

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL022421\  
 Data File : VL036351.D  
 Acq On : 24 Feb 2021 15:21  
 Operator : SY/AP  
 Sample : M1463-02  
 Misc : 400ml/MSVOA L  
 ALS Vial : 1 Sample Multiplier: 1

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 NS-9

Manual Integrations  
 APPROVED

MMDadoda  
 2/26/2021 4:17:00 PM

Quant Time: Feb 26 13:56:13 2021  
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL021021AIR.M  
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Feb 10 2021  
 QLast Update : Wed Feb 10 16:04:02 2021  
 Response via : Initial Calibration

| Internal Standards      | R.T.  | QIon | Response | Conc  | Units | Dev(Min) |
|-------------------------|-------|------|----------|-------|-------|----------|
| 1) Bromochloromethane   | 5.67  | 49   | 1644820  | 10.00 | ppbv  | 0.03     |
| 33) 1,4-Difluorobenzene | 7.18  | 114  | 3519629  | 10.00 | ppbv  | 0.02     |
| 55) Chlorobenzene-d5    | 12.09 | 117  | 3135549  | 10.00 | ppbv  | 0.03     |

|                             |        |       |          |          |      |        |
|-----------------------------|--------|-------|----------|----------|------|--------|
| System Monitoring Compounds |        |       |          |          |      |        |
| 68) 1-Bromo-4-Fluorobenzene | 14.43  | 95    | 2565641  | 9.94     | ppbv | 0.03   |
| Spiked Amount               | 10.000 | Range | 65 - 135 | Recovery | =    | 99.40% |

| Target Compounds           | R.T.  | QIon | Response | Conc   | Units  | Ovalue |
|----------------------------|-------|------|----------|--------|--------|--------|
| 2) Dichlorodifluoromethane | 3.05  | 85   | 35485    | 0.145  | ppbv   | 91     |
| 3) Chlorodifluoromethane   | 2.99  | 51   | 94632    | 0.463  | ppbv # | 86     |
| 4) Chloromethane           | 3.15  | 50   | 57024m   | 0.578  | ppbv   |        |
| 9) Propene                 | 3.02  | 41   | 110499   | 1.450  | ppbv   | 86     |
| 11) Trichlorofluoromethane | 3.95  | 101  | 49929    | 0.208  | ppbv   | 94     |
| 13) Ethanol                | 3.61  | 45   | 247229m  | 17.274 | ppbv   |        |
| 15) Acetone                | 3.86  | 43   | 505735   | 2.515  | ppbv   | 100    |
| 19) Isopropyl Alcohol      | 3.98  | 45   | 223383m  | 2.005  | ppbv   |        |
| 20) Methylene Chloride     | 4.36  | 84   | 147816   | 2.279  | ppbv # | 80     |
| 26) Hexane                 | 5.69  | 57   | 95050m   | 0.596  | ppbv   |        |
| 34) 2-Butanone             | 5.26  | 43   | 53158m   | 0.227  | ppbv   |        |
| 35) Carbon Tetrachloride   | 7.02  | 117  | 14698m   | 0.062  | ppbv   |        |
| 36) Benzene                | 6.90  | 78   | 152318   | 0.509  | ppbv   | 97     |
| 44) 2,2,4-Trimethylpentane | 7.88  | 57   | 65948m   | 0.121  | ppbv   |        |
| 53) Toluene                | 9.81  | 91   | 206925   | 0.639  | ppbv   | 98     |
| 59) m/p-Xylene             | 12.99 | 91   | 77901m   | 0.207  | ppbv   |        |
| 74) 1,2,4-Trimethylbenzene | 16.77 | 105  | 49796m   | 0.125  | ppbv   |        |

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

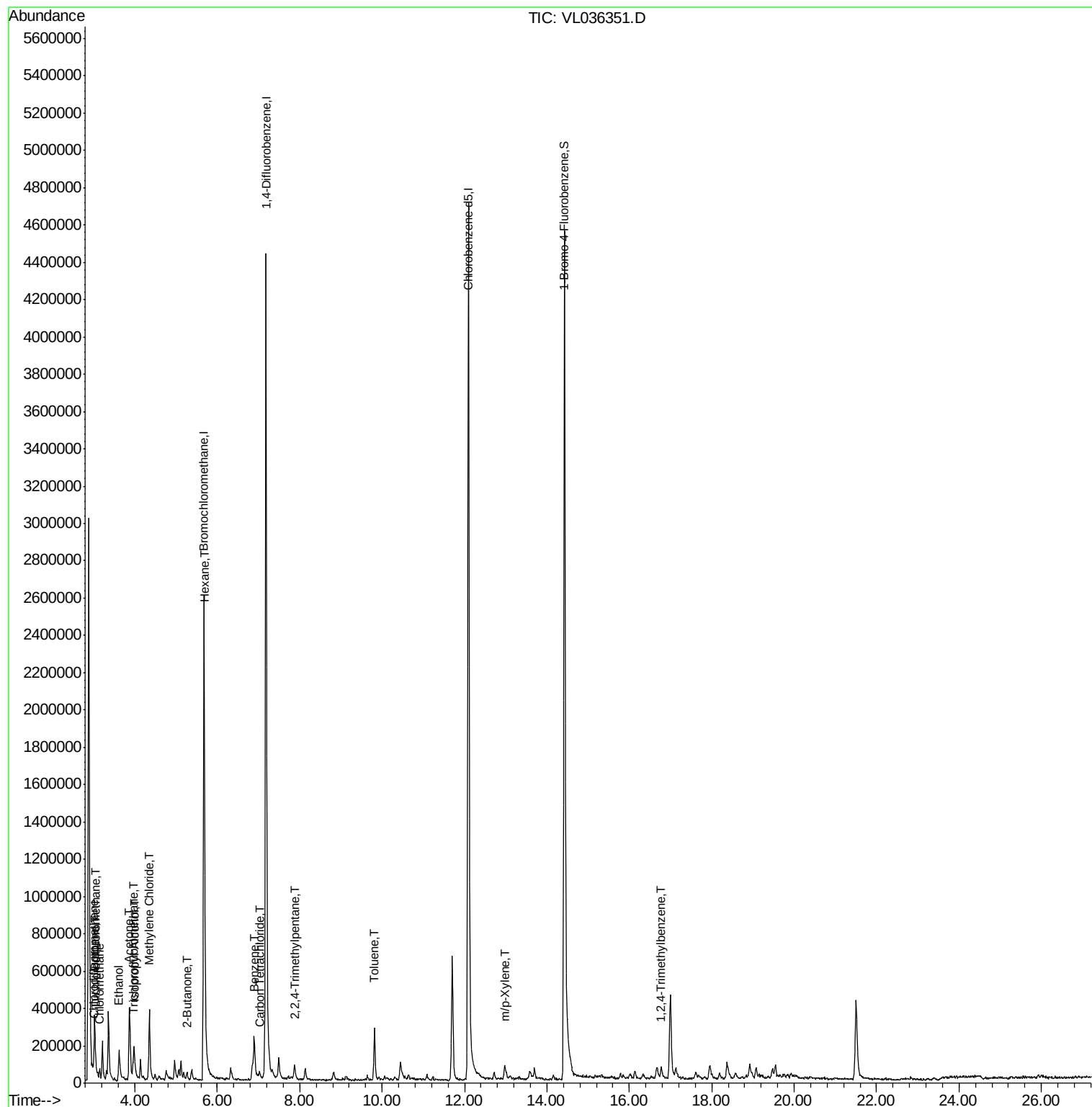
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL022421\  
Data File : VL036351.D  
Acq On : 24 Feb 2021 15:21  
Operator : SY/AP  
Sample : M1463-02  
Misc : 400ml/MSVOA L  
ALS Vial : 1 Sample Multiplier: 1

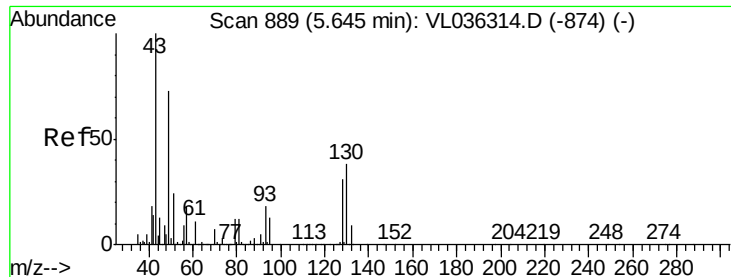
Instrument :  
MSVOA\_L  
ClientSampleId :  
NS-9

Manual Integrations  
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2/26/2021 4:17:00 PM

Quant Time: Feb 26 13:56:13 2021  
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL021021AIR.M  
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA\_L Wed Feb  
QLast Update : Wed Feb 10 16:04:02 2021  
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

ClientSampled :

NS-9

Tot Ion: 49 Resp: 1644820

Ion Ratio Lower Upper

49 100

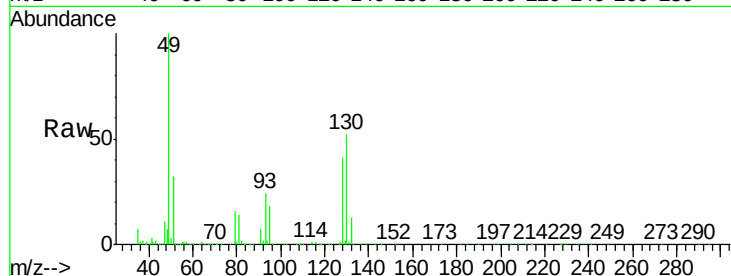
128 42.0 20.8 62.5

130 53.0 26.7 80.1

Manual Integrations  
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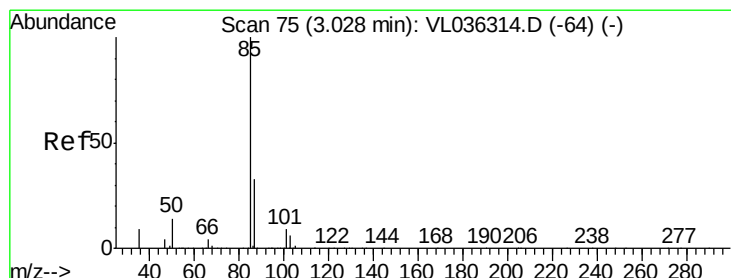
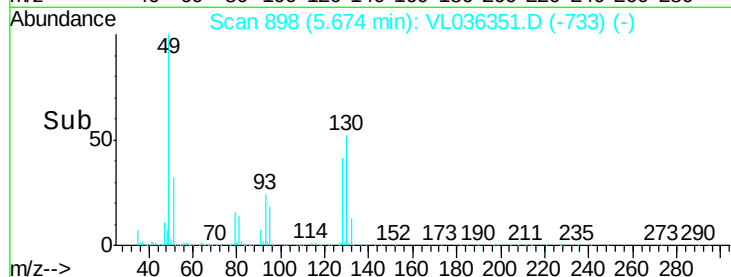
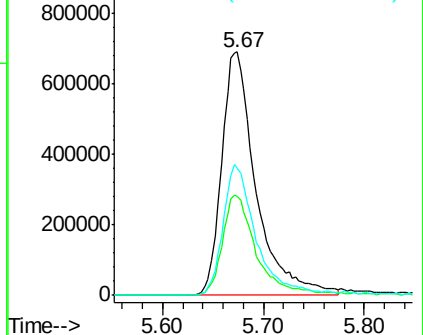
2/26/2021 4:17:00 PM



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



#2

Dichlorodifluoromethane

Concen: 0.145 ppbv

RT: 3.05 min Scan# 82

Delta R.T. 0.02 min

Lab File: VL036351.D

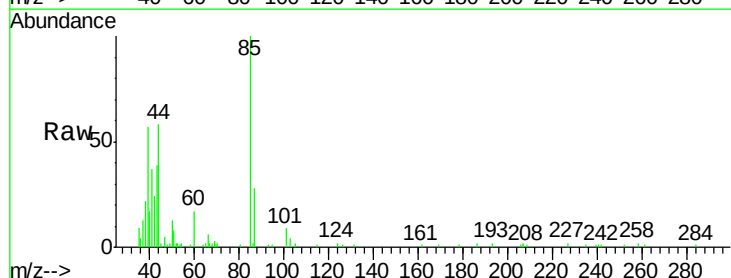
Acq: 24 Feb 2021 15:21

Tgt Ion: 85 Resp: 35485

Ion Ratio Lower Upper

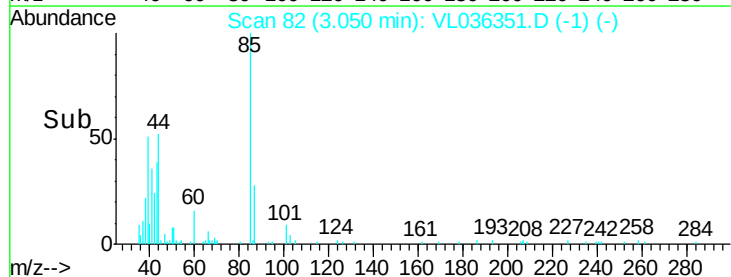
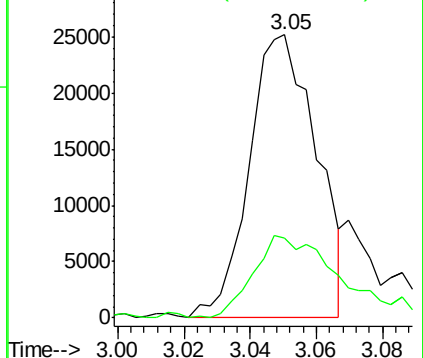
85 100

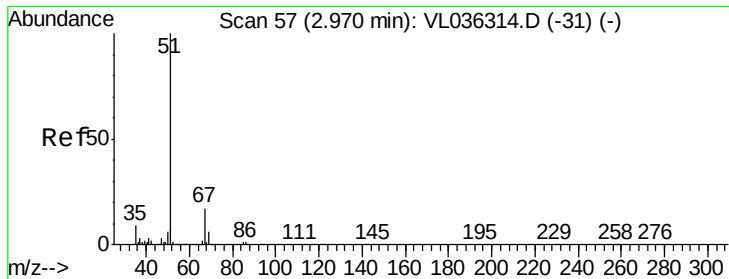
87 28.1 26.5 39.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





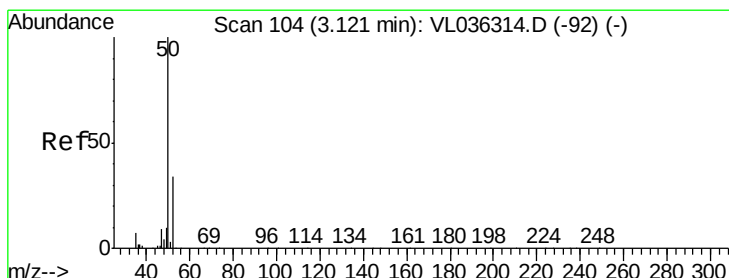
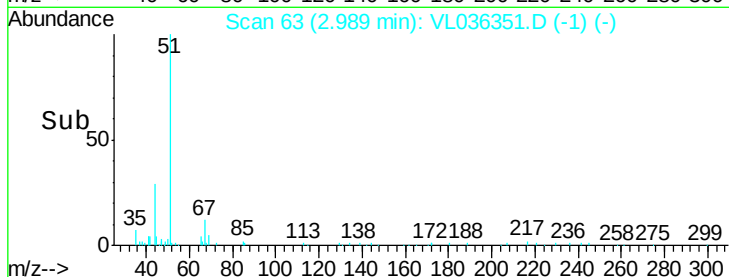
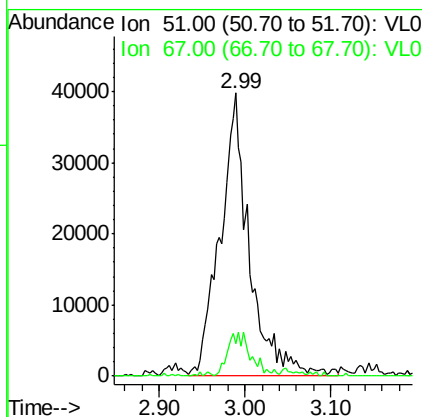
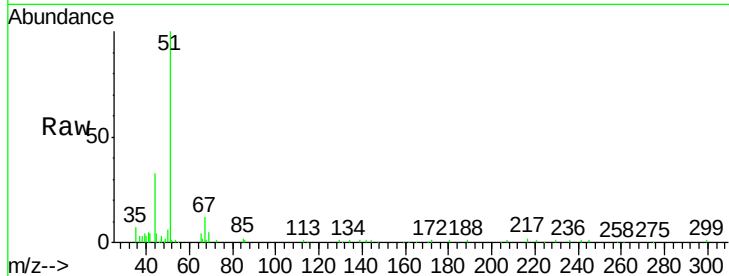
#3  
Chlorodifluoromethane  
Concen: 0.463 ppbv  
RT: 2.99 min Scan# 63  
Delta R.T. 0.02 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Instrument :  
MSVOA\_L  
ClientSampleId :  
NS-9

Tot Ion: 51 Resp: 94632  
Ion Ratio Lower Upper  
51 100  
67 12.2 14.7 22.1#

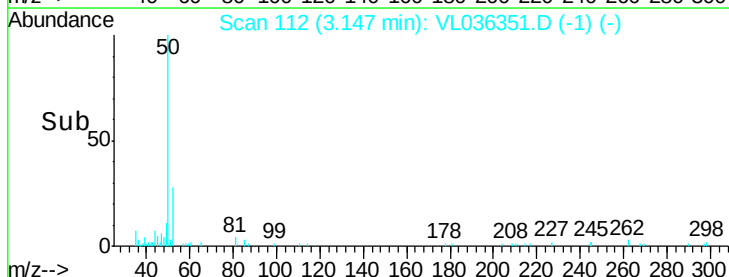
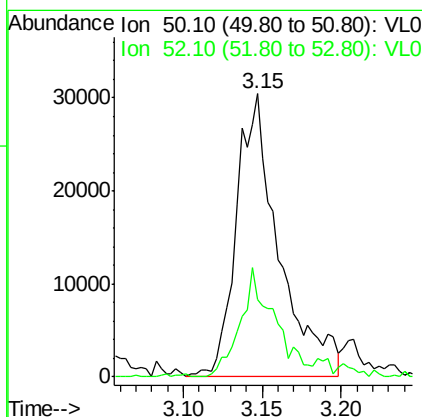
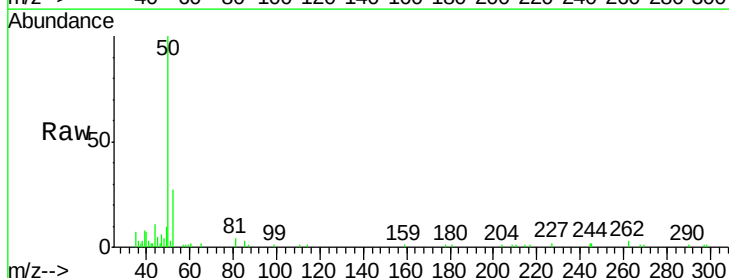
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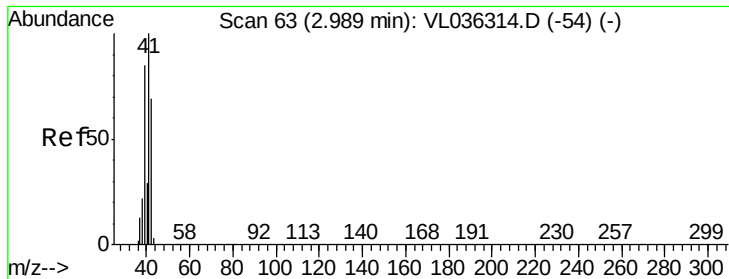
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#4  
Chloromethane  
Concen: 0.578 ppbv m  
RT: 3.15 min Scan# 112  
Delta R.T. 0.03 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Tgt Ion: 50 Resp: 57024  
Ion Ratio Lower Upper  
50 100  
52 27.3 27.0 40.4





#9

Propene

Concen: 1.450 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

ClientSampleId :

NS-9

Tot Ion: 41 Resp: 110499

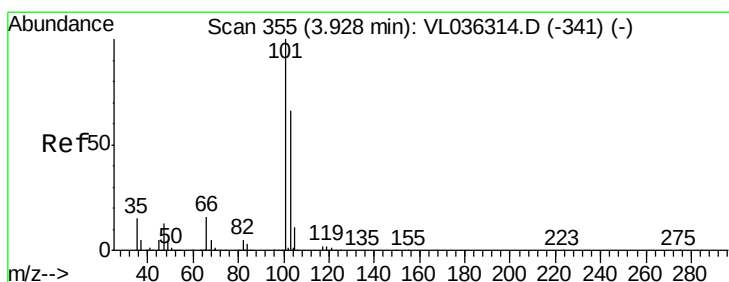
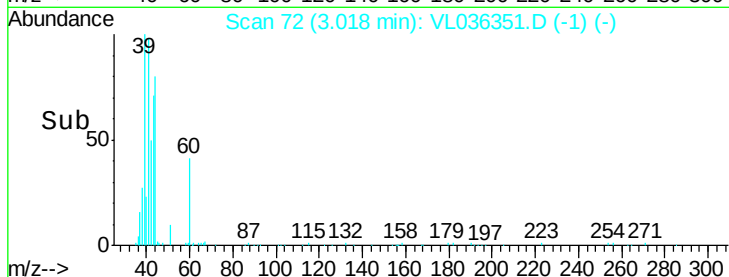
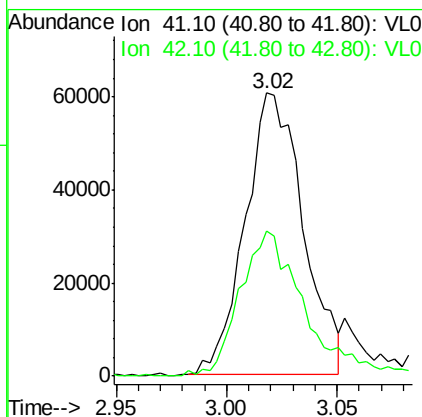
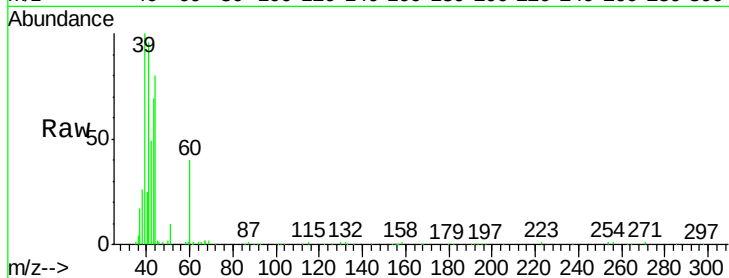
Ion Ratio Lower Upper

41 100

42 59.0 56.2 84.2

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#11

Trichlorofluoromethane

Concen: 0.208 ppbv

RT: 3.95 min Scan# 363

Delta R.T. 0.03 min

Lab File: VL036351.D

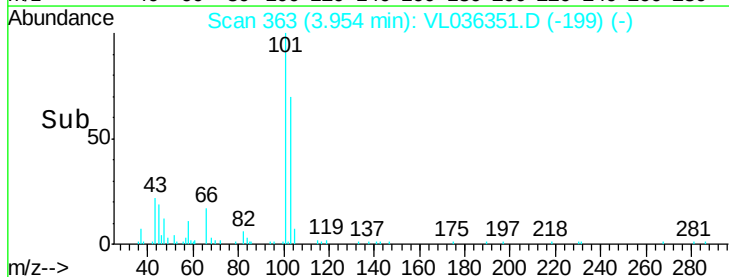
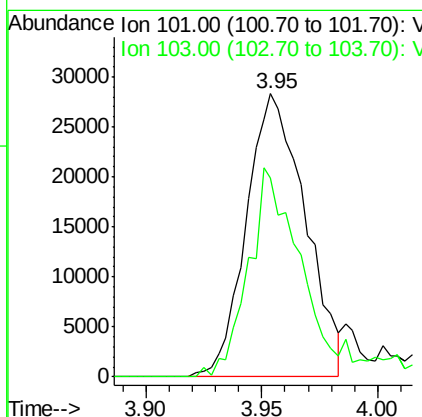
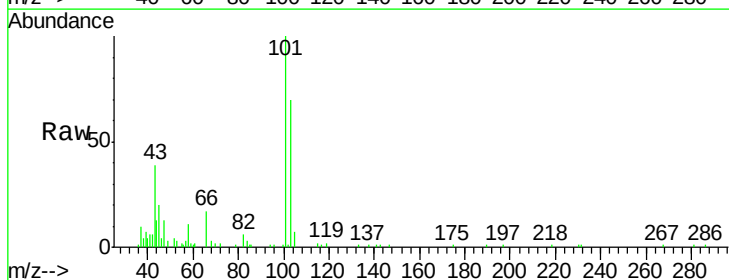
Acq: 24 Feb 2021 15:21

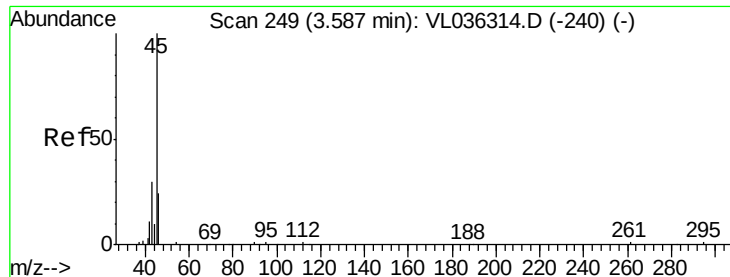
Tgt Ion: 101 Resp: 49929

Ion Ratio Lower Upper

101 100

103 70.5 52.9 79.3





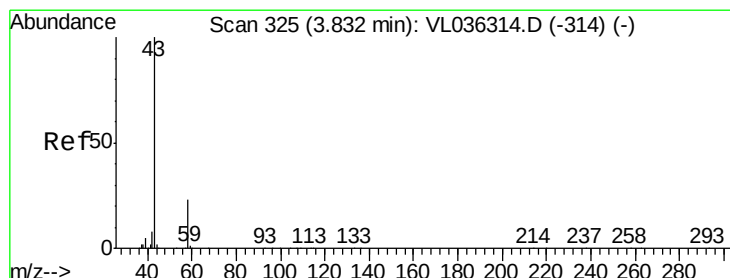
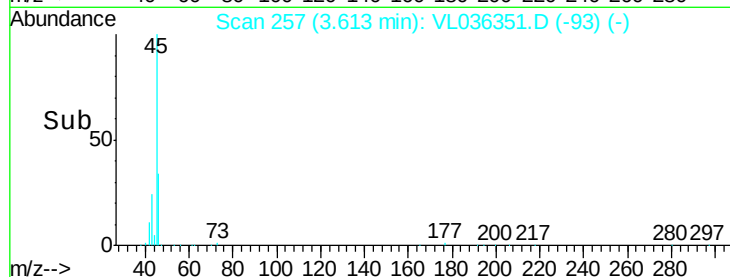
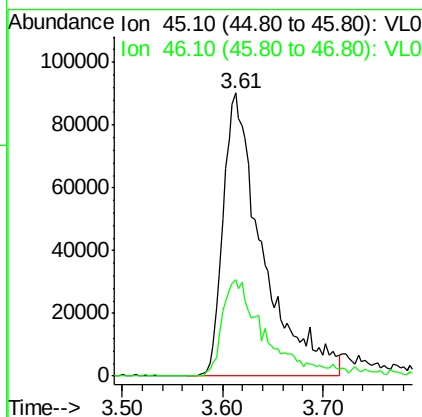
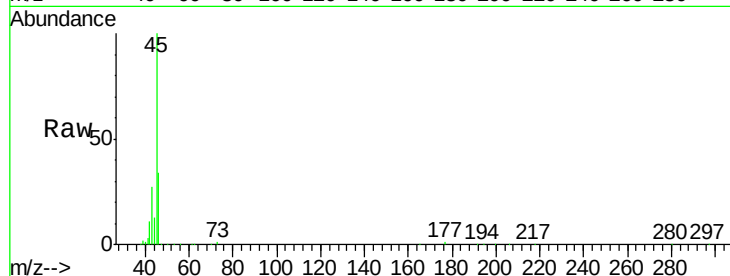
#13  
Ethanol  
Concen: 17.274 ppbv m  
RT: 3.61 min Scan# 257  
Delta R.T. 0.03 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Instrument :  
MSVOA\_L  
ClientSampled :  
NS-9

Tot Ion: 45 Resp: 247229  
Ion Ratio Lower Upper  
45 100  
46 37.9 17.7 70.7

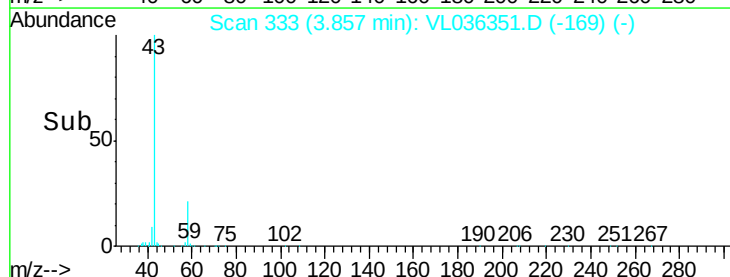
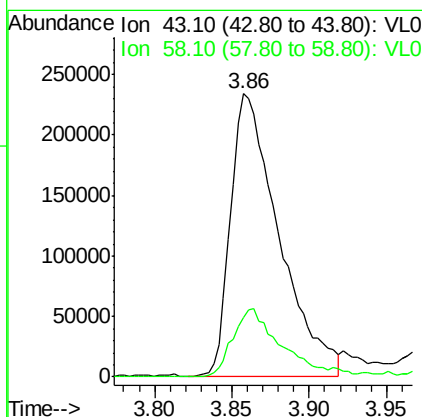
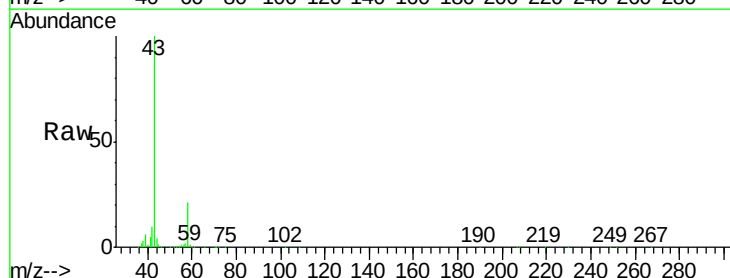
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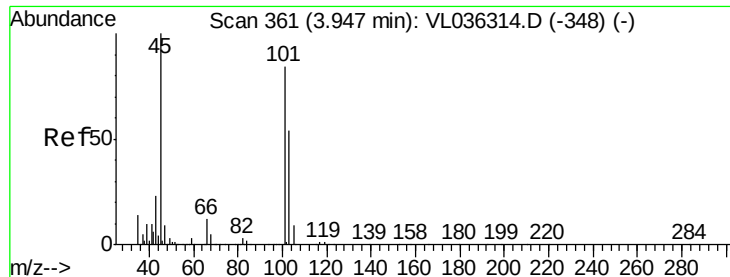
MMDadoda  
2/26/2021 4:17:00 PM



#15  
Acetone  
Concen: 2.515 ppbv  
RT: 3.86 min Scan# 333  
Delta R.T. 0.03 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Tgt Ion: 43 Resp: 505735  
Ion Ratio Lower Upper  
43 100  
58 25.6 20.3 30.5





#19

Isopropyl Alcohol

Concen: 2.005 ppbv m

RT: 3.98 min Scan# 371

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

ClientSampled :

NS-9

Tot Ion: 45 Resp: 223383

Ion Ratio Lower Upper

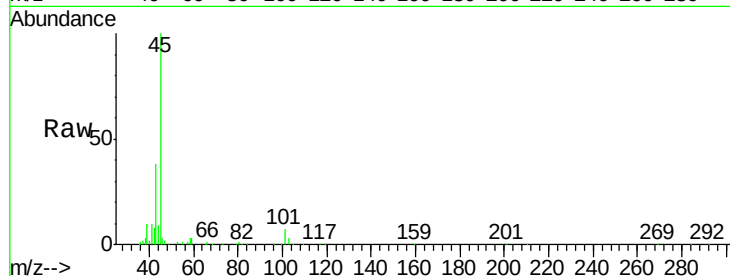
45 100

58 4.0 1.9 2.9#

Manual Integrations  
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Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0

3.98

100000

80000

60000

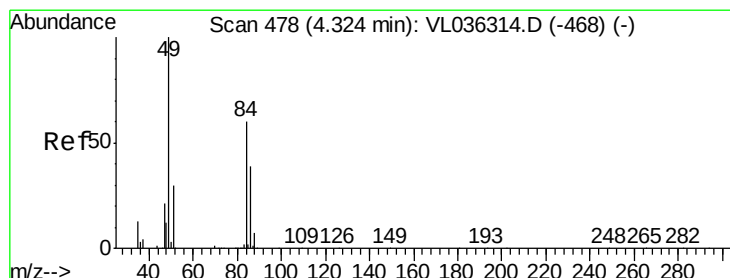
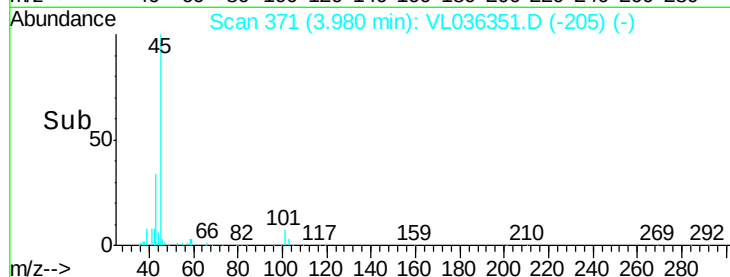
40000

20000

0

Time-->

3.90 4.00 4.10



#20

Methylene Chloride

Concen: 2.279 ppbv

RT: 4.36 min Scan# 488

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Tgt Ion: 84 Resp: 147816

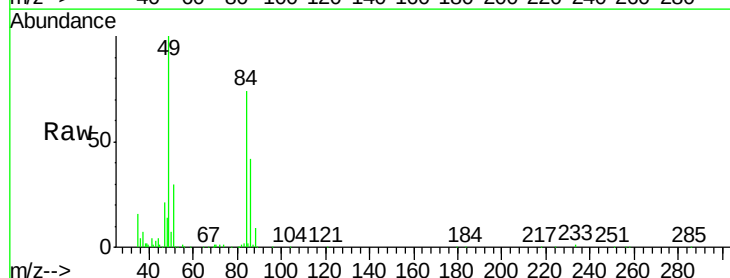
Ion Ratio Lower Upper

84 100

49 133.9 133.8 200.8

51 40.1 41.4 62.0#

86 56.5 51.5 77.3



Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

150000

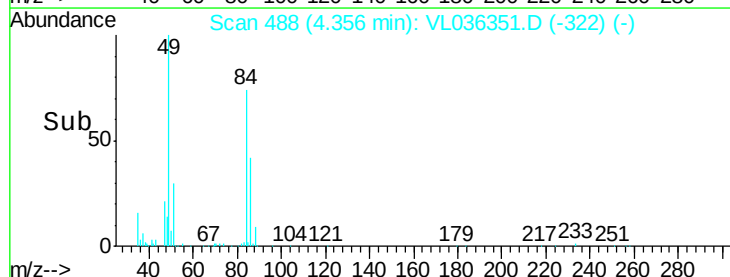
100000

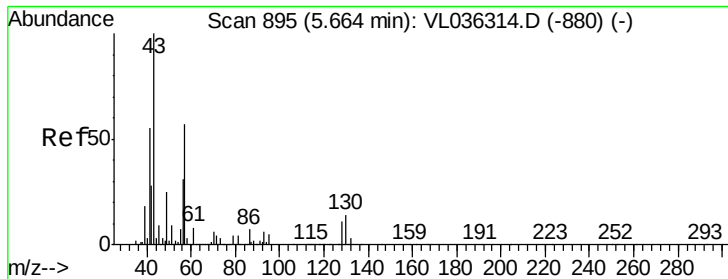
50000

0

Time-->

4.30 4.35 4.40 4.45





#26

Hexane

Concen: 0.596 ppbv m

RT: 5.69 min Scan# 903

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

ClientSampled :

NS-9

Tot Ion: 57 Resp: 95050

Ion Ratio Lower Upper

57 100

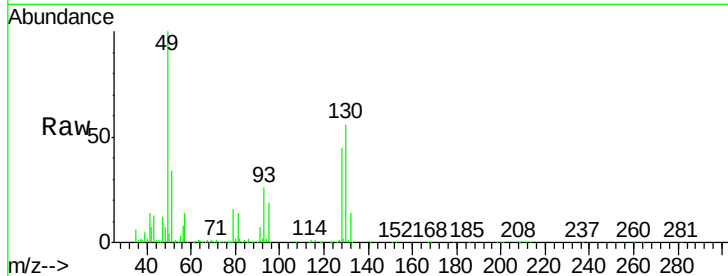
41 109.3 81.7 122.5

43 0.0 199.1 298.7#

56 62.2 44.0 66.0

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2/26/2021 4:17:00 PM

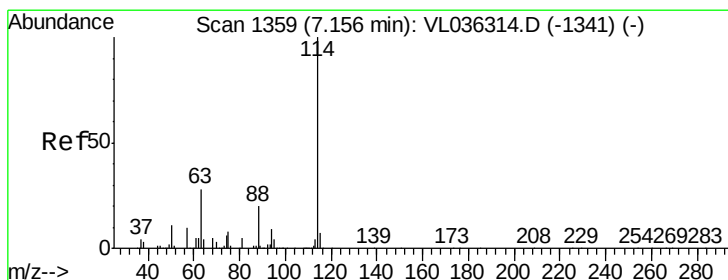
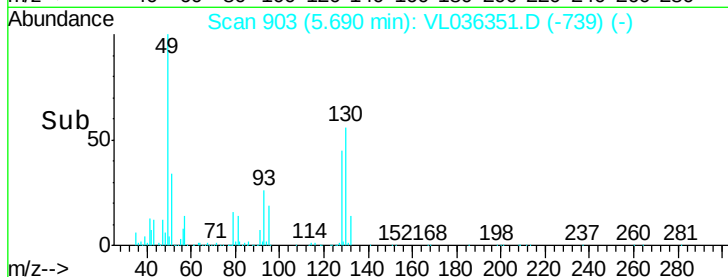
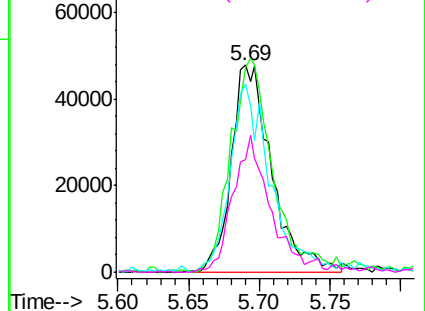


Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 7.18 min Scan# 1366

Delta R.T. 0.02 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

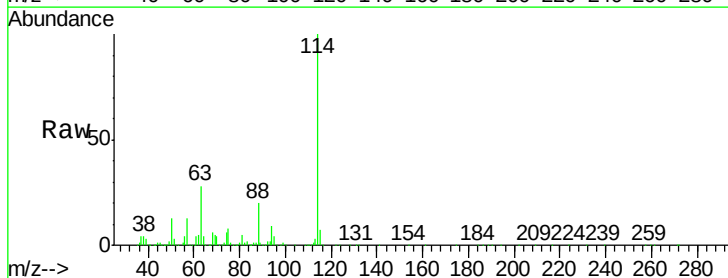
Tgt Ion: 114 Resp: 3519629

Ion Ratio Lower Upper

114 100

63 29.8 24.1 36.1

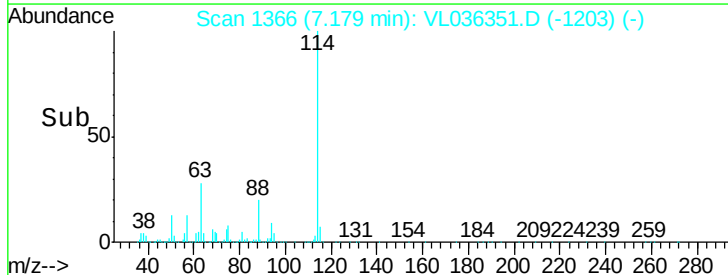
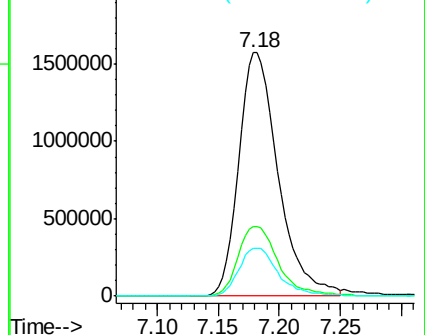
88 20.1 16.0 24.0



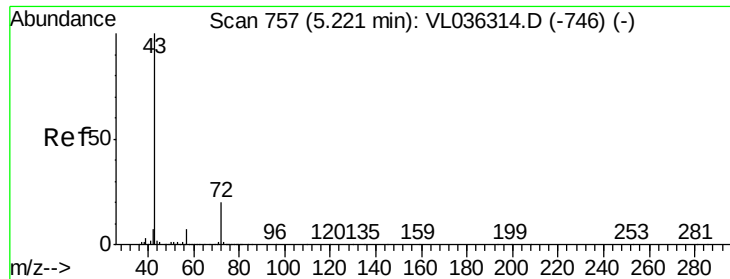
Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0







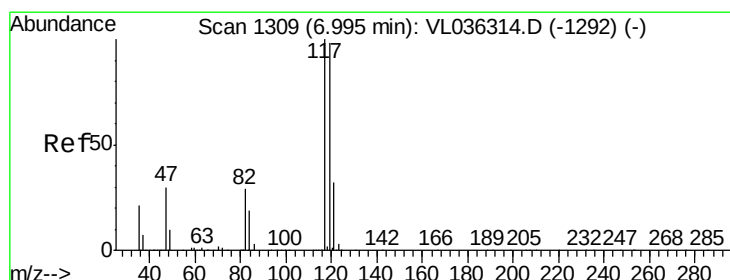
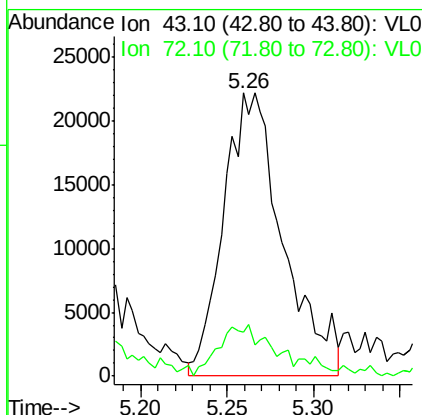
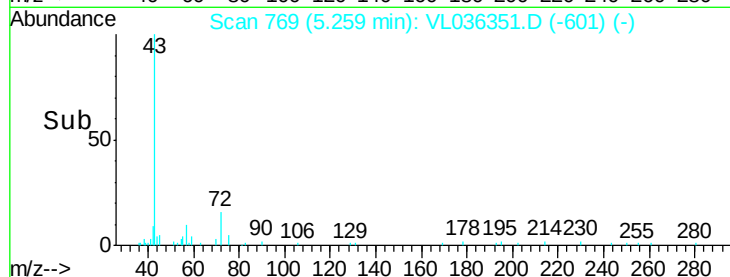
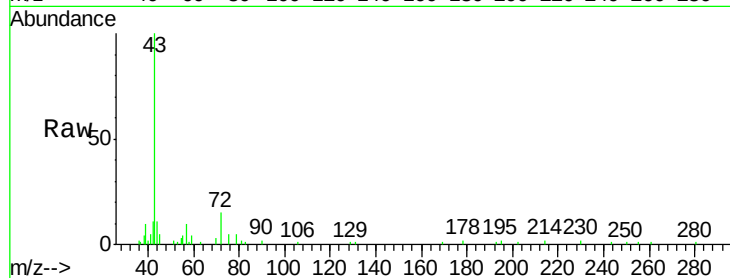
#34  
2-Butanone  
Concen: 0.227 ppbv m  
RT: 5.26 min Scan# 769  
Delta R.T. 0.04 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Instrument :  
MSVOA\_L  
ClientSampled :  
NS-9

Tot Ion: 43 Resp: 53158  
Ion Ratio Lower Upper  
43 100  
72 0.0 16.7 25.1#

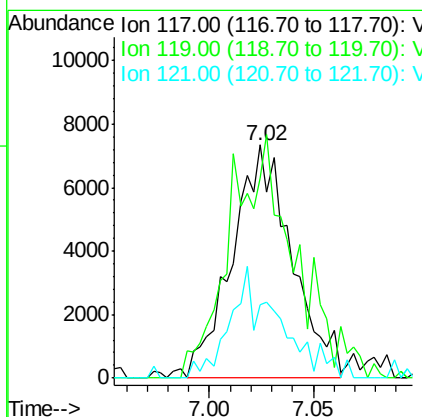
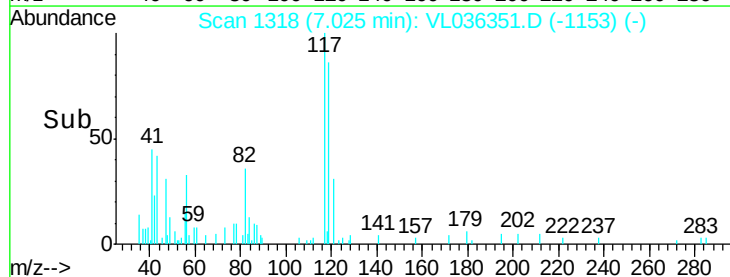
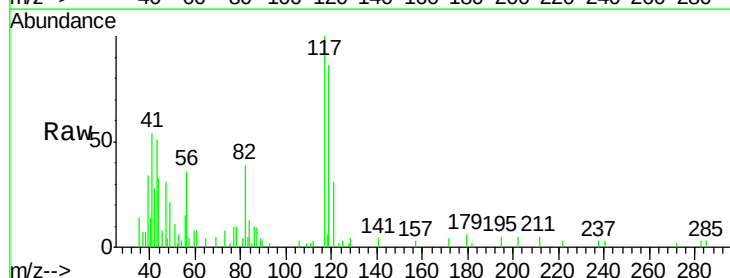
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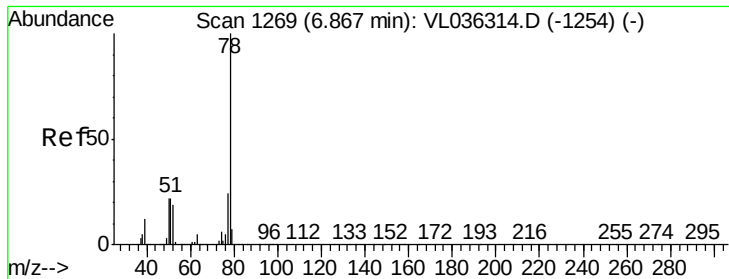
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#35  
Carbon Tetrachloride  
Concen: 0.062 ppbv m  
RT: 7.02 min Scan# 1318  
Delta R.T. 0.03 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Tgt Ion: 117 Resp: 14698  
Ion Ratio Lower Upper  
117 100  
119 85.8 78.1 117.1  
121 31.4 25.8 38.8





#36

Benzene

Concen: 0.509 ppbv

RT: 6.90 min Scan# 1278

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

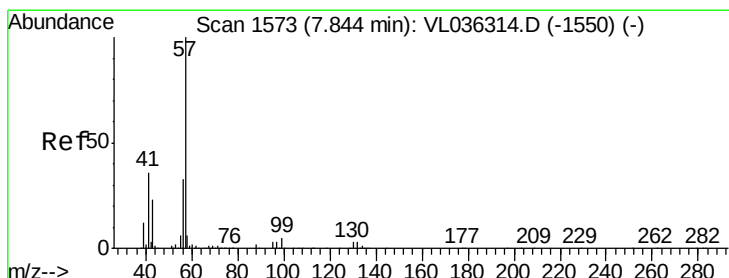
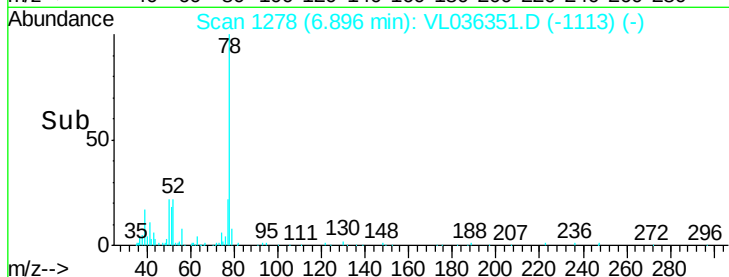
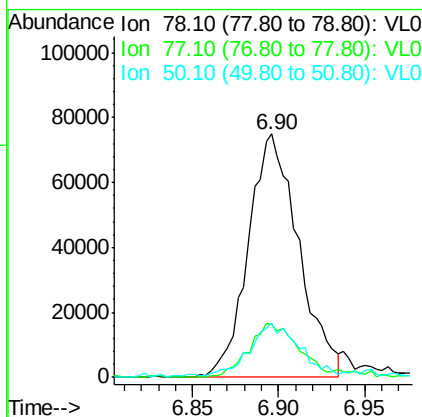
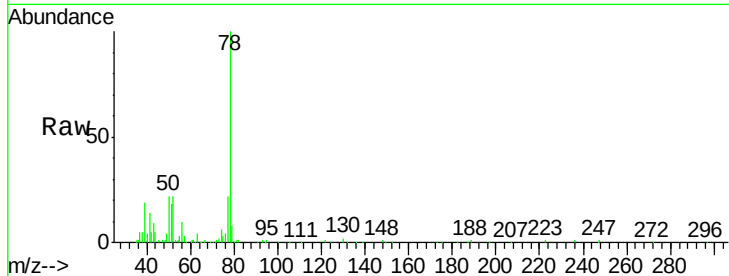
ClientSampled :

NS-9

|           |       |       |        |
|-----------|-------|-------|--------|
| Tot Ion:  | 78    | Resp: | 152318 |
| Ion Ratio | Lower | Upper |        |
| 78        | 100   |       |        |
| 77        | 21.7  | 18.9  | 28.3   |
| 50        | 21.1  | 17.3  | 25.9   |

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#44

2,2,4-Trimethylpentane

Concen: 0.121 ppbv m

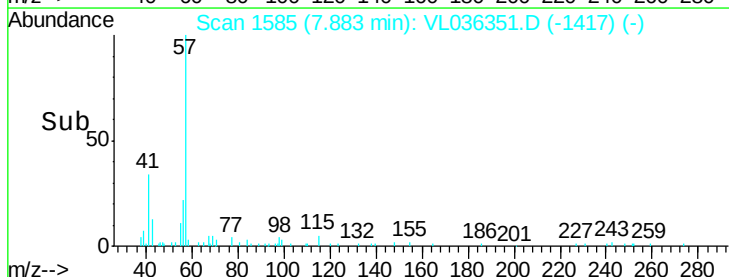
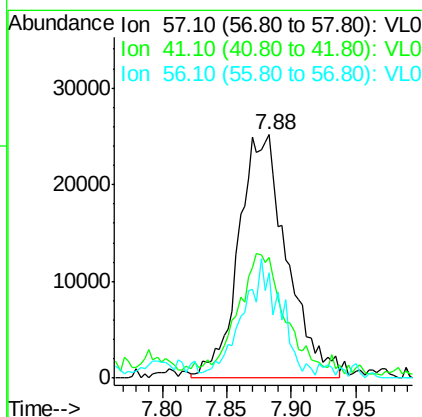
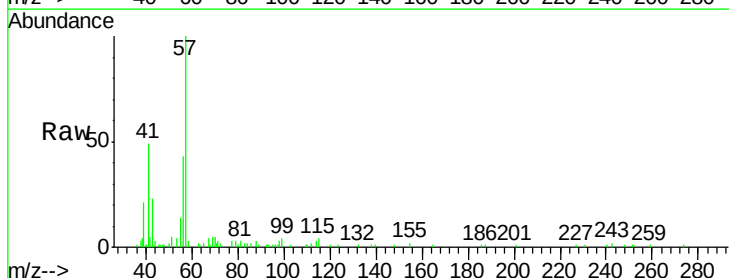
RT: 7.88 min Scan# 1585

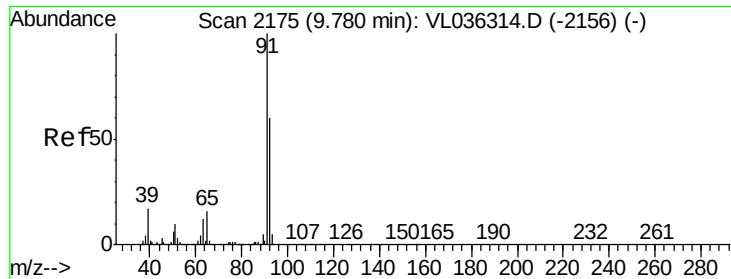
Delta R.T. 0.04 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 57    | Resp: | 65948 |
| Ion Ratio | Lower | Upper |       |
| 57        | 100   |       |       |
| 41        | 50.8  | 28.8  | 43.2# |
| 56        | 36.3  | 25.8  | 38.6  |





#53

Toluene

Concen: 0.639 ppbv

RT: 9.81 min Scan# 2185

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

Instrument :

MSVOA\_L

ClientSampleId :

NS-9

Tot Ion: 91 Resp: 206925

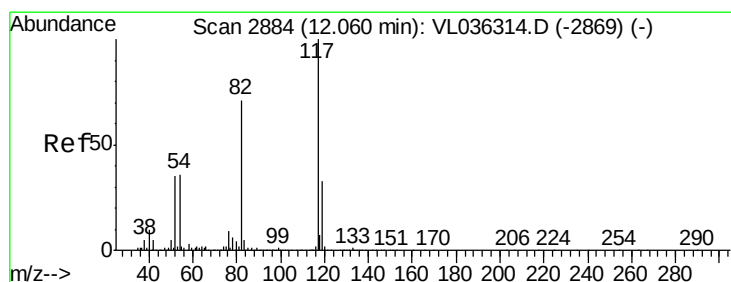
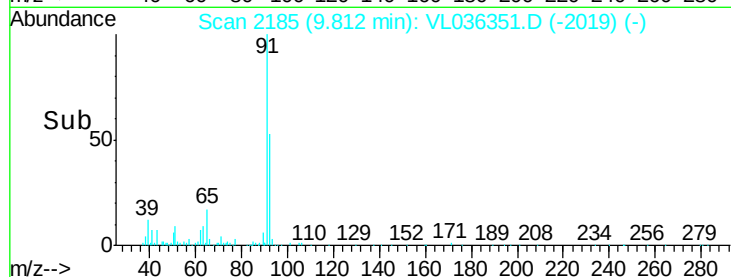
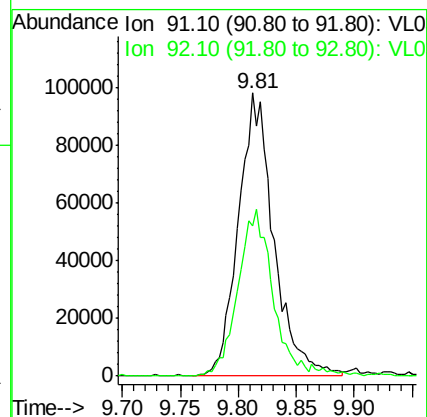
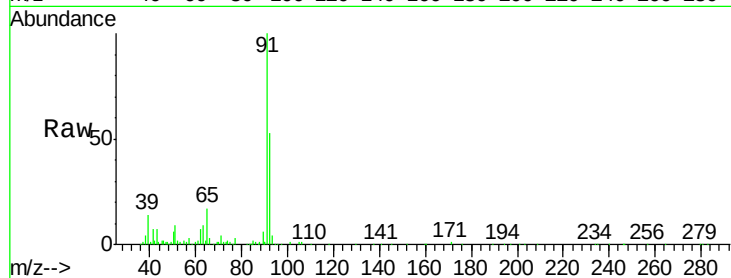
Ion Ratio Lower Upper

91 100

92 59.4 48.6 72.8

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2894

Delta R.T. 0.03 min

Lab File: VL036351.D

Acq: 24 Feb 2021 15:21

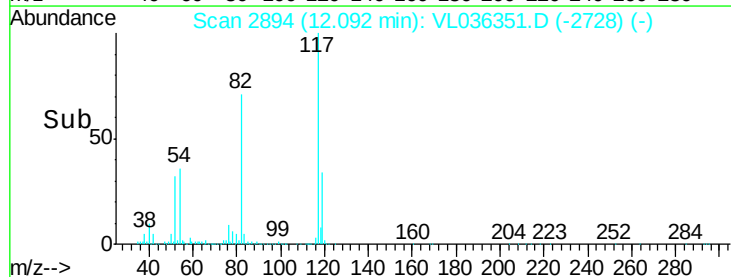
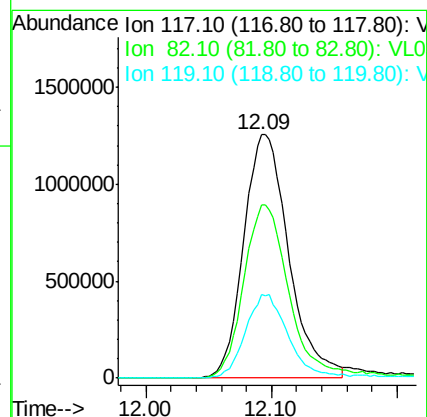
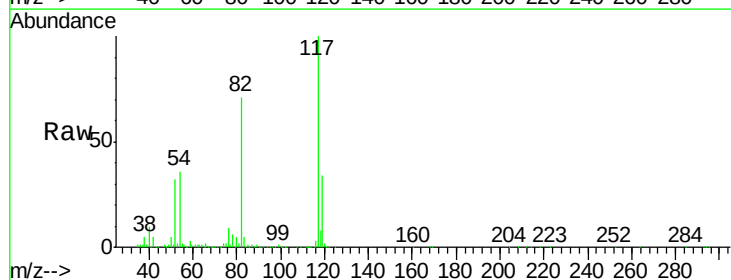
Tgt Ion: 117 Resp: 3135549

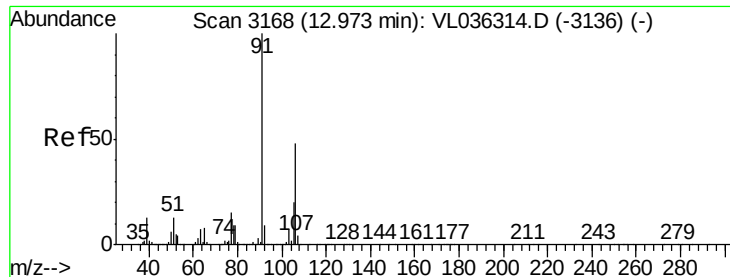
Ion Ratio Lower Upper

117 100

82 74.7 59.1 88.7

119 34.0 46.3 69.5#





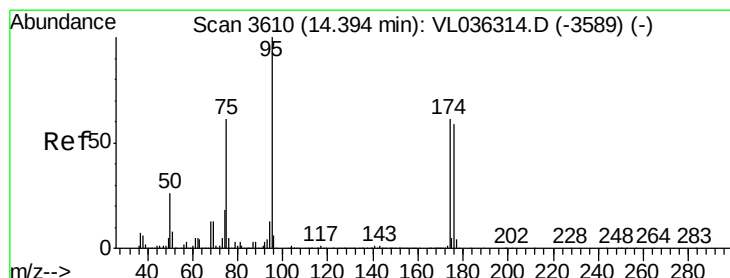
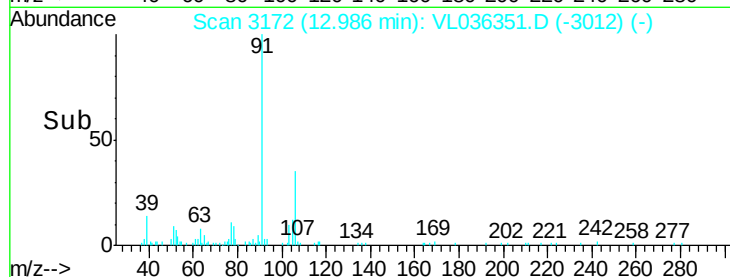
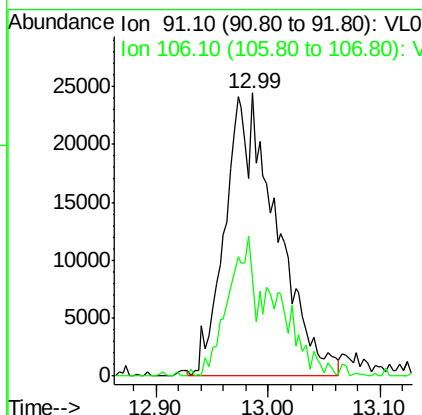
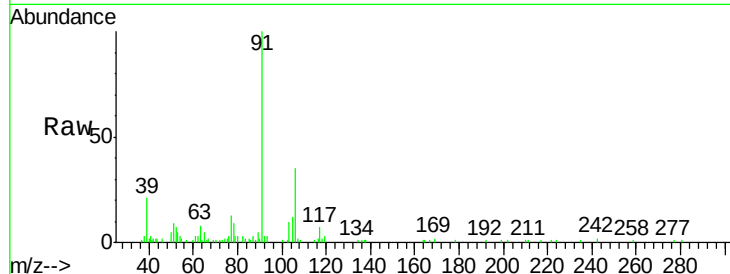
#59  
m/p-Xylene  
Concen: 0.207 ppbv m  
RT: 12.99 min Scan# 3172  
Delta R.T. 0.01 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Instrument :  
MSVOA\_L  
ClientSampled :  
NS-9

Tot Ion: 91 Resp: 77901  
Ion Ratio Lower Upper  
91 100  
106 0.0 34.2 51.2#

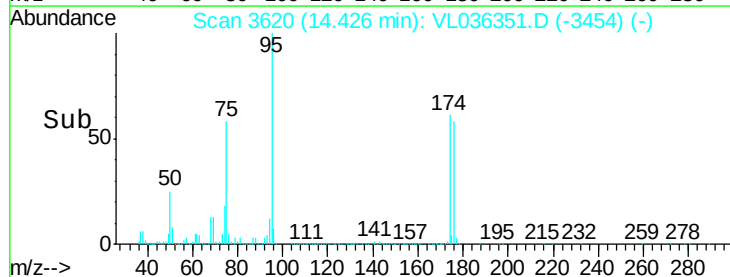
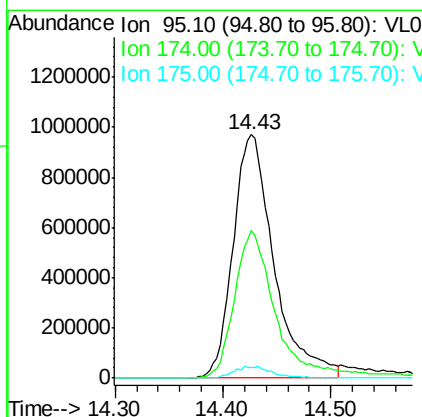
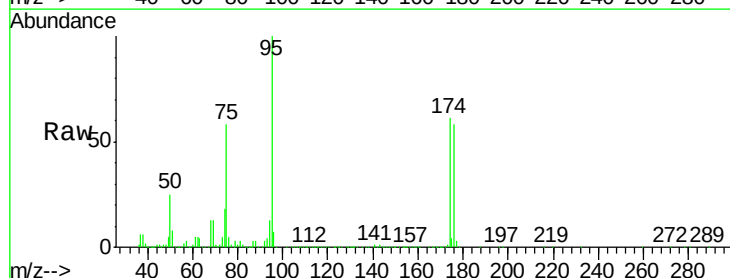
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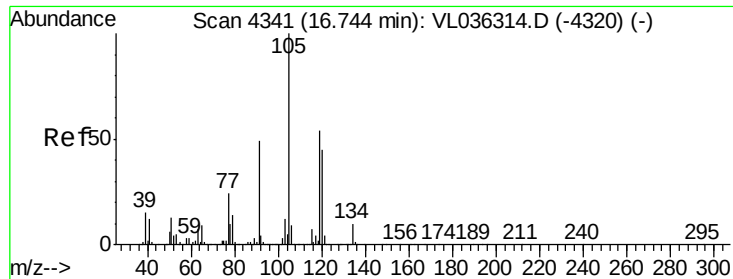
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#68  
1-Bromo-4-Fluorobenzene  
Concen: 9.945 ppbv  
RT: 14.43 min Scan# 3620  
Delta R.T. 0.03 min  
Lab File: VL036351.D  
Acq: 24 Feb 2021 15:21

Tgt Ion: 95 Resp: 2565641  
Ion Ratio Lower Upper  
95 100  
174 63.0 49.8 74.6  
175 4.7 3.7 5.5





#74  
 1,2,4-Trimethylbenzene  
 Concen: 0.125 ppbv m  
 RT: 16.77 min Scan# 4350  
 Delta R.T. 0.03 min  
 Lab File: VL036351.D  
 Acq: 24 Feb 2021 15:21

Instrument :  
 MSVOA\_L  
 ClientSampleId :  
 NS-9

|           |       |       |       |
|-----------|-------|-------|-------|
| Tot Ion:  | 105   | Resp: | 49796 |
| Ion Ratio | Lower | Upper |       |
| 105       | 100   |       |       |
| 120       | 38.1  | 35.8  | 53.6  |
| 91        | 13.9  | 39.8  | 59.6# |
| 77        | 19.3  | 19.1  | 28.7  |

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