

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL120820\
 Data File : VL036107.D
 Acq On : 8 Dec 2020 23:05
 Operator : SY/AP
 Sample : L4949-05DL 10X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-4DL

Quant Time: Dec 09 07:22:21 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120720AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 07 16:56:49 2020
 QLast Update : Mon Dec 07 16:56:49 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	1171731	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	2609179	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.10	117	2317308	10.00	ppbv	-0.01

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.43	95	1965927	10.68	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	106.80%

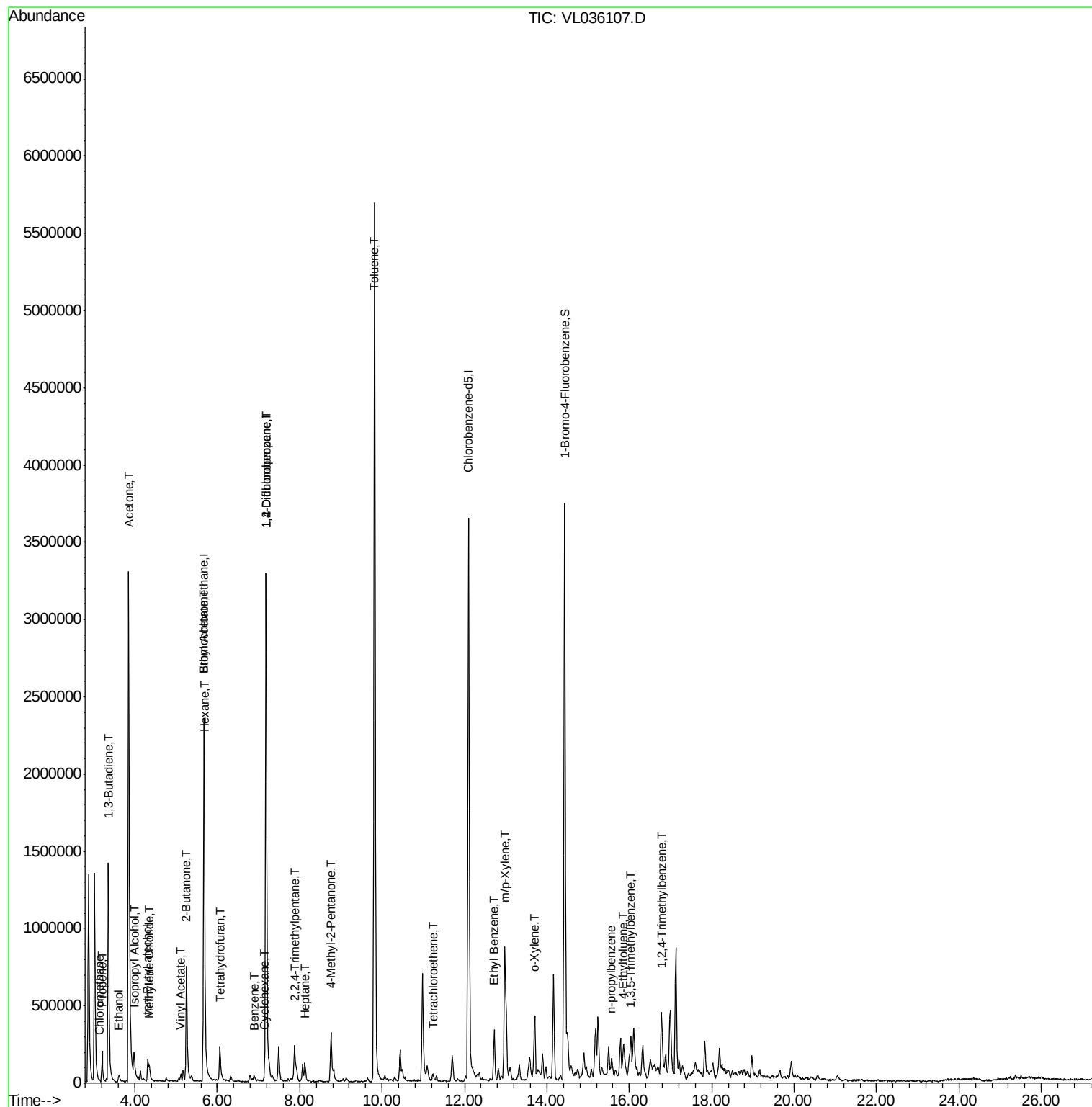
Target Compounds					Ovalue
4) Chloromethane	3.14	50	5047	0.077 ppbv	# 42
9) Propene	3.20	41	59332	0.886 ppbv	94
10) Heptane	8.12	43	45158	0.264 ppbv	# 71
13) Ethanol	3.61	45	31615	3.424 ppbv	# 29
15) Acetone	3.85	43	4518595	32.087 ppbv	99
16) 1,3-Butadiene	3.36	39	219226	3.091 ppbv	# 14
17) tert-Butyl alcohol	4.31	59	12206	0.089 ppbv	# 71
19) Isopropyl Alcohol	3.98	45	200383	2.328 ppbv	# 100
20) Methylene Chloride	4.35	84	33552	0.581 ppbv	# 95
23) Vinyl Acetate	5.11	43	11044	0.059 ppbv	# 51
25) Ethyl Acetate	5.68	43	598832	2.129 ppbv	# 67
26) Hexane	5.69	57	55726	0.440 ppbv	# 1
30) Cyclohexane	7.13	84	4221	0.045 ppbv	# 1
34) 2-Butanone	5.25	43	1085808	6.274 ppbv	100
36) Benzene	6.90	78	14484	0.066 ppbv	# 82
39) 1,2-Dichloropropane	7.18	63	756653	8.665 ppbv	# 23
41) Tetrahydrofuran	6.06	42	153272	1.491 ppbv	97
44) 2,2,4-Trimethylpentane	7.87	57	230248	0.575 ppbv	# 71
50) 4-Methyl-2-Pentanone	8.76	43	300986	1.166 ppbv	98
52) Tetrachloroethene	11.23	164	3562	0.044 ppbv	# 67
53) Toluene	9.82	91	4750881	19.134 ppbv	98
58) Ethyl Benzene	12.73	91	300663	0.947 ppbv	99
59) m/p-Xylene	12.98	91	962654	3.599 ppbv	98
60) o-Xylene	13.70	91	322196	1.279 ppbv	97
64) n-propylbenzene	15.57	120	4492	0.050 ppbv	# 1
72) 4-Ethyltoluene	15.85	105	49885	0.183 ppbv	# 60
73) 1,3,5-Trimethylbenzene	16.01	105	46658	0.179 ppbv	96
74) 1,2,4-Trimethylbenzene	16.77	105	111932	0.428 ppbv	# 65

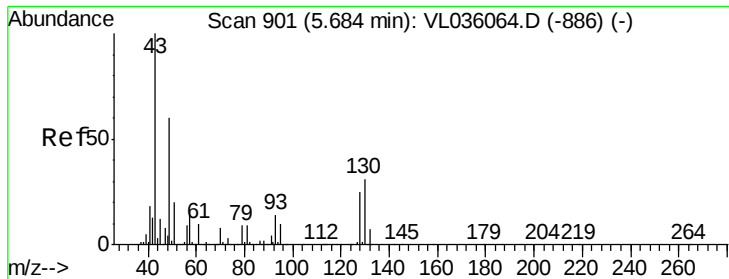
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Mon Dec 07 16:56:49 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

IA-4DL

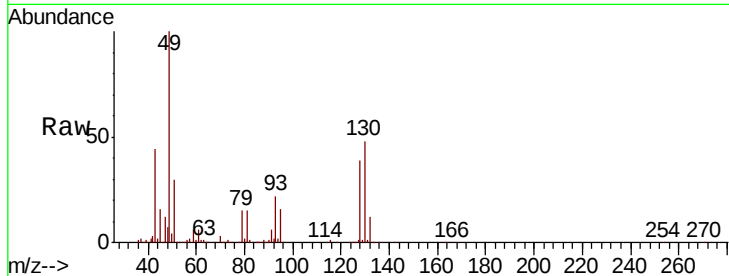
Tot Ion: 49 Resp: 1171731

Ion Ratio Lower Upper

49 100

128 38.9 21.1 63.1

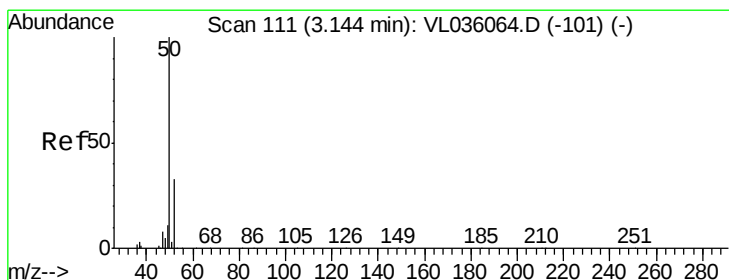
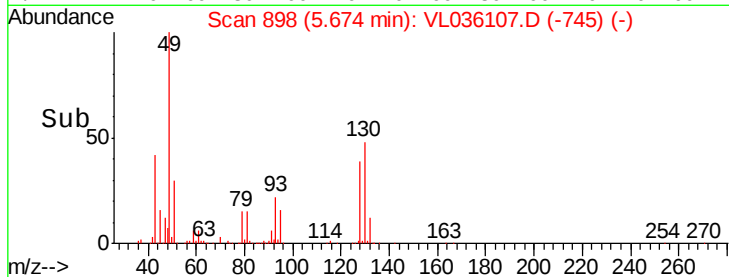
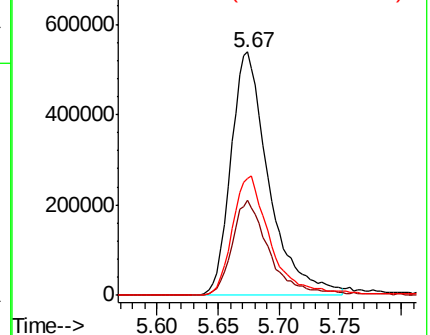
130 49.9 27.1 81.3



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



#4

Chloromethane

Concen: 0.077 ppbv

RT: 3.14 min Scan# 110

Delta R.T. -0.00 min

Lab File: VL036107.D

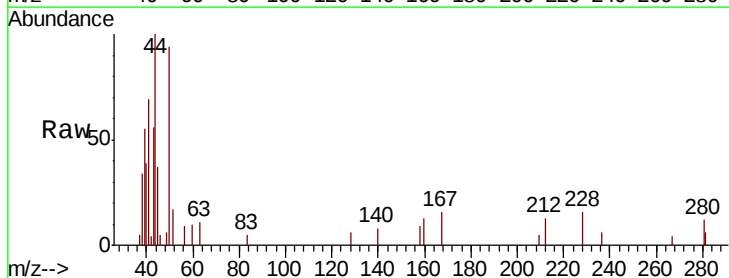
Acq: 8 Dec 2020 23:05

Tgt Ion: 50 Resp: 5047

Ion Ratio Lower Upper

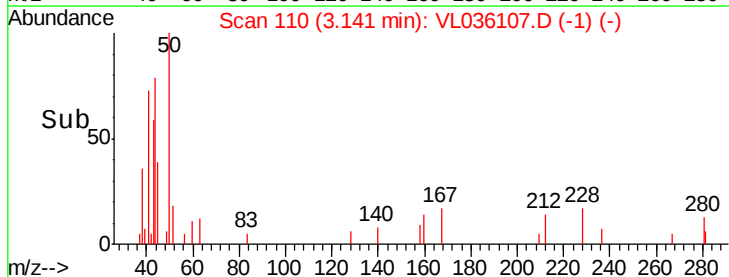
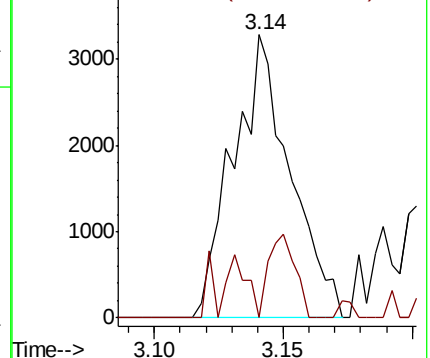
50 100

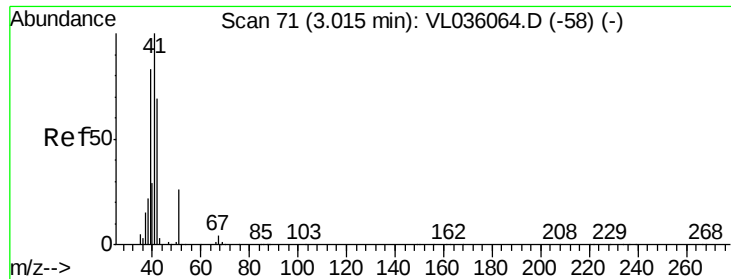
52 0.0 26.1 39.1#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.886 ppbv

RT: 3.20 min Scan# 130

Delta R.T. 0.19 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

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ClientSampleId :

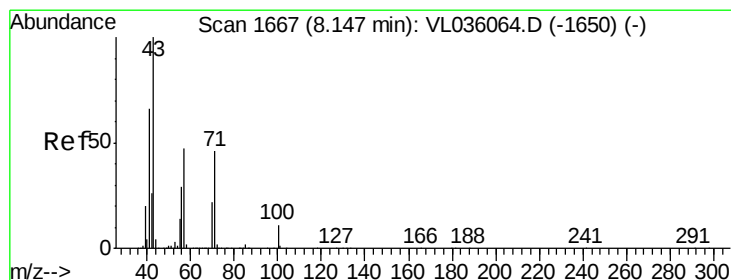
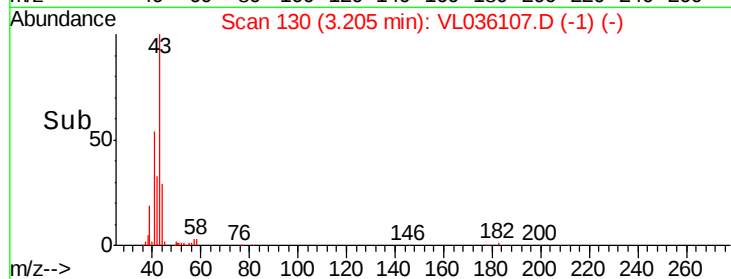
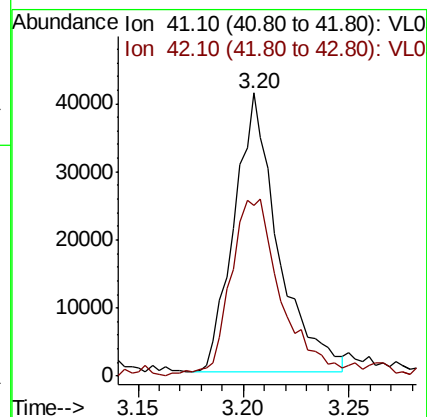
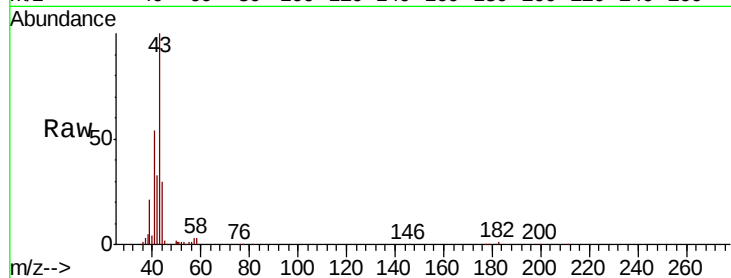
IA-4DL

Tot Ion: 41 Resp: 59332

Ion Ratio Lower Upper

41 100

42 76.5 57.0 85.6



#10

Heptane

Concen: 0.264 ppbv

RT: 8.12 min Scan# 1660

Delta R.T. -0.02 min

Lab File: VL036107.D

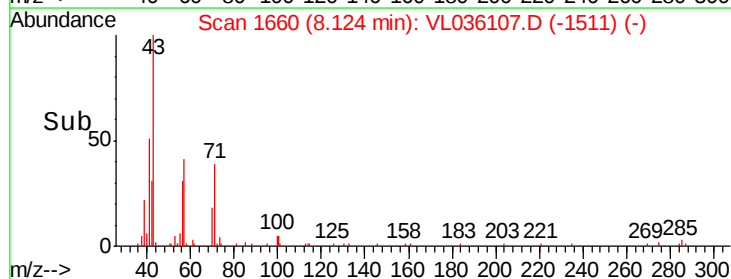
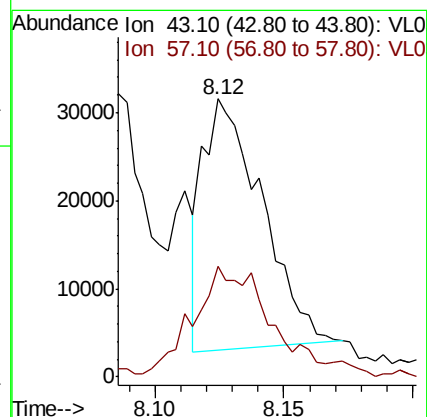
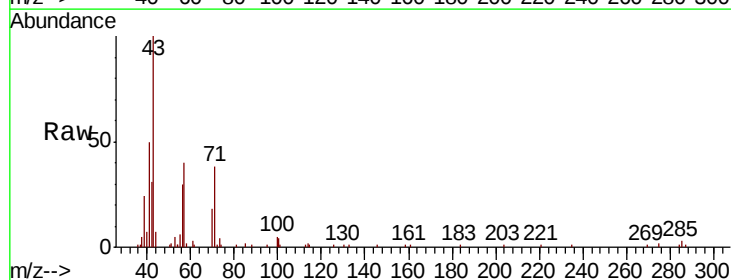
Acq: 8 Dec 2020 23:05

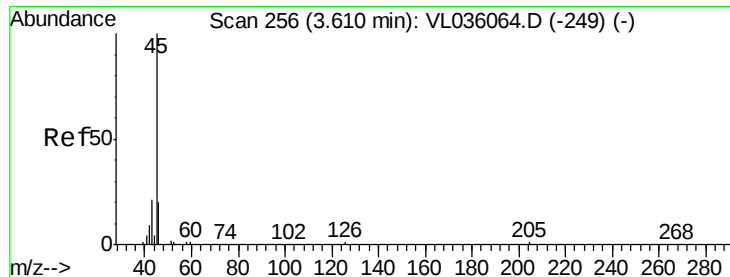
Tgt Ion: 43 Resp: 45158

Ion Ratio Lower Upper

43 100

57 66.7 37.9 56.9#

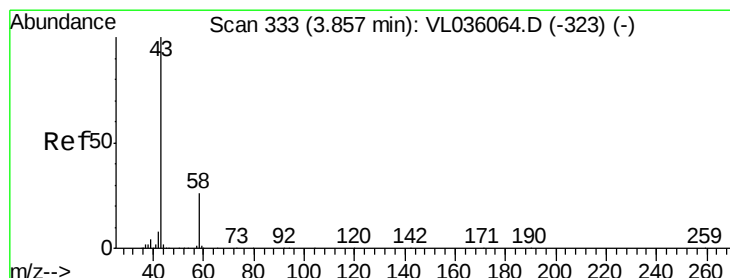
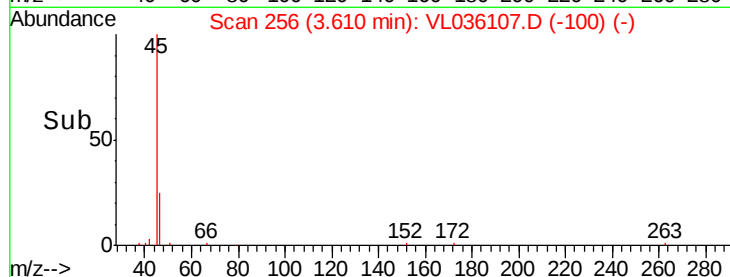
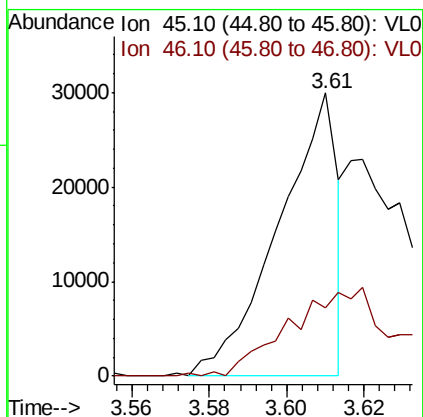
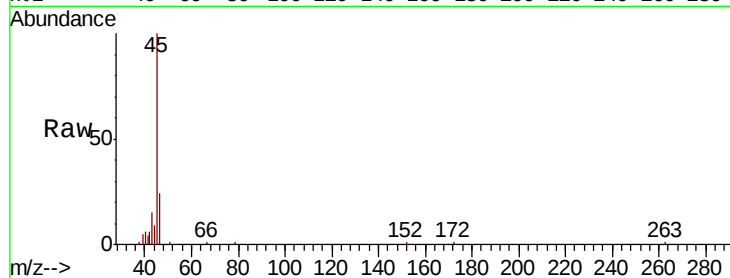




#13
Ethanol
Concen: 3.424 ppbv
RT: 3.61 min Scan# 256
Delta R.T. 0.00 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

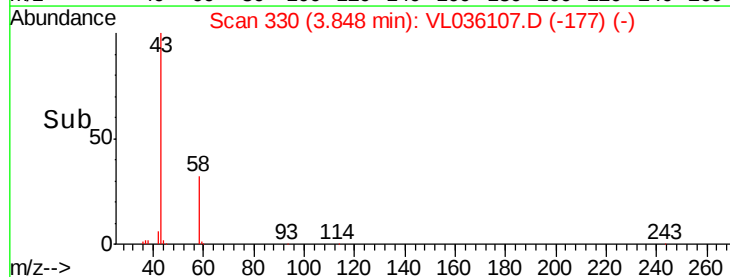
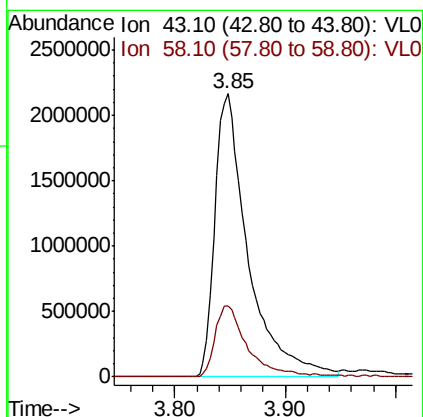
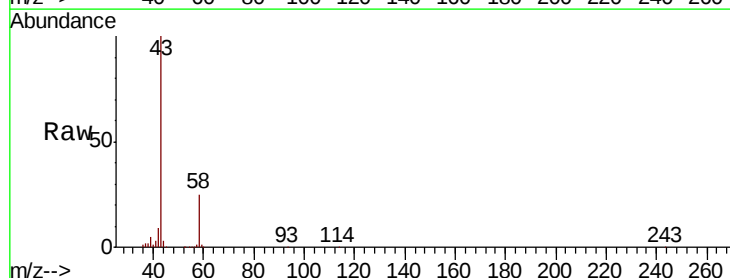
Instrument :
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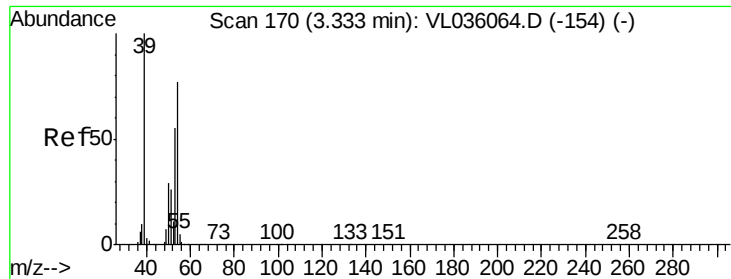
Tot Ion: 45 Resp: 31615
Ion Ratio Lower Upper
45 100
46 0.0 19.0 75.8#



#15
Acetone
Concen: 32.087 ppbv
RT: 3.85 min Scan# 330
Delta R.T. -0.01 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

Tgt Ion: 43 Resp: 4518595
Ion Ratio Lower Upper
43 100
58 25.7 20.9 31.3





#16

1,3-Butadiene

Concen: 3.091 ppbv

RT: 3.36 min Scan# 177

Delta R.T. 0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

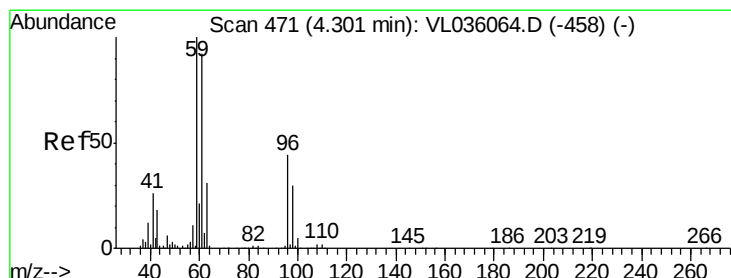
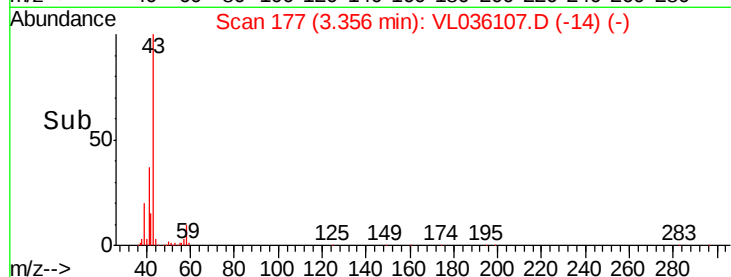
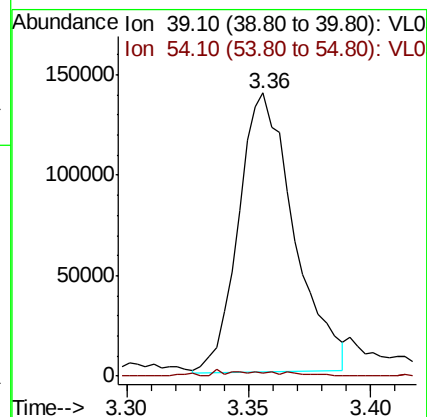
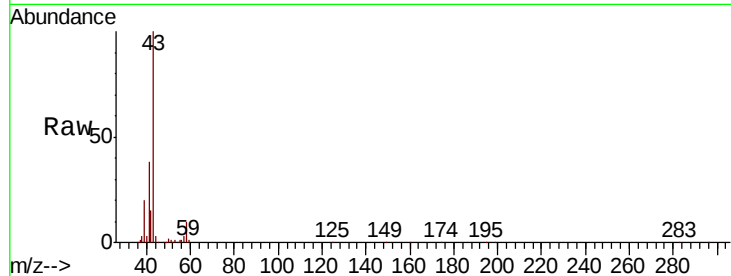
IA-4DL

Tot Ion: 39 Resp: 219226

Ion Ratio Lower Upper

39 100

54 2.7 62.1 93.1#



#17

tert-Butyl alcohol

Concen: 0.089 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.01 min

Lab File: VL036107.D

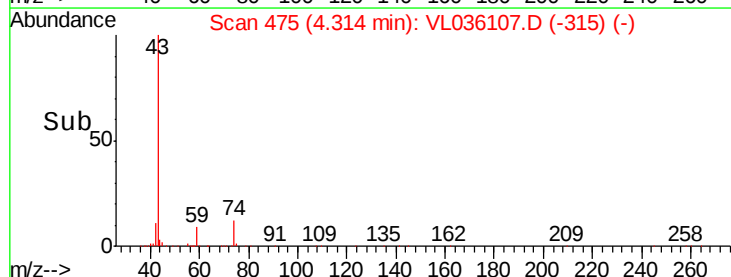
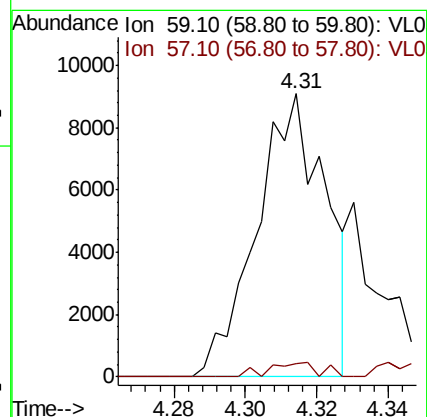
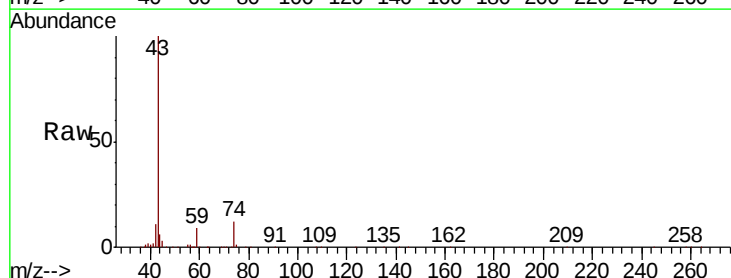
Acq: 8 Dec 2020 23:05

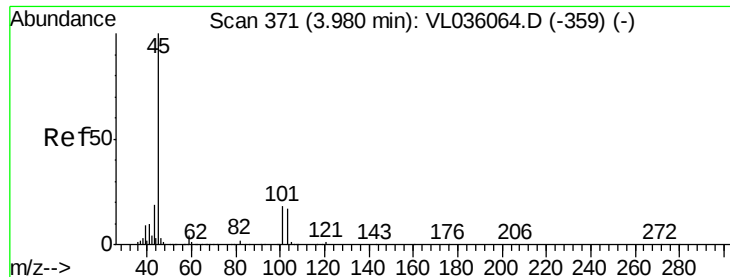
Tgt Ion: 59 Resp: 12206

Ion Ratio Lower Upper

59 100

57 0.0 8.7 13.1#



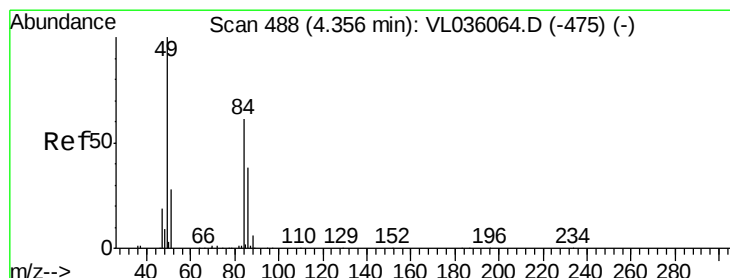
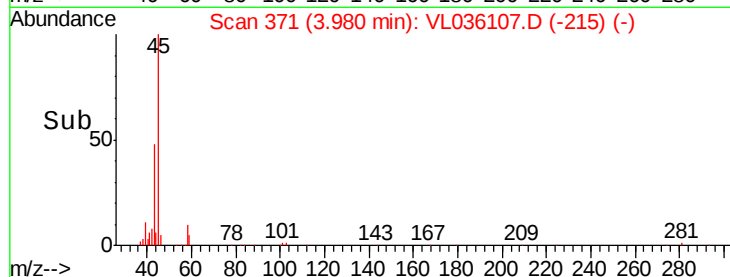
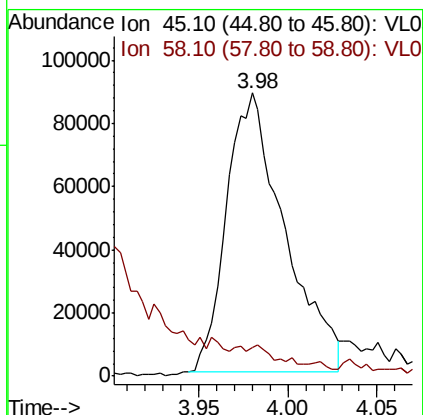
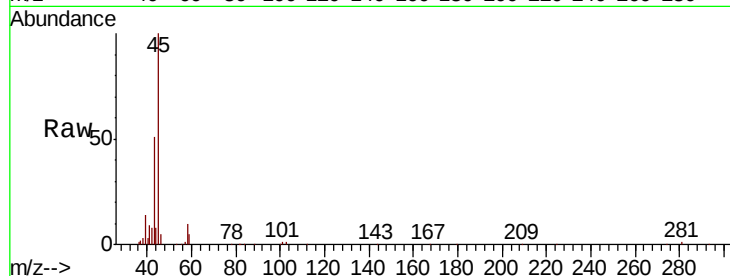


#19

Isopropyl Alcohol
 Concen: 2.328 ppbv
 RT: 3.98 min Scan# 371
 Delta R.T. 0.00 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Instrument :
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 ClientSampleId :
 IA-4DL

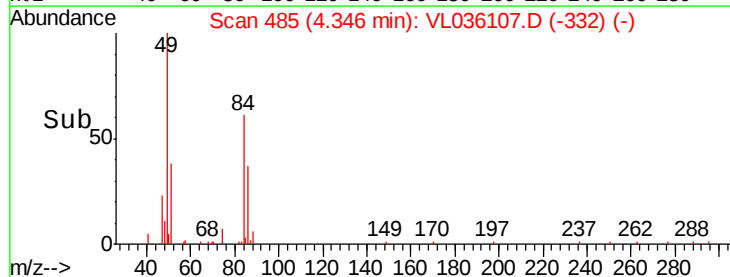
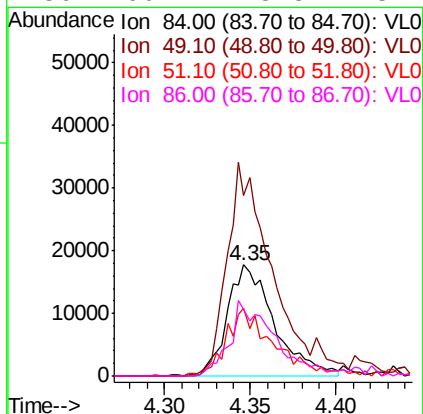
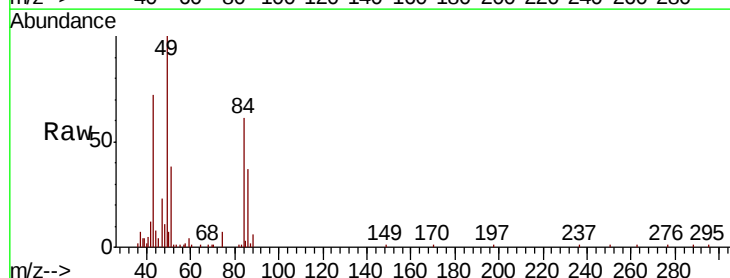
Tot Ion: 45 Resp: 200383
 Ion Ratio Lower Upper
 45 100
 58 0.0 0.0 0.0

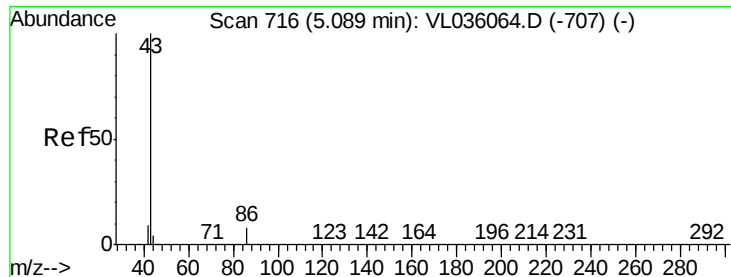


#20

Methylene Chloride
 Concen: 0.581 ppbv
 RT: 4.35 min Scan# 485
 Delta R.T. -0.01 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Tgt Ion: 84 Resp: 33552
 Ion Ratio Lower Upper
 84 100
 49 161.7 133.0 199.4
 51 59.5 38.9 58.3#
 86 60.1 48.8 73.2

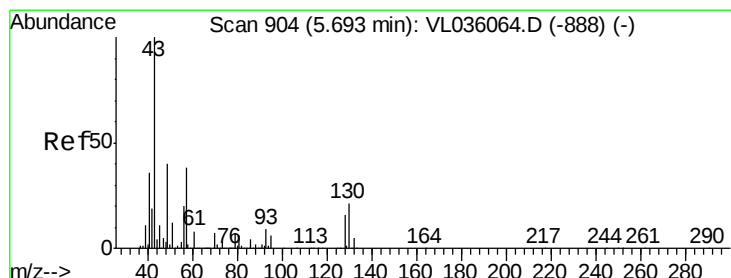
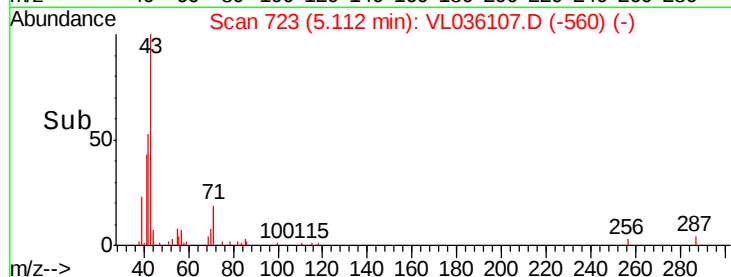
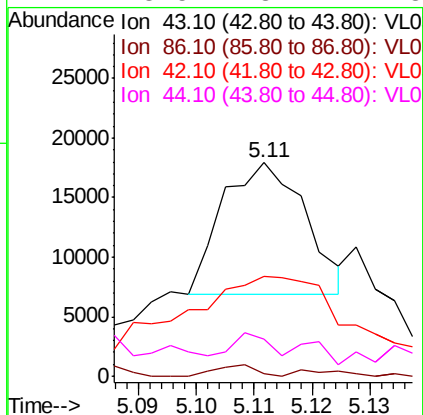
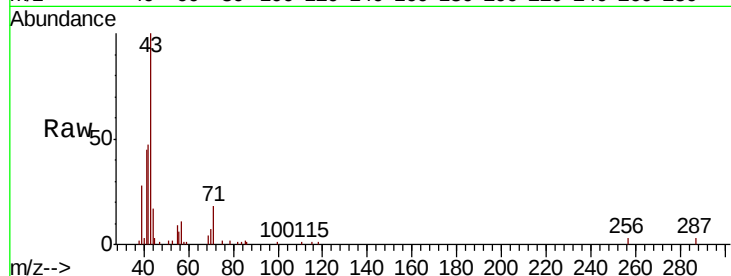




#23
 Vinyl Acetate
 Concen: 0.059 ppbv
 RT: 5.11 min Scan# 723
 Delta R.T. 0.02 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

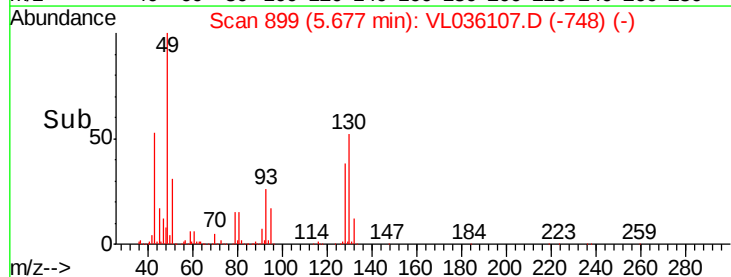
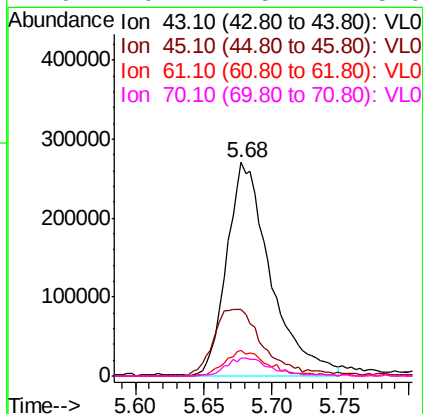
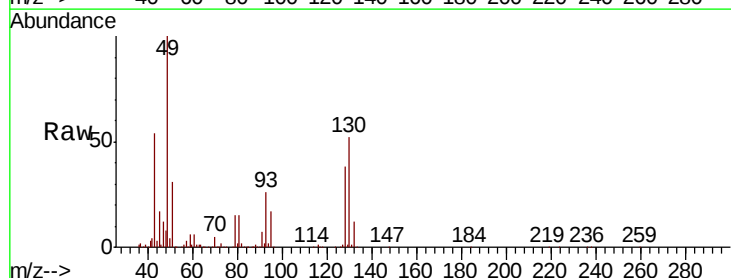
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 ClientSampleID :
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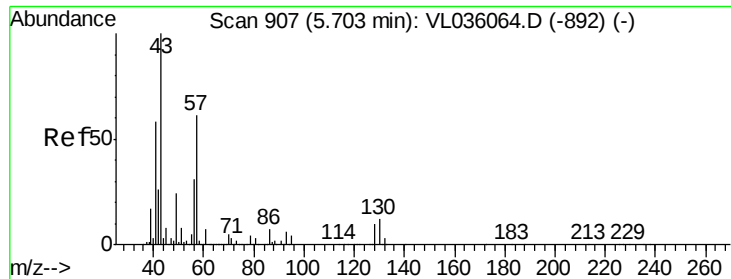
Tot Ion:	43	Resp:	11044
Ion	Ratio	Lower	Upper
43	100		
86	2.2	5.0	7.4#
42	37.2	7.8	11.6#
44	18.5	3.2	4.8#



#25
 Ethyl Acetate
 Concen: 2.129 ppbv
 RT: 5.68 min Scan# 899
 Delta R.T. -0.02 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Tgt Ion:	43	Resp:	598832
Ion	Ratio	Lower	Upper
43	100		
45	37.5	8.2	12.4#
61	12.2	7.4	11.2#
70	9.1	5.4	8.0#

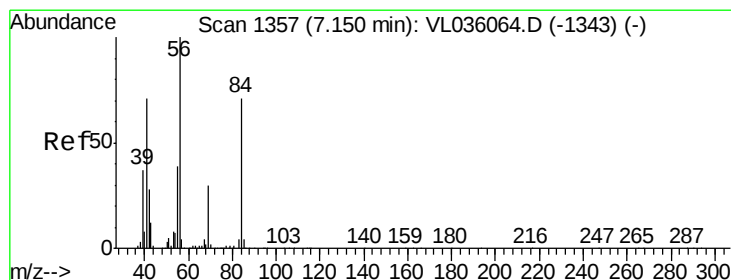
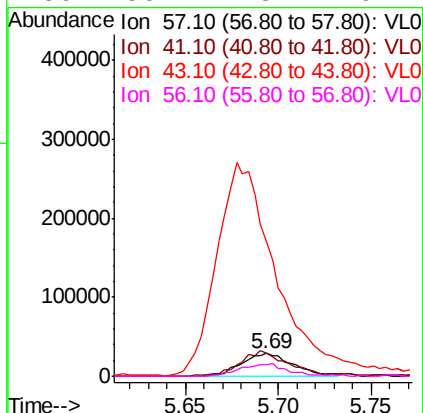
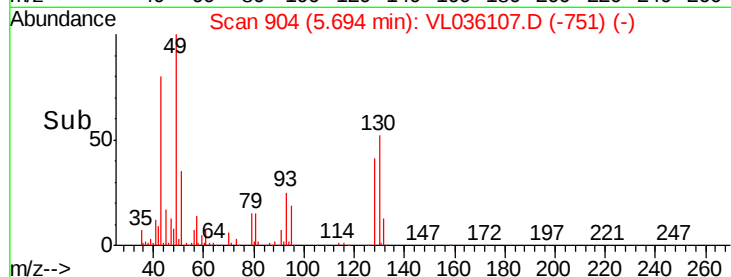
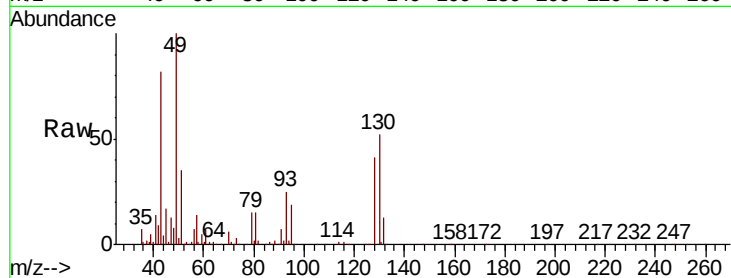




#26
Hexane
Concen: 0.440 ppbv
RT: 5.69 min Scan# 904
Delta R.T. -0.01 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

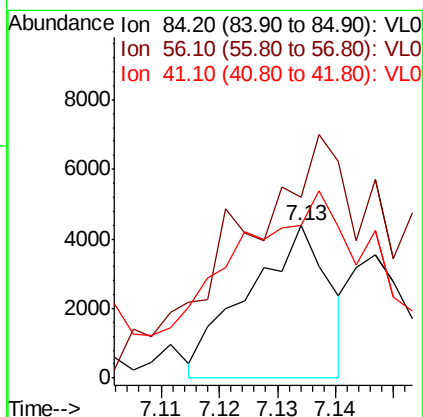
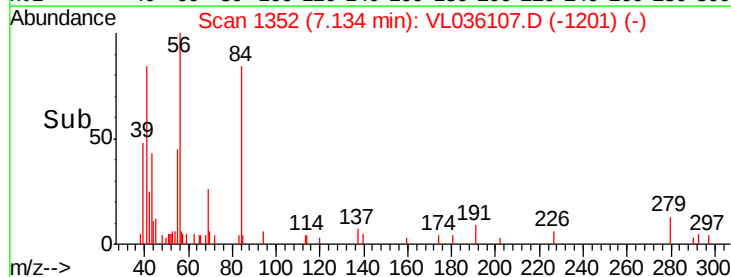
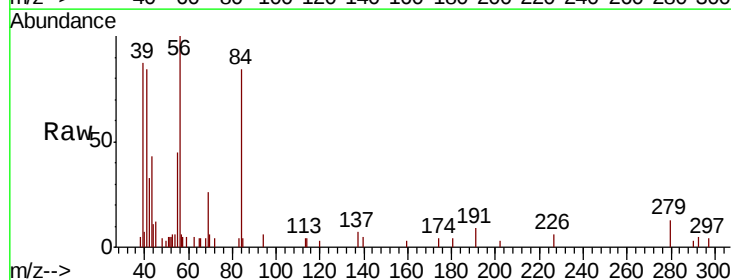
Instrument :
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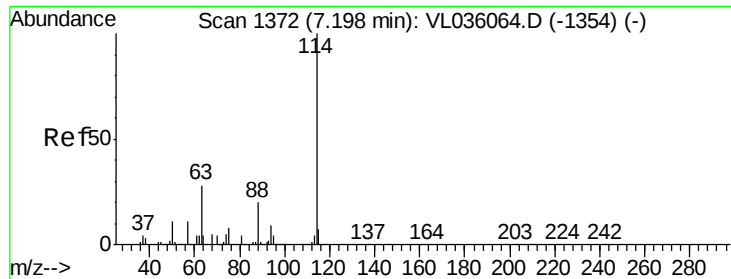
Tot Ion: 57 Resp: 55726
Ion Ratio Lower Upper
57 100
41 115.3 82.9 124.3
43 1119.2 199.9 299.9#
56 56.4 43.1 64.7



#30
Cyclohexane
Concen: 0.045 ppbv
RT: 7.13 min Scan# 1352
Delta R.T. -0.02 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

Tgt Ion: 84 Resp: 4221
Ion Ratio Lower Upper
84 100
56 0.0 128.0 192.0#
41 338.6 81.3 121.9#

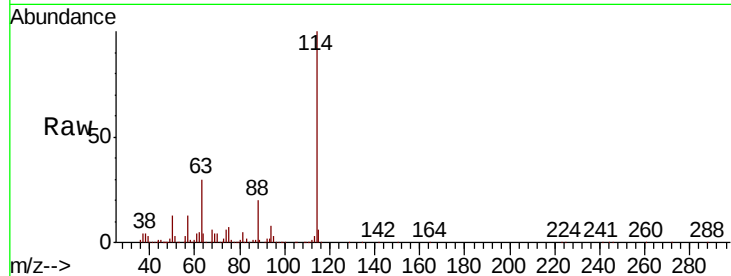




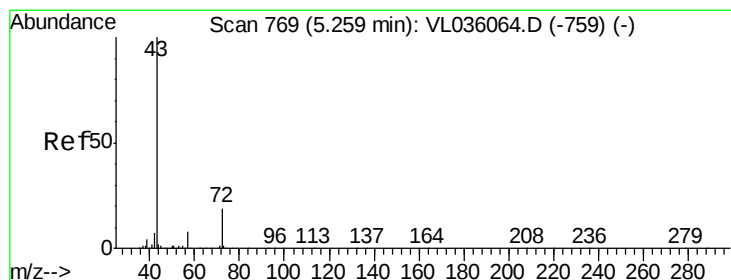
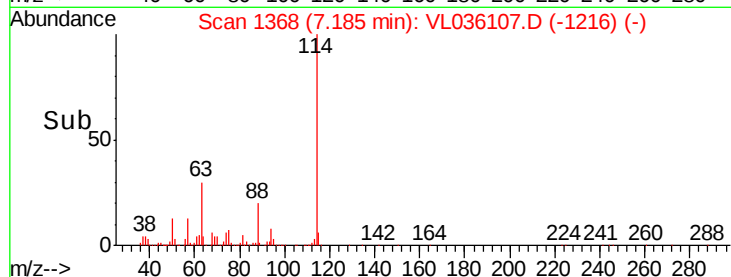
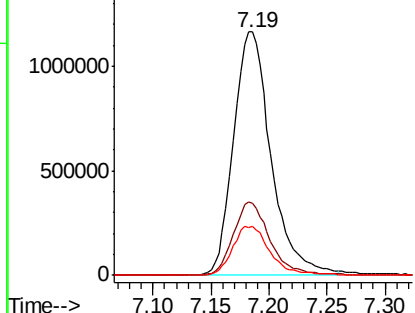
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.19 min Scan# 1368
 Delta R.T. -0.01 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-4DL

Tot Ion:114 Resp: 2609179
 Ion Ratio Lower Upper
 114 100
 63 29.8 23.6 35.4
 88 20.4 15.8 23.6

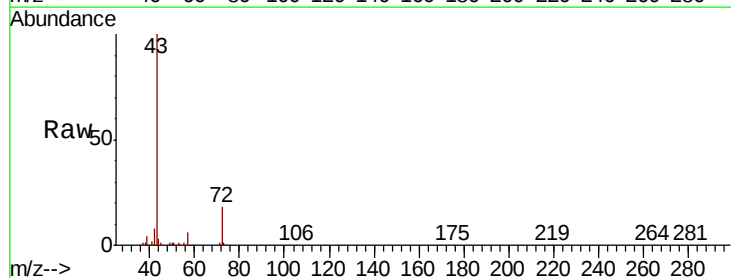


Abundance Ion 114.10 (113.80 to 114.80): VL0
 Ion 63.10 (62.80 to 63.80): VL0
 Ion 88.10 (87.80 to 88.80): VL0

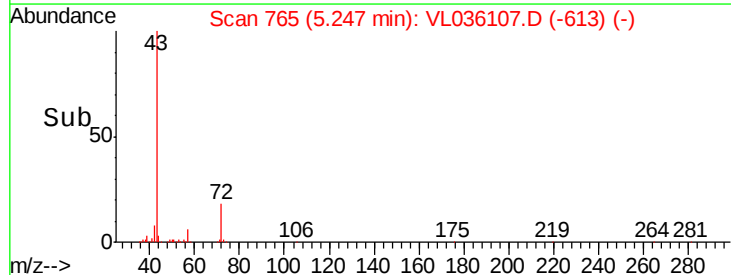
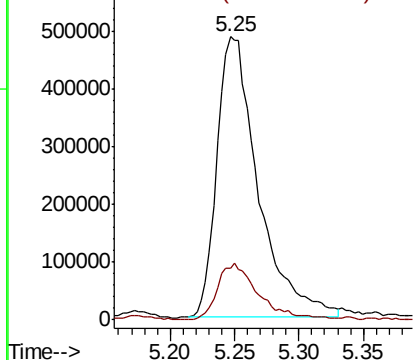


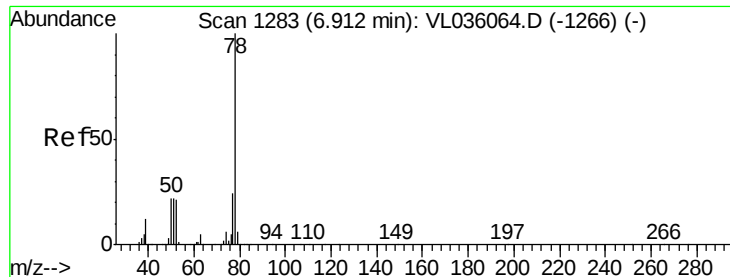
#34
 2-Butanone
 Concen: 6.274 ppbv
 RT: 5.25 min Scan# 765
 Delta R.T. -0.01 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Tgt Ion: 43 Resp: 1085808
 Ion Ratio Lower Upper
 43 100
 72 20.5 16.5 24.7



Abundance Ion 43.10 (42.80 to 43.80): VL0
 Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.066 ppbv

RT: 6.90 min Scan# 1278

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

IA-4DL

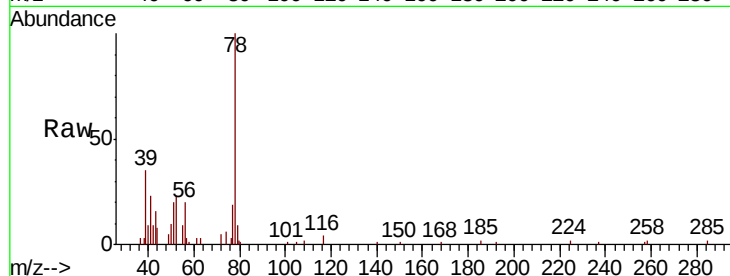
Tot Ion: 78 Resp: 14484

Ion Ratio Lower Upper

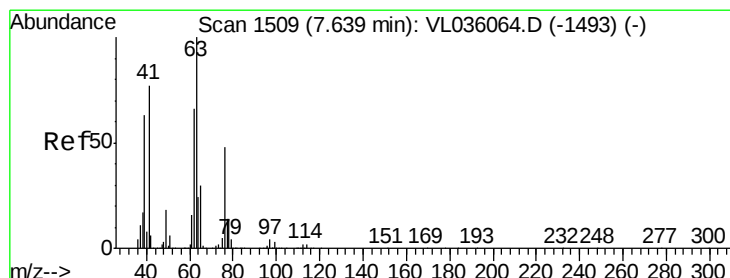
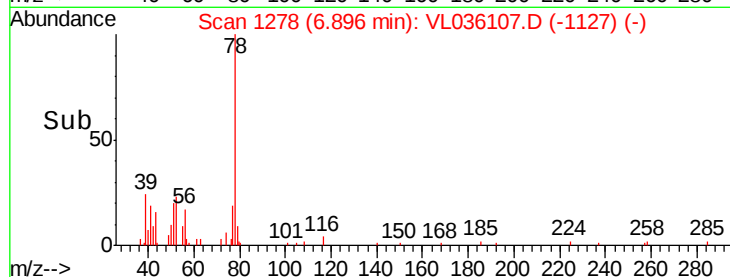
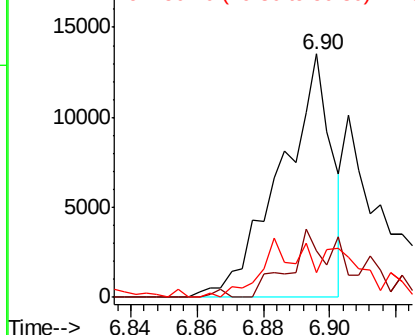
78 100

77 19.1 19.4 29.2#

50 10.2 17.8 26.8#



Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0



#39

1,2-Dichloropropane

Concen: 8.665 ppbv

RT: 7.18 min Scan# 1367

Delta R.T. -0.46 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

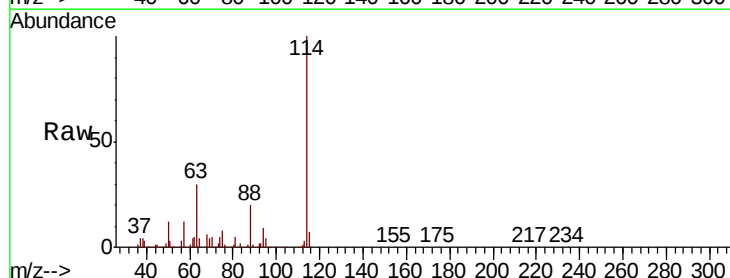
Tgt Ion: 63 Resp: 756653

Ion Ratio Lower Upper

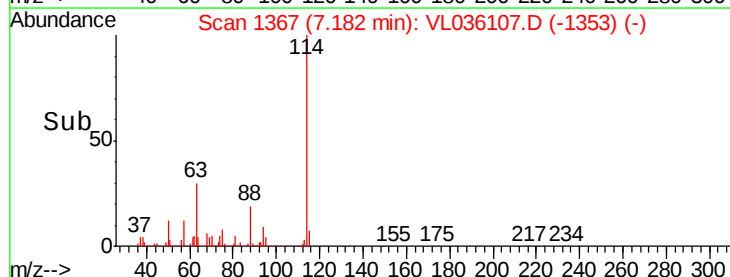
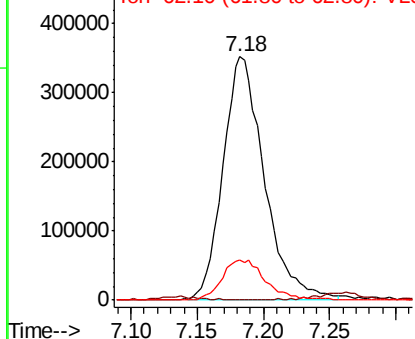
63 100

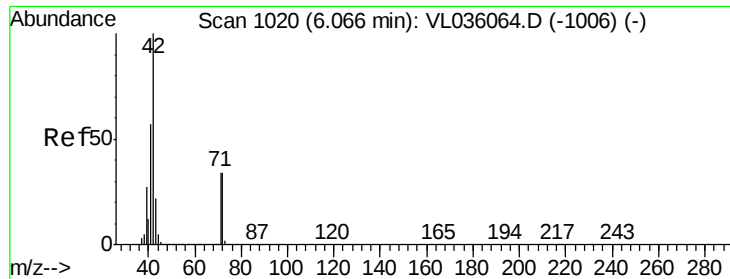
41 0.0 61.9 92.9#

62 16.2 52.5 78.7#



Abundance Ion 63.10 (62.80 to 63.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 62.10 (61.80 to 62.80): VL0





#41

Tetrahydrofuran

Concen: 1.491 ppbv

RT: 6.06 min Scan# 1019

Delta R.T. -0.00 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

IA-4DL

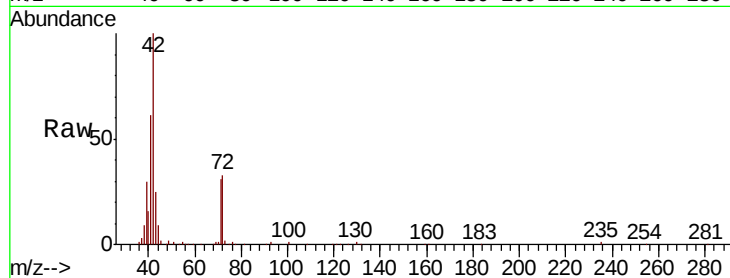
Tot Ion: 42 Resp: 153272

Ion Ratio Lower Upper

42 100

72 36.6 28.3 42.5

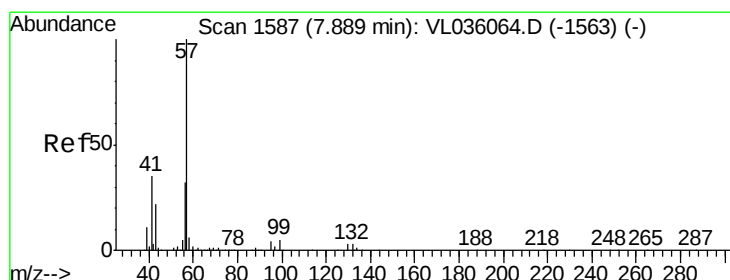
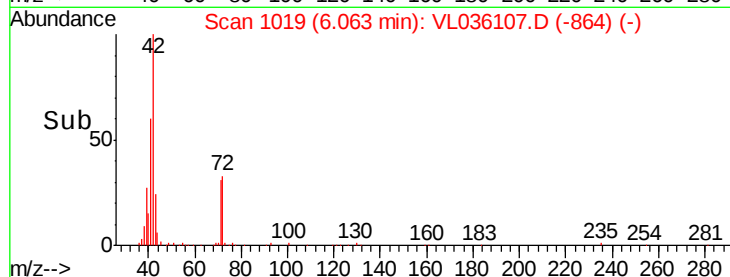
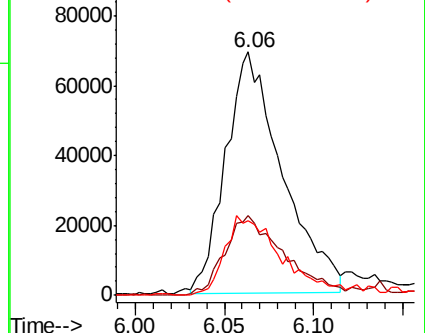
71 36.6 27.3 40.9



Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0



#44

2,2,4-Trimethylpentane

Concen: 0.575 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

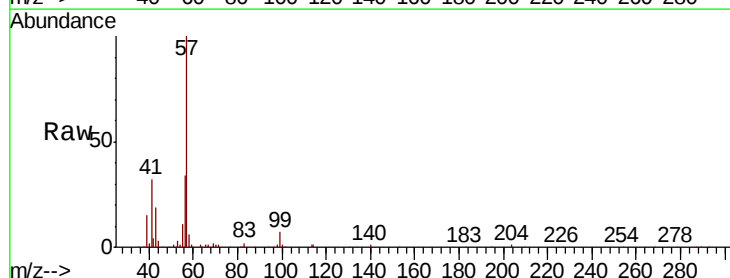
Tgt Ion: 57 Resp: 230248

Ion Ratio Lower Upper

57 100

41 56.7 28.9 43.3#

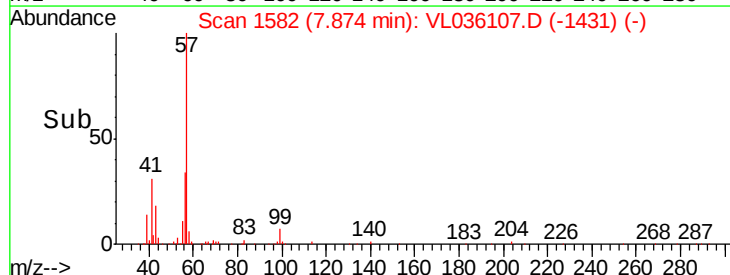
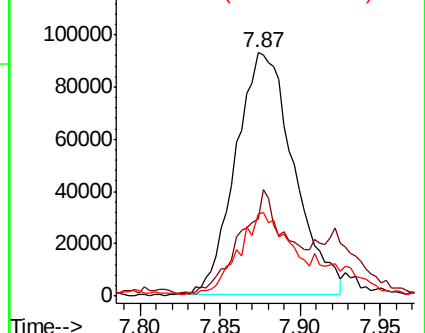
56 43.6 25.3 37.9#

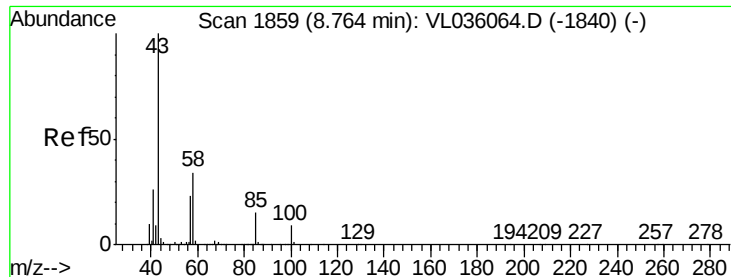


Abundance Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 56.10 (55.80 to 56.80): VL0

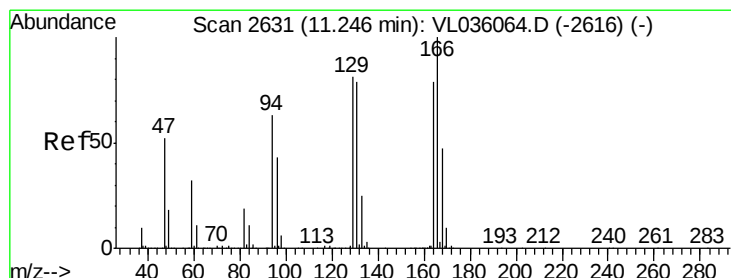
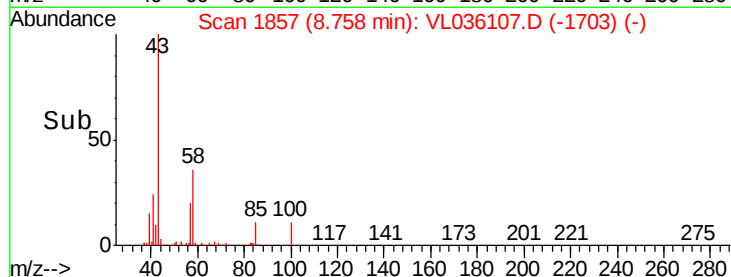
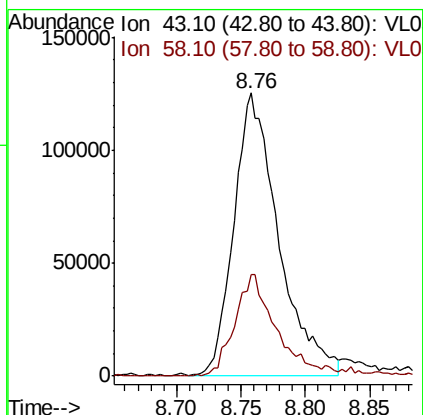
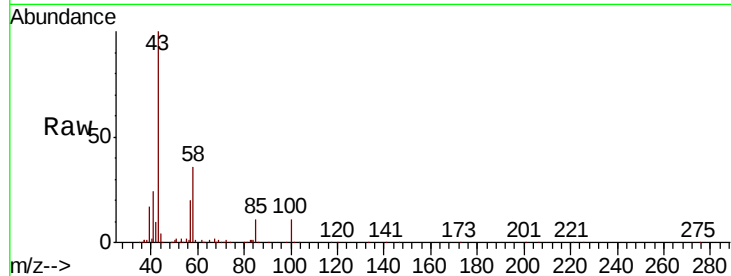




#50
4-Methyl-2-Pentanone
Concen: 1.166 ppbv
RT: 8.76 min Scan# 1857
Delta R.T. -0.01 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

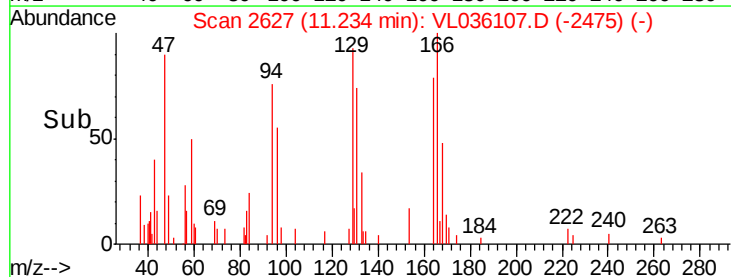
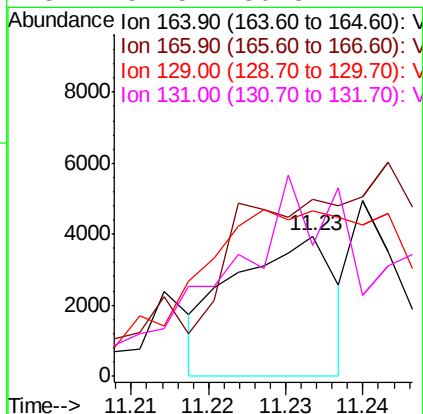
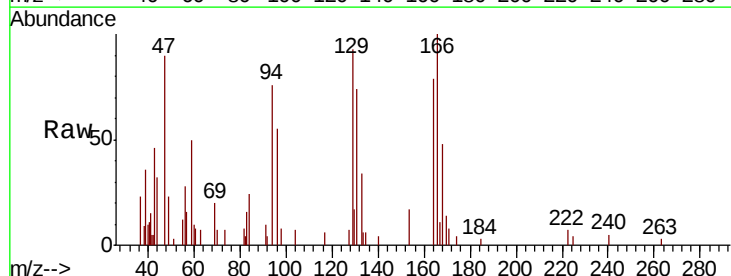
Instrument :
MSVOA_L
ClientSampleID :
IA-4DL

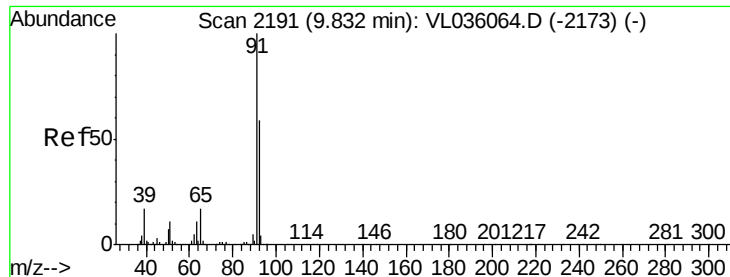
Tot Ion: 43 Resp: 300986
Ion Ratio Lower Upper
43 100
58 35.4 27.4 41.2



#52
Tetrachloroethene
Concen: 0.044 ppbv
RT: 11.23 min Scan# 2627
Delta R.T. -0.01 min
Lab File: VL036107.D
Acq: 8 Dec 2020 23:05

Tgt Ion:164 Resp: 3562
Ion Ratio Lower Upper
164 100
166 170.5 101.9 152.9#
129 89.2 82.1 123.1
131 52.5 80.8 121.2#





#53

Toluene

Concen: 19.134 ppbv

RT: 9.82 min Scan# 2186

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

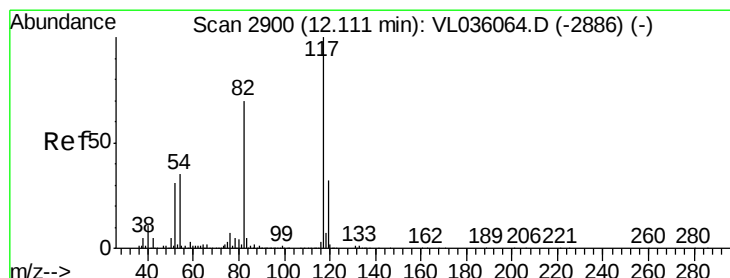
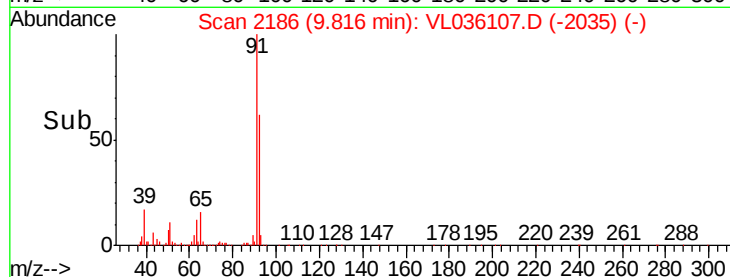
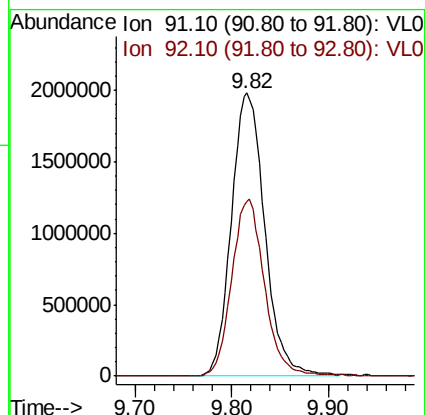
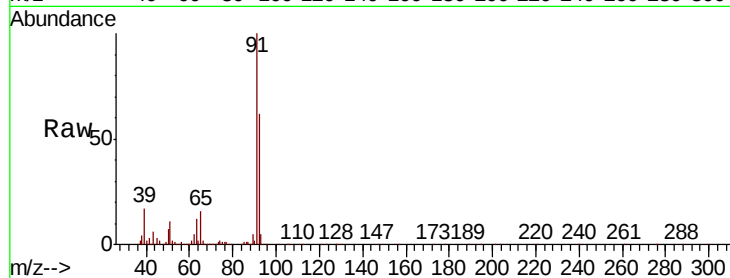
IA-4DL

Tot Ion: 91 Resp: 4750881

Ion Ratio Lower Upper

91 100

92 61.7 48.2 72.2



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.10 min Scan# 2896

Delta R.T. -0.01 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

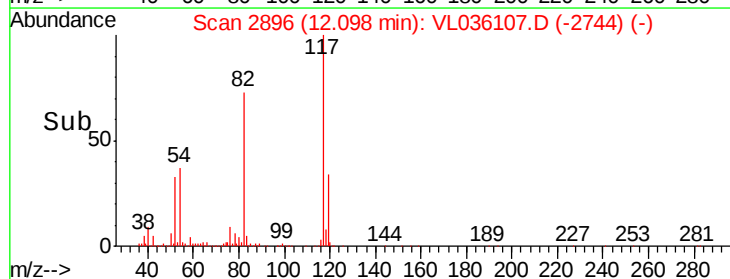
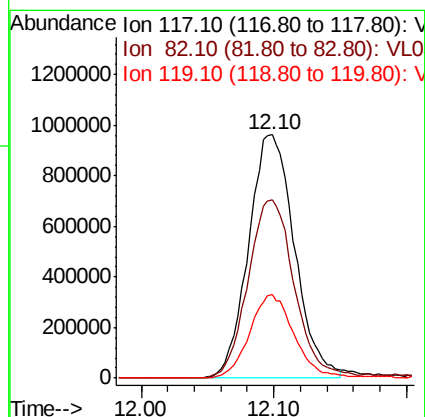
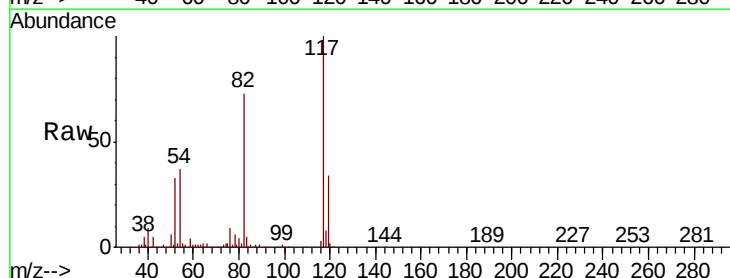
Tgt Ion: 117 Resp: 2317308

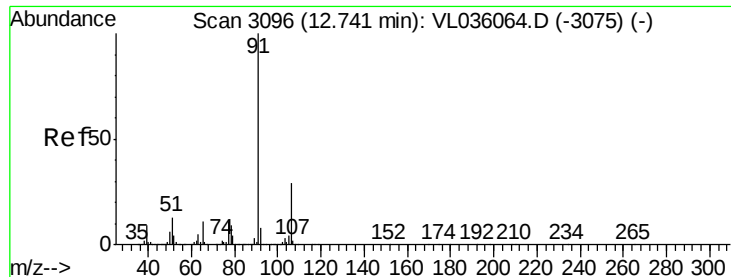
Ion Ratio Lower Upper

117 100

82 75.9 0.0 0.0#

119 33.8 0.0 0.0#





#58

Ethyl Benzene

Concen: 0.947 ppbv

RT: 12.73 min Scan# 3091

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

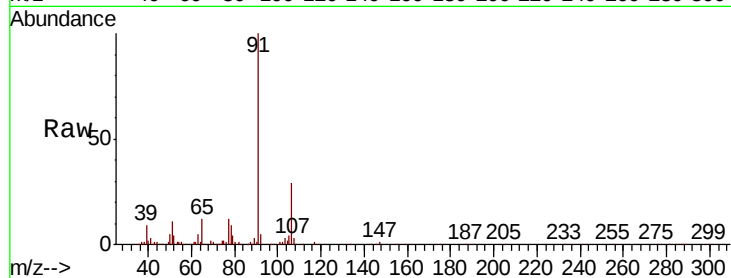
IA-4DL

Tot Ion: 91 Resp: 300663

Ion Ratio Lower Upper

91 100

106 29.2 23.0 34.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.73

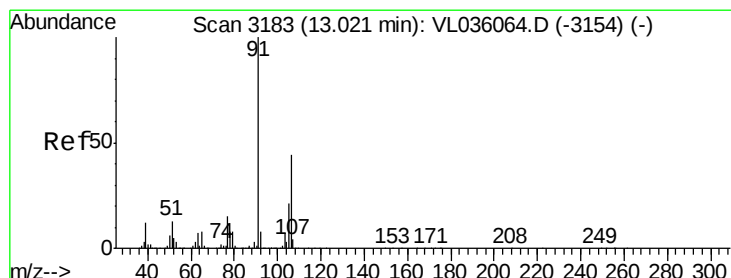
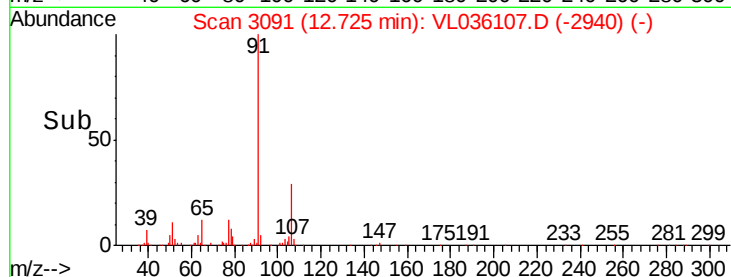
150000

100000

50000

0

Time-->



#59

m/p-Xylene

Concen: 3.599 ppbv

RT: 12.98 min Scan# 3169

Delta R.T. -0.04 min

Lab File: VL036107.D

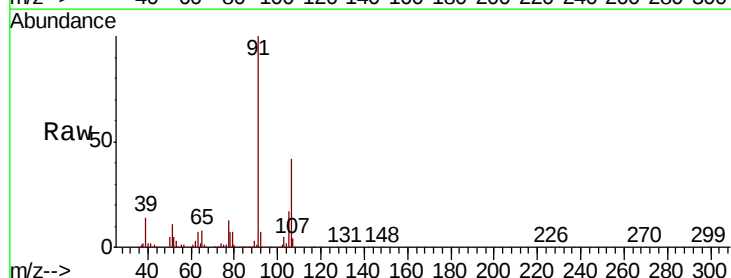
Acq: 8 Dec 2020 23:05

Tgt Ion: 91 Resp: 962654

Ion Ratio Lower Upper

91 100

106 43.0 33.6 50.4



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

12.98

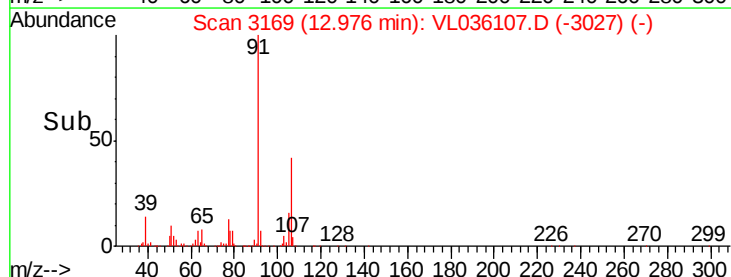
300000

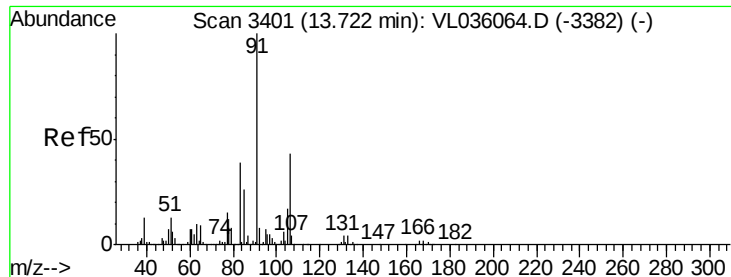
200000

100000

0

Time-->





#60

o-Xylene

Concen: 1.279 ppbv

RT: 13.70 min Scan# 3395

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

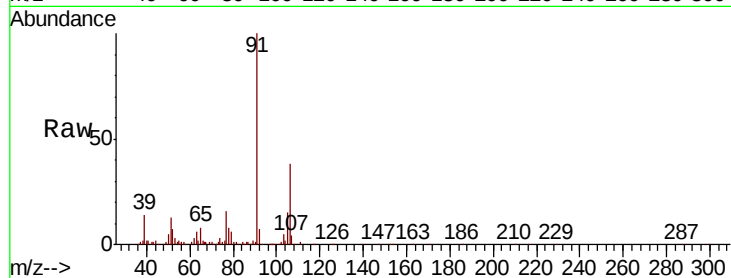
IA-4DL

Tot Ion: 91 Resp: 322196

Ion Ratio Lower Upper

91 100

106 41.0 21.6 64.6



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V

13.70

150000

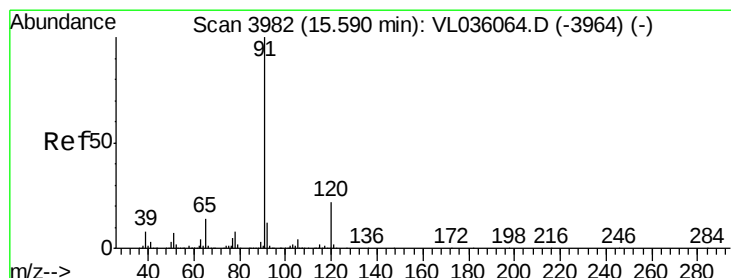
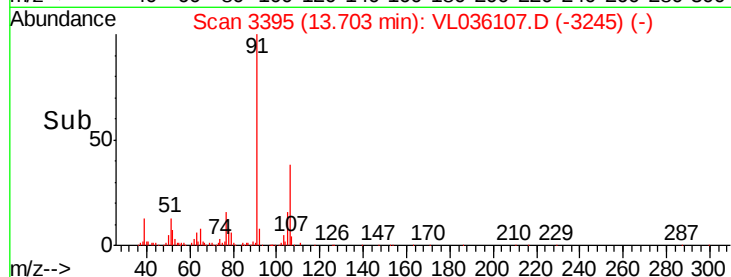
100000

50000

0

13.65 13.70 13.75

Time-->



#64

n-propylbenzene

Concen: 0.050 ppbv

RT: 15.57 min Scan# 3977

Delta R.T. -0.02 min

Lab File: VL036107.D

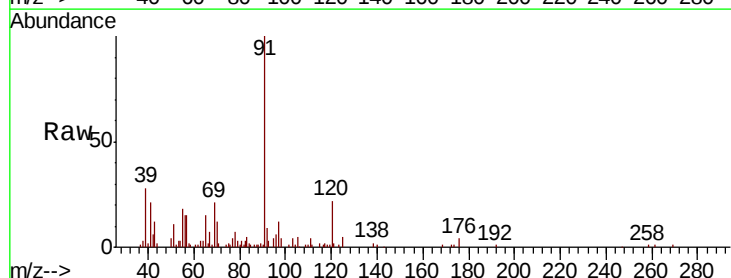
Acq: 8 Dec 2020 23:05

Tgt Ion:120 Resp: 4492

Ion Ratio Lower Upper

120 100

91 0.0 388.9 583.3#



Abundance Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

40000

30000

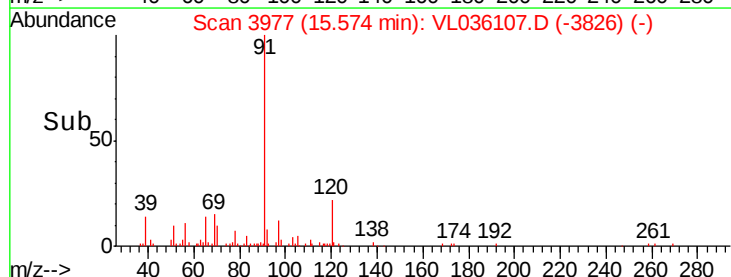
20000

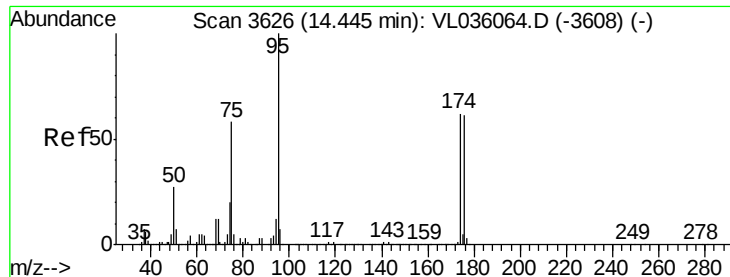
10000

0

15.56 15.57 15.58

Time-->

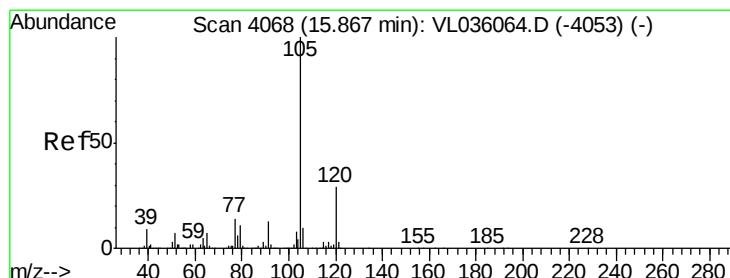
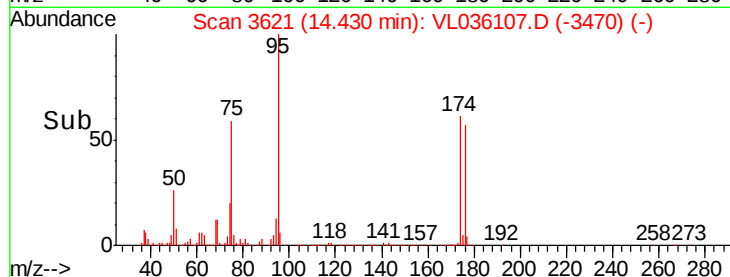
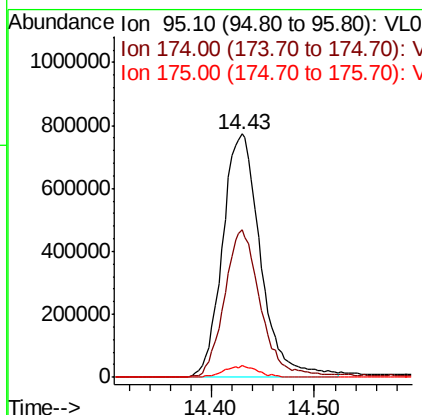
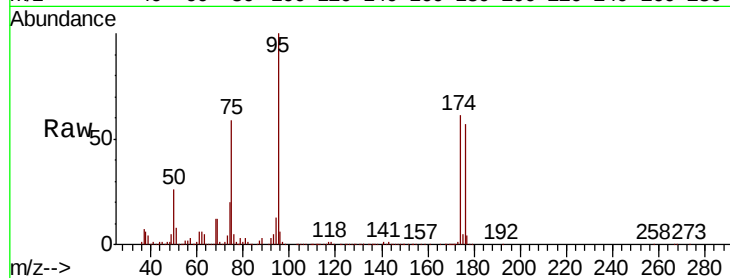




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.684 ppbv
 RT: 14.43 min Scan# 3621
 Delta R.T. -0.02 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

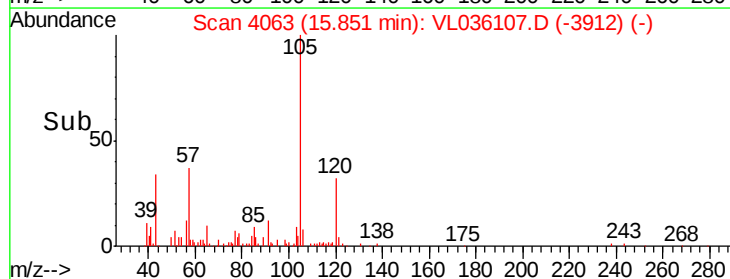
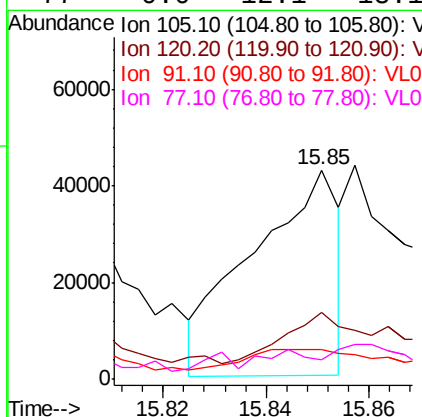
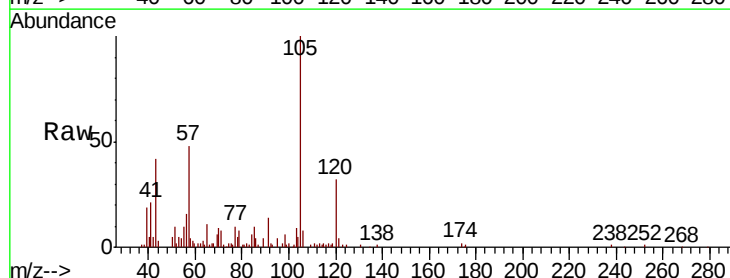
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-4DL

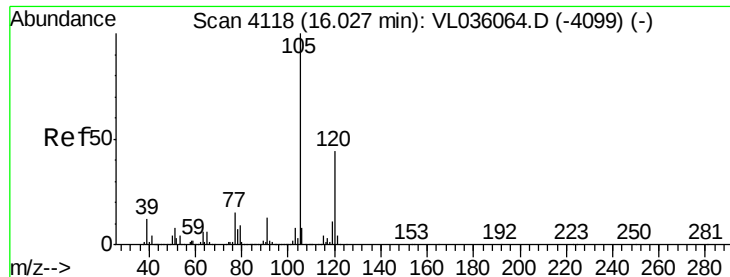
Tot Ion: 95 Resp: 1965927
 Ion Ratio Lower Upper
 95 100
 174 58.7 50.7 76.1
 175 4.4 4.0 6.0



#72
 4-Ethyltoluene
 Concen: 0.183 ppbv
 RT: 15.85 min Scan# 4063
 Delta R.T. -0.02 min
 Lab File: VL036107.D
 Acq: 8 Dec 2020 23:05

Tgt Ion: 105 Resp: 49885
 Ion Ratio Lower Upper
 105 100
 120 53.5 23.6 35.4#
 91 27.5 11.4 17.0#
 77 0.0 12.1 18.1#





#73

1,3,5-Trimethylbenzene

Concen: 0.179 ppbv

RT: 16.01 min Scan# 4112

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Instrument :

MSVOA_L

ClientSampleId :

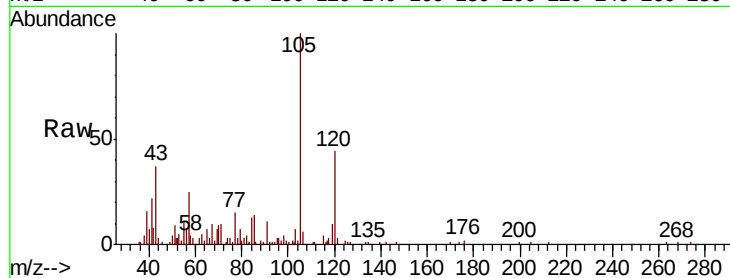
IA-4DL

Tot Ion:105 Resp: 46658

Ion Ratio Lower Upper

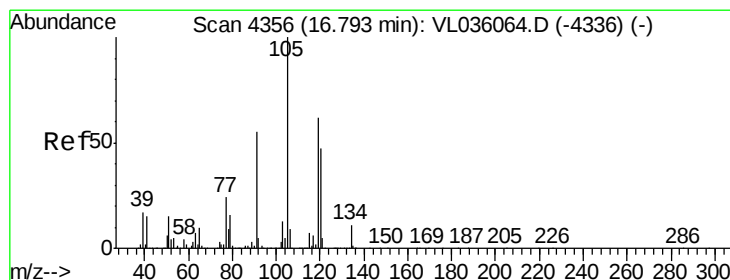
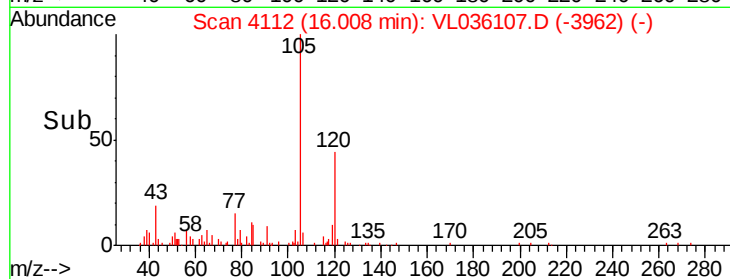
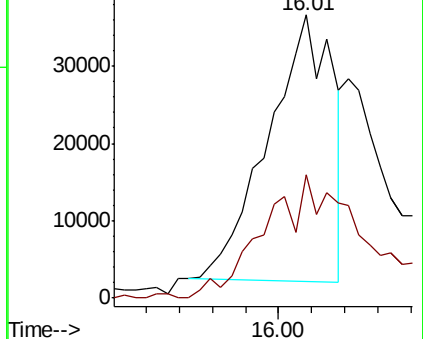
105 100

120 47.0 35.4 53.2



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.428 ppbv

RT: 16.77 min Scan# 4350

Delta R.T. -0.02 min

Lab File: VL036107.D

Acq: 8 Dec 2020 23:05

Tgt Ion:105 Resp: 111932

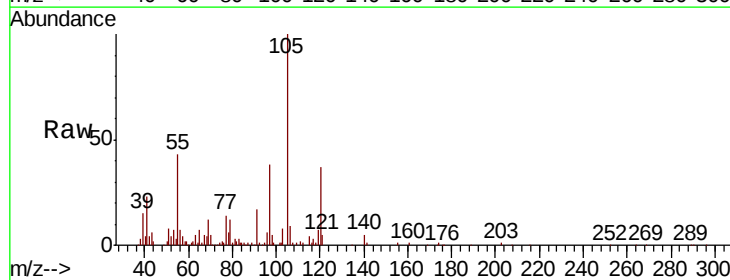
Ion Ratio Lower Upper

105 100

120 36.5 37.4 56.0#

91 16.0 45.6 68.4#

77 13.1 19.4 29.2#



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0

