

Data File : VL034838.D  
Acq On : 7 Mar 2020 9:45  
Operator : SY/AP  
Sample : VIBLK  
Misc : 400ml/MSVOA\_L  
ALS Vial : 1 Sample Multiplier: 1

Instrument :  
MSVOA\_L  
ClientSampleId :  
VIBLK

Quant Time: Mar 07 13:02:06 2020  
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA\_L\METHODS\VL030420AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_LWed Mar 04 06:36:39 2020  
QLast Update : Wed Mar 04 06:36:39 2020  
Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.65  | 49   | 862562   | 10.00 | ppbv  | -0.03    |
| 33) 1,4-Difluorobenzene | 7.17  | 114  | 1955718  | 10.00 | ppbv  | -0.04    |
| 55) Chlorobenzene-d5    | 12.10 | 117  | 1932569  | 10.00 | ppbv  | -0.04    |

System Monitoring Compounds

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| 68) 1-Bromo-4-Fluorobenzene | 14.45  | 95    | 1520463  | 9.44     | ppbv | -0.04  |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 94.40% |

| Target Compounds             | R.T. | QIon | Response | Conc  | Units  | Qvalue |
|------------------------------|------|------|----------|-------|--------|--------|
| 2) Dichlorodifluoromethane   | 3.01 | 85   | 6095     | 0.043 | ppbv   | 93     |
| 3) Chlorodifluoromethane     | 2.94 | 51   | 4584     | 0.047 | ppbv   | 96     |
| 4) Chloromethane             | 3.10 | 50   | 1977     | 0.037 | ppbv   | 96     |
| 5) Vinyl Chloride            | 3.21 | 62   | 2069     | 0.037 | ppbv # | 87     |
| 6) Bromomethane              | 3.44 | 94   | 1364     | 0.045 | ppbv   | 82     |
| 8) Dichlorotetrafluoroethane | 3.15 | 85   | 4609     | 0.038 | ppbv # | 73     |
| 9) Propene                   | 2.97 | 41   | 5237     | 0.135 | ppbv # | 81     |
| 10) Heptane                  | 8.12 | 43   | 3100     | 0.032 | ppbv # | 27     |
| 13) Ethanol                  | 3.60 | 45   | 1233     | 0.093 | ppbv   | 98     |
| 15) Acetone                  | 3.84 | 43   | 18115    | 0.175 | ppbv # | 74     |
| 16) 1,3-Butadiene            | 3.29 | 39   | 2366     | 0.051 | ppbv # | 9      |
| 19) Isopropyl Alcohol        | 3.97 | 45   | 3830     | 0.062 | ppbv # | 93     |
| 20) Methylene Chloride       | 4.32 | 84   | 2873     | 0.078 | ppbv   | 89     |
| 24) 1,1-Dichloroethane       | 4.99 | 63   | 4883     | 0.045 | ppbv # | 88     |
| 26) Hexane                   | 5.66 | 57   | 3470     | 0.045 | ppbv # | 1      |
| 31) cis-1,2-Dichloroethene   | 5.54 | 61   | 24749    | 0.309 | ppbv # | 95     |
| 39) 1,2-Dichloropropane      | 7.17 | 63   | 502510   | 7.451 | ppbv # | 24     |
| 44) 2,2,4-Trimethylpentane   | 7.86 | 57   | 9164     | 0.031 | ppbv # | 49     |

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

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VIBLK

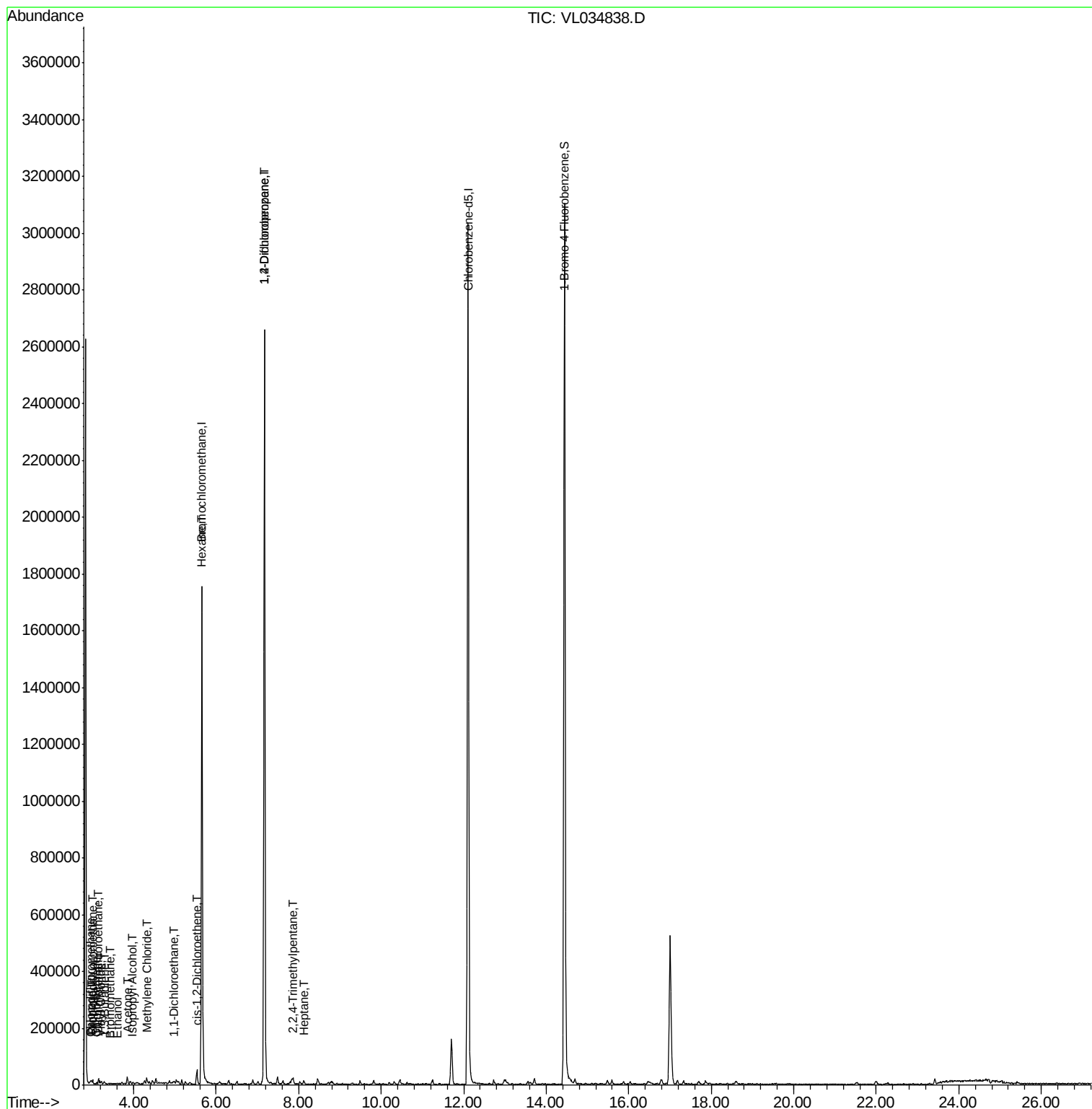
Quant Time: Mar 07 13:02:06 2020

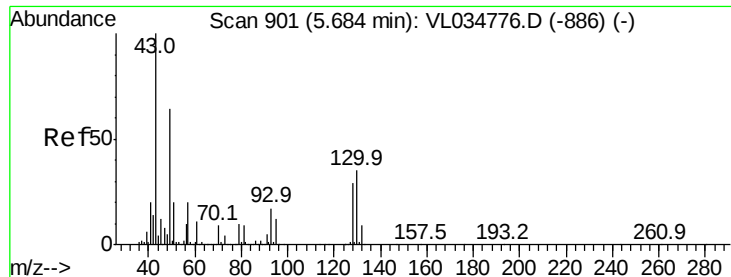
Quant Method : Z:\V0ASRV\HPCHEM1\MSV0A\_L\METHODS\VL030420AIR.M

Quant Title : AIR ANALYSIS BY METHOD T0-15 Instrument: MSVOA\_LWed Mar 04 06:36:39 2020

QLast Update : Wed Mar 04 06:36:39 2020

Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.65 min Scan# 891

Delta R.T. -0.03 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

VIBLK

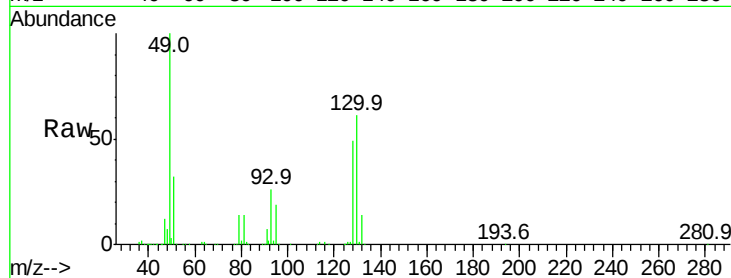
Tgt Ion: 49 Resp: 862562

Ion Ratio Lower Upper

49 100

128 47.3 21.6 64.6

130 60.4 27.4 82.2



Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): VL0

Ion 130.00 (129.70 to 130.70): VL0

5.65

600000

500000

400000

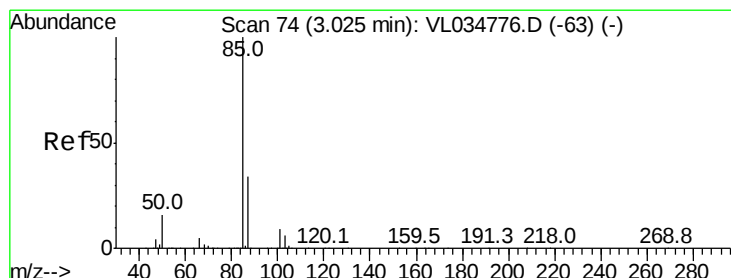
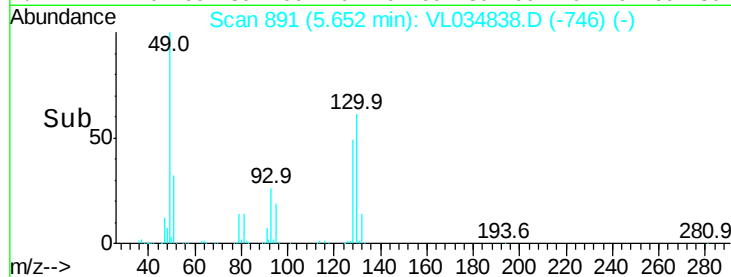
300000

200000

100000

0

Time-->



#2

Dichlorodifluoromethane

Concen: 0.043 ppbv

RT: 3.01 min Scan# 69

Delta R.T. -0.02 min

Lab File: VL034838.D

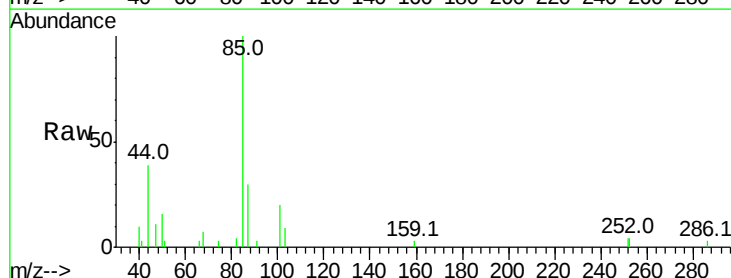
Acq: 7 Mar 2020 9:45

Tgt Ion: 85 Resp: 6095

Ion Ratio Lower Upper

85 100

87 29.8 27.2 40.8



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

3.01

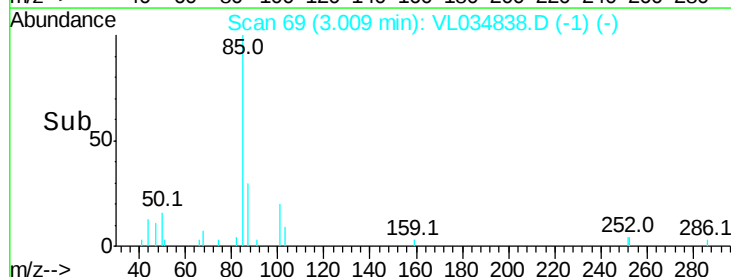
6000

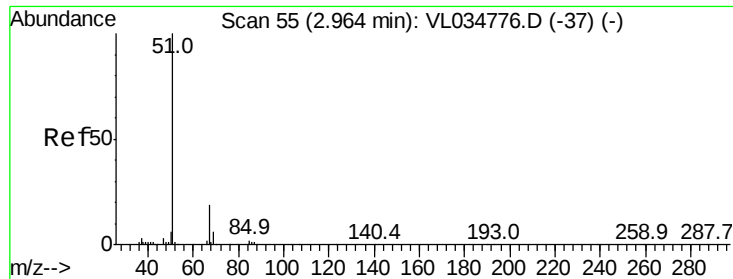
4000

2000

0

Time-->





#3

Chlorodifluoromethane

Concen: 0.047 ppbv

RT: 2.94 min Scan# 49

Delta R.T. -0.02 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

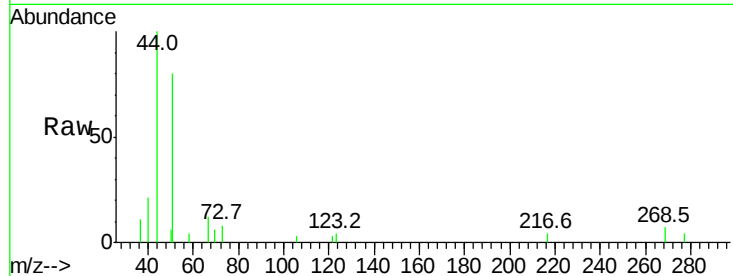
VIBLK

Tgt Ion: 51 Resp: 4584

Ion Ratio Lower Upper

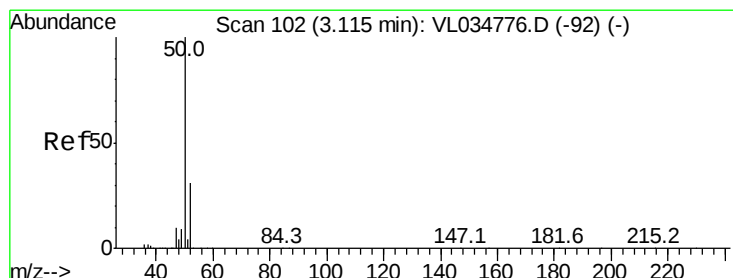
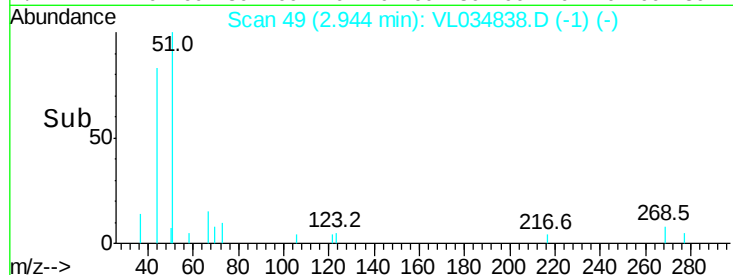
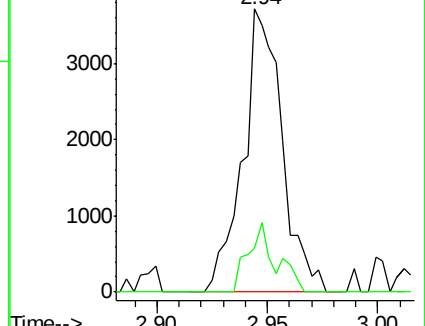
51 100

67 17.2 15.3 22.9



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.037 ppbv

RT: 3.10 min Scan# 98

Delta R.T. -0.01 min

Lab File: VL034838.D

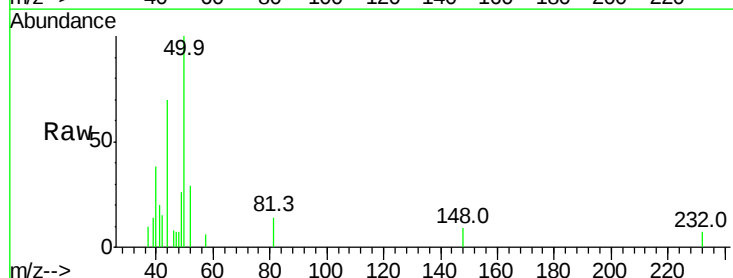
Acq: 7 Mar 2020 9:45

Tgt Ion: 50 Resp: 1977

Ion Ratio Lower Upper

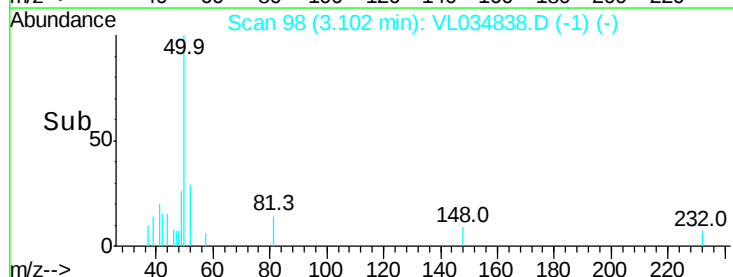
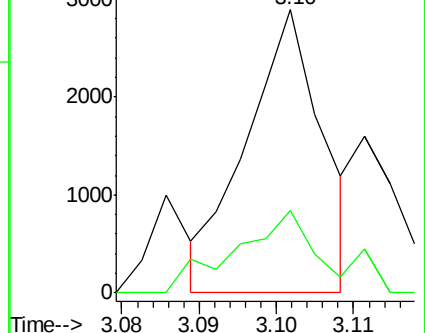
50 100

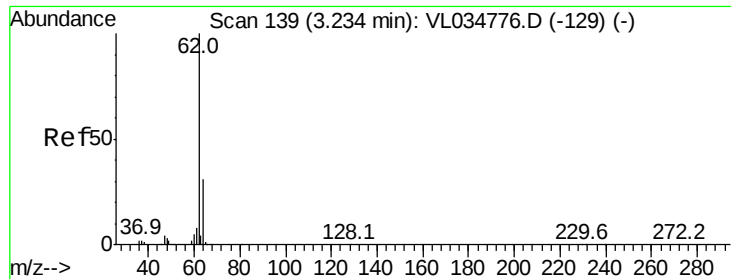
52 28.9 25.0 37.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#5

Vinyl Chloride

Concen: 0.037 ppbv

RT: 3.21 min Scan# 132

Delta R.T. -0.02 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampled :

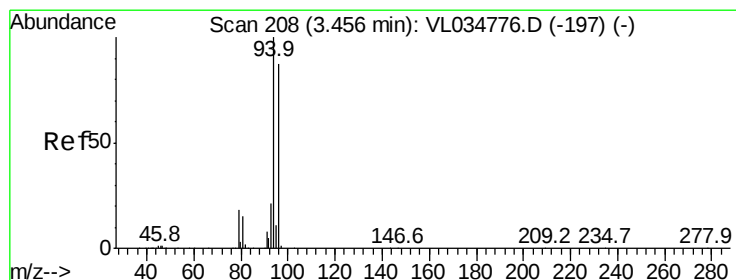
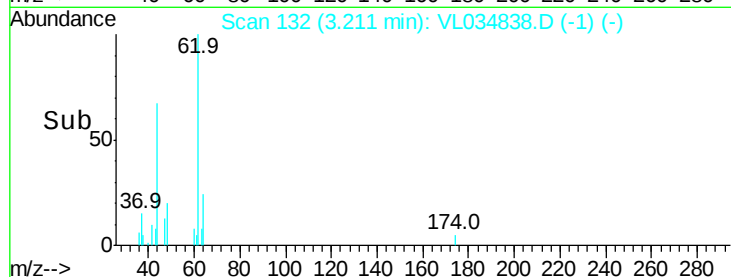
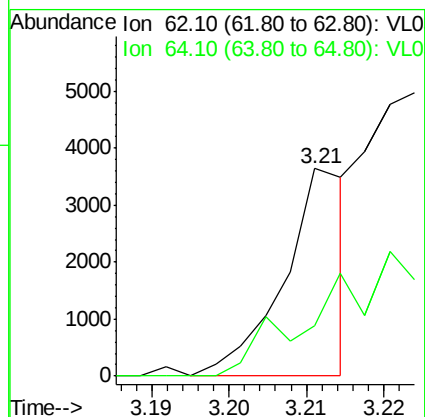
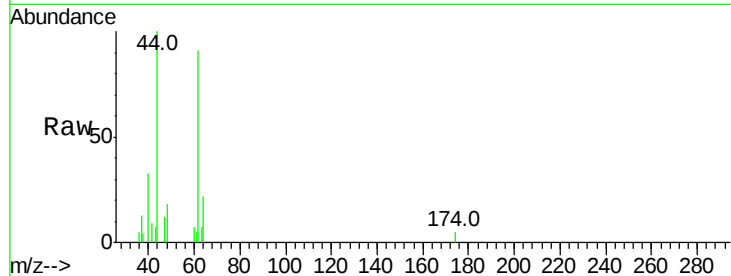
VIBLK

Tgt Ion: 62 Resp: 2069

Ion Ratio Lower Upper

62 100

64 24.0 25.1 37.7#



#6

Bromomethane

Concen: 0.045 ppbv

RT: 3.44 min Scan# 202

Delta R.T. -0.02 min

Lab File: VL034838.D

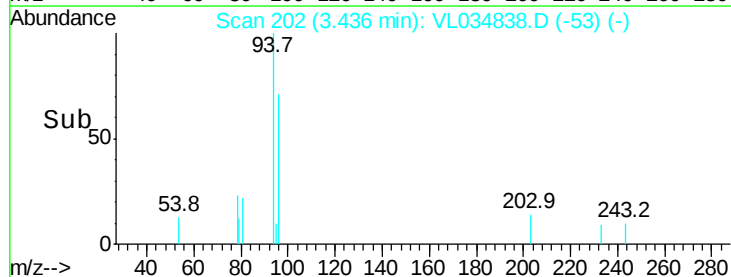
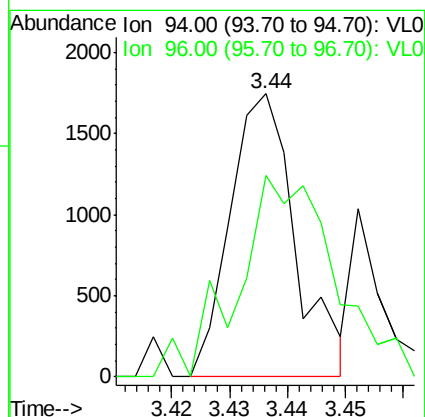
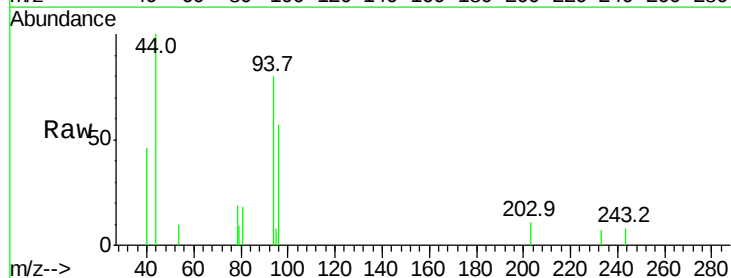
Acq: 7 Mar 2020 9:45

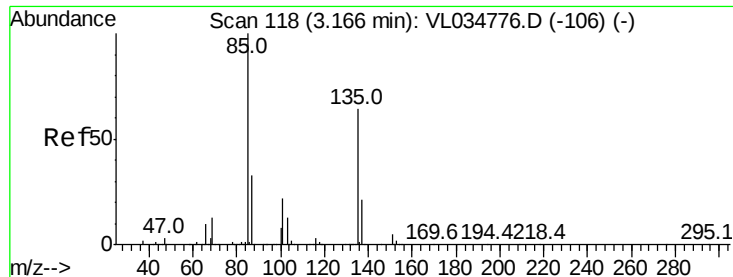
Tgt Ion: 94 Resp: 1364

Ion Ratio Lower Upper

94 100

96 71.1 70.0 105.0





#8

Dichlorotetrafluoroethane

Concen: 0.038 ppbv

RT: 3.15 min Scan# 112

Delta R.T. -0.02 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

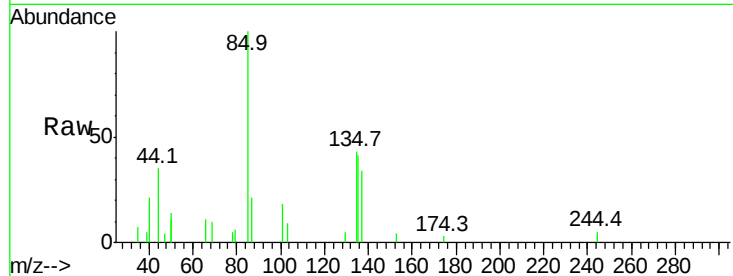
VIBLK

Tgt Ion: 85 Resp: 4609

Ion Ratio Lower Upper

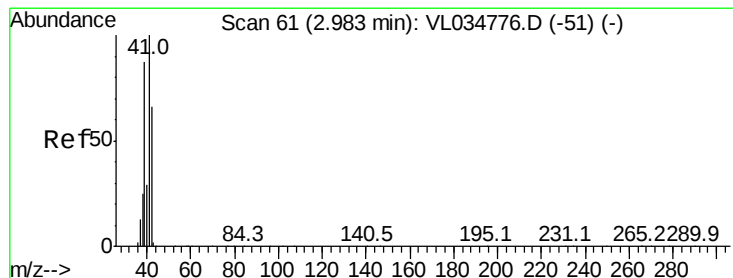
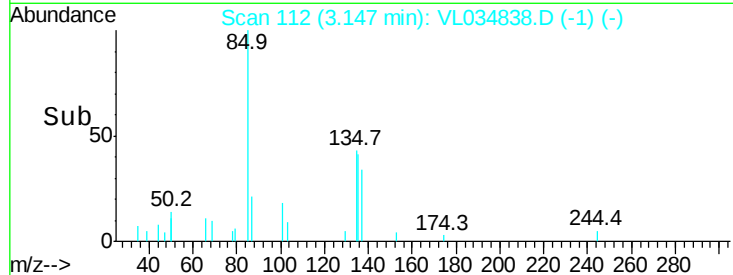
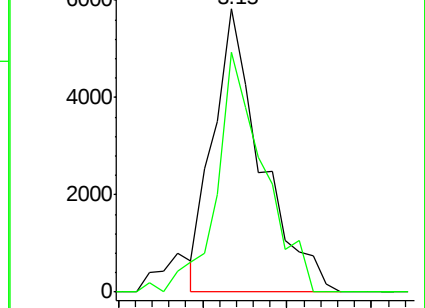
85 100

135 82.4 49.4 74.2#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 135.00 (134.70 to 135.70): V



#9

Propene

Concen: 0.135 ppbv

RT: 2.97 min Scan# 57

Delta R.T. -0.01 min

Lab File: VL034838.D

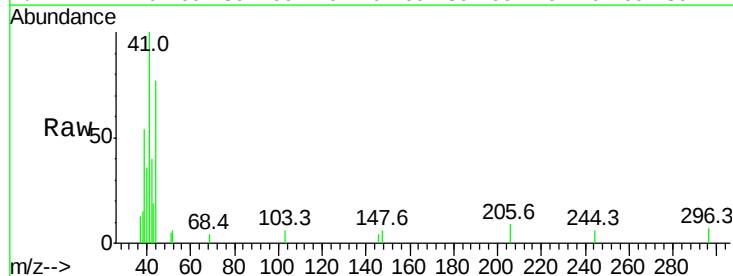
Acq: 7 Mar 2020 9:45

Tgt Ion: 41 Resp: 5237

Ion Ratio Lower Upper

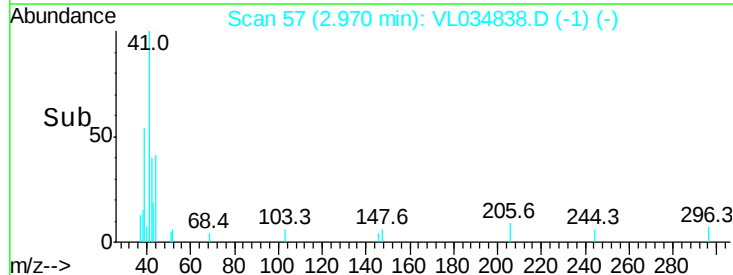
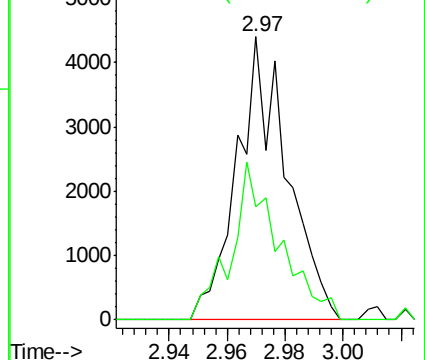
41 100

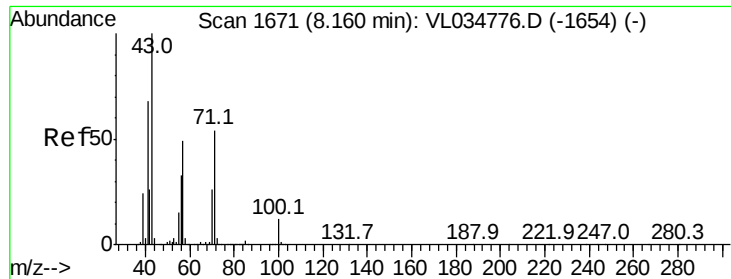
42 53.8 55.6 83.4#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.032 ppbv

RT: 8.12 min Scan# 1659

Delta R.T. -0.04 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampled :

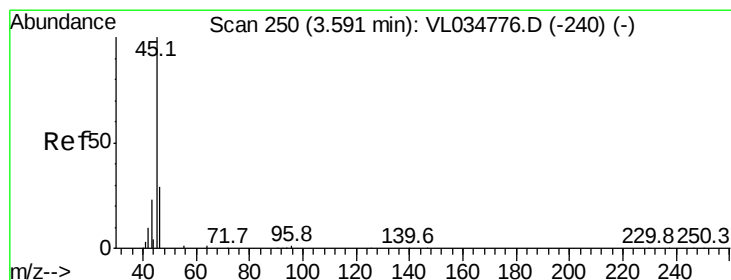
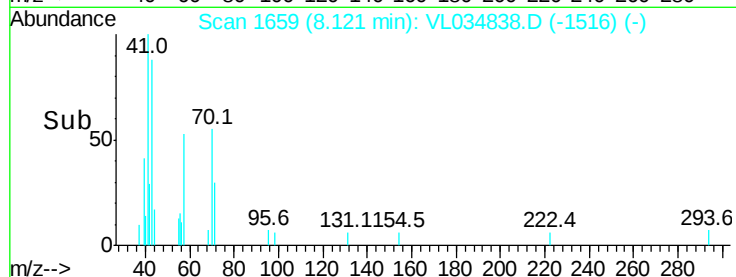
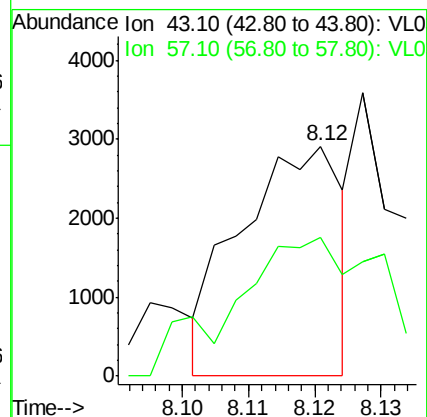
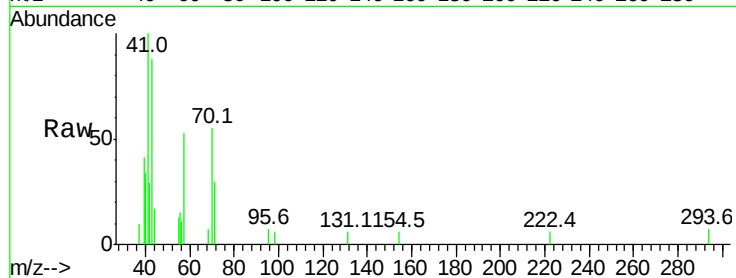
VIBLK

Tgt Ion: 43 Resp: 3100

Ion Ratio Lower Upper

43 100

57 0.0 40.5 60.7#



#13

Ethanol

Concen: 0.093 ppbv

RT: 3.60 min Scan# 252

Delta R.T. 0.01 min

Lab File: VL034838.D

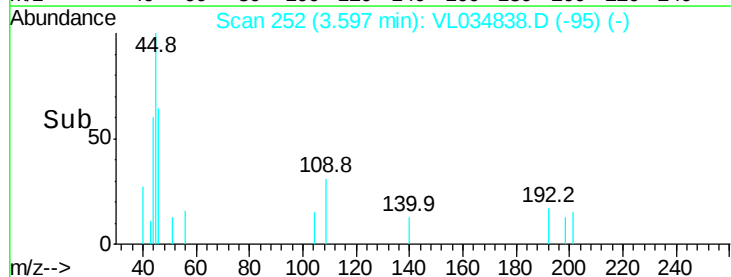
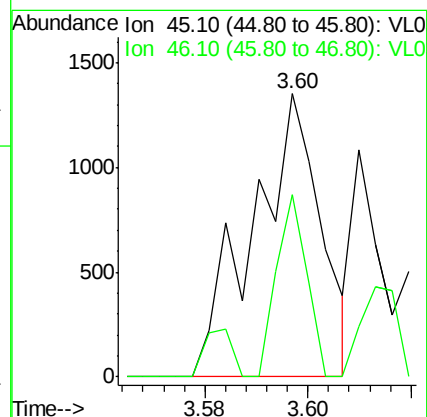
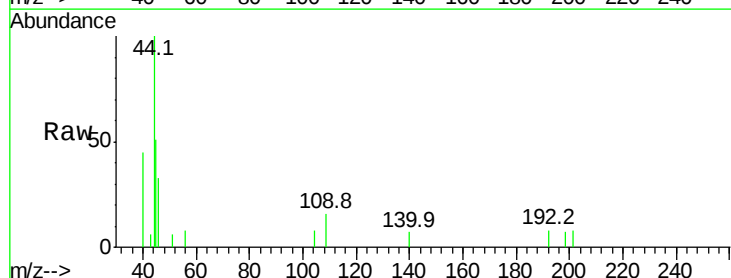
Acq: 7 Mar 2020 9:45

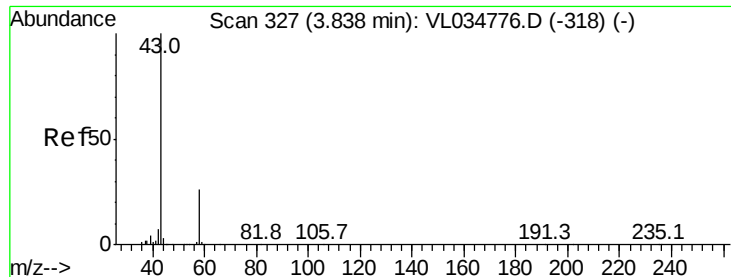
Tgt Ion: 45 Resp: 1233

Ion Ratio Lower Upper

45 100

46 35.4 14.7 58.9





#15

Acetone

Concen: 0.175 ppbv

RT: 3.84 min Scan# 329

Delta R.T. 0.01 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

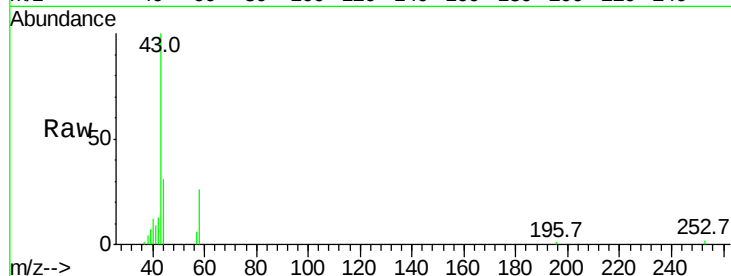
VIBLK

Tgt Ion: 43 Resp: 18115

Ion Ratio Lower Upper

43 100

58 39.4 21.0 31.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.84

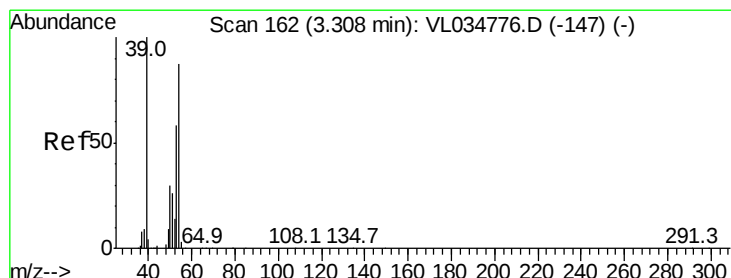
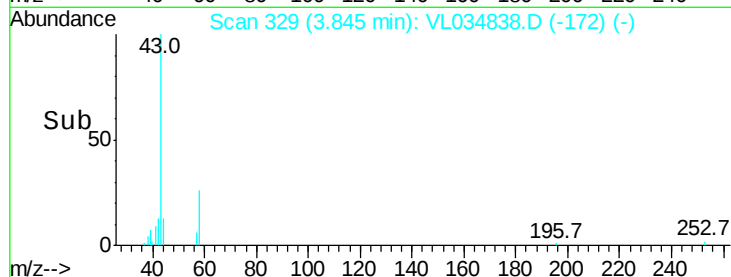
15000

10000

5000

0

Time--> 3.80 3.82 3.84 3.86 3.88



#16

1,3-Butadiene

Concen: 0.051 ppbv

RT: 3.29 min Scan# 158

Delta R.T. -0.01 min

Lab File: VL034838.D

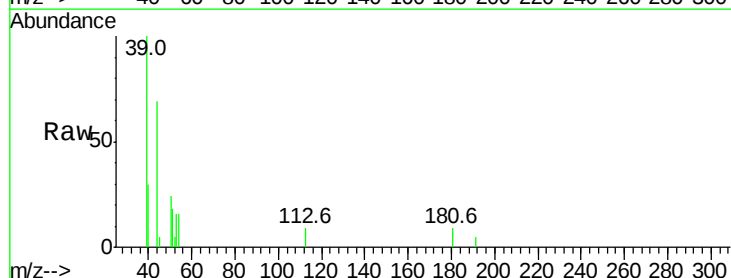
Acq: 7 Mar 2020 9:45

Tgt Ion: 39 Resp: 2366

Ion Ratio Lower Upper

39 100

54 0.0 64.2 96.2#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0

3.29

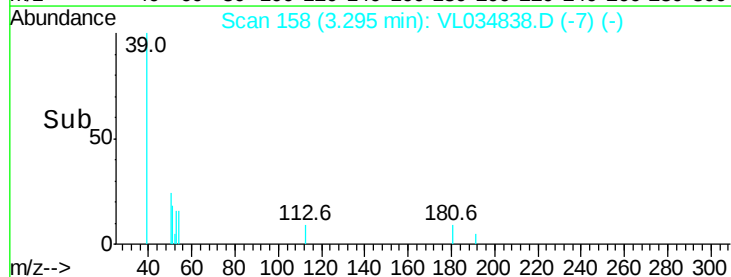
3000

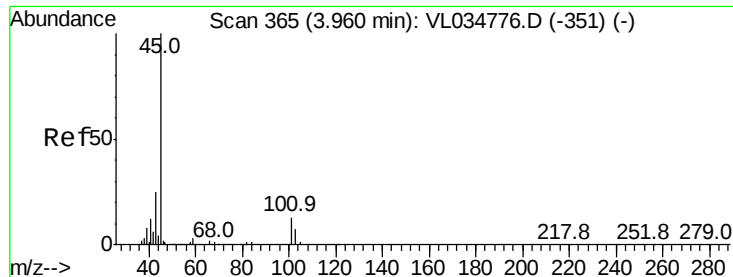
2000

1000

0

Time--> 3.27 3.28 3.29 3.30





#19

Isopropyl Alcohol

Concen: 0.062 ppbv

RT: 3.97 min Scan# 369

Delta R.T. 0.01 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

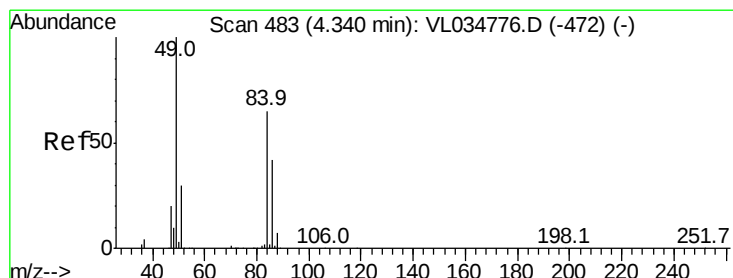
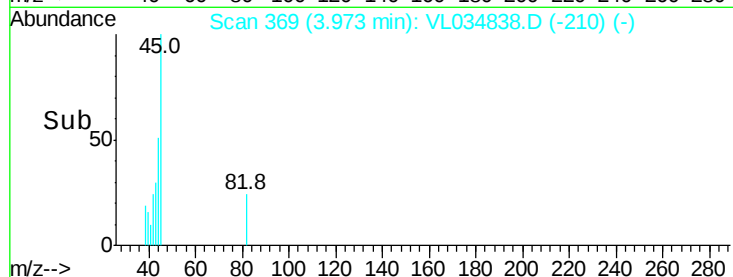
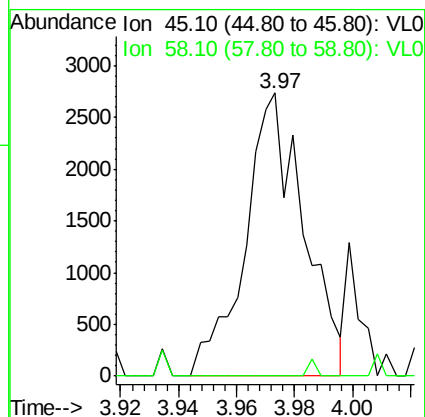
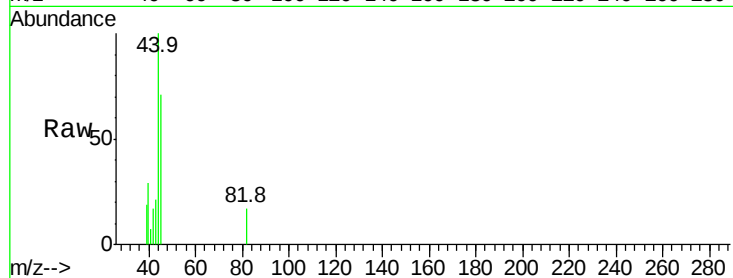
VIBLK

Tgt Ion: 45 Resp: 3830

Ion Ratio Lower Upper

45 100

58 0.0 1.8 2.8#



#20

Methylene Chloride

Concen: 0.078 ppbv

RT: 4.32 min Scan# 477

Delta R.T. -0.02 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Tgt Ion: 84 Resp: 2873

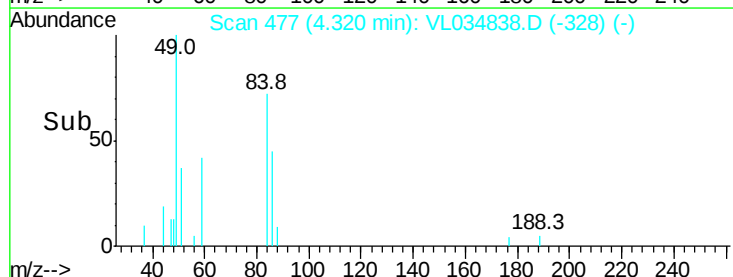
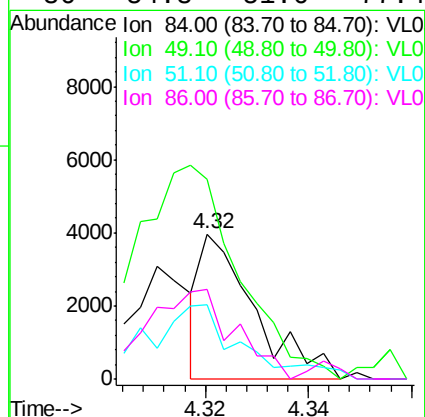
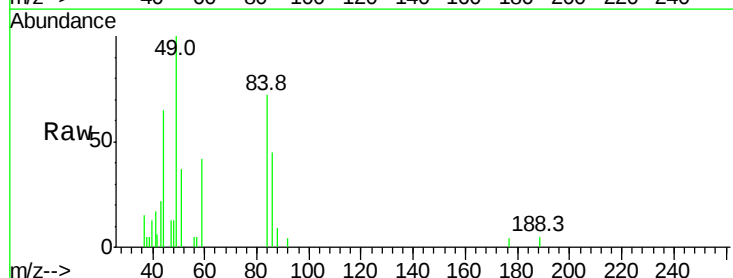
Ion Ratio Lower Upper

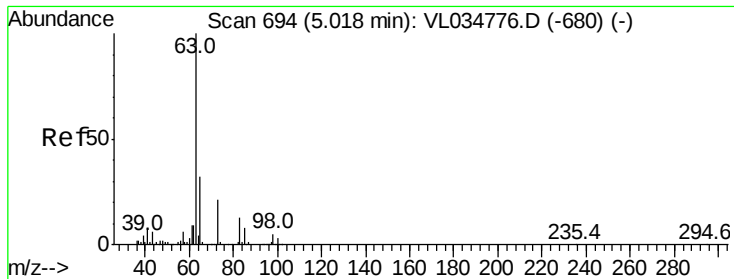
84 100

49 138.0 123.2 184.8

51 44.5 37.4 56.2

86 54.8 51.6 77.4





#24

1,1-Dichloroethane

Concen: 0.045 ppbv

RT: 4.99 min Scan# 684

Delta R.T. -0.03 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

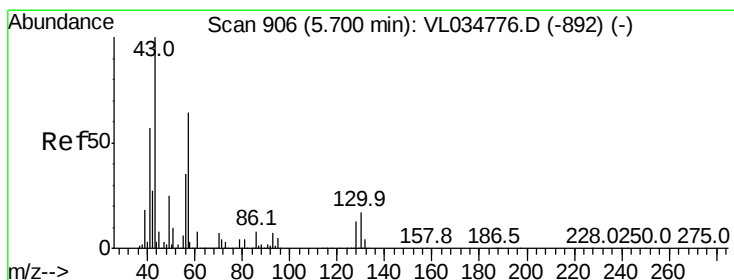
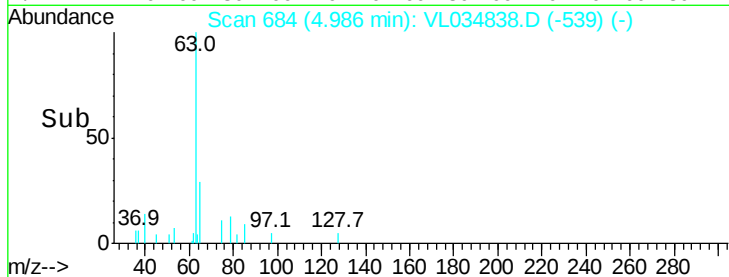
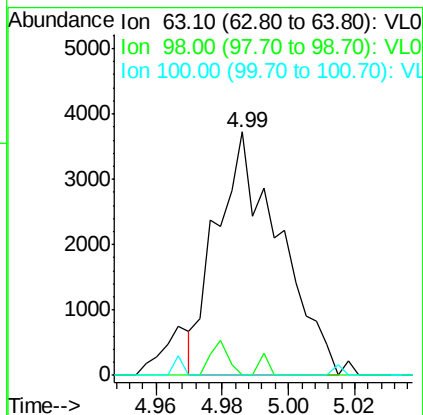
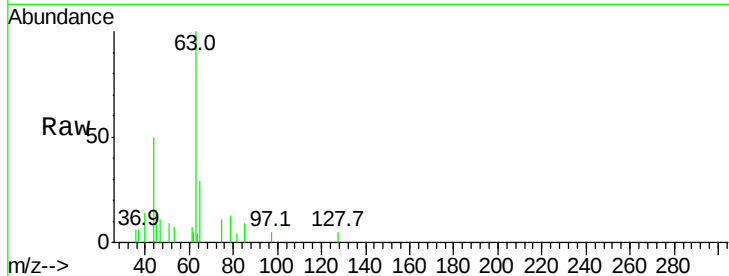
Instrument :

MSVOA\_L

ClientSampleId :

VIBLK

|          |       |       |       |
|----------|-------|-------|-------|
| Tgt Ion: | 63    | Resp: | 4883  |
| Ion      | Ratio | Lower | Upper |
| 63       | 100   |       |       |
| 98       | 0.0   | 2.3   | 6.8#  |
| 100      | 0.0   | 1.5   | 4.4#  |



#26

Hexane

Concen: 0.045 ppbv

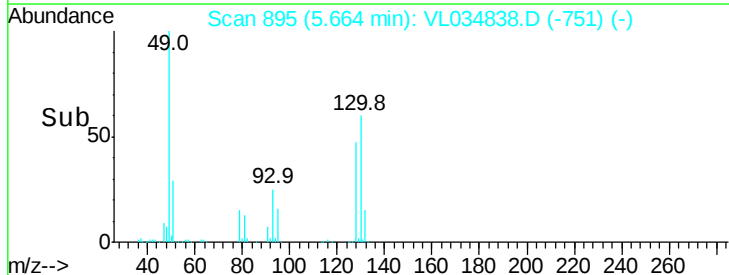
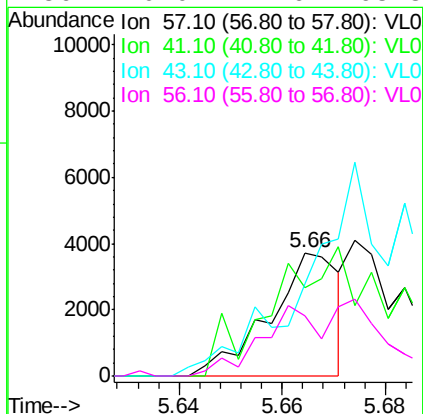
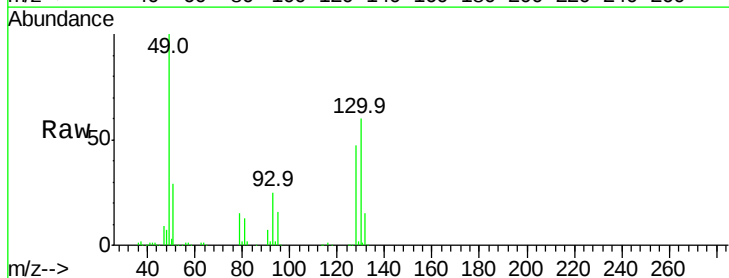
RT: 5.66 min Scan# 895

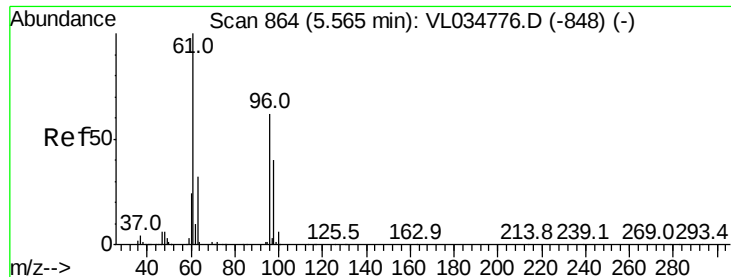
Delta R.T. -0.04 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

|          |       |       |        |
|----------|-------|-------|--------|
| Tgt Ion: | 57    | Resp: | 3470   |
| Ion      | Ratio | Lower | Upper  |
| 57       | 100   |       |        |
| 41       | 0.0   | 72.0  | 108.0# |
| 43       | 0.0   | 179.1 | 268.7# |
| 56       | 0.0   | 42.6  | 63.8#  |



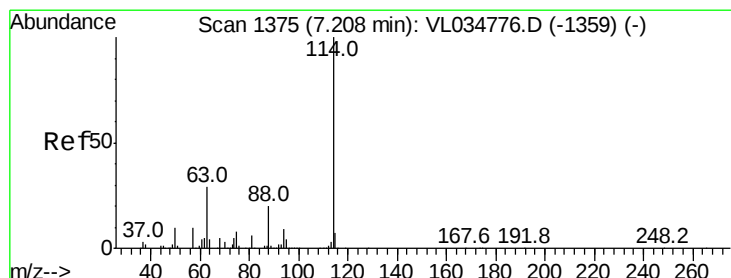
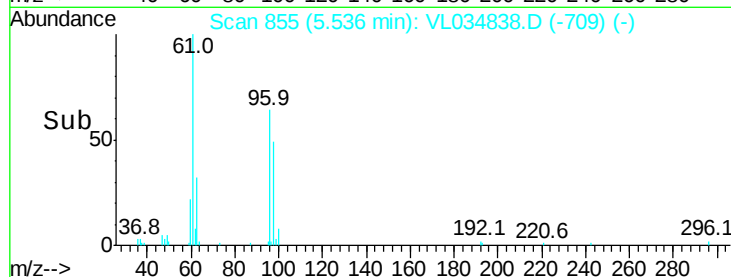
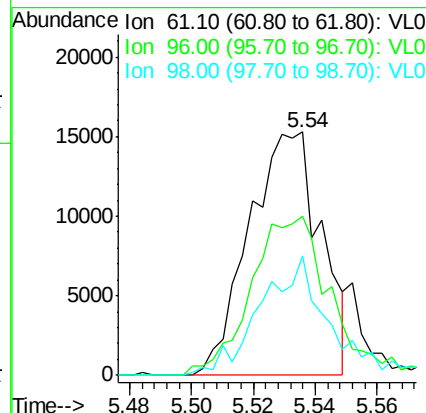
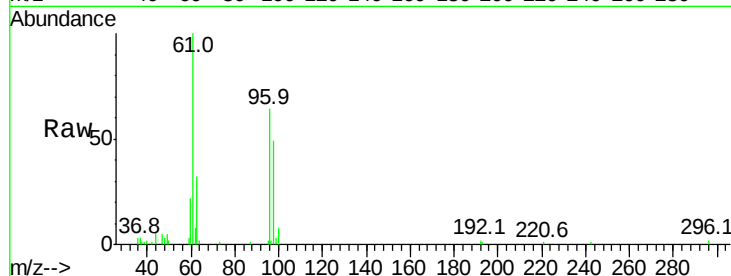


#31

cis-1,2-Dichloroethene  
 Concen: 0.309 ppbv  
 RT: 5.54 min Scan# 855  
 Delta R.T. -0.03 min  
 Lab File: VL034838.D  
 Acq: 7 Mar 2020 9:45

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 VIBLK

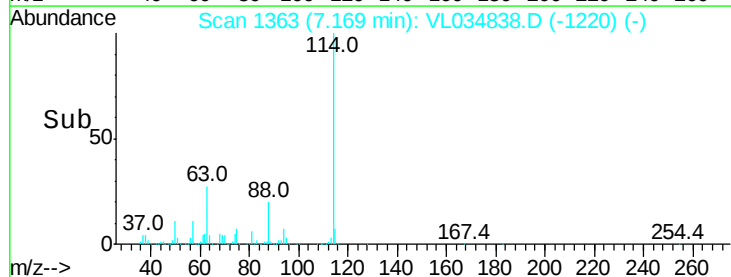
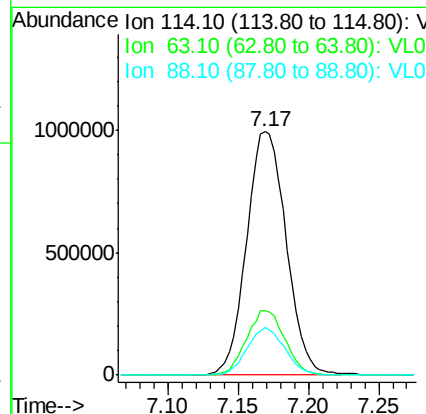
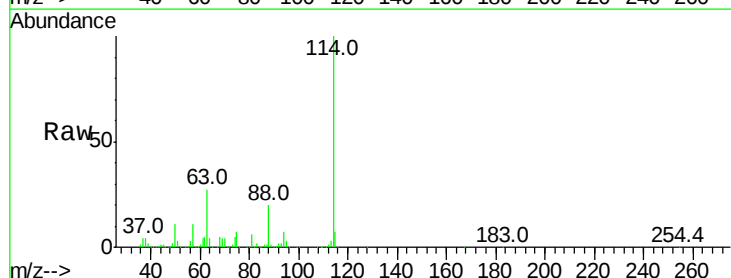
Tgt Ion: 61 Resp: 24749  
 Ion Ratio Lower Upper  
 61 100  
 96 62.0 49.7 74.5  
 98 48.1 31.9 47.9#

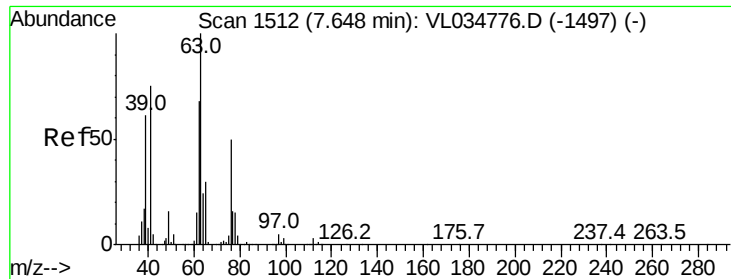


#33

1,4-Difluorobenzene  
 Concen: 10.000 ppbv  
 RT: 7.17 min Scan# 1363  
 Delta R.T. -0.04 min  
 Lab File: VL034838.D  
 Acq: 7 Mar 2020 9:45

Tgt Ion: 114 Resp: 1955718  
 Ion Ratio Lower Upper  
 114 100  
 63 25.9 23.6 35.4  
 88 18.7 15.8 23.8





#39

1,2-Dichloropropane

Concen: 7.451 ppbv

RT: 7.17 min Scan# 1363

Delta R.T. -0.48 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

Instrument :

MSVOA\_L

ClientSampleId :

VIBLK

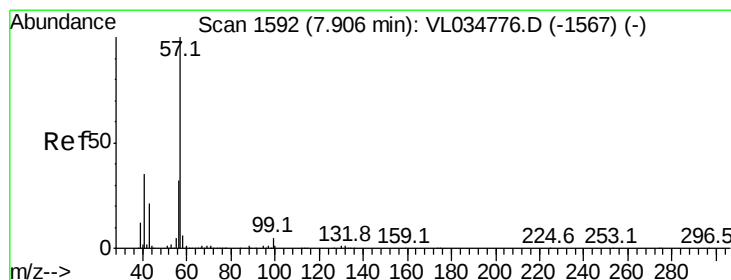
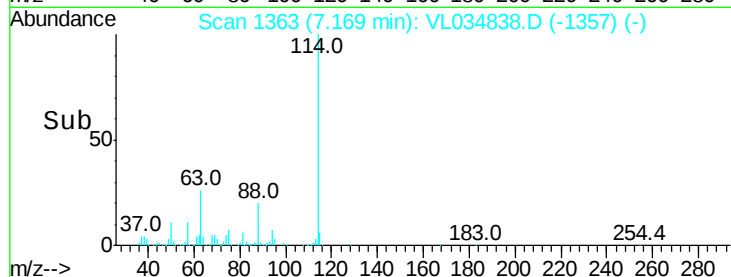
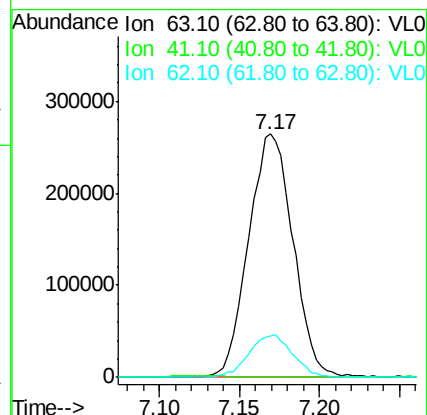
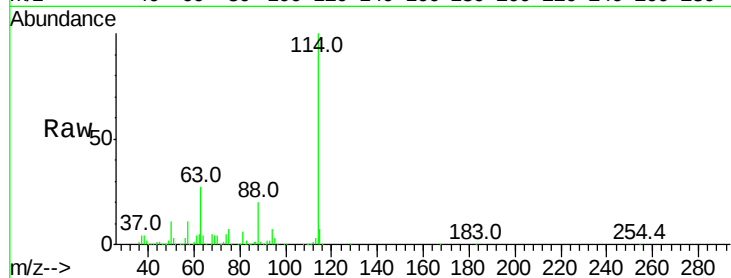
Tgt Ion: 63 Resp: 502510

Ion Ratio Lower Upper

63 100

41 0.0 60.3 90.5#

62 17.1 54.5 81.7#



#44

2,2,4-Trimethylpentane

Concen: 0.031 ppbv

RT: 7.86 min Scan# 1579

Delta R.T. -0.04 min

Lab File: VL034838.D

Acq: 7 Mar 2020 9:45

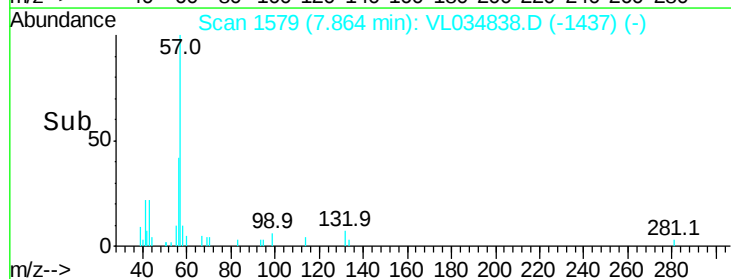
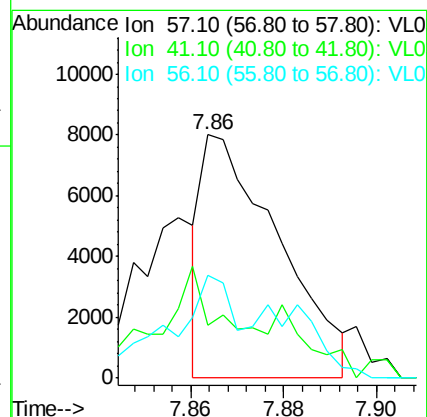
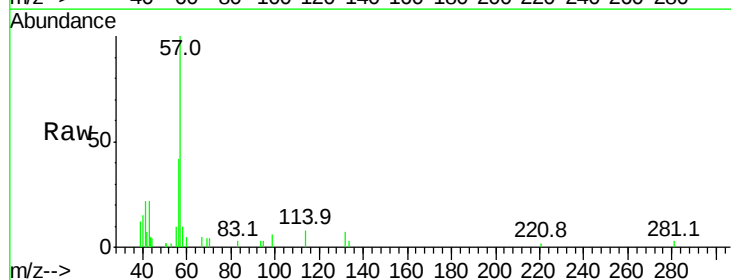
Tgt Ion: 57 Resp: 9164

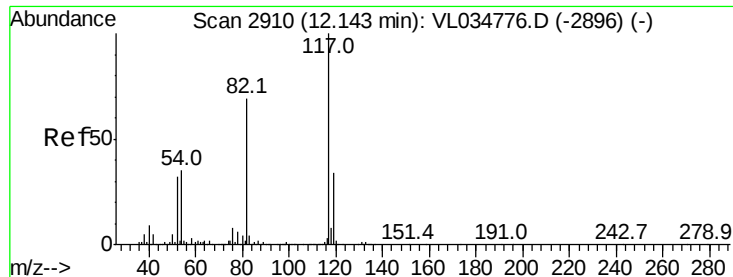
Ion Ratio Lower Upper

57 100

41 61.6 27.4 41.0#

56 61.8 25.0 37.6#

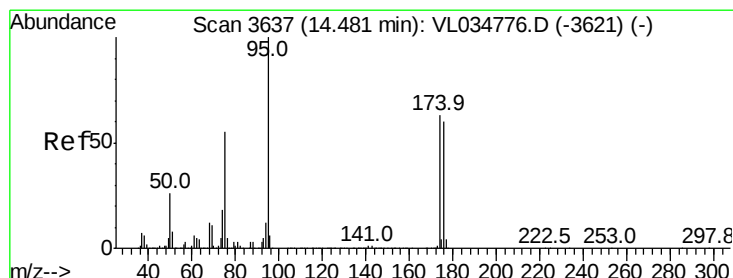
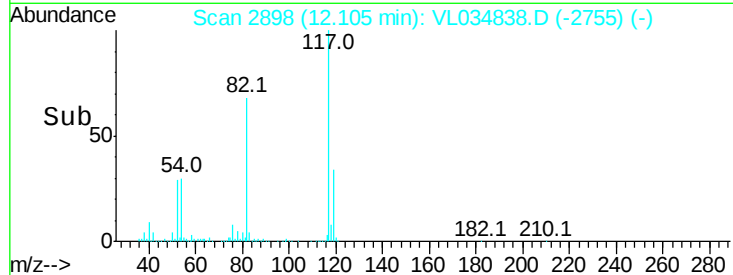
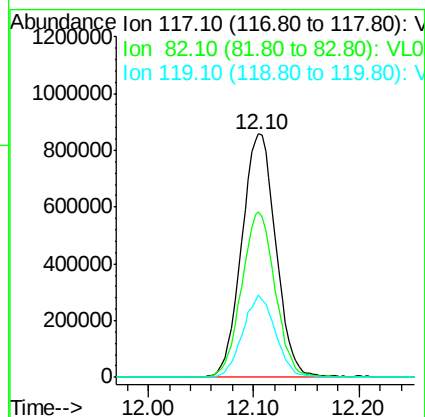
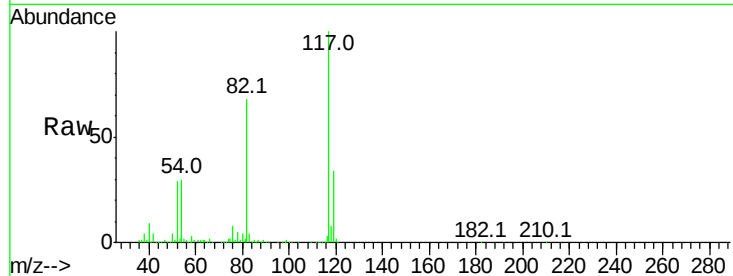




#55  
Chlorobenzene-d5  
Concen: 10.000 ppbv  
RT: 12.10 min Scan# 2898  
Delta R.T. -0.04 min  
Lab File: VL034838.D  
Acq: 7 Mar 2020 9:45

Instrument :  
MSVOA\_L  
ClientSampleId :  
VIBLK

Tgt Ion: 117 Resp: 1932569  
Ion Ratio Lower Upper  
117 100  
82 66.8 53.9 80.9  
119 32.7 25.0 37.4



#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.435 ppbv  
RT: 14.45 min Scan# 3626  
Delta R.T. -0.04 min  
Lab File: VL034838.D  
Acq: 7 Mar 2020 9:45

Tgt Ion: 95 Resp: 1520463  
Ion Ratio Lower Upper  
95 100  
174 70.2 50.6 76.0  
175 5.3 3.8 5.6

