

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL091420\
 Data File : VL035607.D
 Acq On : 14 Sep 2020 20:24
 Operator : SY/AP
 Sample : L3983-03DL40X
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-9DL

Quant Time: Sep 15 06:42:33 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL082720AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Sep 14 15:19:50 2020
 QLast Update : Mon Sep 14 15:19:50 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.66	49	1070769	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.17	114	4563881	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.09	117	4581258	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.42	95	3435545	10.56	ppbv	-0.01
Spiked Amount	10.000	Range	65 - 135	Recovery	=	105.60%

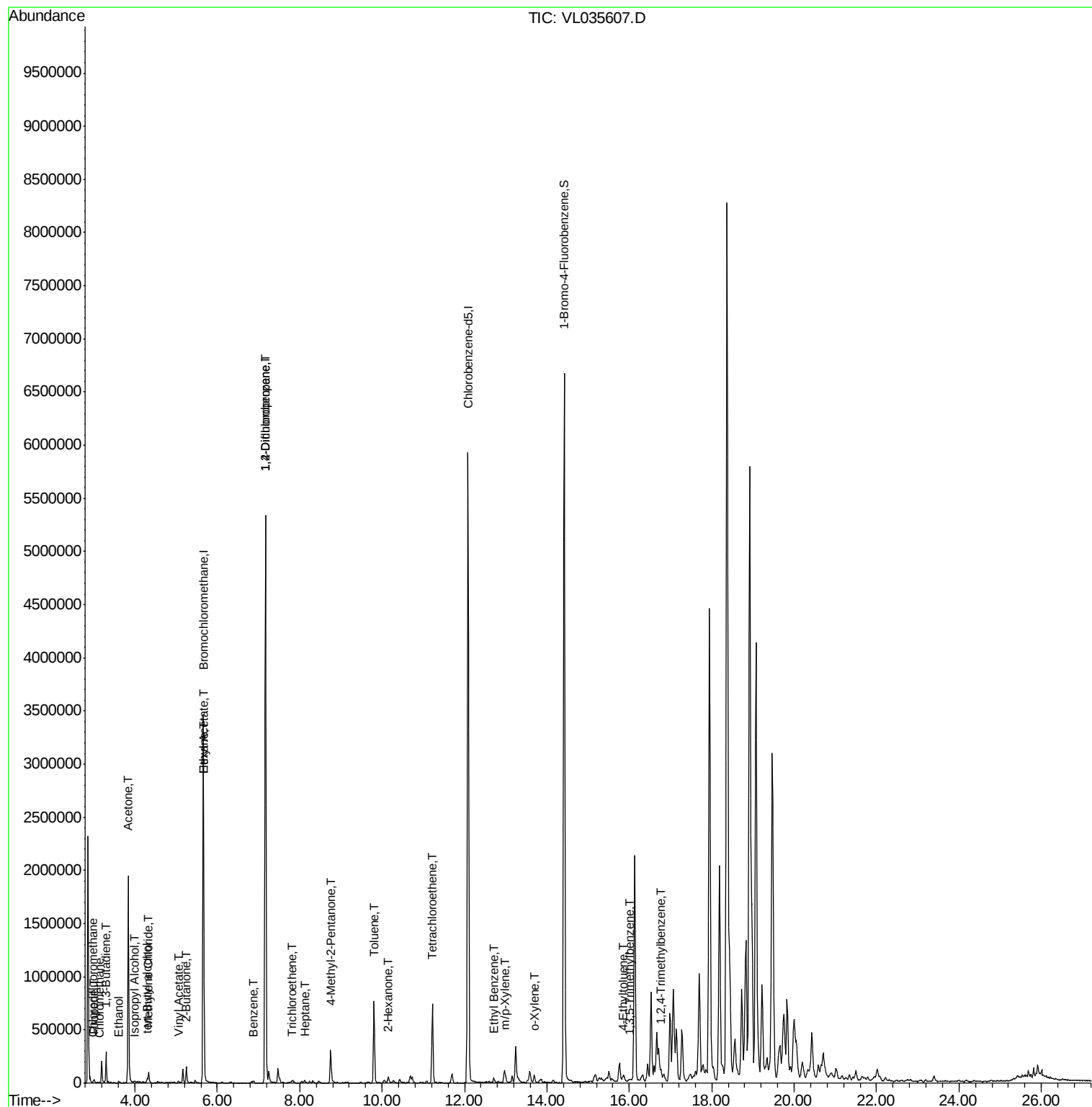
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
3) Chlorodifluoromethane	2.98	51	9113	0.077	ppbv	92
4) Chloromethane	3.13	50	2187	0.034	ppbv #	82
9) Propene	3.00	41	13835	0.303	ppbv	87
10) Heptane	8.12	43	4608	0.038	ppbv #	59
13) Ethanol	3.61	45	14768	1.305	ppbv	97
15) Acetone	3.83	43	1880352	15.922	ppbv	96
16) 1,3-Butadiene	3.30	39	57328	1.304	ppbv #	3
17) tert-Butyl alcohol	4.30	59	35926	0.250	ppbv	99
19) Isopropyl Alcohol	3.98	45	11355	0.161	ppbv #	93
20) Methylene Chloride	4.33	84	39343	0.447	ppbv	96
23) Vinyl Acetate	5.06	43	10724	0.071	ppbv #	80
25) Ethyl Acetate	5.68	43	12195	0.058	ppbv #	78
26) Hexane	5.68	57	18542	0.157	ppbv #	46
34) 2-Butanone	5.25	43	148238	1.094	ppbv	98
36) Benzene	6.89	78	14893	0.050	ppbv #	84
38) Trichloroethene	7.83	130	7380	0.043	ppbv #	89
39) 1,2-Dichloropropane	7.17	63	832931	8.346	ppbv #	32
50) 4-Methyl-2-Pentanone	8.75	43	203266	1.036	ppbv	99
51) 2-Hexanone	10.15	43	39449	0.245	ppbv #	97
52) Tetrachloroethene	11.22	164	216044	1.252	ppbv	94
53) Toluene	9.80	91	673813	1.814	ppbv	97
58) Ethyl Benzene	12.71	91	40244	0.085	ppbv	89
59) m/p-Xylene	13.00	91	30182	0.076	ppbv #	24
60) o-Xylene	13.70	91	22481	0.057	ppbv #	26
72) 4-Ethyltoluene	15.84	105	15909	0.031	ppbv #	67
73) 1,3,5-Trimethylbenzene	16.00	105	17790	0.038	ppbv	97
74) 1,2,4-Trimethylbenzene	16.77	105	79252	0.154	ppbv #	72

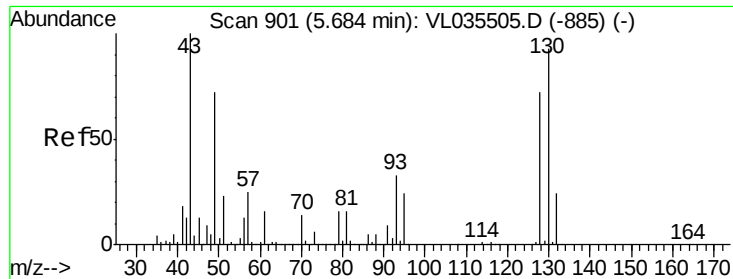
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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SV-9DL

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Sep 14 15:19:50 2020
QLast Update : Mon Sep 14 15:19:50 2020
Response via : Initial Calibration

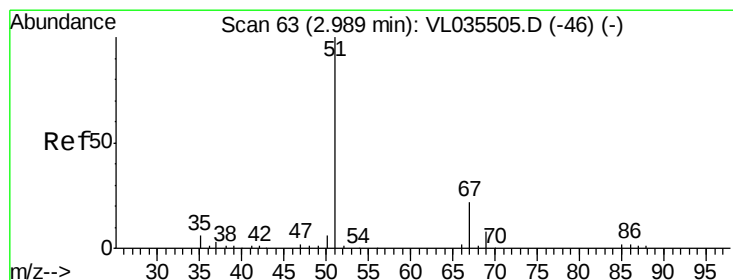
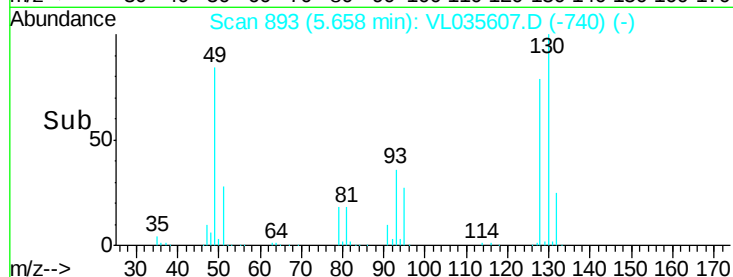
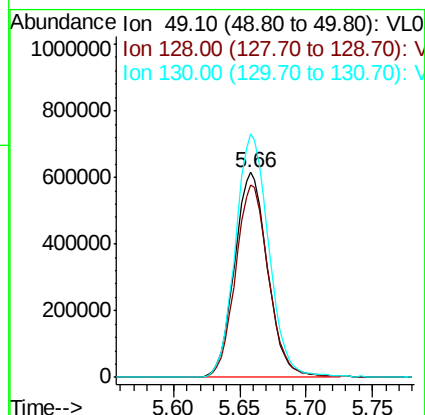
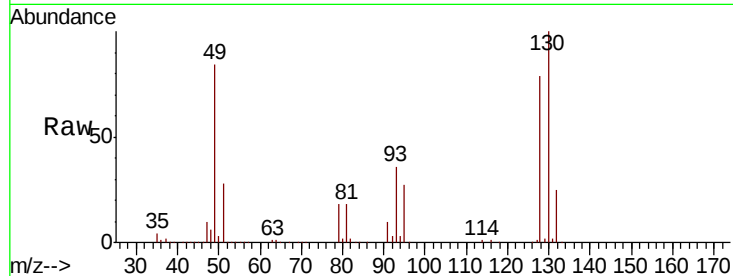




#1
Bromochloromethane
Concen: 10.000 ppbv
RT: 5.66 min Scan# 893
Delta R.T. -0.01 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

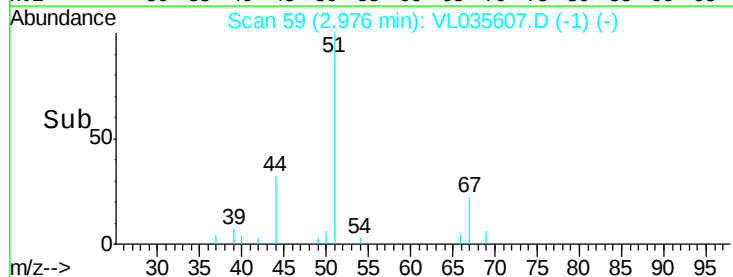
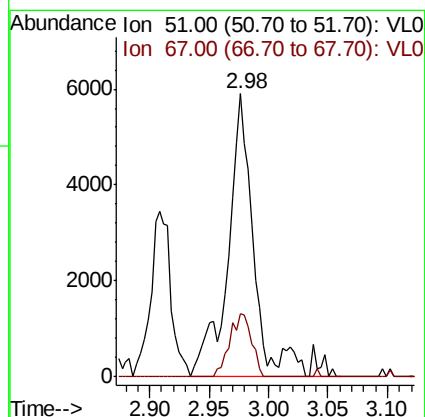
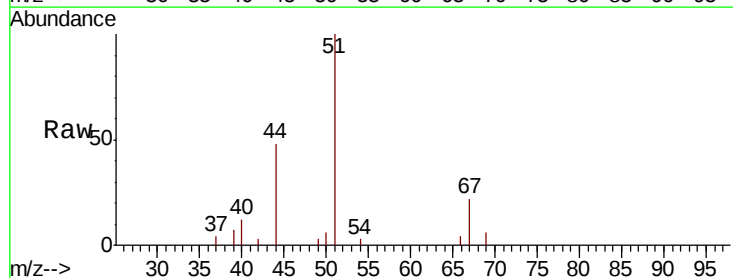
Instrument :
MSVOA_L
ClientSampleId :
SV-9DL

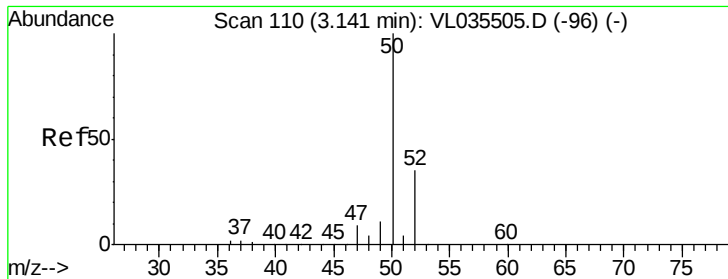
Tot Ion: 49 Resp: 1070769
Ion Ratio Lower Upper
49 100
128 94.4 50.0 150.1
130 120.3 64.4 193.2



#3
Chlorodifluoromethane
Concen: 0.077 ppbv
RT: 2.98 min Scan# 59
Delta R.T. 0.00 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

Tgt Ion: 51 Resp: 9113
Ion Ratio Lower Upper
51 100
67 18.3 17.8 26.8





#4

Chloromethane

Concen: 0.034 ppbv

RT: 3.13 min Scan# 108

Delta R.T. 0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

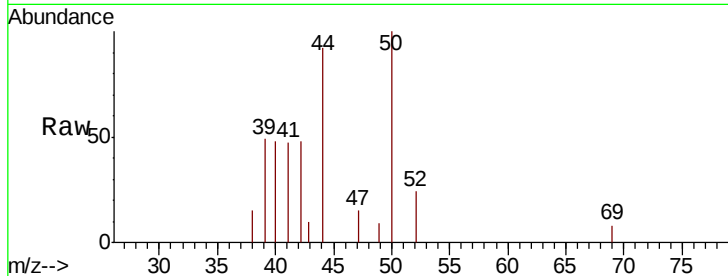
SV-9DL

Tot Ion: 50 Resp: 2187

Ion Ratio Lower Upper

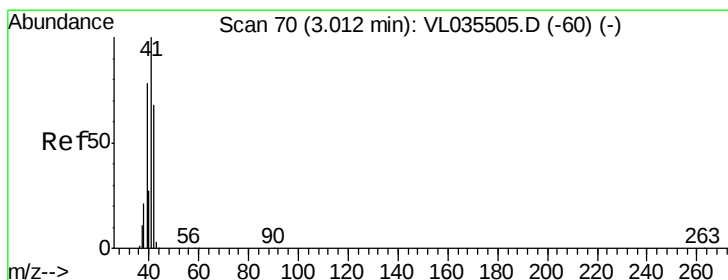
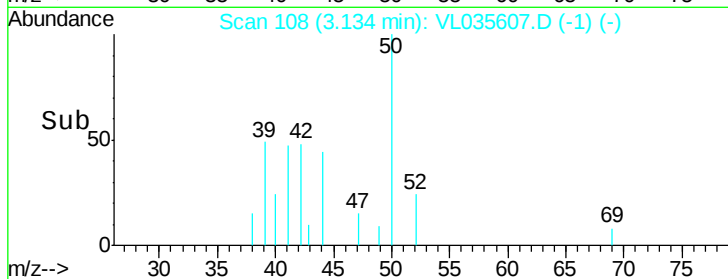
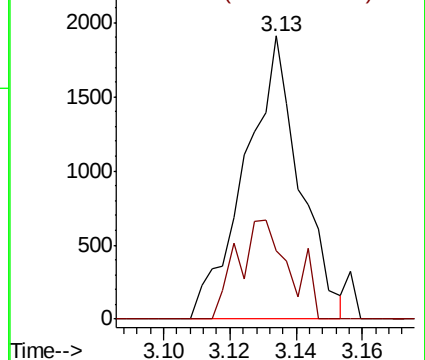
50 100

52 24.0 27.7 41.5#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0



#9

Propene

Concen: 0.303 ppbv

RT: 3.00 min Scan# 66

Delta R.T. 0.00 min

Lab File: VL035607.D

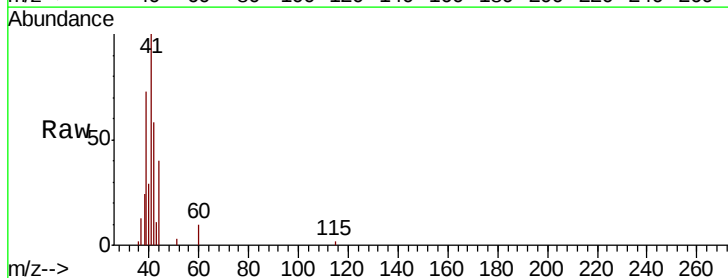
Acq: 14 Sep 2020 20:24

Tgt Ion: 41 Resp: 13835

Ion Ratio Lower Upper

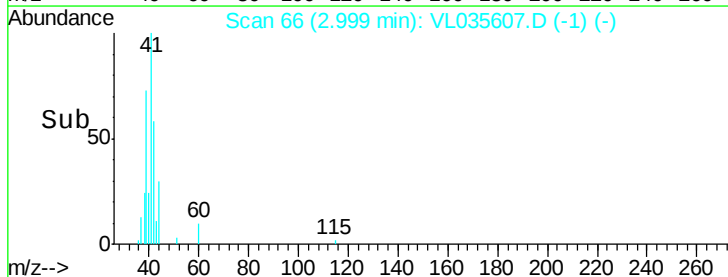
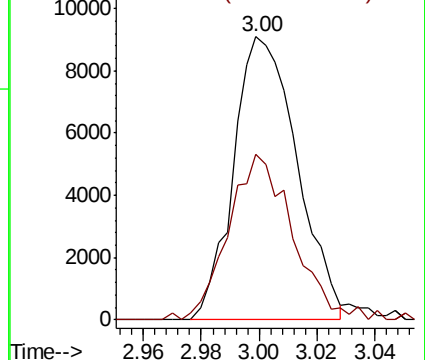
41 100

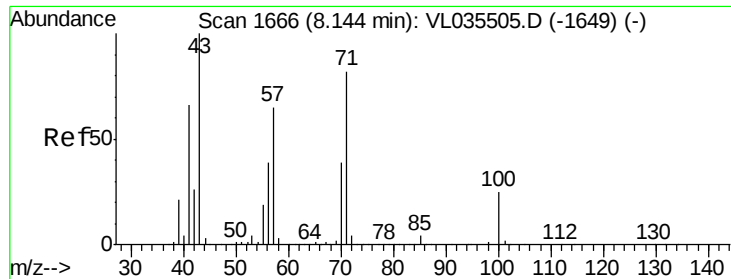
42 59.8 56.3 84.5



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#10

Heptane

Concen: 0.038 ppbv

RT: 8.12 min Scan# 1658

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

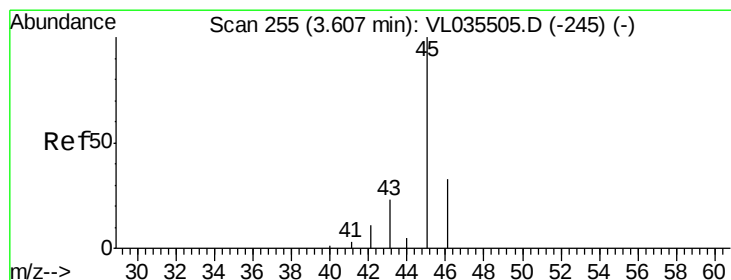
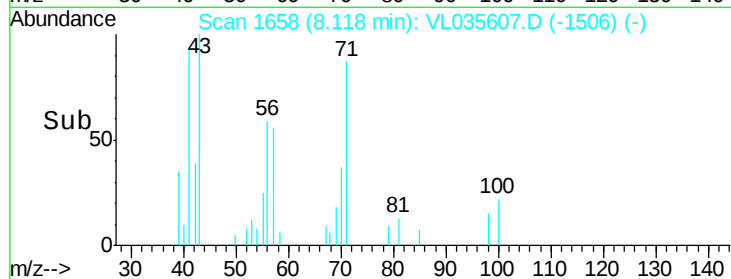
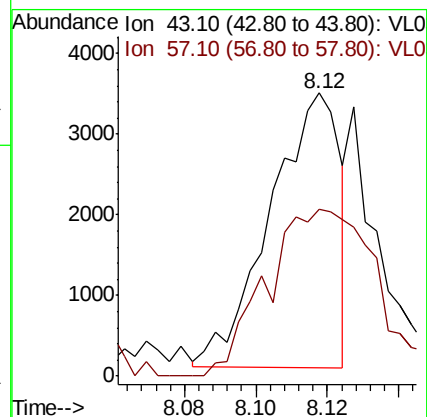
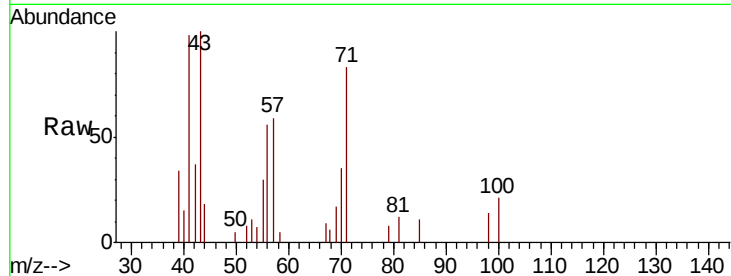
SV-9DL

Tot Ion: 43 Resp: 4608

Ion Ratio Lower Upper

43 100

57 96.3 51.4 77.0#



#13

Ethanol

Concen: 1.305 ppbv

RT: 3.61 min Scan# 255

Delta R.T. 0.01 min

Lab File: VL035607.D

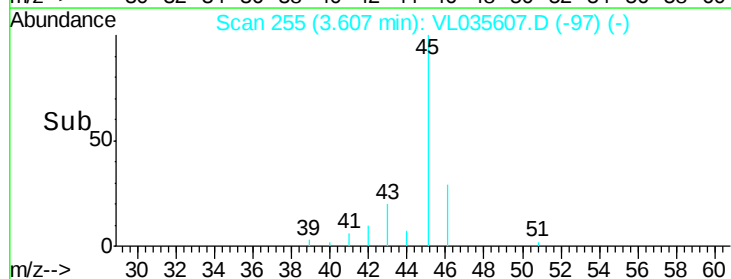
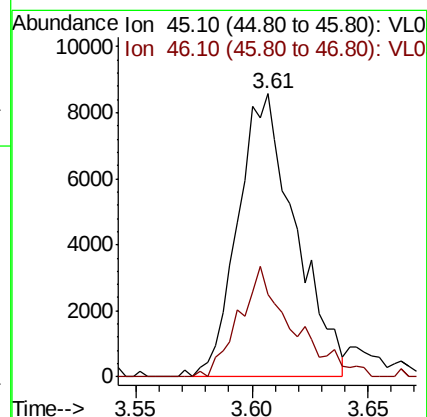
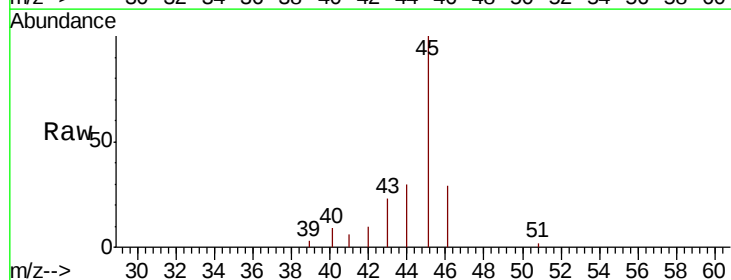
Acq: 14 Sep 2020 20:24

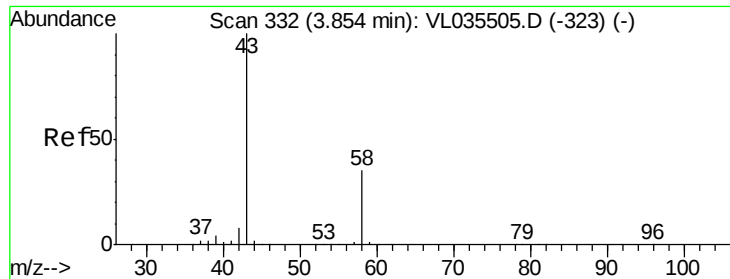
Tgt Ion: 45 Resp: 14768

Ion Ratio Lower Upper

45 100

46 36.2 15.2 60.6





#15

Acetone

Concen: 15.922 ppbv

RT: 3.83 min Scan# 326

Delta R.T. -0.00 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

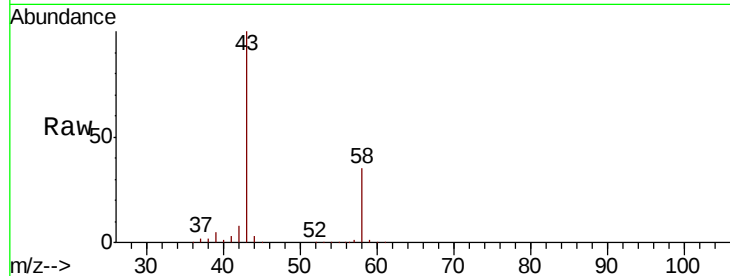
SV-9DL

Tot Ion: 43 Resp: 1880352

Ion Ratio Lower Upper

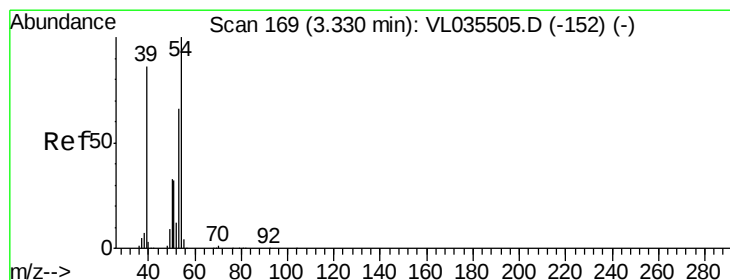
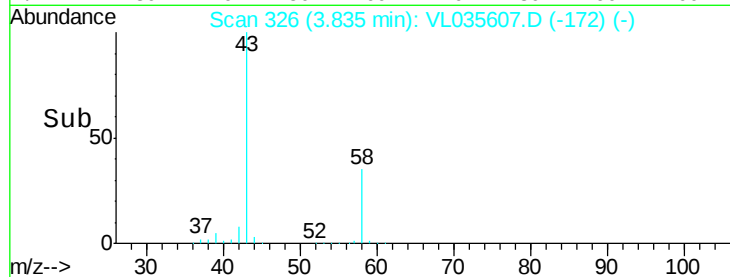
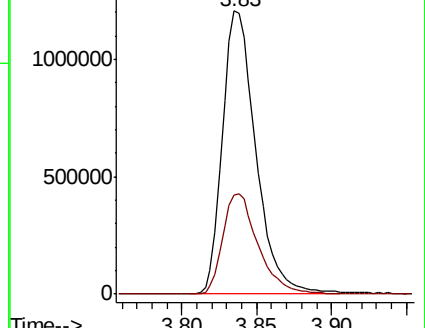
43 100

58 37.9 28.4 42.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#16

1,3-Butadiene

Concen: 1.304 ppbv

RT: 3.30 min Scan# 159

Delta R.T. -0.02 min

Lab File: VL035607.D

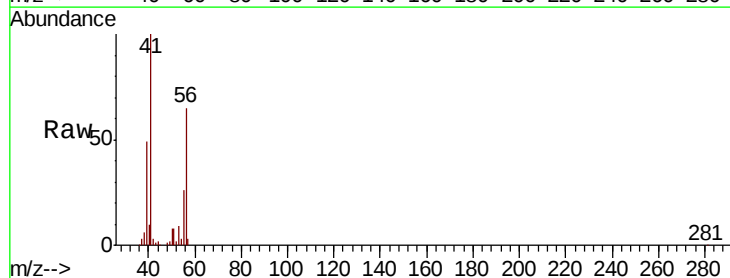
Acq: 14 Sep 2020 20:24

Tgt Ion: 39 Resp: 57328

Ion Ratio Lower Upper

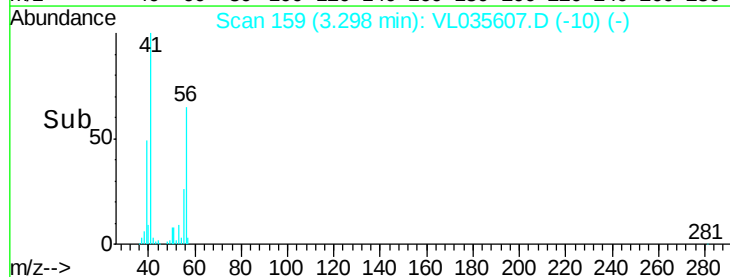
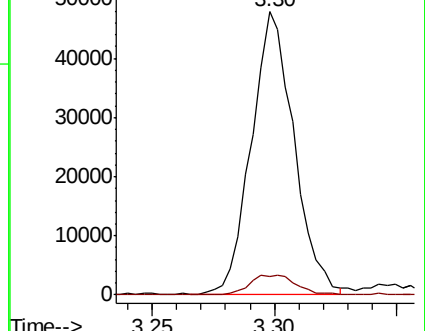
39 100

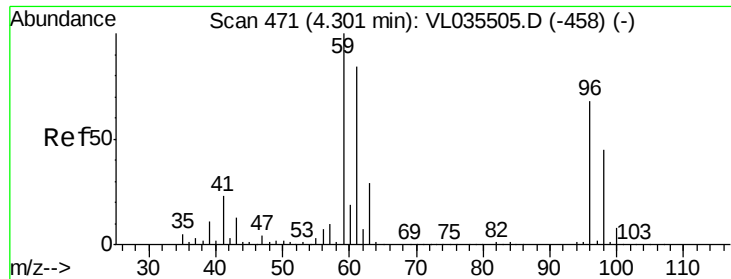
54 8.0 88.4 132.6#



Abundance Ion 39.10 (38.80 to 39.80): VL0

Ion 54.10 (53.80 to 54.80): VL0





#17

tert-Butyl alcohol

Concen: 0.250 ppbv

RT: 4.30 min Scan# 471

Delta R.T. 0.02 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampled :

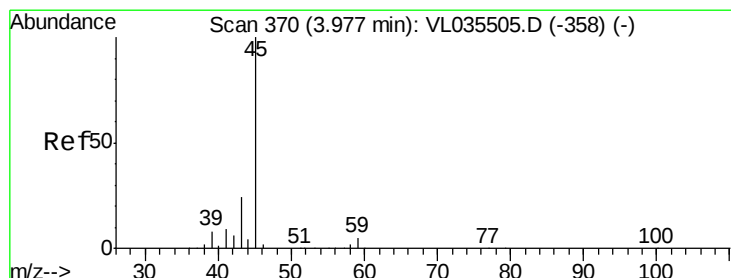
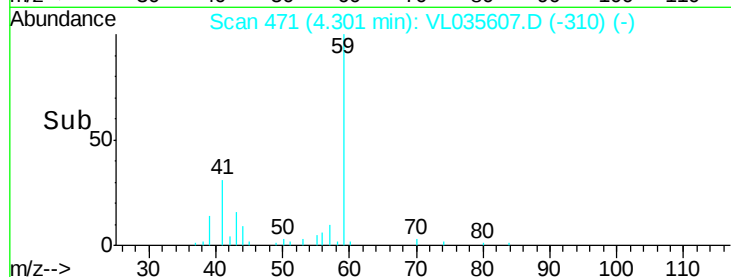
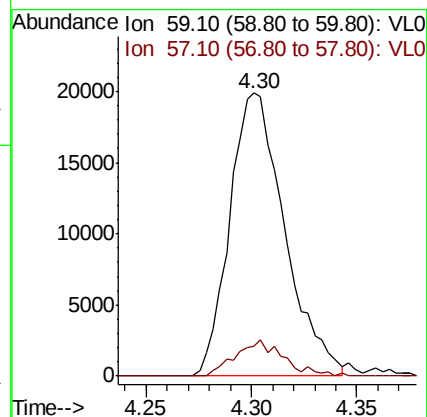
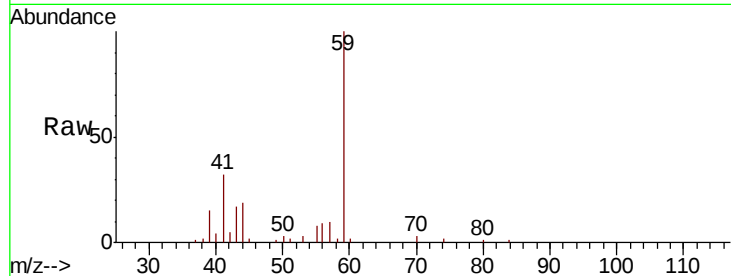
SV-9DL

Tot Ion: 59 Resp: 35926

Ion Ratio Lower Upper

59 100

57 11.0 8.4 12.6



#19

Isopropyl Alcohol

Concen: 0.161 ppbv

RT: 3.98 min Scan# 370

Delta R.T. 0.02 min

Lab File: VL035607.D

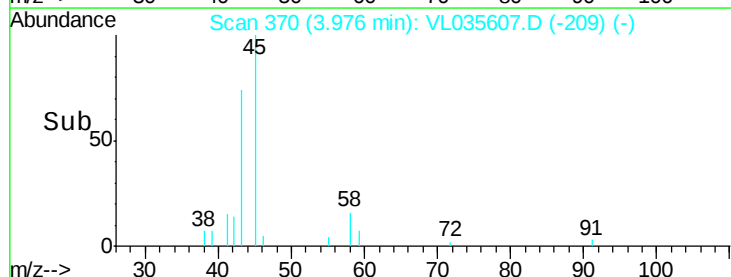
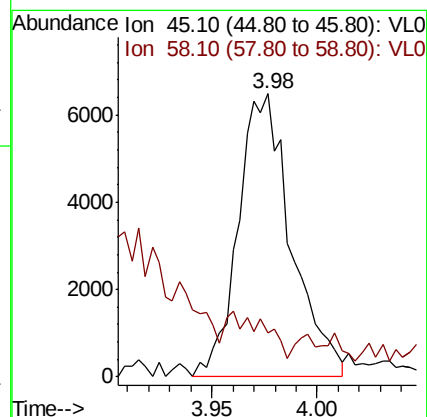
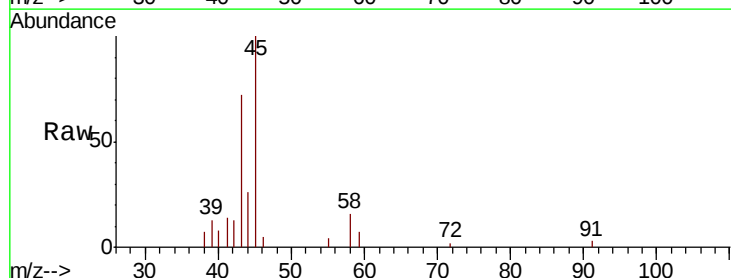
Acq: 14 Sep 2020 20:24

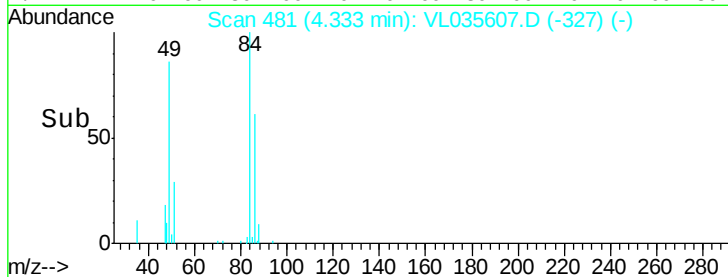
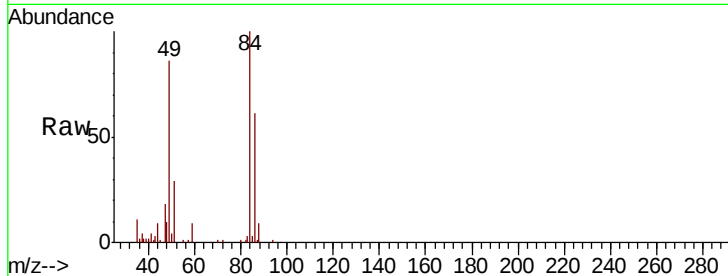
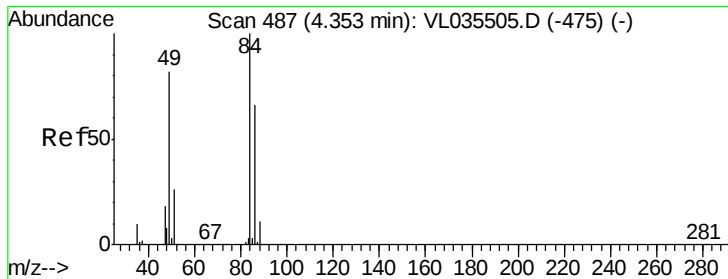
Tgt Ion: 45 Resp: 11355

Ion Ratio Lower Upper

45 100

58 0.0 2.0 3.0#

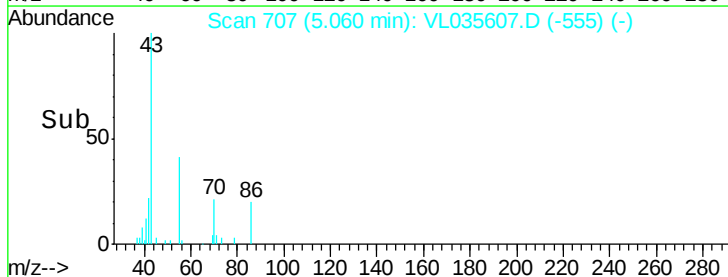
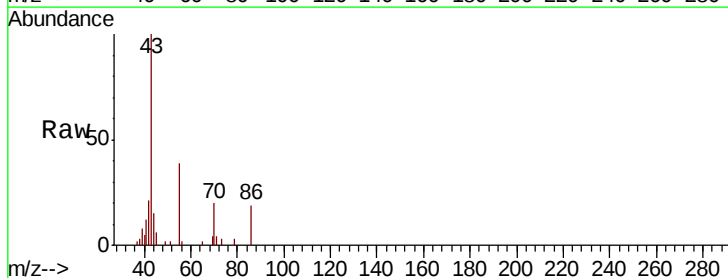
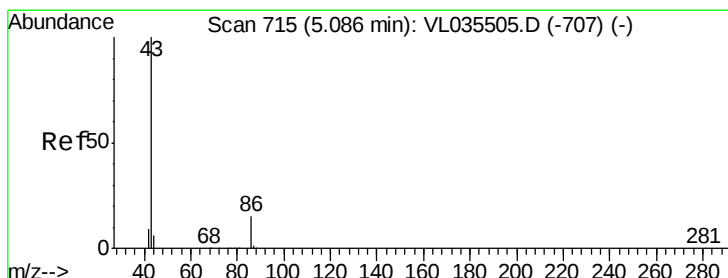
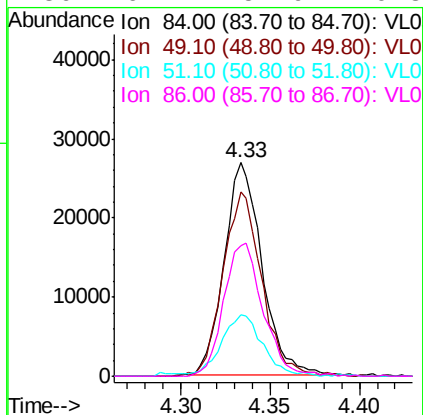




#20
Methylene Chloride
Concen: 0.447 ppbv
RT: 4.33 min Scan# 481
Delta R.T. -0.00 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

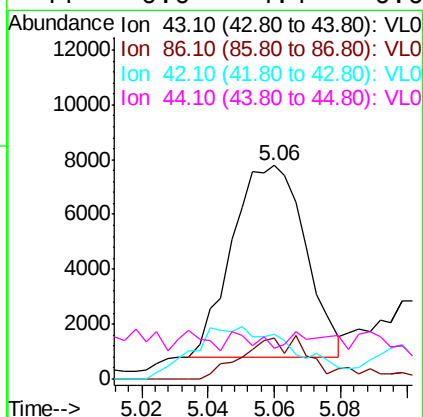
Instrument :
MSVOA_L
ClientSampleId :
SV-9DL

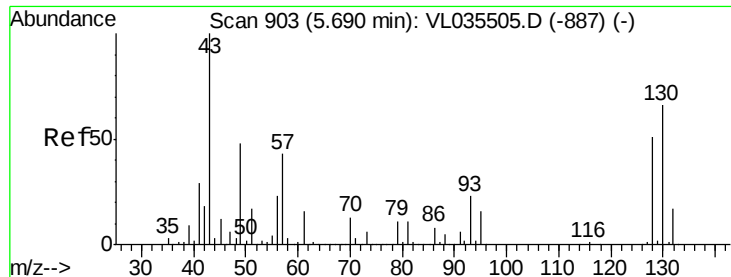
Tot Ion:	84	Resp:	39343
Ion	Ratio	Lower	Upper
84	100		
49	85.0	65.4	98.0
51	28.1	21.5	32.3
86	61.7	52.9	79.3



#23
Vinyl Acetate
Concen: 0.071 ppbv
RT: 5.06 min Scan# 707
Delta R.T. -0.01 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

Tgt Ion:	43	Resp:	10724
Ion	Ratio	Lower	Upper
43	100		
86	21.4	10.6	16.0#
42	17.7	7.5	11.3#
44	0.0	4.4	6.6#





#25

Ethyl Acetate

Concen: 0.058 ppbv

RT: 5.68 min Scan# 899

Delta R.T. 0.00 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

SV-9DL

Tot Ion: 43 Resp: 12195

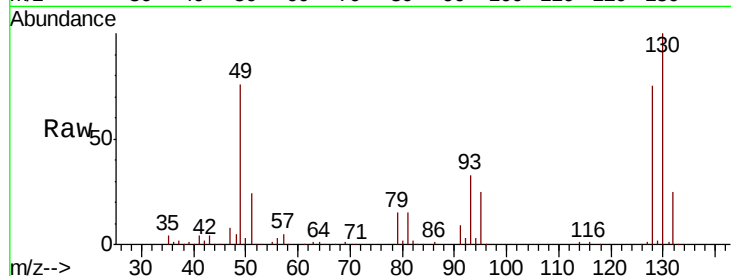
Ion Ratio Lower Upper

43 100

45 3.4 8.4 12.6#

61 2.0 10.6 16.0#

70 4.8 9.4 14.2#



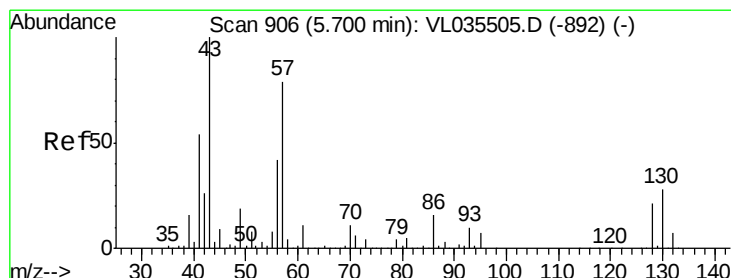
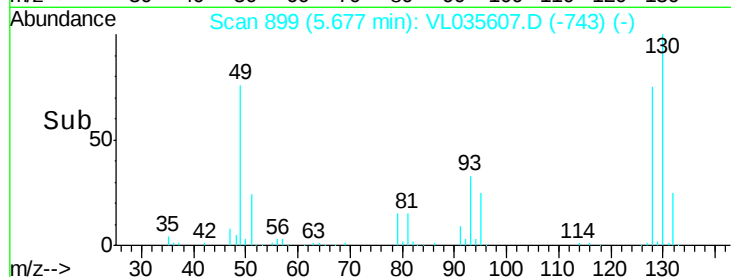
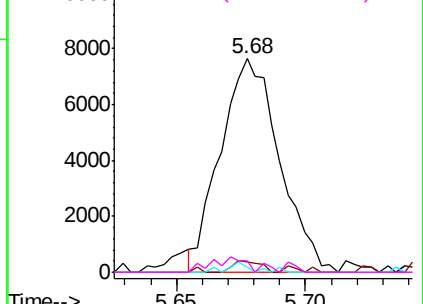
Abundance

Ion 43.10 (42.80 to 43.80): VL0

Ion 45.10 (44.80 to 45.80): VL0

Ion 61.10 (60.80 to 61.80): VL0

Ion 70.10 (69.80 to 70.80): VL0



#26

Hexane

Concen: 0.157 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Tgt Ion: 57 Resp: 18542

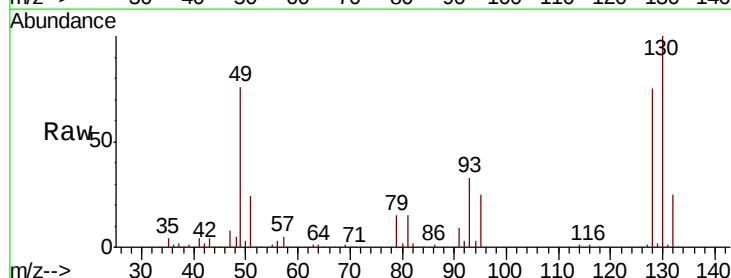
Ion Ratio Lower Upper

57 100

41 95.9 55.9 83.9#

43 70.8 141.8 212.8#

56 61.1 41.8 62.8



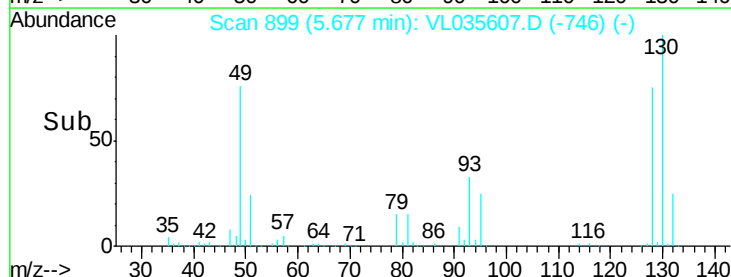
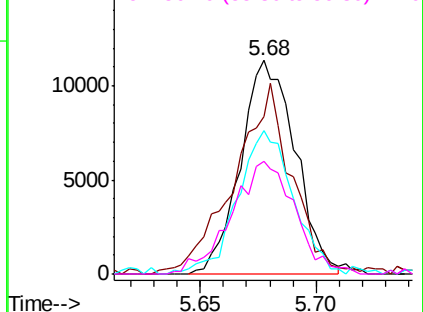
Abundance

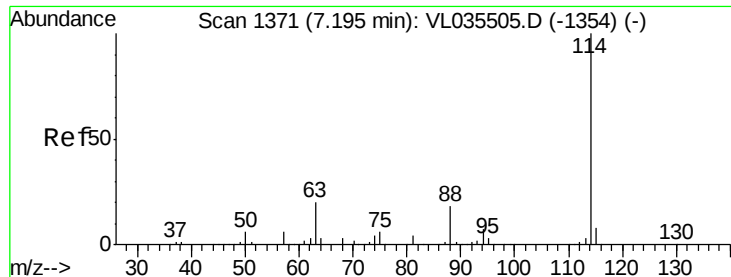
Ion 57.10 (56.80 to 57.80): VL0

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

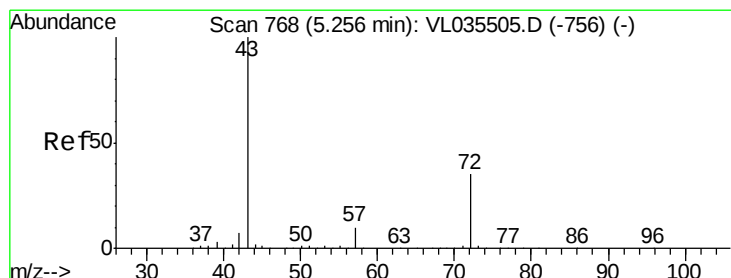
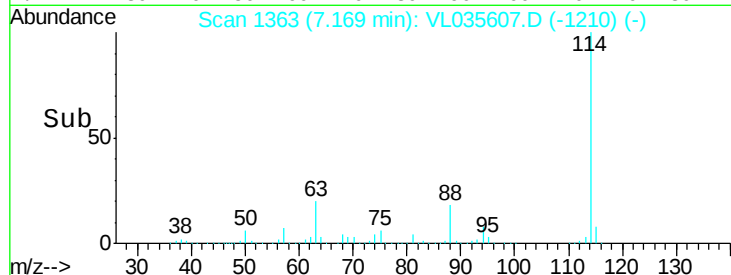
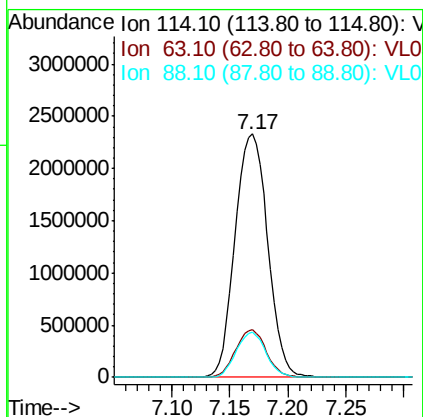
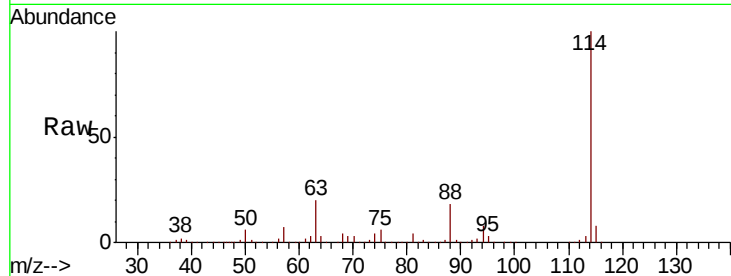




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.01 min
 Lab File: VL035607.D
 Acq: 14 Sep 2020 20:24

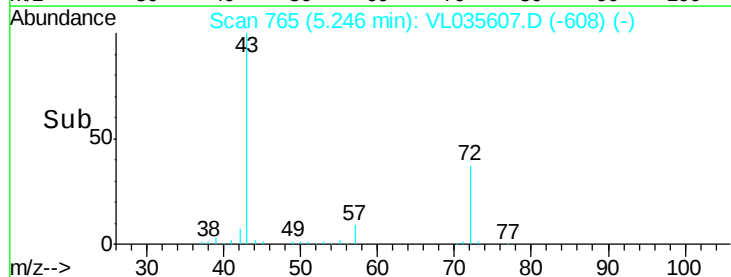
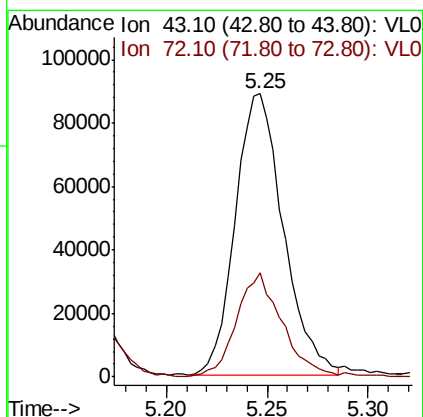
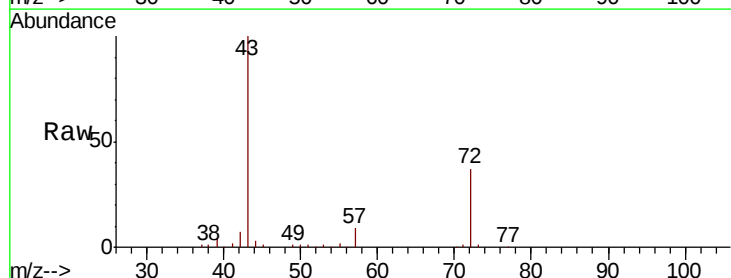
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-9DL

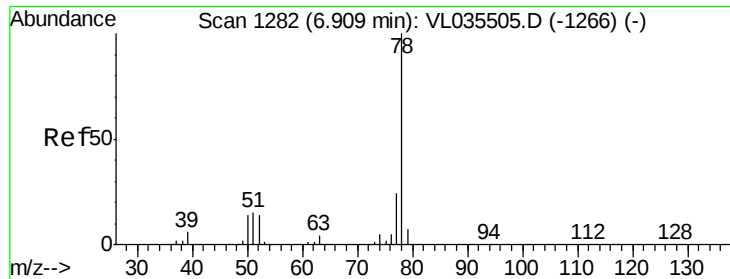
Tot Ion:114 Resp: 4563881
 Ion Ratio Lower Upper
 114 100
 63 18.3 14.7 22.1
 88 17.1 13.4 20.2



#34
 2-Butanone
 Concen: 1.094 ppbv
 RT: 5.25 min Scan# 765
 Delta R.T. 0.01 min
 Lab File: VL035607.D
 Acq: 14 Sep 2020 20:24

Tgt Ion: 43 Resp: 148238
 Ion Ratio Lower Upper
 43 100
 72 35.6 27.7 41.5





#36

Benzene

Concen: 0.050 ppbv

RT: 6.89 min Scan# 1275

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

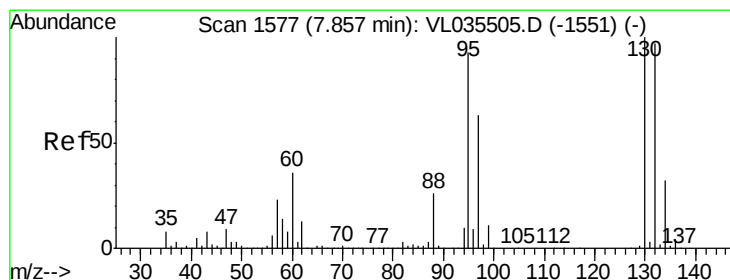
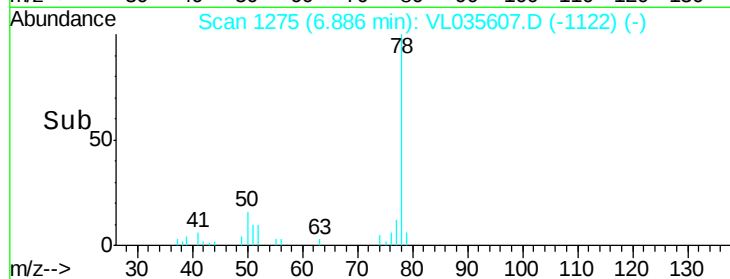
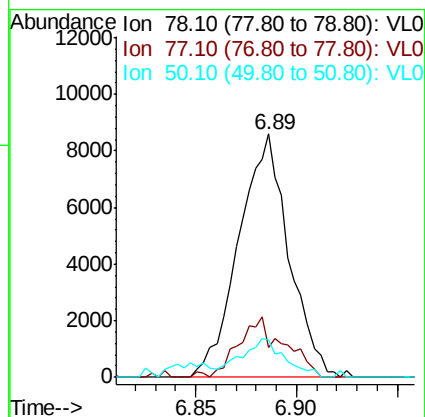
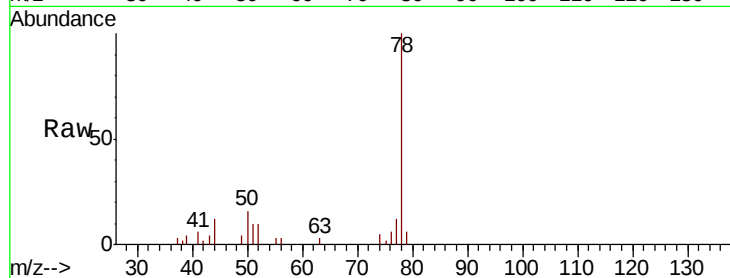
MSVOA_L

ClientSampleId :

SV-9DL

Tot Ion: 78 Resp: 14893

Ion	Ratio	Lower	Upper
78	100		
77	12.5	19.3	28.9#
50	13.1	11.0	16.6



#38

Trichloroethene

Concen: 0.043 ppbv

RT: 7.83 min Scan# 1569

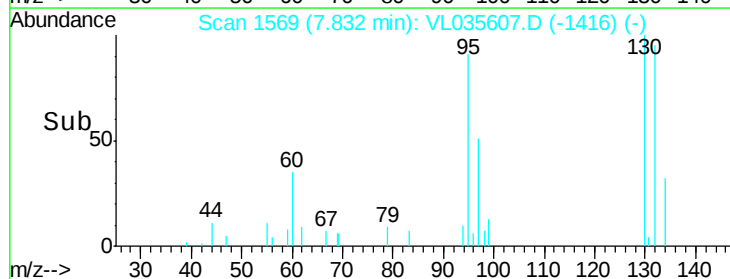
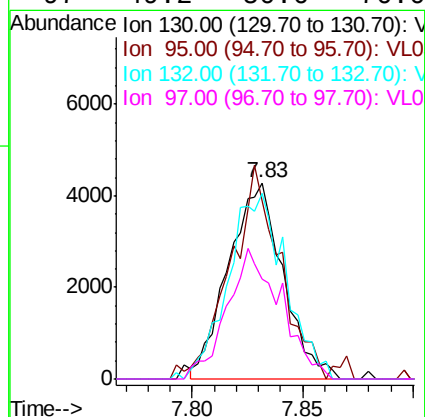
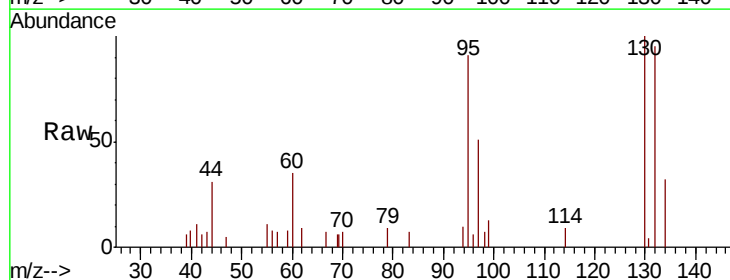
Delta R.T. -0.01 min

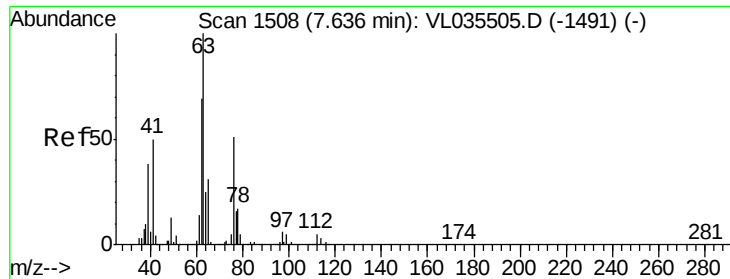
Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Tgt Ion: 130 Resp: 7380

Ion	Ratio	Lower	Upper
130	100		
95	81.9	74.6	112.0
132	91.1	77.6	116.4
97	49.2	50.6	76.0#

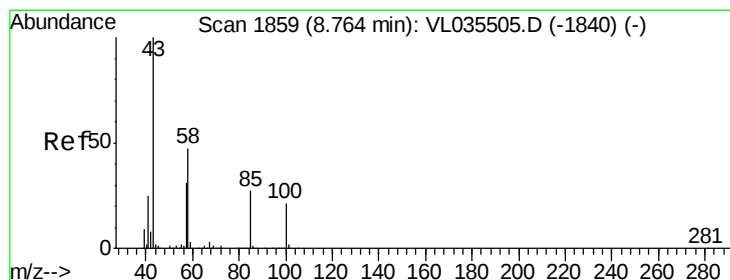
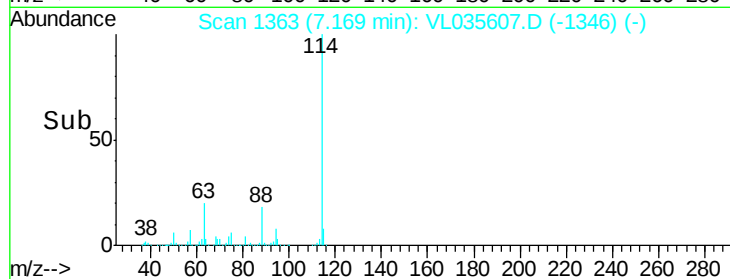
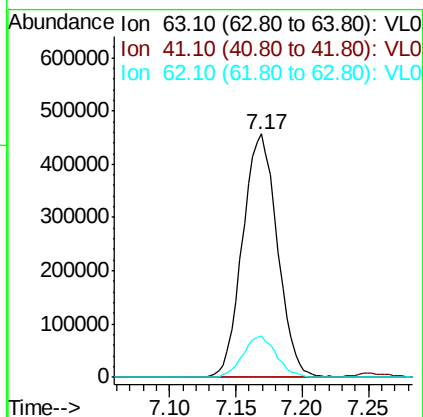
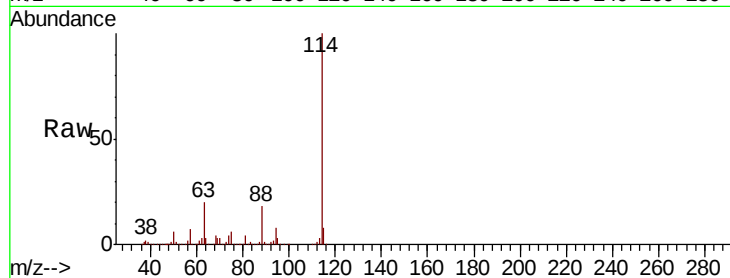




#39
 1,2-Dichloropropane
 Concen: 8.346 ppbv
 RT: 7.17 min Scan# 1363
 Delta R.T. -0.44 min
 Lab File: VL035607.D
 Acq: 14 Sep 2020 20:24

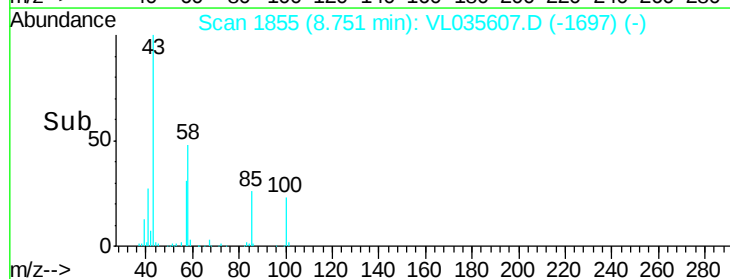
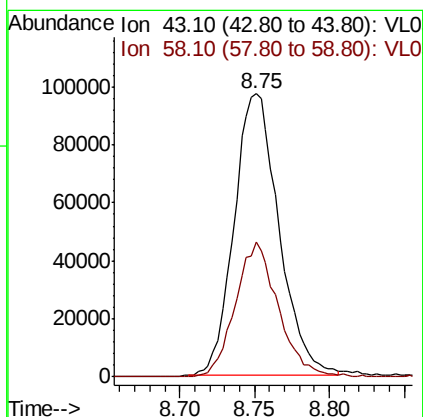
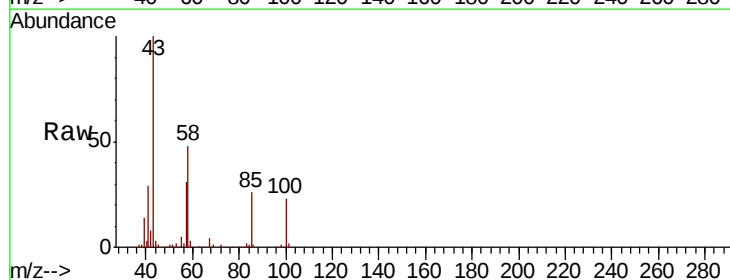
Instrument :
 MSVOA_L
 ClientSampleId :
 SV-9DL

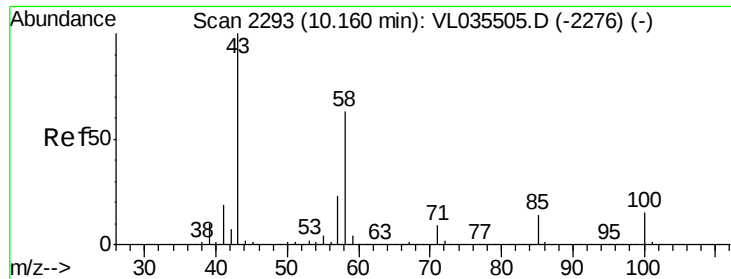
Tot Ion	Ratio	Lower	Upper
63	100		
41	0.0	40.0	60.0#
62	16.9	55.4	83.0#



#50
 4-Methyl-2-Pentanone
 Concen: 1.036 ppbv
 RT: 8.75 min Scan# 1855
 Delta R.T. 0.01 min
 Lab File: VL035607.D
 Acq: 14 Sep 2020 20:24

Tgt Ion	Ratio	Lower	Upper
43	100		
58	46.0	37.4	56.0

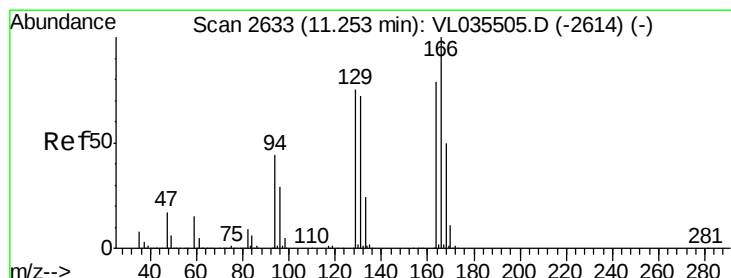
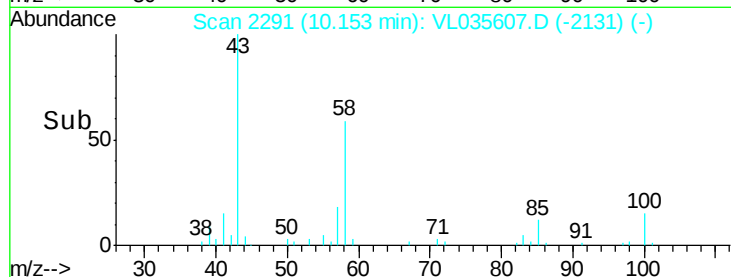
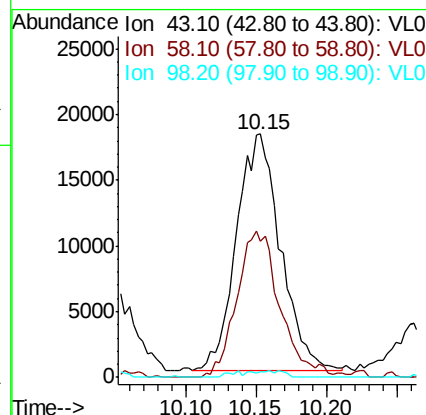
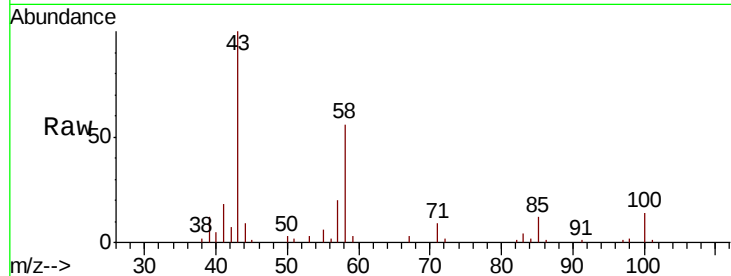




#51
2-Hexanone
Concen: 0.245 ppbv
RT: 10.15 min Scan# 2291
Delta R.T. 0.02 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

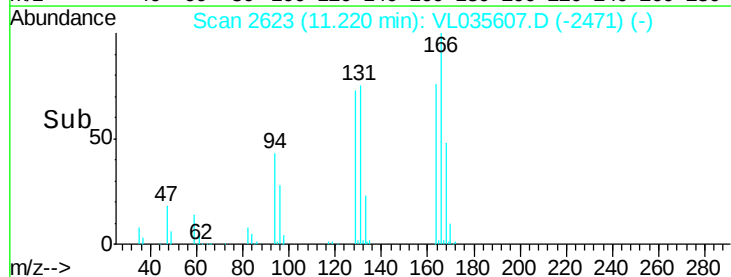
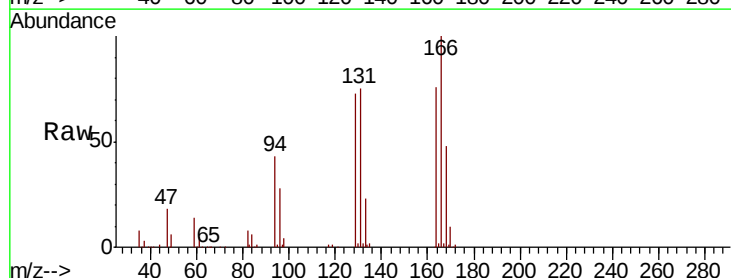
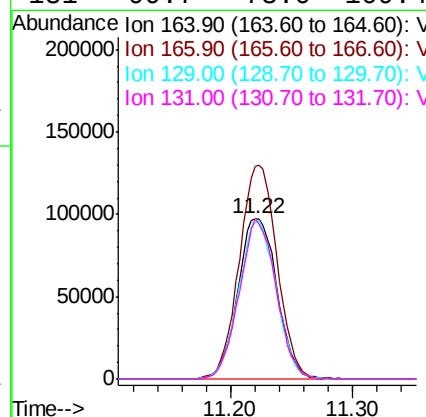
Instrument :
MSVOA_L
ClientSampleId :
SV-9DL

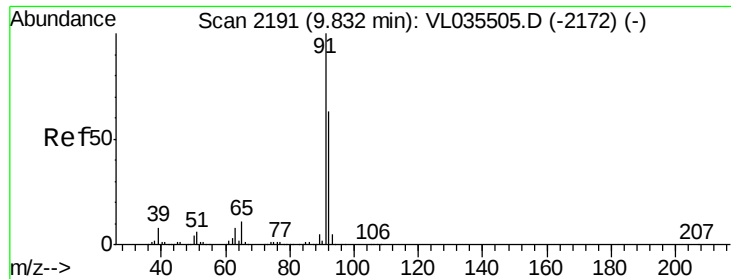
Tot Ion: 43 Resp: 39449
Ion Ratio Lower Upper
43 100
58 60.7 50.2 75.4
98 2.8 0.4 0.6#



#52
Tetrachloroethene
Concen: 1.252 ppbv
RT: 11.22 min Scan# 2623
Delta R.T. -0.01 min
Lab File: VL035607.D
Acq: 14 Sep 2020 20:24

Tgt Ion: 164 Resp: 216044
Ion Ratio Lower Upper
164 100
166 132.3 100.9 151.3
129 97.1 75.3 112.9
131 99.7 73.0 109.4





#53

Toluene

Concen: 1.814 ppbv

RT: 9.80 min Scan# 2182

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

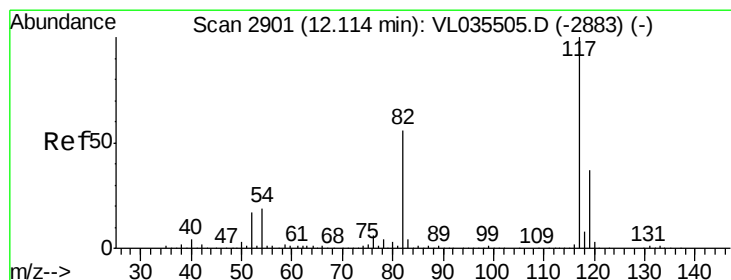
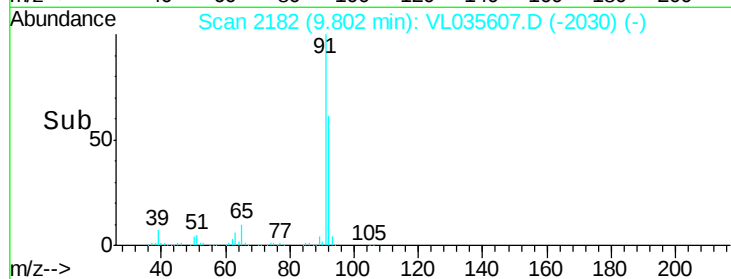
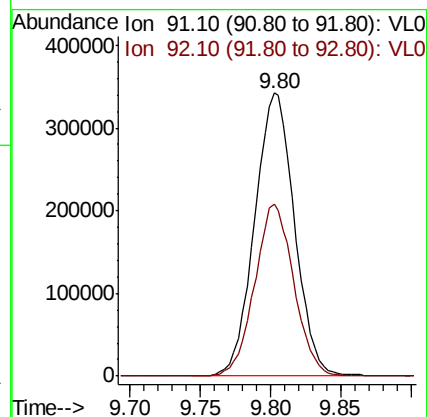
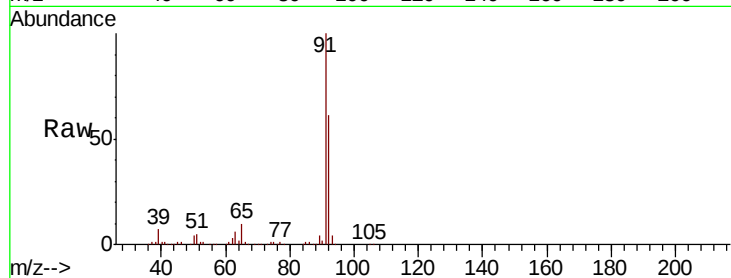
SV-9DL

Tot Ion: 91 Resp: 673813

Ion Ratio Lower Upper

91 100

92 60.0 49.8 74.8



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.09 min Scan# 2892

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

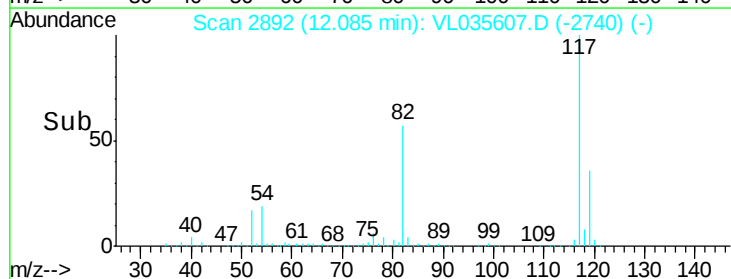
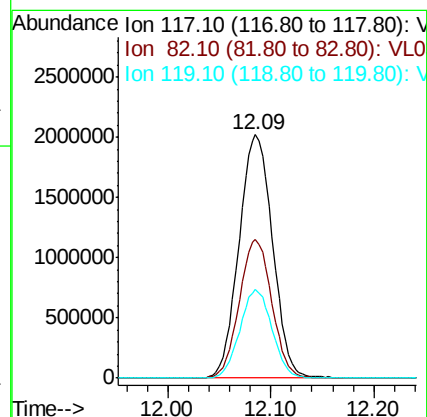
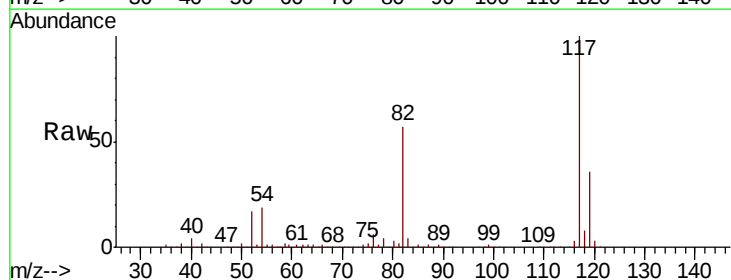
Tgt Ion: 117 Resp: 4581258

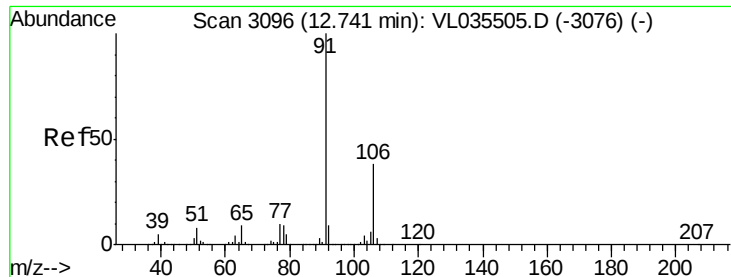
Ion Ratio Lower Upper

117 100

82 55.6 41.6 62.4

119 35.0 29.3 43.9





#58

Ethyl Benzene

Concen: 0.085 ppbv

RT: 12.71 min Scan# 3086

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

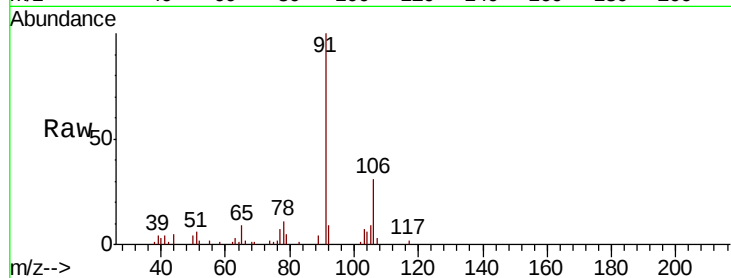
SV-9DL

Tot Ion: 91 Resp: 40244

Ion Ratio Lower Upper

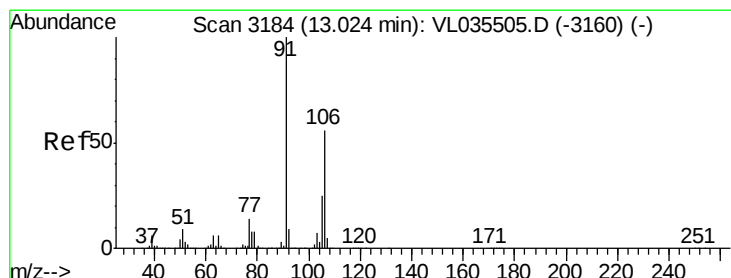
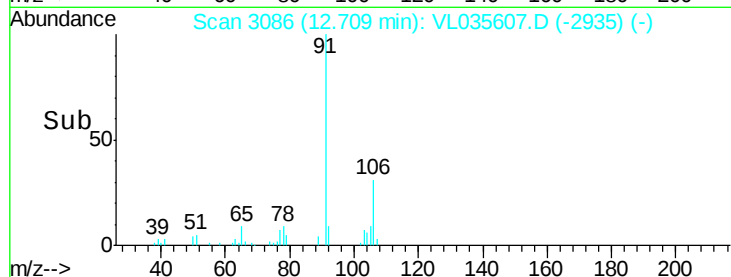
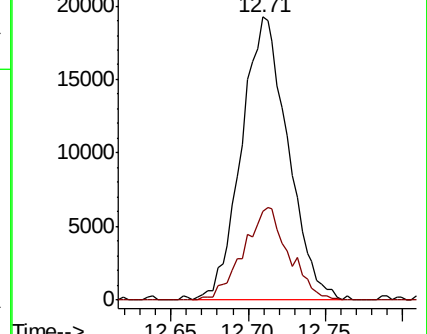
91 100

106 31.3 30.3 45.5



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#59

m/p-Xylene

Concen: 0.076 ppbv

RT: 13.00 min Scan# 3176

Delta R.T. -0.01 min

Lab File: VL035607.D

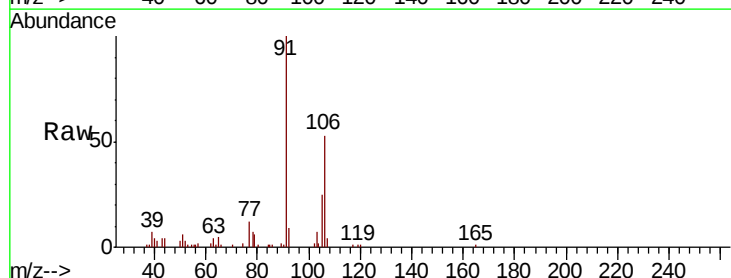
Acq: 14 Sep 2020 20:24

Tgt Ion: 91 Resp: 30182

Ion Ratio Lower Upper

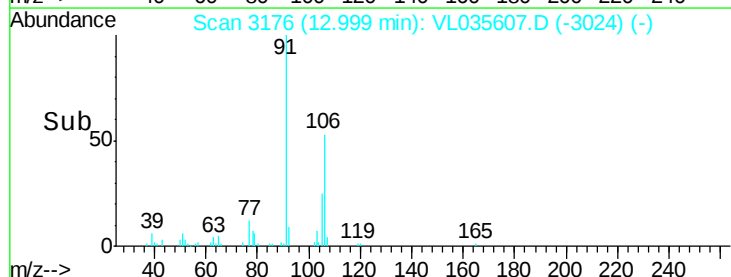
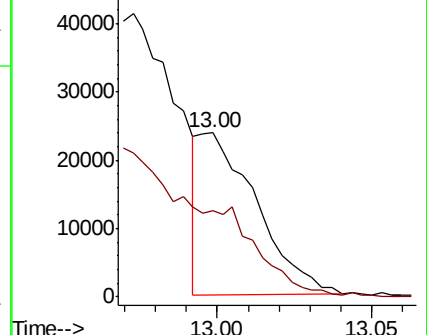
91 100

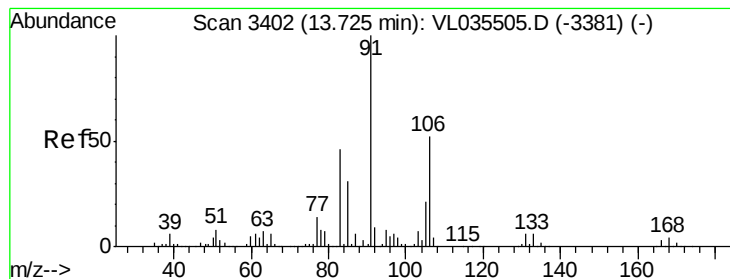
106 0.0 43.4 65.2#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





#60

o-Xylene

Concen: 0.057 ppbv

RT: 13.70 min Scan# 3393

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleID :

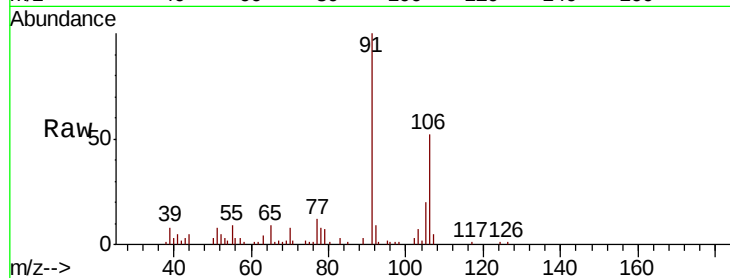
SV-9DL

Tot Ion: 91 Resp: 22481

Ion Ratio Lower Upper

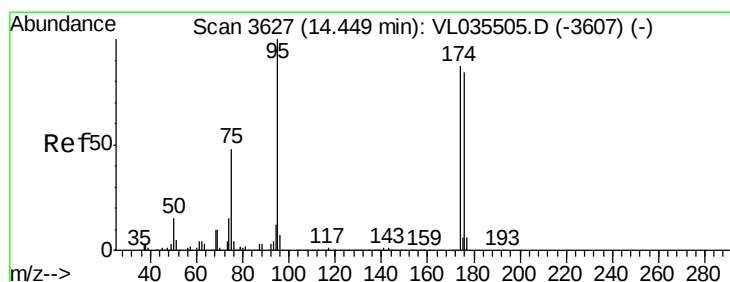
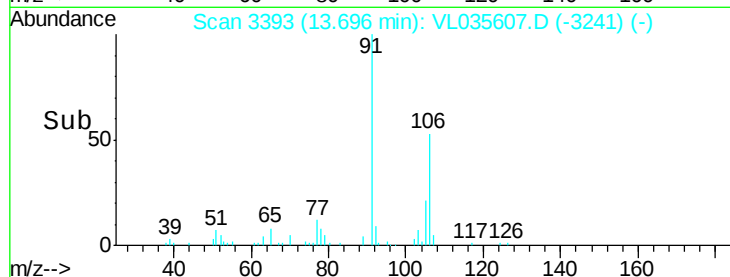
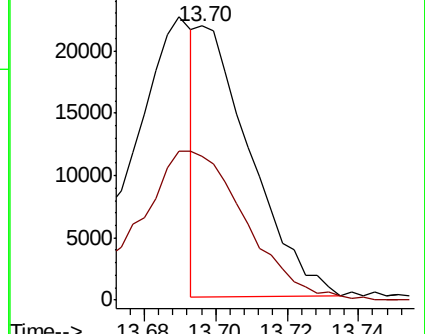
91 100

106 0.0 25.8 77.4#



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



#68

1-Bromo-4-Fluorobenzene

Concen: 10.560 ppbv

RT: 14.42 min Scan# 3617

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

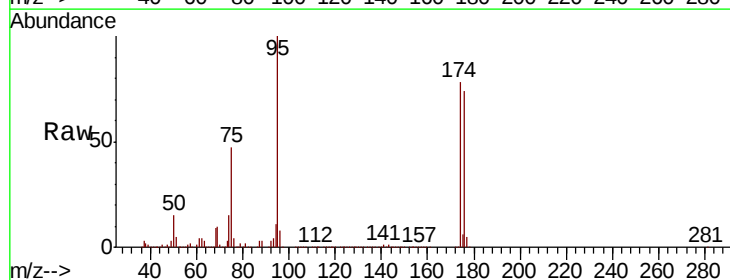
Tgt Ion: 95 Resp: 3435545

Ion Ratio Lower Upper

95 100

174 79.9 69.6 104.4

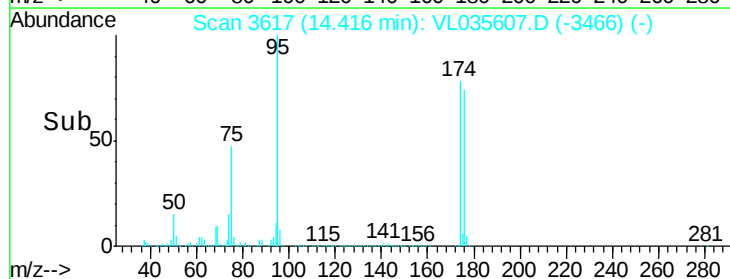
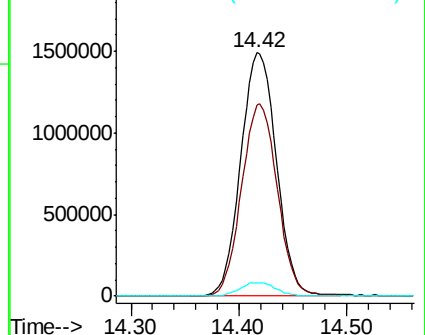
175 5.7 5.1 7.7

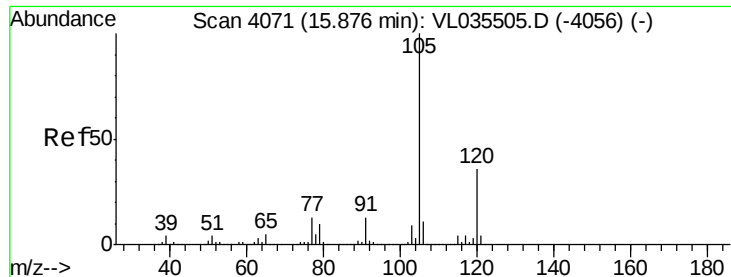


Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V





#72

4-Ethyltoluene

Concen: 0.031 ppbv

RT: 15.84 min Scan# 4061

Delta R.T. -0.01 min

Lab File: VL035607.D

Acq: 14 Sep 2020 20:24

Instrument :

MSVOA_L

ClientSampleId :

SV-9DL

Tot Ion:105 Resp: 15909

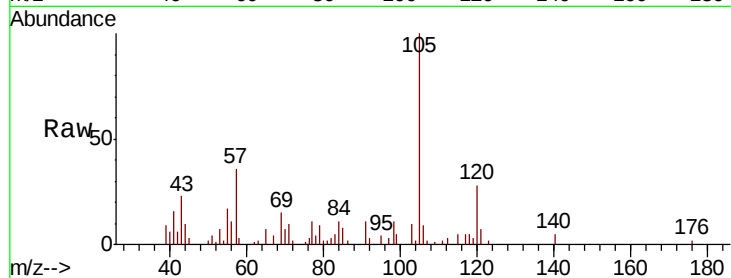
Ion Ratio Lower Upper

105 100

120 58.9 27.4 41.2#

91 17.2 9.7 14.5#

77 22.6 9.6 14.4#



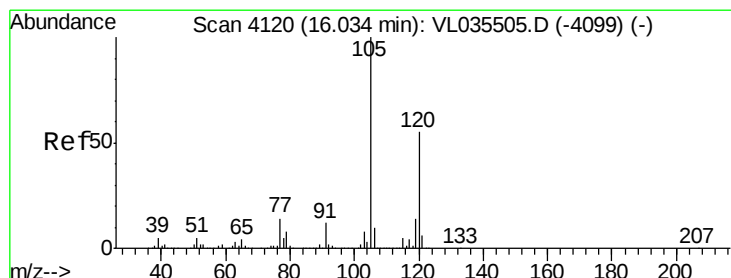
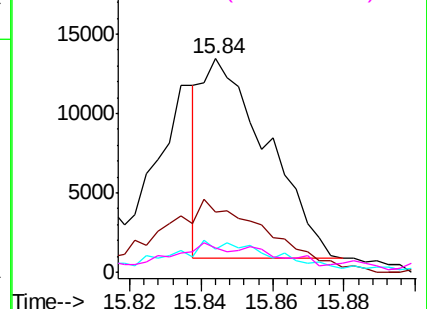
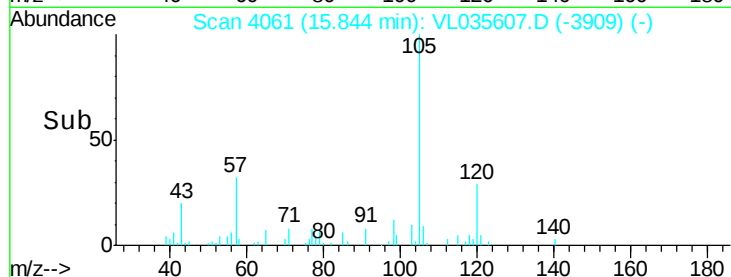
Abundance

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



#73

1,3,5-Trimethylbenzene

Concen: 0.038 ppbv

RT: 16.00 min Scan# 4110

Delta R.T. -0.01 min

Lab File: VL035607.D

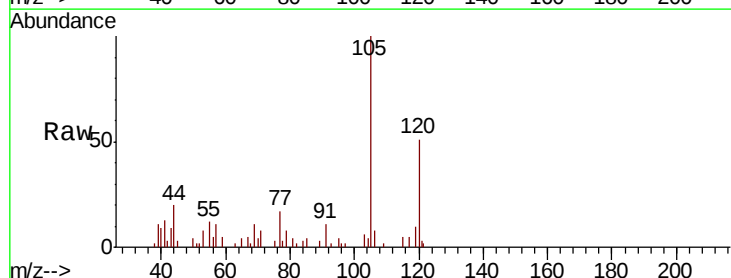
Acq: 14 Sep 2020 20:24

Tgt Ion:105 Resp: 17790

Ion Ratio Lower Upper

105 100

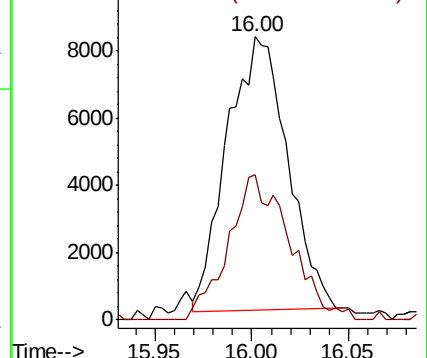
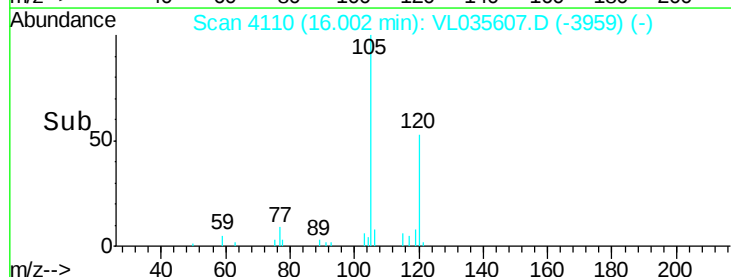
120 53.1 44.2 66.2

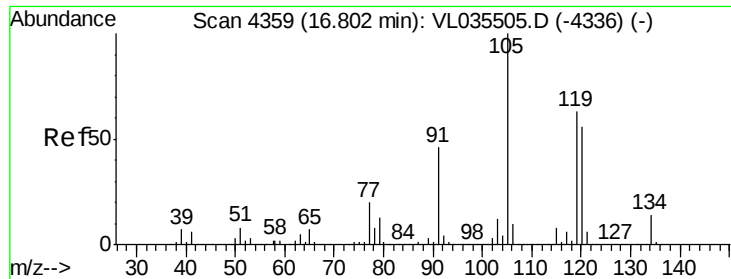


Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74
 1,2,4-Trimethylbenzene
 Concen: 0.154 ppbv
 RT: 16.77 min Scan# 4349
 Delta R.T. -0.01 min
 Lab File: VL035607.D
 Acq: 14 Sep 2020 20:24

Instrument :
 MSVOA_L
 ClientSampleId :
 SV-9DL

Tot Ion:105	Resp:	79252
Ion Ratio	Lower	Upper
105	100	
120	47.9	44.4 66.6
91	9.9	37.1 55.7#
77	12.6	16.0 24.0#

