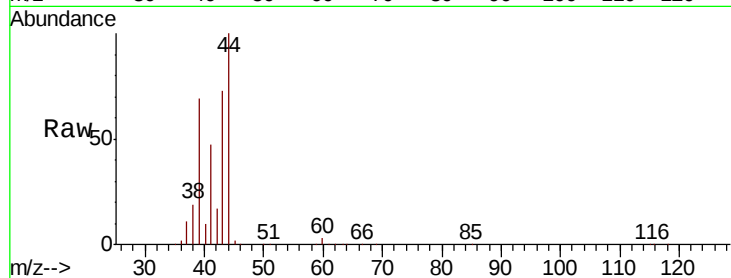
42 13.1 56.2 84.2#

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#11

Trichlorofluoromethane

Concen: 0.287 ppbv

RT: 4.01 min Scan# 335

Delta R.T. 0.00 min

Lab File: VL033020.D

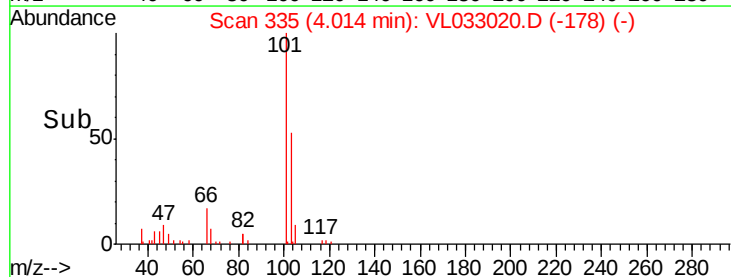
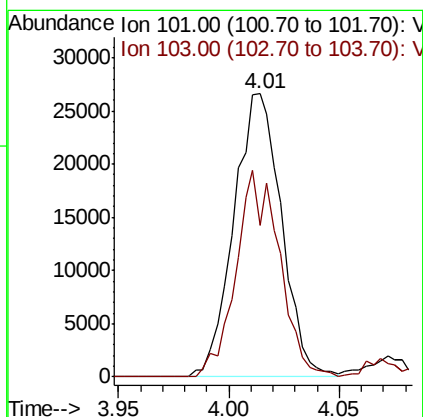
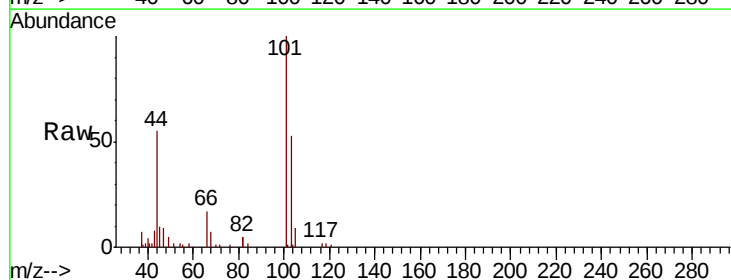
Acq: 18 Dec 2018 7:04

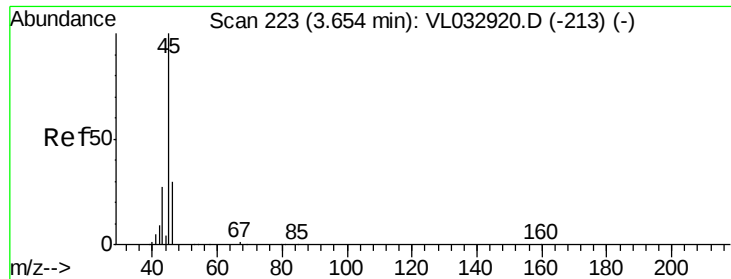
Tgt Ion: 101 Resp: 39944

Ion Ratio Lower Upper

101 100

103 53.4 52.7 79.1





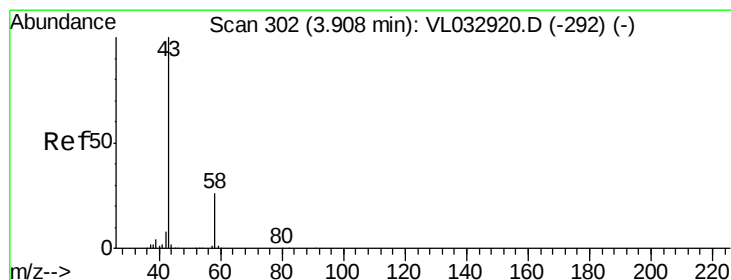
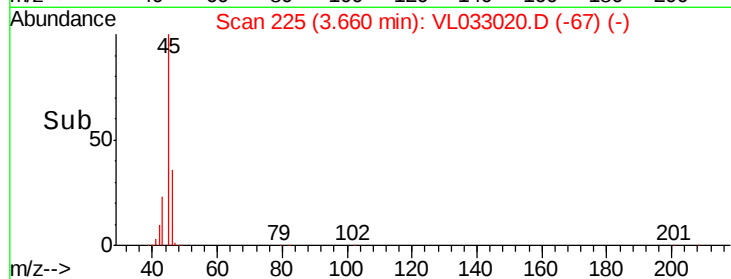
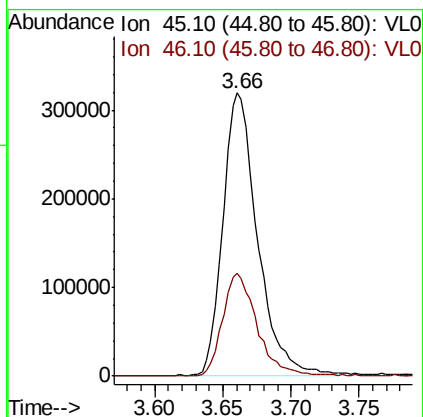
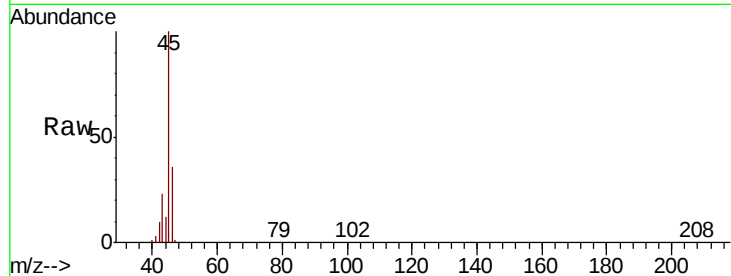
#13  
Ethanol  
Concen: 49.175 ppbv  
RT: 3.66 min Scan# 225  
Delta R.T. 0.01 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

Tot Ion: 45 Resp: 561937  
Ion Ratio Lower Upper  
45 100  
46 36.2 13.8 55.4

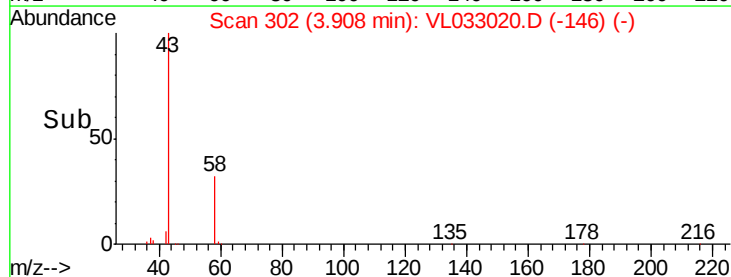
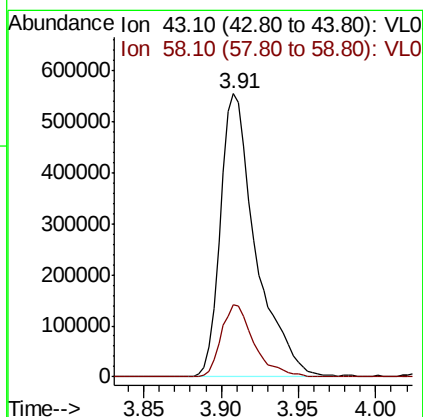
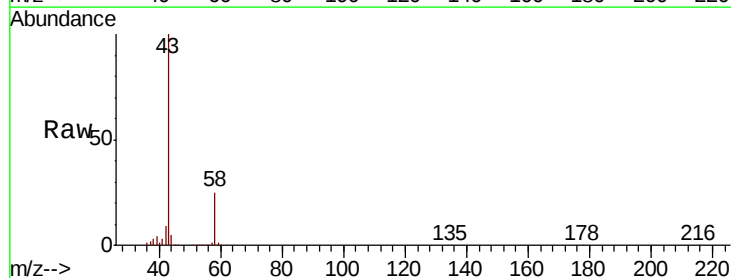
Manual Integrations  
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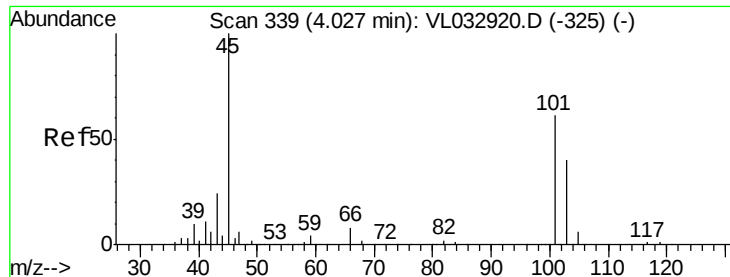
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#15  
Acetone  
Concen: 9.240 ppbv  
RT: 3.91 min Scan# 302  
Delta R.T. 0.00 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Tgt Ion: 43 Resp: 878979  
Ion Ratio Lower Upper  
43 100  
58 23.7 20.6 30.8





#19

Isopropyl Alcohol

Concen: 2.610 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.01 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion: 45 Resp: 155935

Ion Ratio Lower Upper

45 100

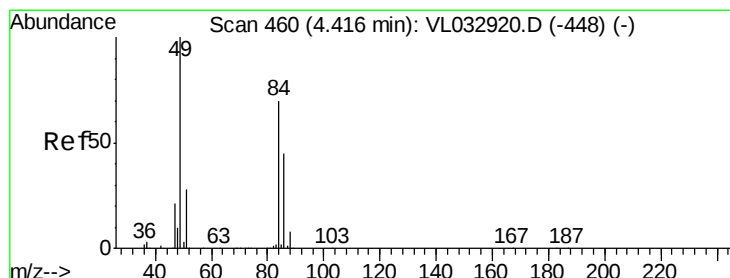
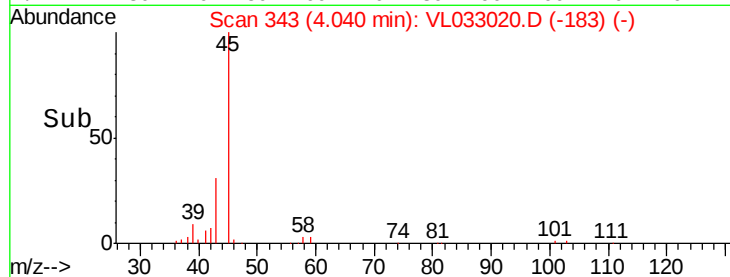
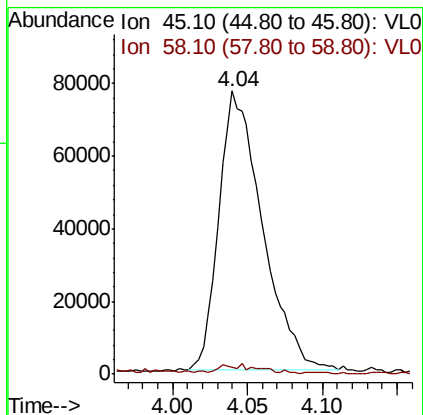
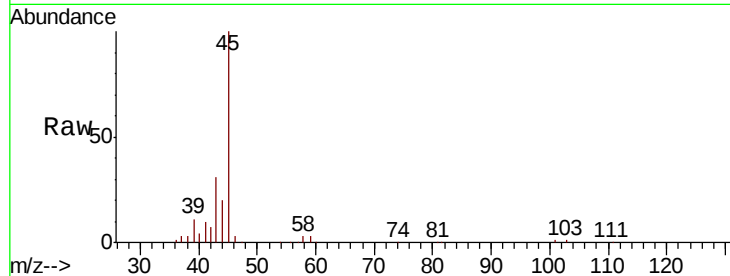
58 133.9 1.4 2.2#

Manual Integrations

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#20

Methylene Chloride

Concen: 16.206 ppbv

RT: 4.42 min Scan# 460

Delta R.T. 0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Tgt Ion: 84 Resp: 753489

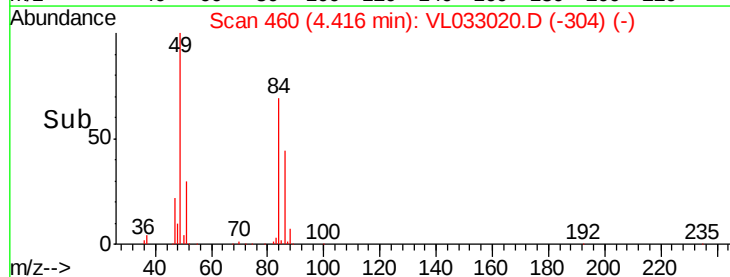
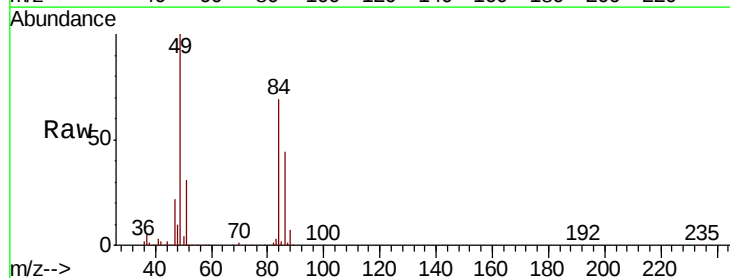
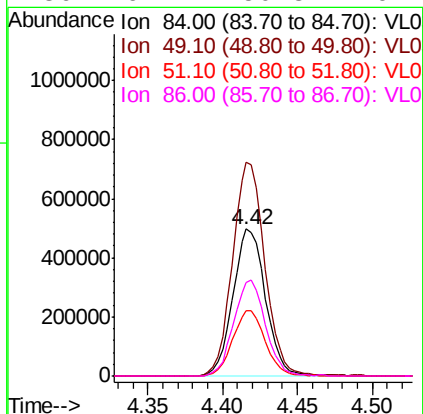
Ion Ratio Lower Upper

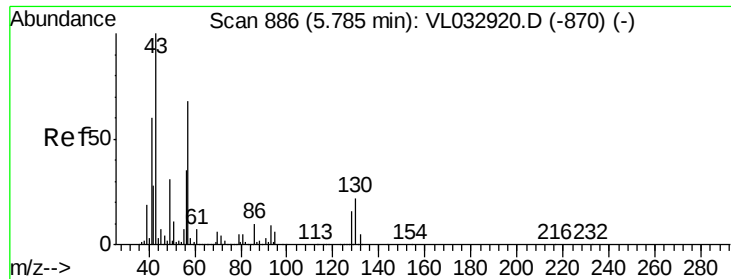
84 100

49 145.6 113.8 170.8

51 44.4 31.8 47.8

86 64.1 50.8 76.2





#26

Hexane

Concen: 5.023 ppbv

RT: 5.79 min Scan# 887

Delta R.T. 0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion: 57 Resp: 521142

Ion Ratio Lower Upper

57 100

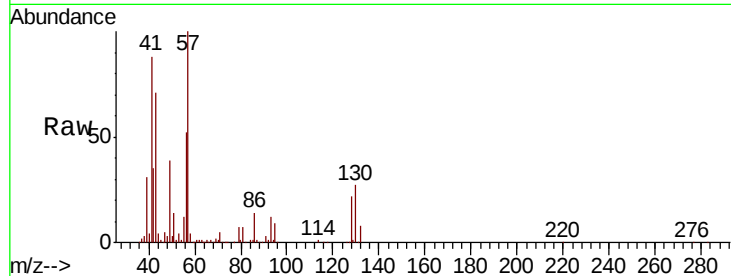
41 91.1 72.2 108.2

43 75.7 171.9 257.9#

56 53.6 42.2 63.2

Manual Integrations  
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12/19/2018 5:38:01 PM



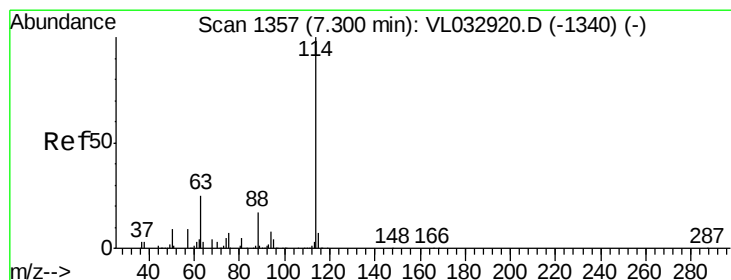
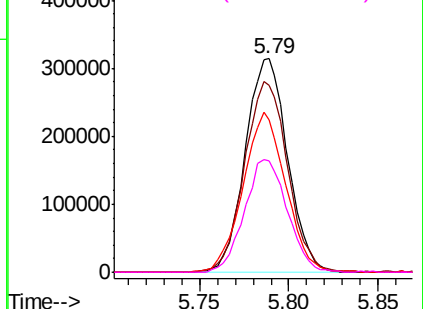
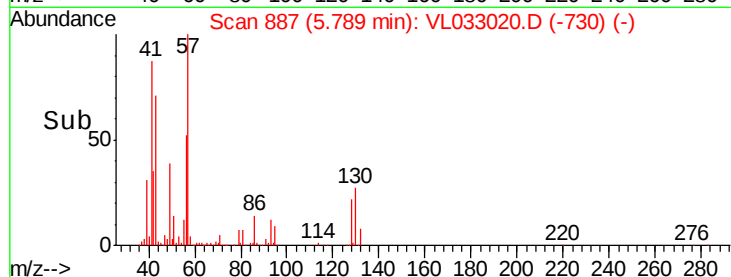
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

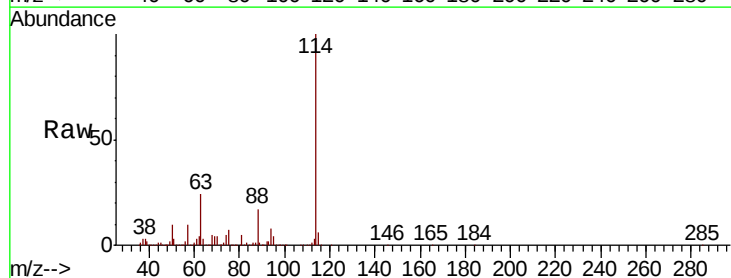
Tgt Ion: 114 Resp: 2626282

Ion Ratio Lower Upper

114 100

63 24.7 20.1 30.1

88 17.7 14.2 21.4

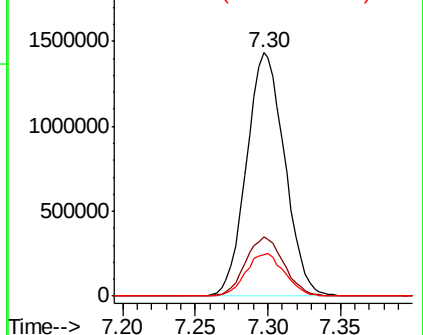
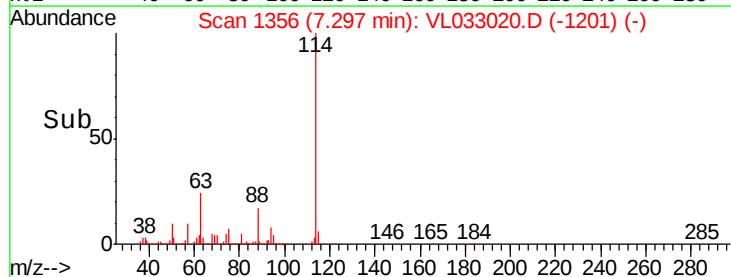


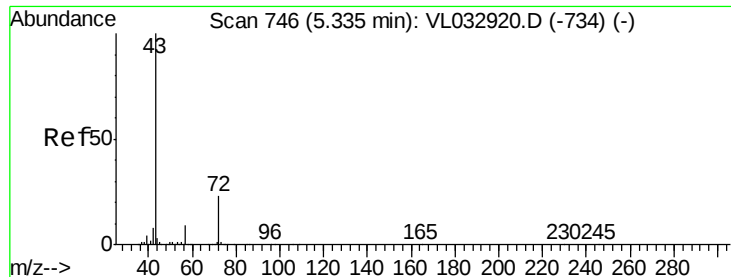
Abundance

Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





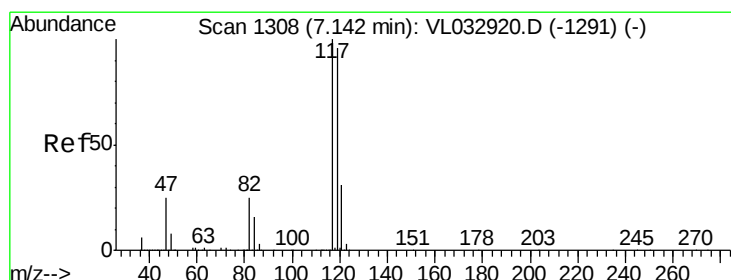
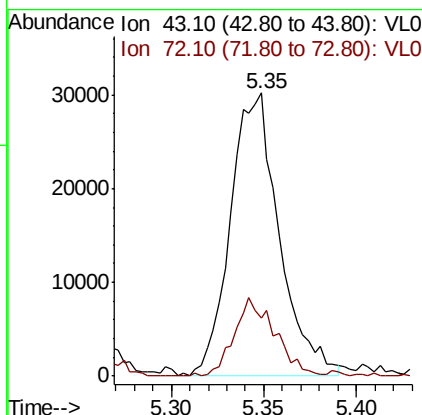
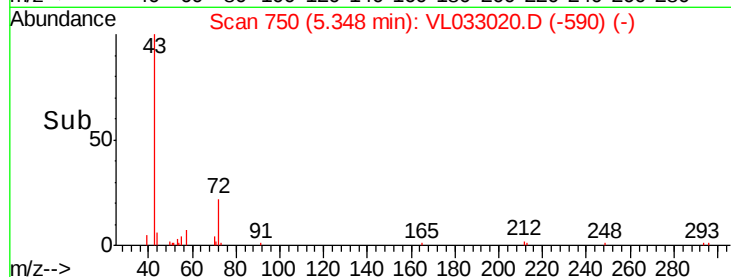
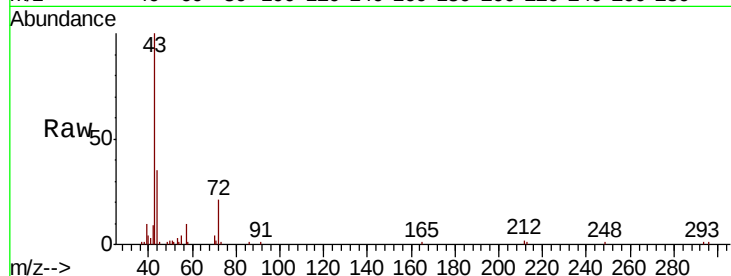
#34  
2-Butanone  
Concen: 0.484 ppbv m  
RT: 5.35 min Scan# 750  
Delta R.T. 0.01 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

Tot Ion: 43 Resp: 55342  
Ion Ratio Lower Upper  
43 100  
72 24.0 18.8 28.2

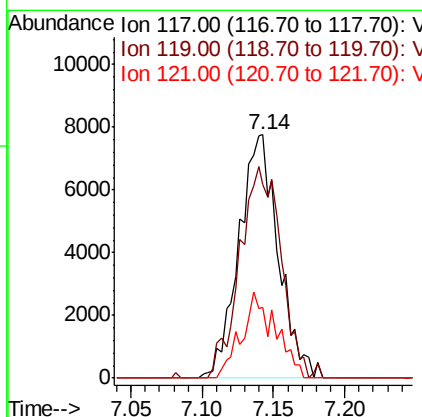
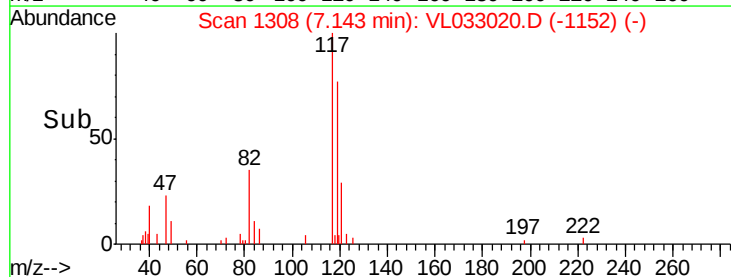
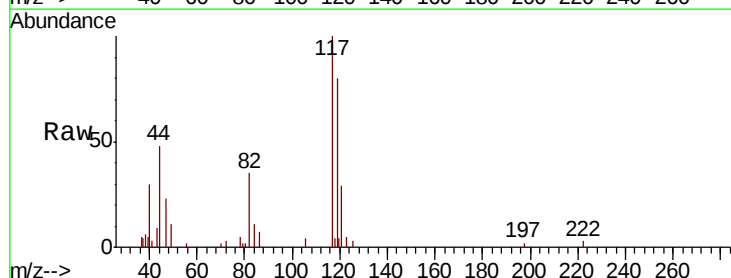
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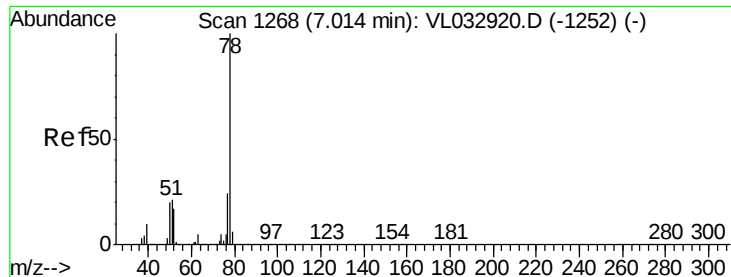
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#35  
Carbon Tetrachloride  
Concen: 0.072 ppbv m  
RT: 7.14 min Scan# 1308  
Delta R.T. 0.00 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Tgt Ion: 117 Resp: 14960  
Ion Ratio Lower Upper  
117 100  
119 79.8 76.5 114.7  
121 29.2 24.5 36.7





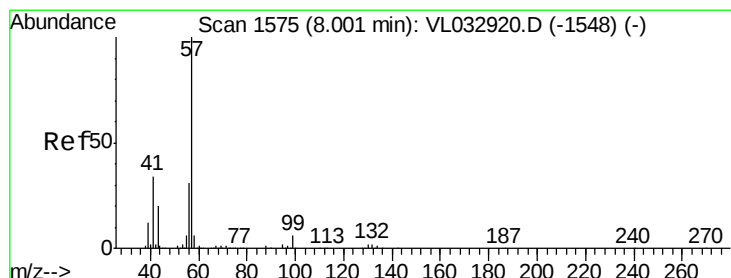
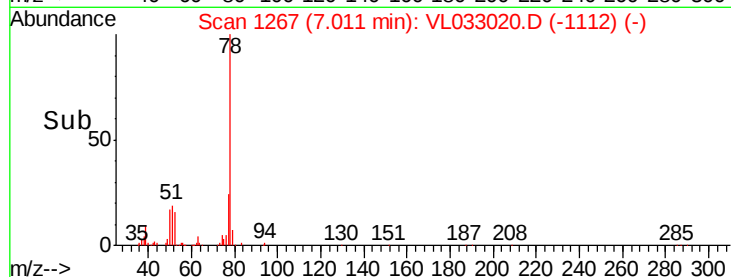
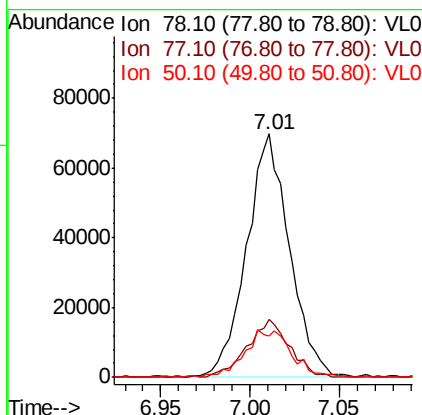
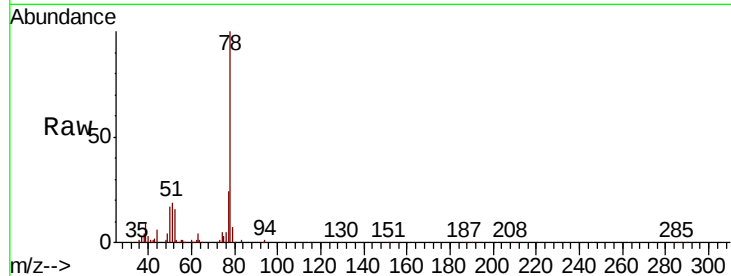
#36  
Benzene  
Concen: 0.608 ppbv  
RT: 7.01 min Scan# 1267  
Delta R.T. -0.00 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 78      | 100   |       |       |
| 77      | 23.8  | 18.9  | 28.3  |
| 50      | 16.6  | 16.1  | 24.1  |

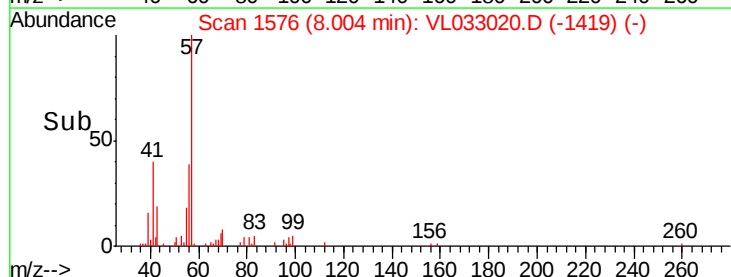
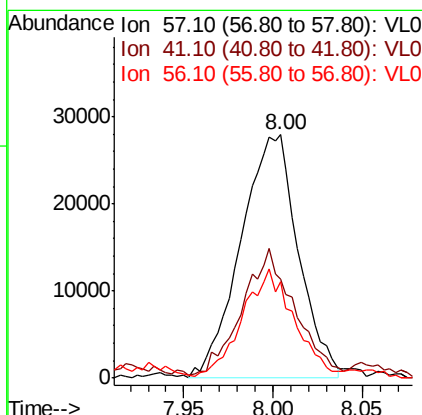
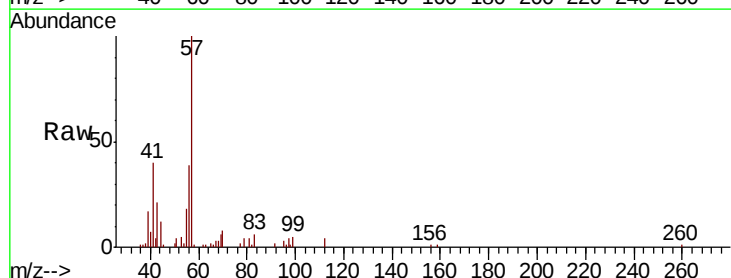
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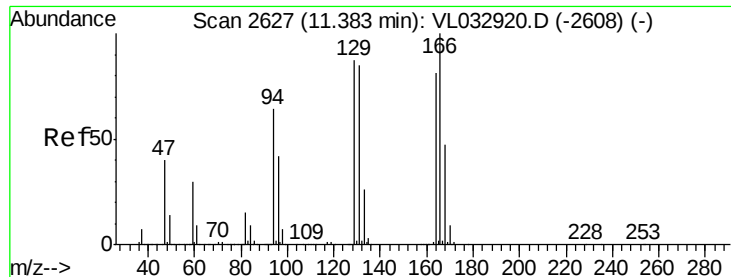
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#44  
2,2,4-Trimethylpentane  
Concen: 0.192 ppbv  
RT: 8.00 min Scan# 1576  
Delta R.T. 0.00 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 57      | 100   |       |       |
| 41      | 55.2  | 27.0  | 40.4# |
| 56      | 43.0  | 24.6  | 37.0# |





#52

Tetrachloroethene

Concen: 0.070 ppbv m

RT: 11.38 min Scan# 2627

Delta R.T. 0.00 min

Lab File: VL033020.D

Acq: 18 Dec 2018 7:04

Instrument :

MSVOA\_L

ClientSampleId :

YT-CBA-LTM5-03

Tot Ion:164 Resp: 4928

Ion Ratio Lower Upper

164 100

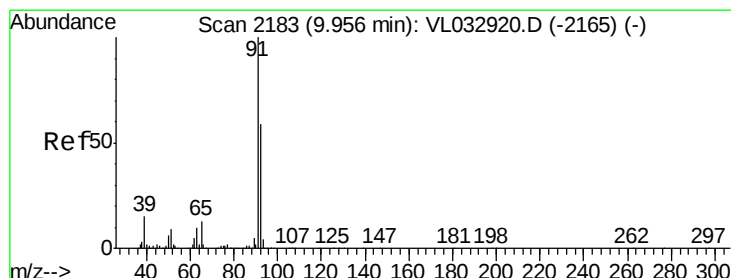
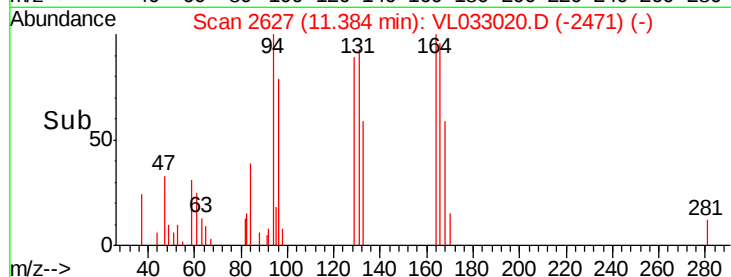
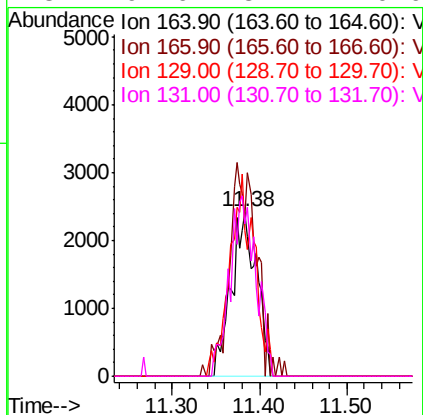
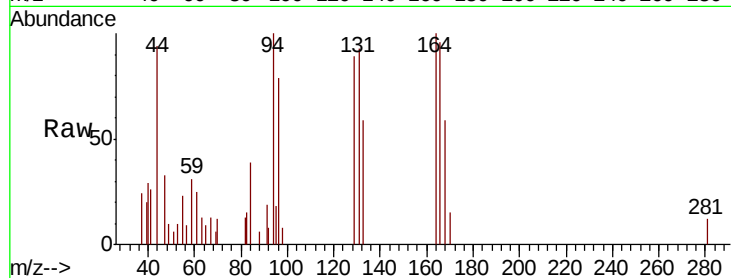
166 96.3 98.8 148.2#

129 89.0 85.5 128.3

131 92.6 84.4 126.6

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#53

Toluene

Concen: 70.731 ppbv

RT: 9.96 min Scan# 2184

Delta R.T. 0.00 min

Lab File: VL033020.D

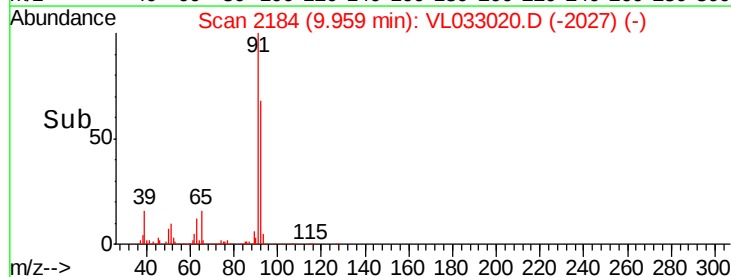
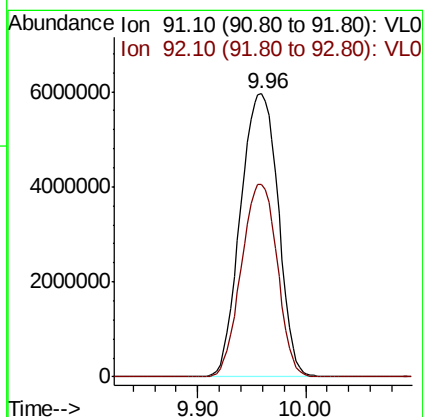
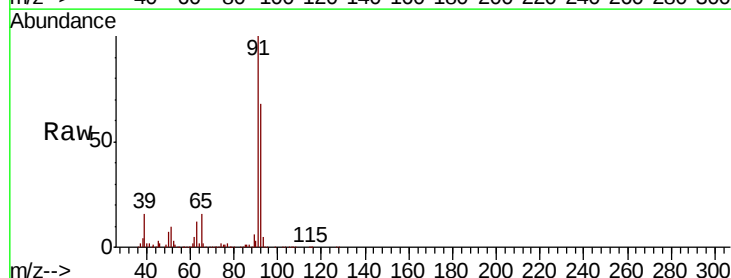
Acq: 18 Dec 2018 7:04

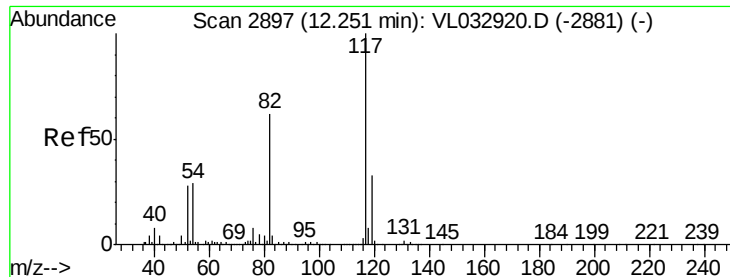
Tgt Ion: 91 Resp:14490629

Ion Ratio Lower Upper

91 100

92 65.0 47.4 71.0





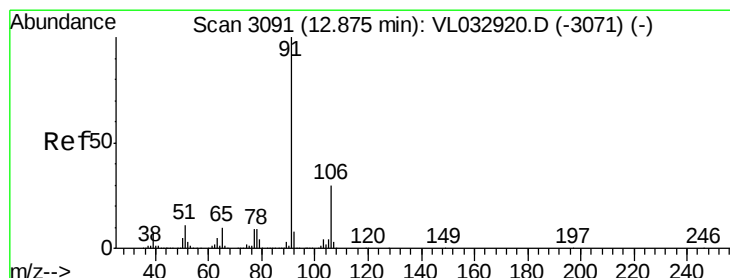
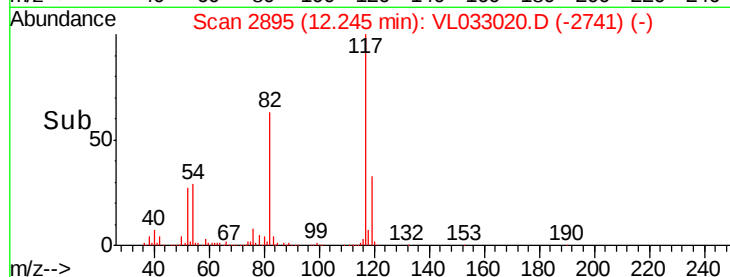
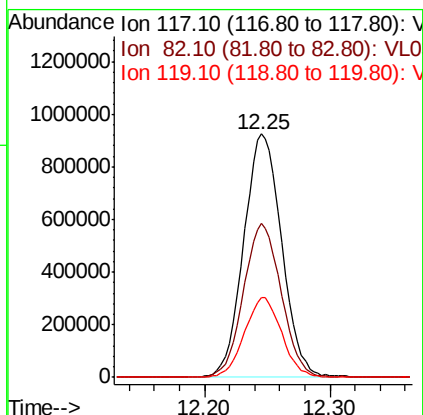
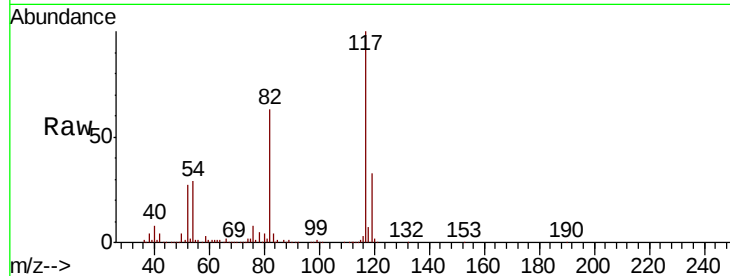
#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.25 min Scan# 2895  
Delta R.T. -0.01 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

| Tot Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 117     | 100   |       |       |
| 82      | 62.8  | 47.8  | 71.8  |
| 119     | 32.1  | 43.1  | 64.7# |

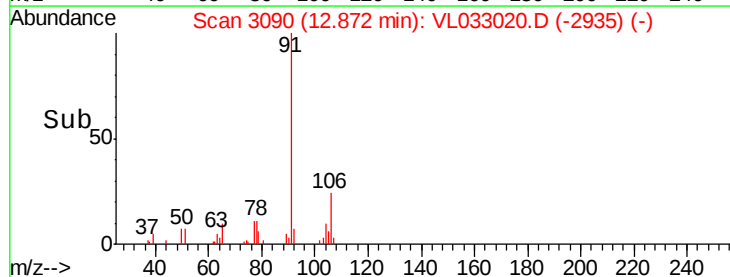
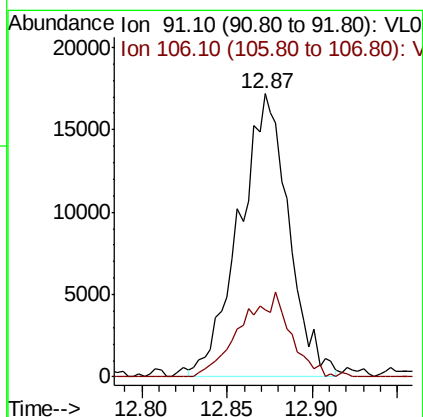
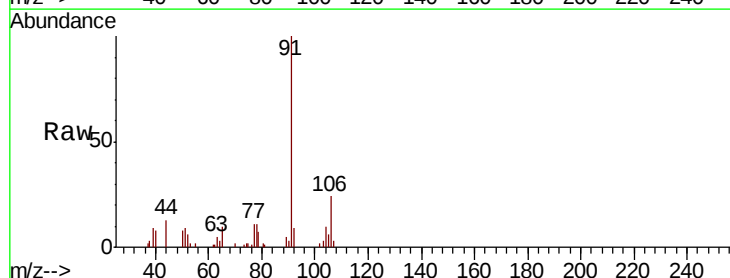
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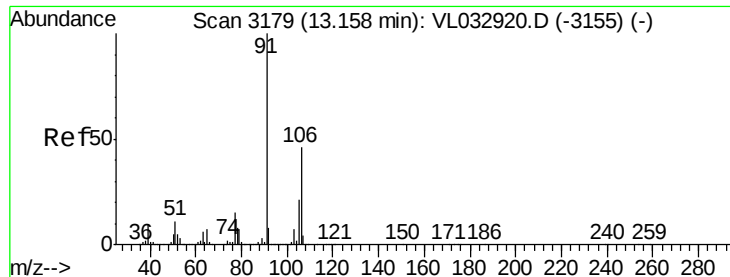
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#58  
Ethyl Benzene  
Concen: 0.167 ppbv m  
RT: 12.87 min Scan# 3090  
Delta R.T. -0.00 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 91      | 100   |       |       |
| 106     | 23.8  | 23.9  | 35.9# |





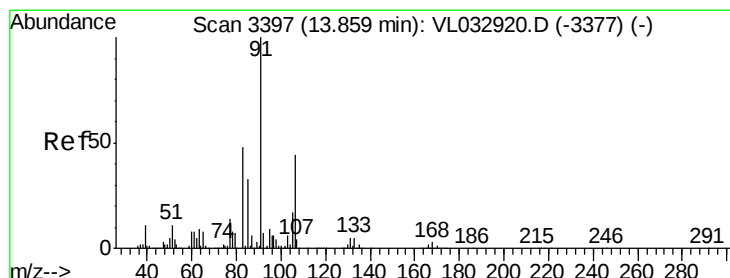
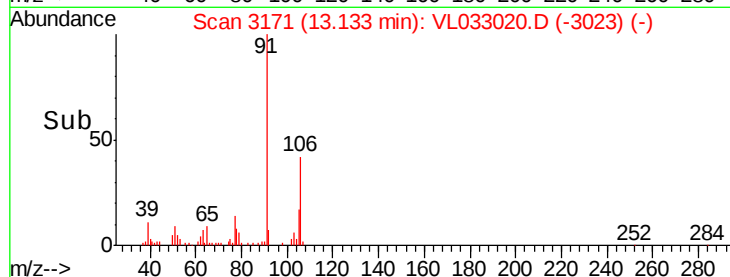
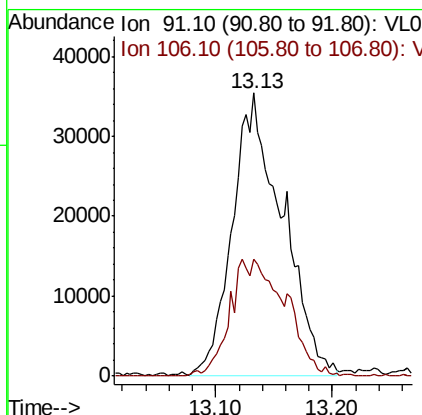
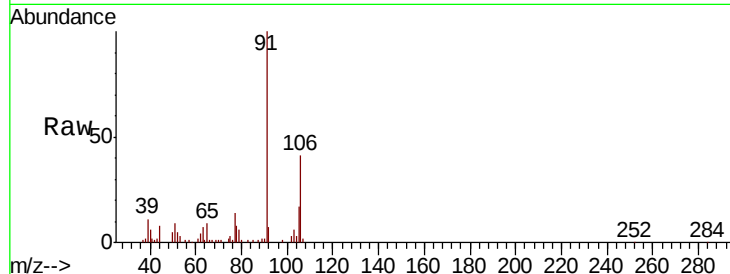
#59  
m/p-Xylene  
Concen: 0.558 ppbv m  
RT: 13.13 min Scan# 3171  
Delta R.T. -0.03 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

Instrument :  
MSVOA\_L  
ClientSampleId :  
YT-CBA-LTM5-03

| Tot Ion | Ion | Ratio | Lower | Upper |
|---------|-----|-------|-------|-------|
| 91      | 100 |       |       |       |
| 106     | 0.0 | 0.0   | 0.0   |       |

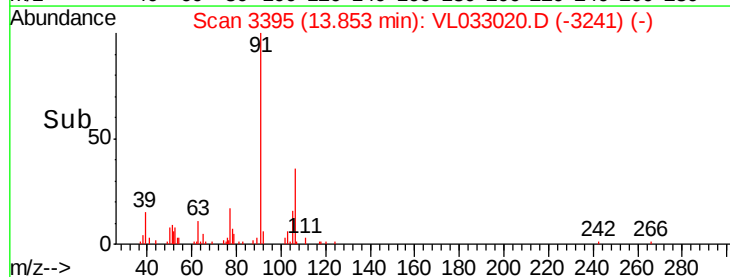
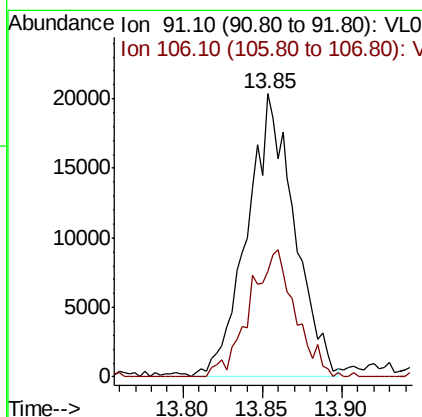
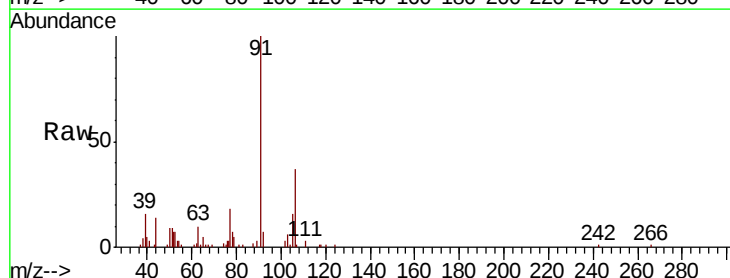
Manual Integrations  
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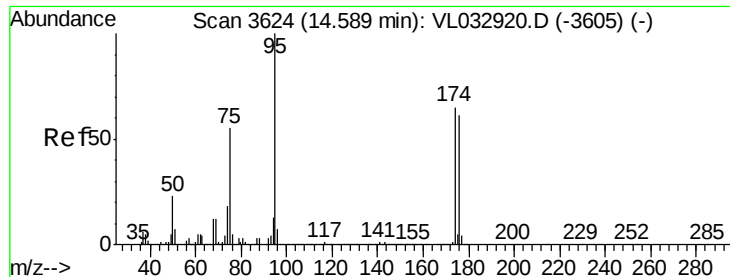
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#60  
o-Xylene  
Concen: 0.225 ppbv m  
RT: 13.85 min Scan# 3395  
Delta R.T. -0.01 min  
Lab File: VL033020.D  
Acq: 18 Dec 2018 7:04

| Tgt Ion | Ion  | Ratio | Lower | Upper |
|---------|------|-------|-------|-------|
| 91      | 100  |       |       |       |
| 106     | 43.4 | 21.9  | 65.8  |       |





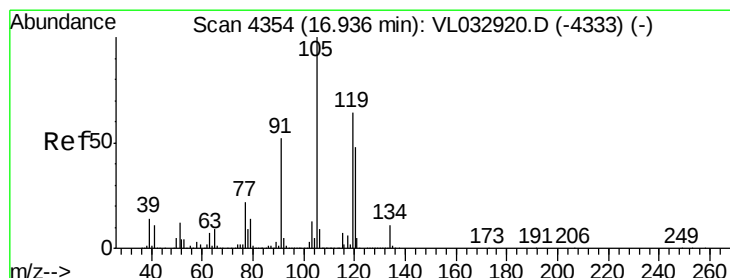
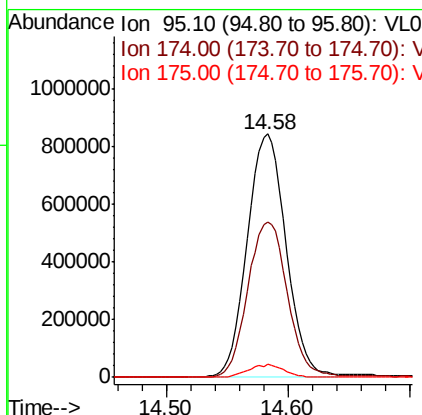
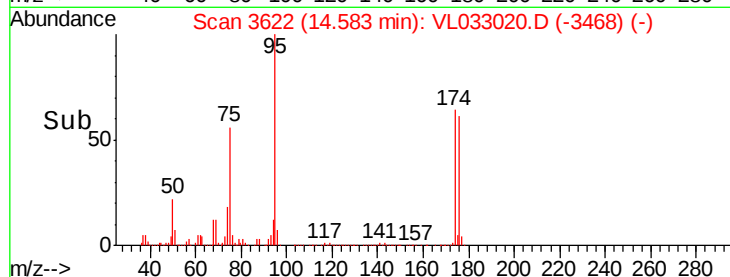
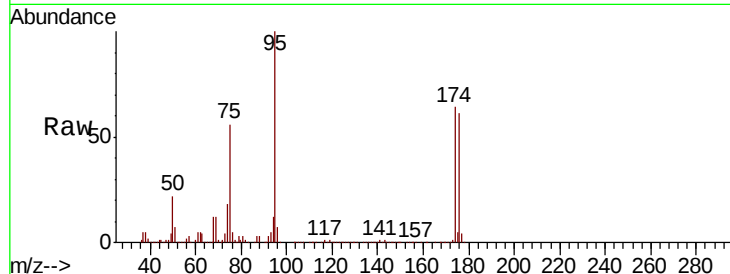
#68  
 1-Bromo-4-Fluorobenzene  
 Concen: 12.879 ppbv  
 RT: 14.58 min Scan# 3622  
 Delta R.T. -0.01 min  
 Lab File: VL033020.D  
 Acq: 18 Dec 2018 7:04

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 YT-CBA-LTM5-03

Tot Ion: 95 Resp: 1857276  
 Ion Ratio Lower Upper  
 95 100  
 174 66.3 51.4 77.0  
 175 4.9 3.8 5.6

Manual Integrations  
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#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.326 ppbv  
 RT: 16.94 min Scan# 4354  
 Delta R.T. 0.00 min  
 Lab File: VL033020.D  
 Acq: 18 Dec 2018 7:04

Tgt Ion: 105 Resp: 76413  
 Ion Ratio Lower Upper  
 105 100  
 120 34.2 38.6 58.0#  
 91 13.4 41.7 62.5#  
 77 21.6 17.4 26.2

