

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL010220\
 Data File : VL034546.D
 Acq On : 2 Jan 2020 14:41
 Operator : SY/AP
 Sample : K6473-01
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

Quant Time: Jan 03 01:10:25 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL123019AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Mon Dec 30 14:58:50 2019
 QLast Update : Mon Dec 30 14:58:50 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	855779	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	1725556	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.13	117	1665641	10.00	ppbv	0.00

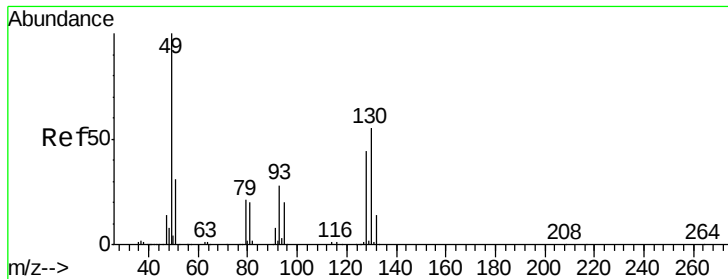
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	1420346	10.22	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.20%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	38648	0.286	ppbv	97
3) Chlorodifluoromethane	2.93	51	198962	1.951	ppbv #	76
4) Chloromethane	3.11	50	27650	0.457	ppbv	97
9) Propene	3.17	41	95382	2.426	ppbv	87
10) Heptane	8.14	43	6410	0.063	ppbv #	64
11) Trichlorofluoromethane	3.93	101	37768	0.242	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.47	101	6058	0.061	ppbv #	74
13) Ethanol	3.60	45	6710483	615.225	ppbv	96
15) Acetone	3.83	43	905181	7.248	ppbv	98
16) 1,3-Butadiene	3.28	39	9974	0.208	ppbv #	27
17) tert-Butyl alcohol	4.29	59	16510	0.165	ppbv #	72
19) Isopropyl Alcohol	3.97	45	537083	6.643	ppbv #	97
20) Methylene Chloride	4.33	84	38095	0.775	ppbv #	83
23) Vinyl Acetate	5.06	43	13397	0.093	ppbv #	1
25) Ethyl Acetate	5.68	43	70653	0.362	ppbv #	95
26) Hexane	5.68	57	10973	0.134	ppbv #	1
27) Carbon Disulfide	4.53	76	4124	0.040	ppbv #	61
29) Chloroform	5.75	83	6304	0.044	ppbv	85
34) 2-Butanone	5.24	43	130268	1.056	ppbv	98
35) Carbon Tetrachloride	7.03	117	5239	0.033	ppbv #	77
36) Benzene	6.91	78	16203	0.108	ppbv #	85
37) 1,2-Dichloroethane	6.31	62	4529	0.037	ppbv #	86
39) 1,2-Dichloropropane	7.19	63	500191	8.087	ppbv #	23
41) Tetrahydrofuran	6.04	42	1523	0.024	ppbv #	38
52) Tetrachloroethene	11.26	164	15584	0.265	ppbv	92
53) Toluene	9.83	91	132064	0.799	ppbv	96
60) o-Xylene	13.73	91	6709	0.034	ppbv #	33
74) 1,2,4-Trimethylbenzene	16.81	105	5761	0.025	ppbv #	70
80) Naphthalene,2-methyl-	25.04	142	3660	0.076	ppbv #	92

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 896

Delta R.T. -0.01 min

Lab File: VL034546.D

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MSVOA_L

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MJ-1

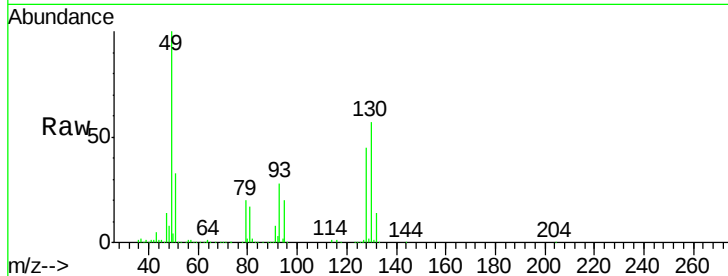
Tgt Ion: 49 Resp: 855779

Ion Ratio Lower Upper

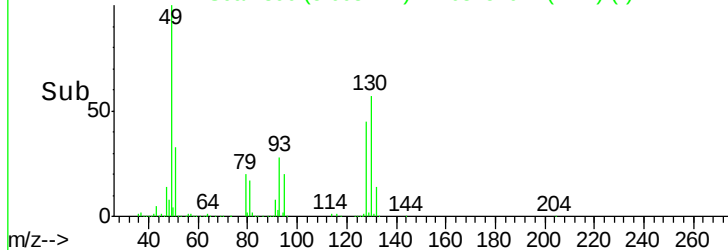
49 100

128 44.7 22.4 67.2

130 58.2 28.3 85.0



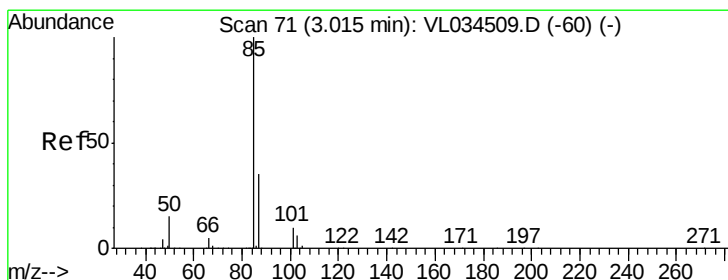
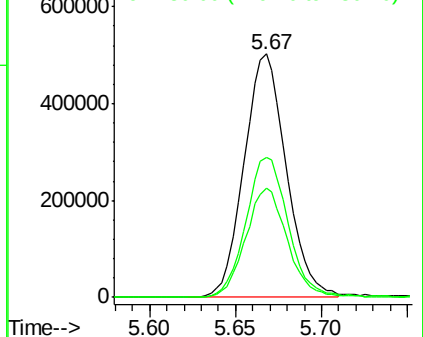
Scan 896 (5.668 min): VL034546.D (-742) (-)



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: 0.286 ppbv

RT: 3.02 min Scan# 71

Delta R.T. 0.00 min

Lab File: VL034546.D

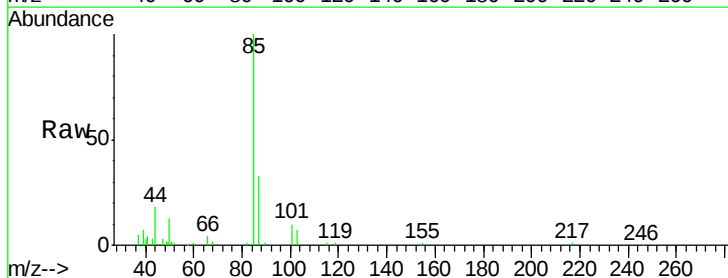
Acq: 2 Jan 2020 14:41

Tgt Ion: 85 Resp: 38648

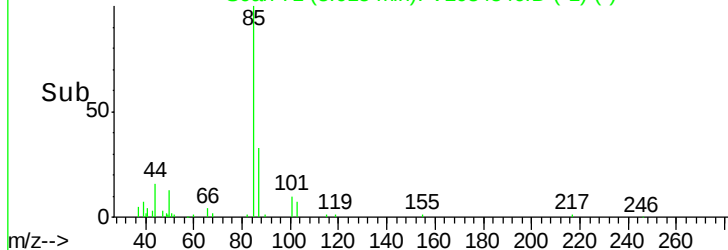
Ion Ratio Lower Upper

85 100

87 32.9 27.9 41.9

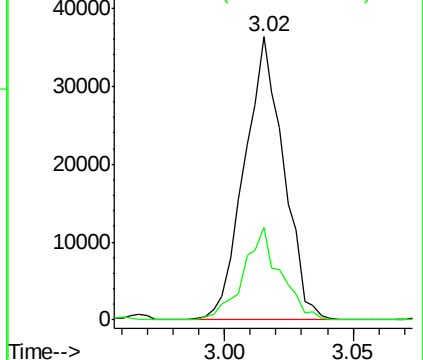


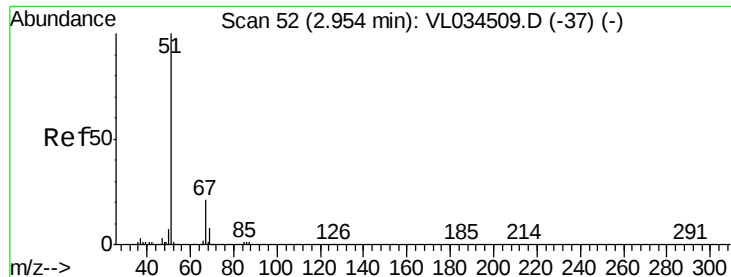
Scan 71 (3.015 min): VL034546.D (-1) (-)



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 1.951 ppbv

RT: 2.93 min Scan# 45

Delta R.T. -0.02 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

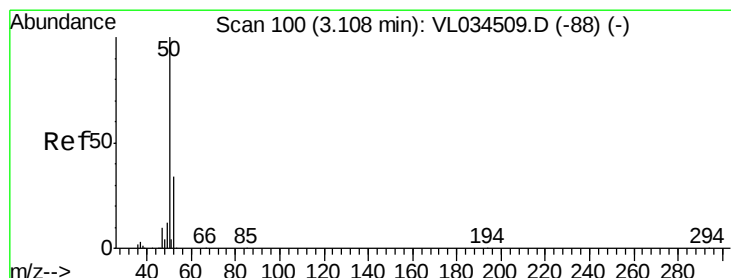
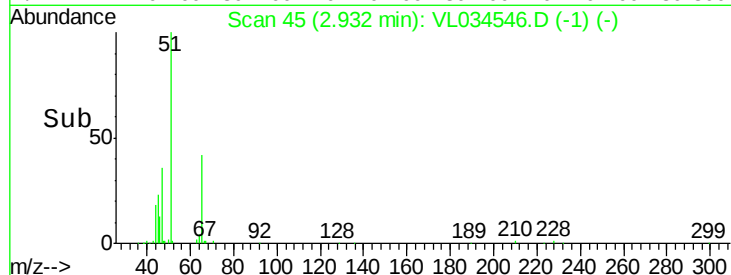
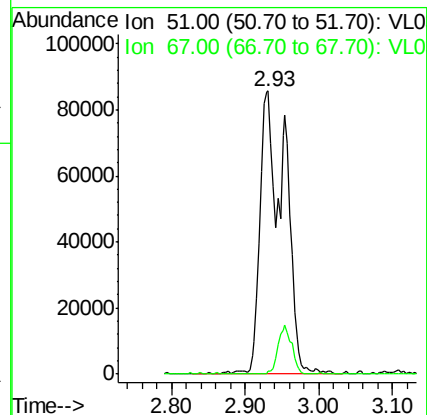
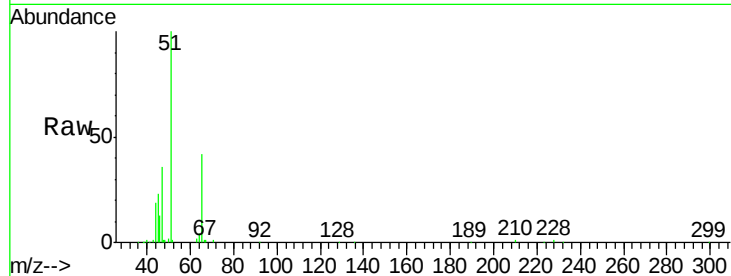
MJ-1

Tgt Ion: 51 Resp: 198962

Ion Ratio Lower Upper

51 100

67 9.7 16.8 25.2#



#4

Chloromethane

Concen: 0.457 ppbv

RT: 3.11 min Scan# 100

Delta R.T. 0.00 min

Lab File: VL034546.D

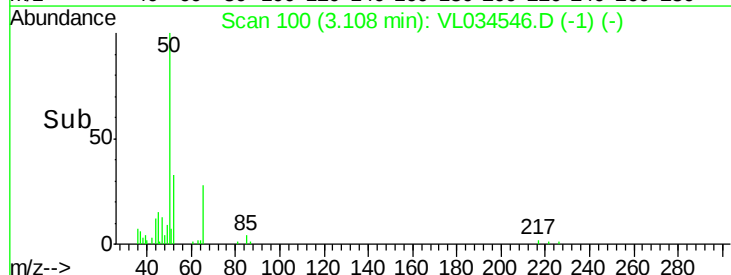
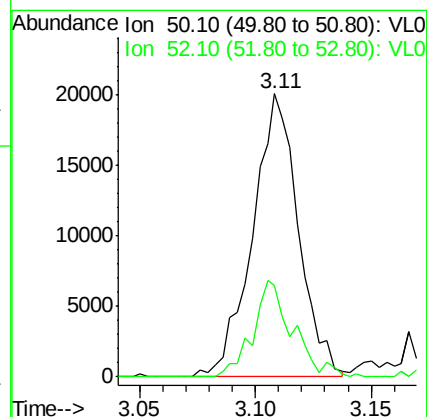
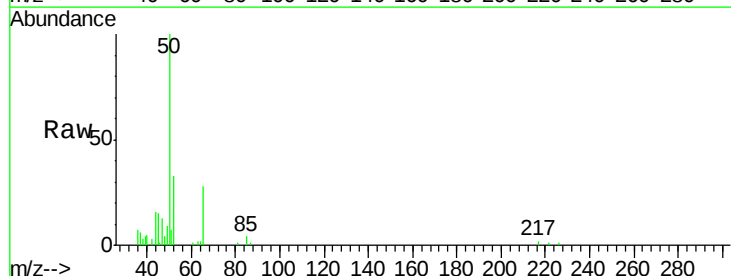
Acq: 2 Jan 2020 14:41

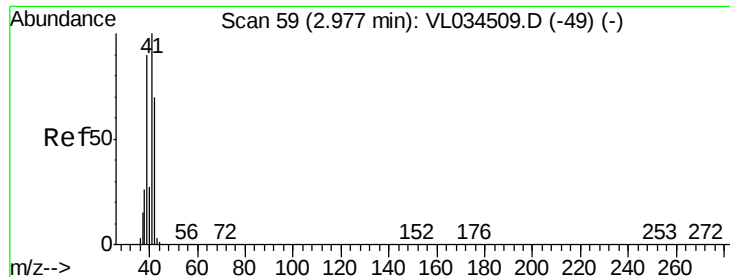
Tgt Ion: 50 Resp: 27650

Ion Ratio Lower Upper

50 100

52 32.5 27.6 41.4





#9

Propene

Concen: 2.426 ppbv

RT: 3.17 min Scan# 120

Delta R.T. 0.20 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

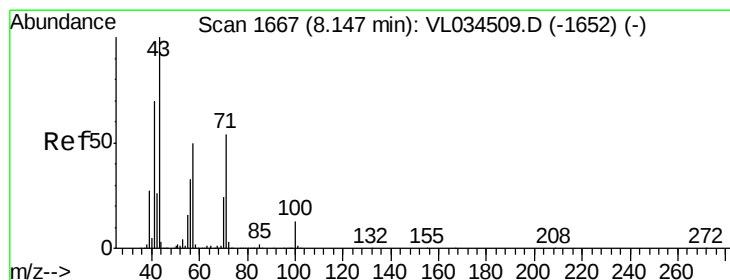
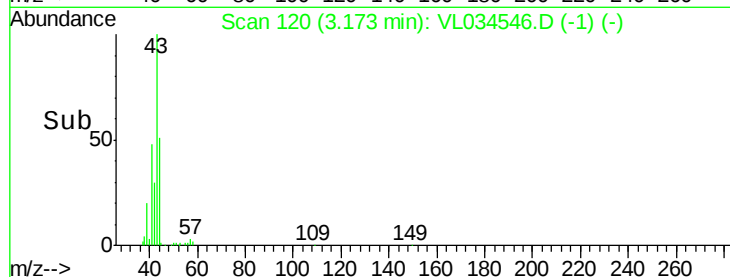
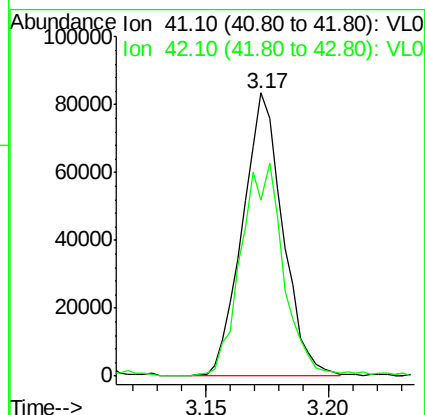
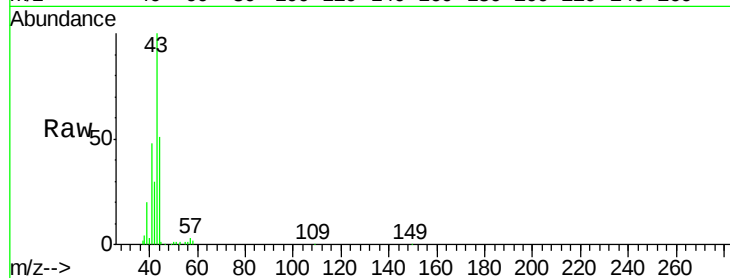
MJ-1

Tgt Ion: 41 Resp: 95382

Ion Ratio Lower Upper

41 100

42 80.2 55.8 83.6



#10

Heptane

Concen: 0.063 ppbv

RT: 8.14 min Scan# 1666

Delta R.T. -0.00 min

Lab File: VL034546.D

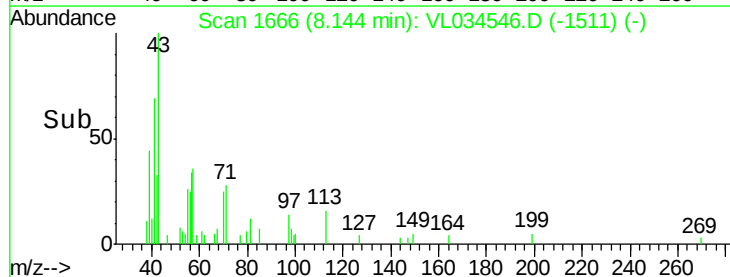
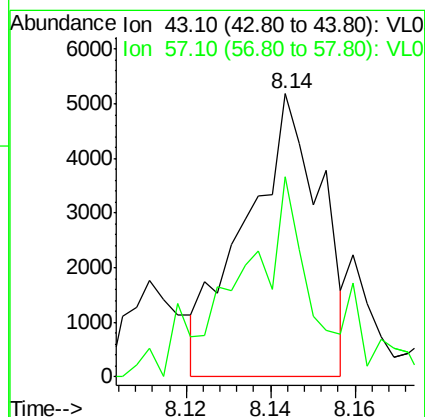
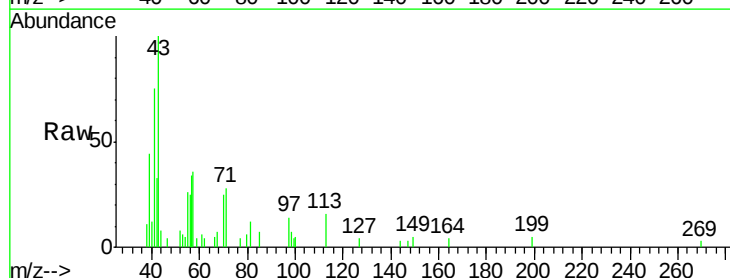
Acq: 2 Jan 2020 14:41

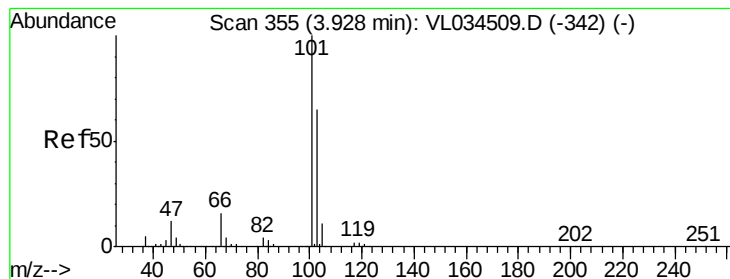
Tgt Ion: 43 Resp: 6410

Ion Ratio Lower Upper

43 100

57 76.5 41.0 61.6#





#11

Trichlorofluoromethane

Concen: 0.242 ppbv

RT: 3.93 min Scan# 356

Delta R.T. 0.00 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampled :

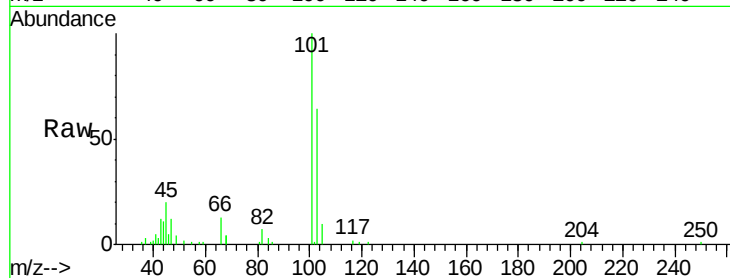
MJ-1

Tgt Ion:101 Resp: 37768

Ion Ratio Lower Upper

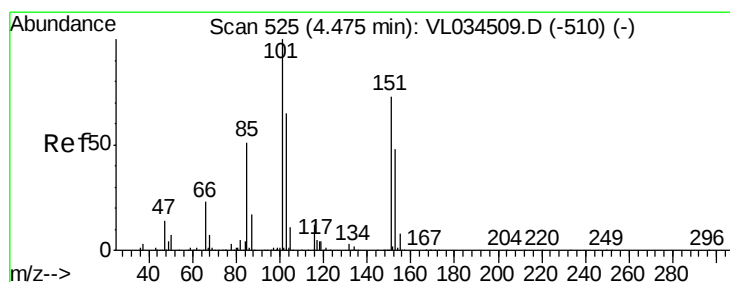
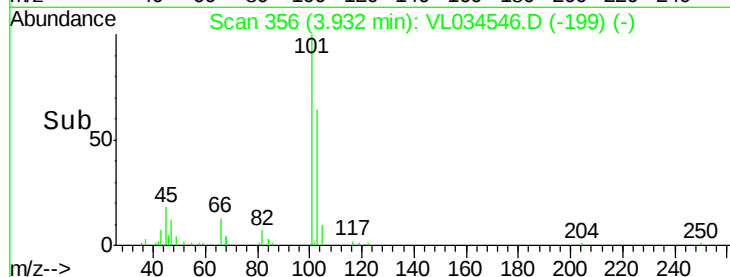
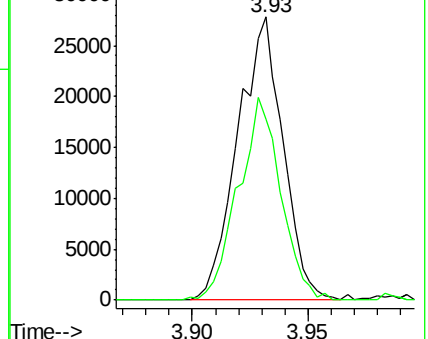
101 100

103 63.8 52.1 78.1



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.061 ppbv

RT: 4.47 min Scan# 524

Delta R.T. -0.00 min

Lab File: VL034546.D

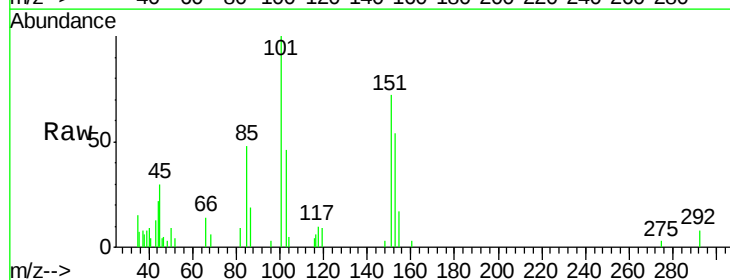
Acq: 2 Jan 2020 14:41

Tgt Ion:101 Resp: 6058

Ion Ratio Lower Upper

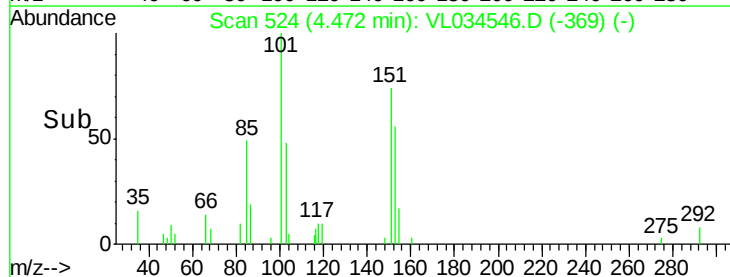
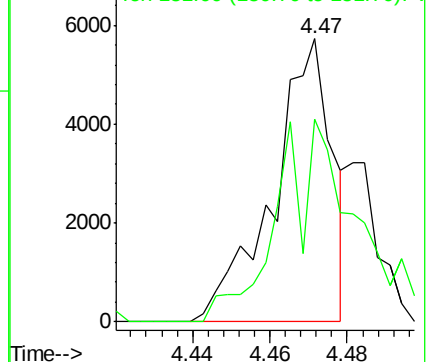
101 100

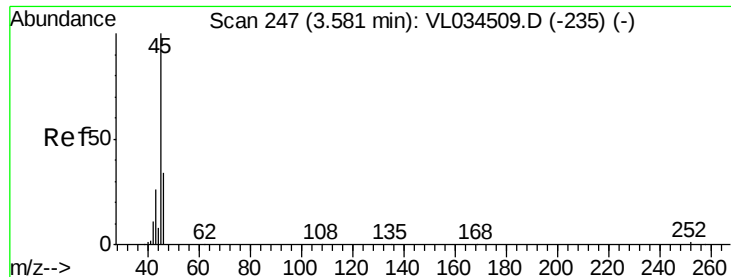
151 94.2 57.8 86.6#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V

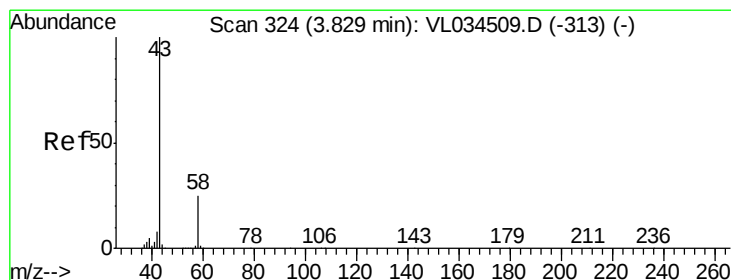
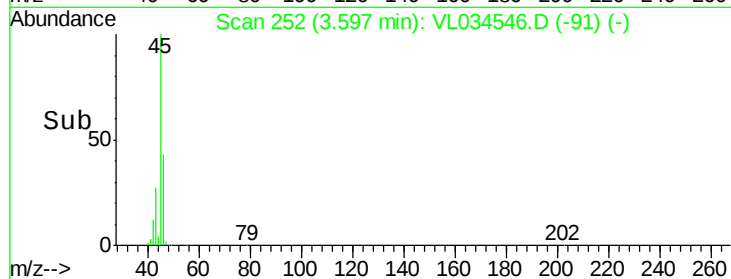
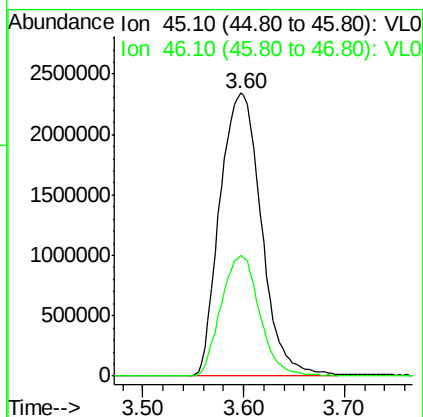
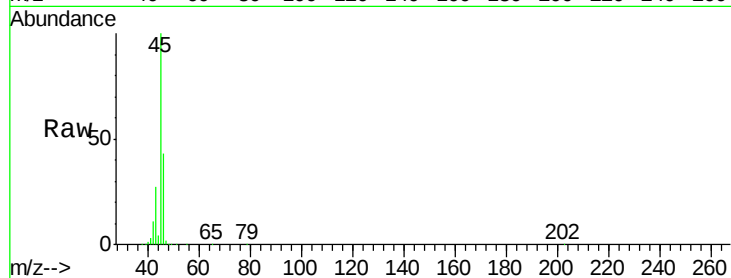




#13
Ethanol
Concen: 615.225 ppbv
RT: 3.60 min Scan# 252
Delta R.T. 0.02 min
Lab File: VL034546.D
Acq: 2 Jan 2020 14:41

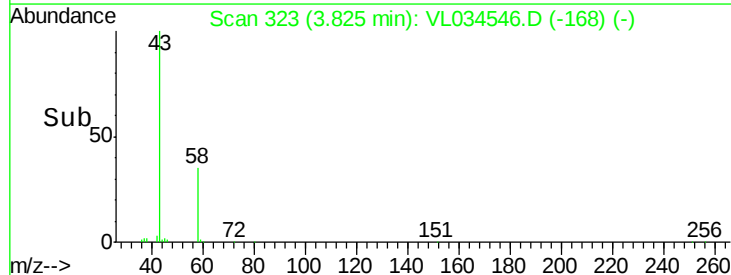
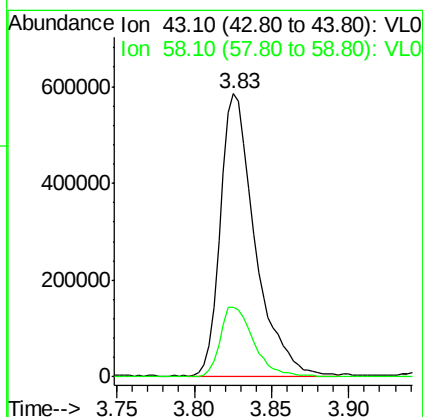
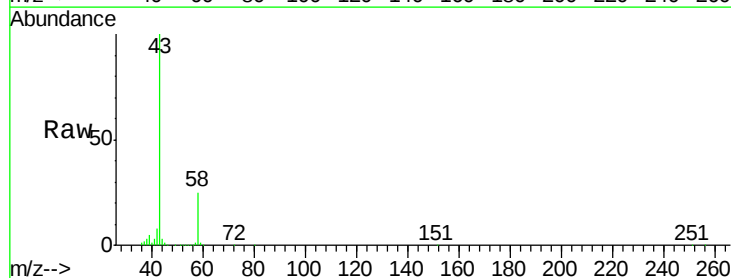
Instrument :
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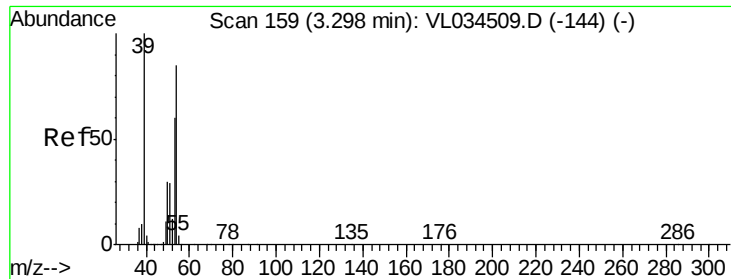
Tgt Ion: 45 Resp: 6710483
Ion Ratio Lower Upper
45 100
46 39.9 14.9 59.7



#15
Acetone
Concen: 7.248 ppbv
RT: 3.83 min Scan# 323
Delta R.T. -0.00 min
Lab File: VL034546.D
Acq: 2 Jan 2020 14:41

Tgt Ion: 43 Resp: 905181
Ion Ratio Lower Upper
43 100
58 24.2 20.4 30.6

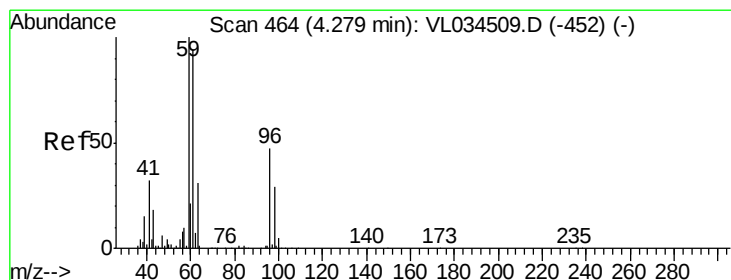
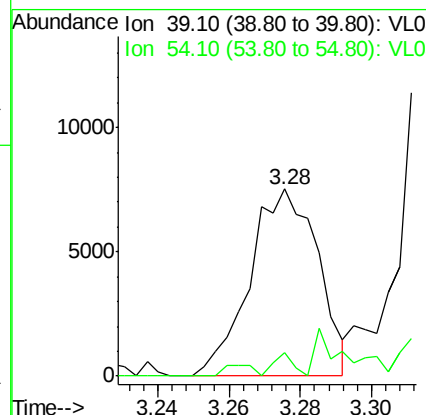
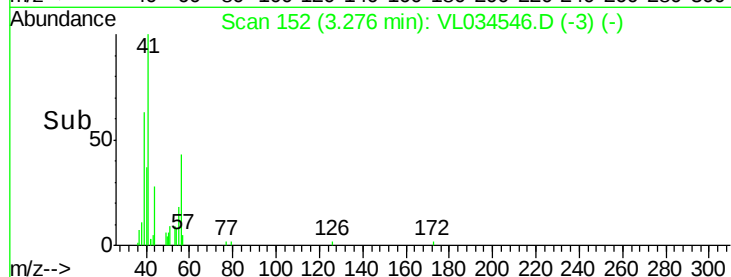
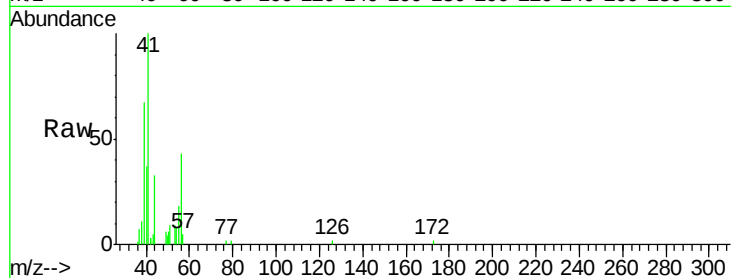




#16
 1,3-Butadiene
 Concen: 0.208 ppbv
 RT: 3.28 min Scan# 152
 Delta R.T. -0.02 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

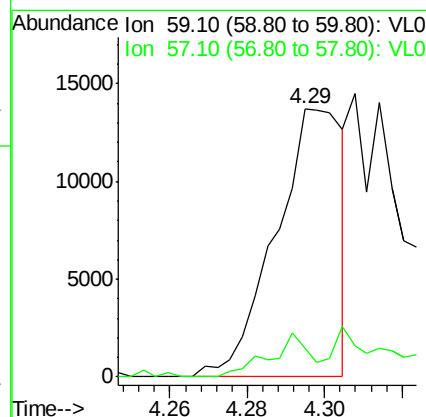
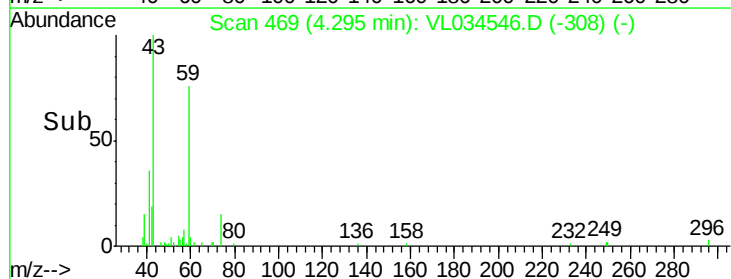
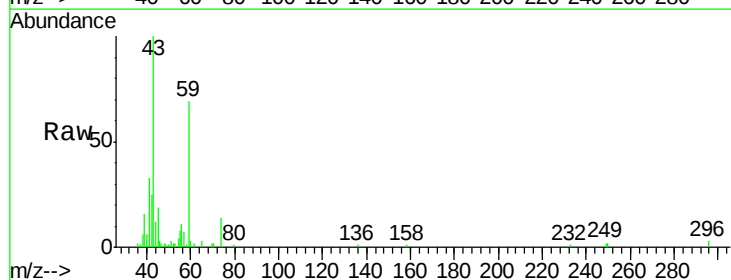
Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

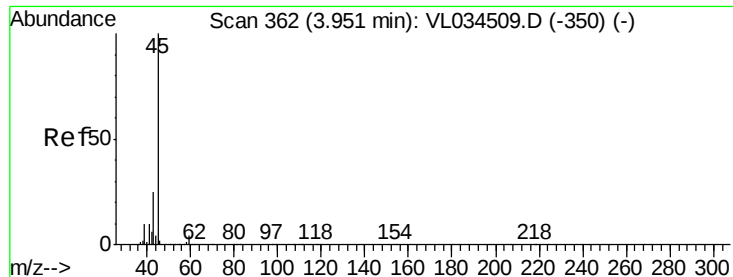
Tgt Ion: 39 Resp: 9974
 Ion Ratio Lower Upper
 39 100
 54 17.3 66.2 99.2#



#17
 tert-Butyl alcohol
 Concen: 0.165 ppbv
 RT: 4.29 min Scan# 469
 Delta R.T. 0.02 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

Tgt Ion: 59 Resp: 16510
 Ion Ratio Lower Upper
 59 100
 57 0.0 8.6 12.8#





#19

Isopropyl Alcohol

Concen: 6.643 ppbv

RT: 3.97 min Scan# 368

Delta R.T. 0.02 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

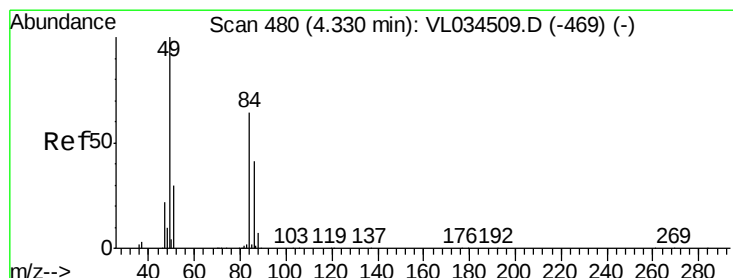
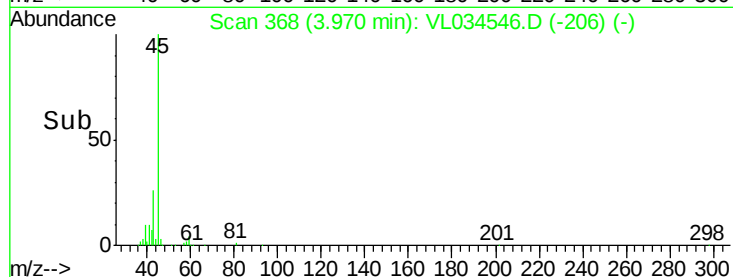
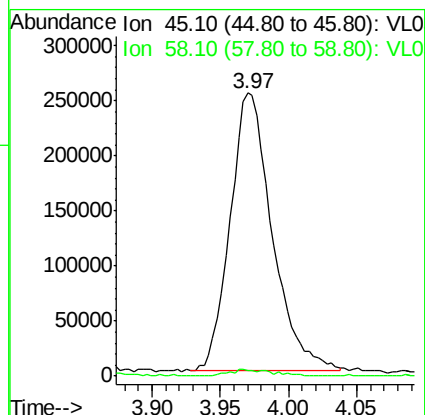
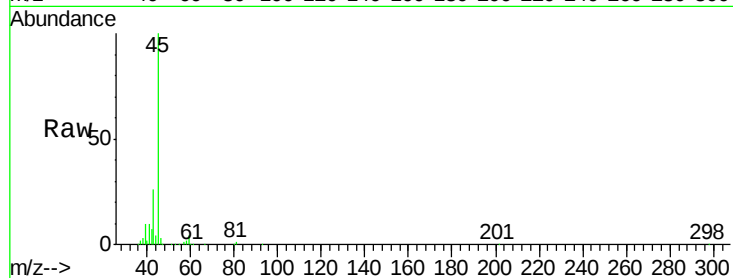
MJ-1

Tgt Ion: 45 Resp: 537083

Ion Ratio Lower Upper

45 100

58 2.7 1.4 2.0#



#20

Methylene Chloride

Concen: 0.775 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.00 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Tgt Ion: 84 Resp: 38095

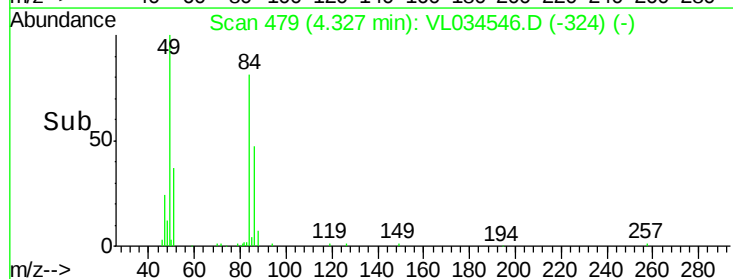
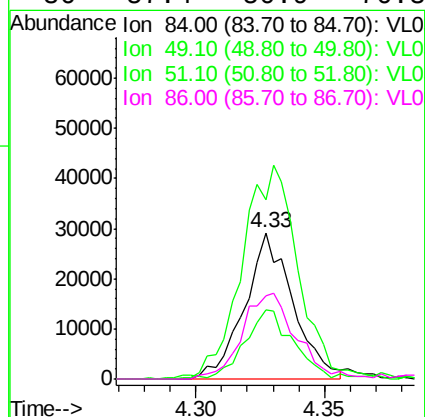
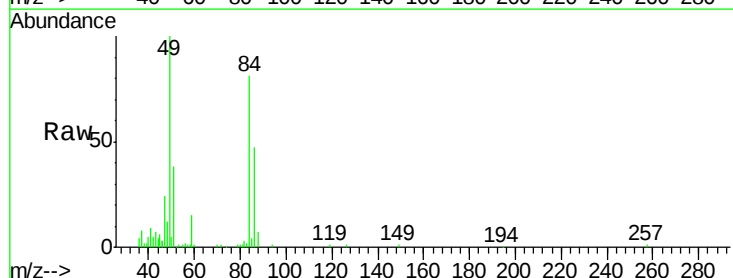
Ion Ratio Lower Upper

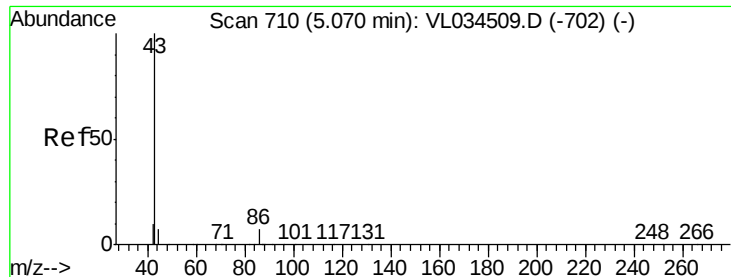
84 100

49 122.4 124.4 186.6#

51 44.7 37.0 55.6

86 57.4 50.9 76.3

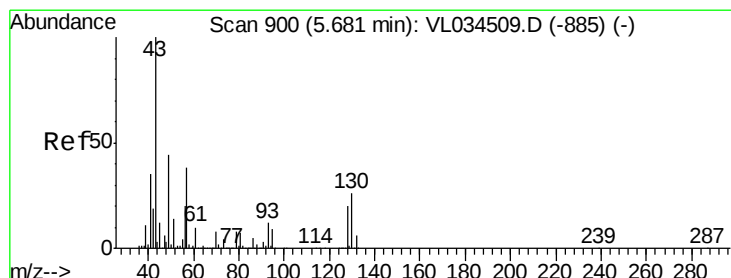
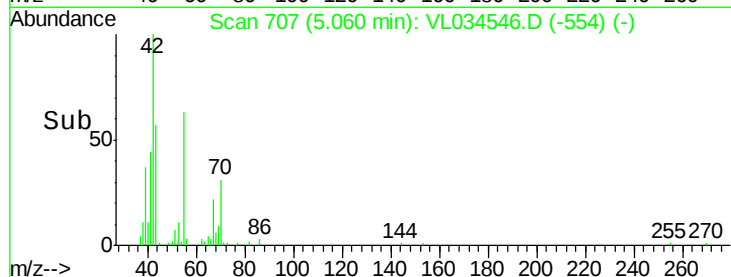
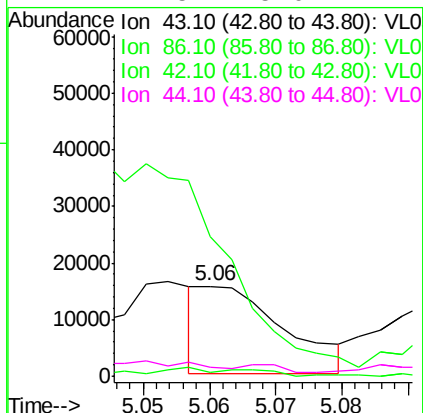
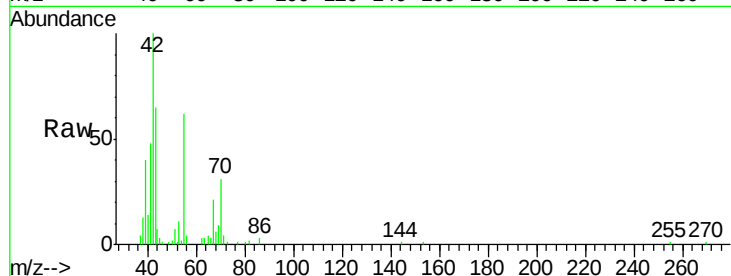




#23
 Vinyl Acetate
 Concen: 0.093 ppbv
 RT: 5.06 min Scan# 707
 Delta R.T. -0.01 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

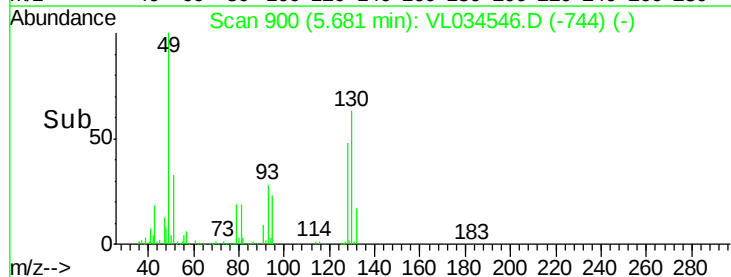
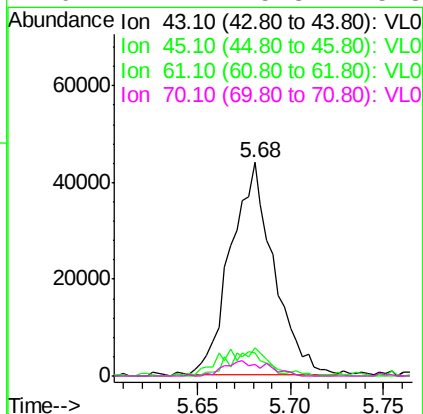
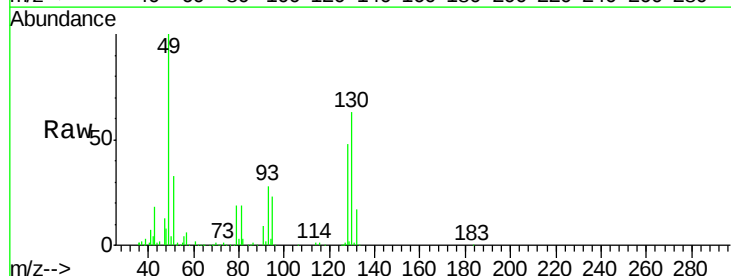
Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

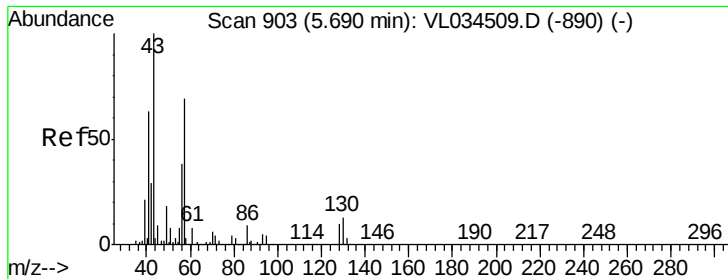
Tgt Ion:	43	Resp:	13397
Ion	Ratio	Lower	Upper
43	100		
86	4.1	5.4	8.2#
42	189.3	8.9	13.3#
44	7.5	5.0	7.4#



#25
 Ethyl Acetate
 Concen: 0.362 ppbv
 RT: 5.68 min Scan# 900
 Delta R.T. 0.00 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

Tgt Ion:	43	Resp:	70653
Ion	Ratio	Lower	Upper
43	100		
45	14.7	8.3	12.5#
61	10.5	7.8	11.6
70	7.2	5.8	8.8





#26

Hexane

Concen: 0.134 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.01 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-1

Tgt Ion: 57 Resp: 10973

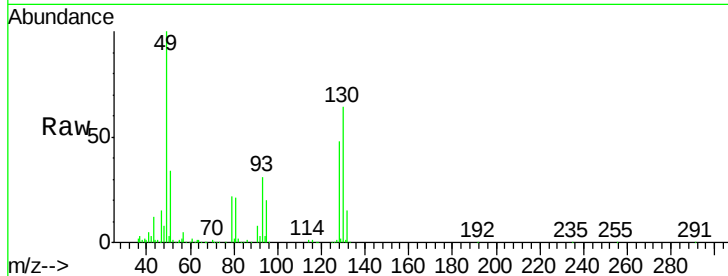
Ion Ratio Lower Upper

57 100

41 324.0 75.3 112.9#

43 670.3 189.4 284.2#

56 173.5 42.8 64.2#

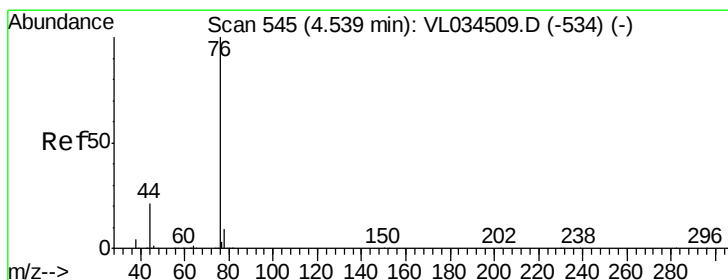
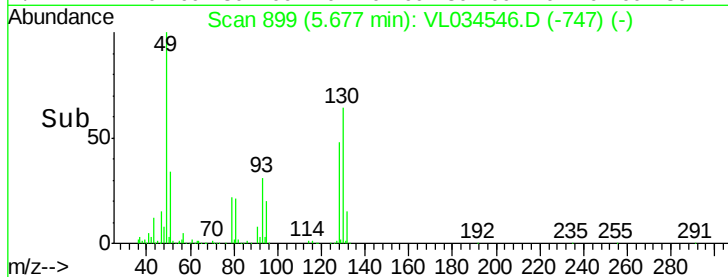
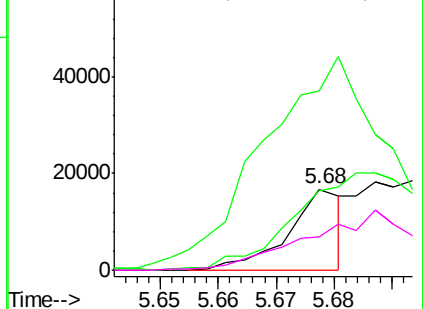


Abundance Ion 57.10 (56.80 to 57.80): VL0

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



#27

Carbon Disulfide

Concen: 0.040 ppbv

RT: 4.53 min Scan# 543

Delta R.T. -0.01 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

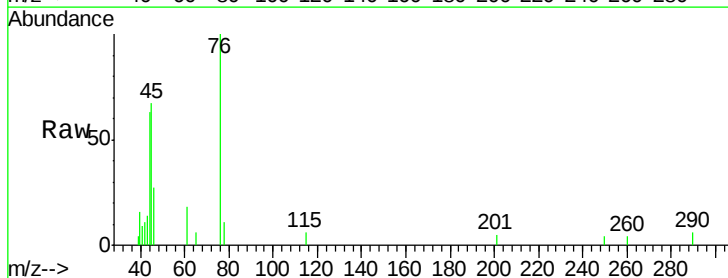
Tgt Ion: 76 Resp: 4124

Ion Ratio Lower Upper

76 100

44 0.0 16.6 25.0#

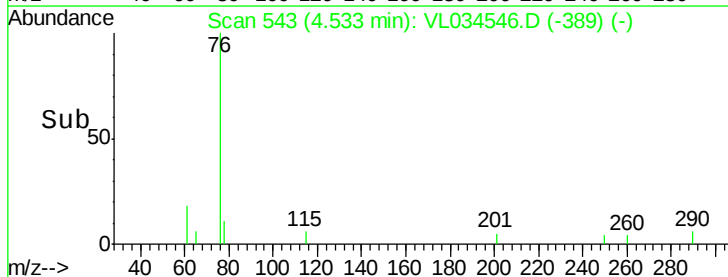
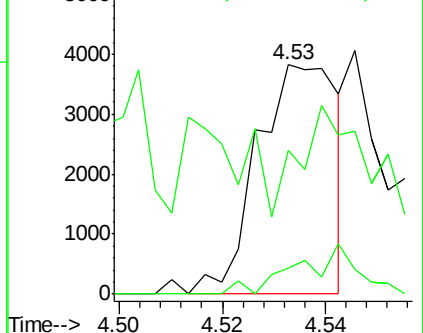
78 0.0 7.4 11.0#

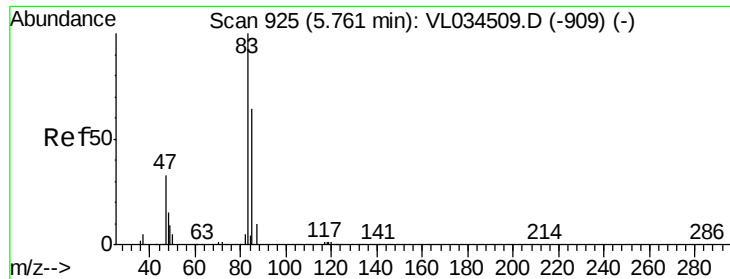


Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0





#29

Chloroform

Concen: 0.044 ppbv

RT: 5.75 min Scan# 923

Delta R.T. -0.01 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

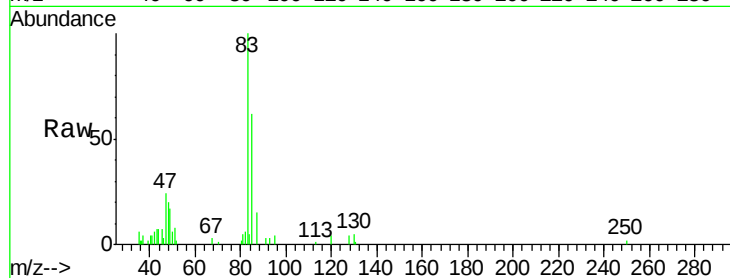
MJ-1

Tgt Ion: 83 Resp: 6304

Ion Ratio Lower Upper

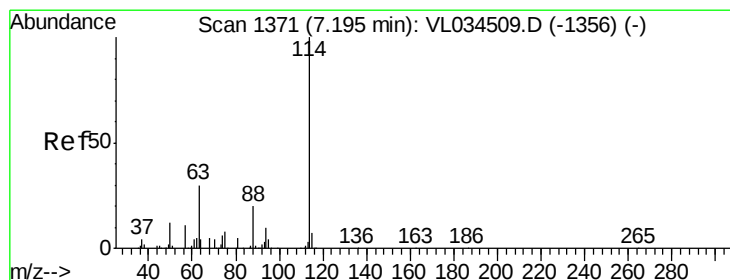
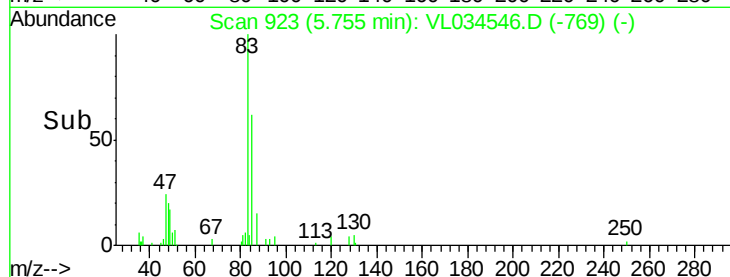
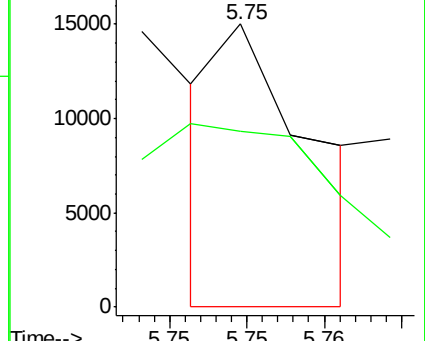
83 100

85 52.2 51.0 76.6



Abundance Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.01 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

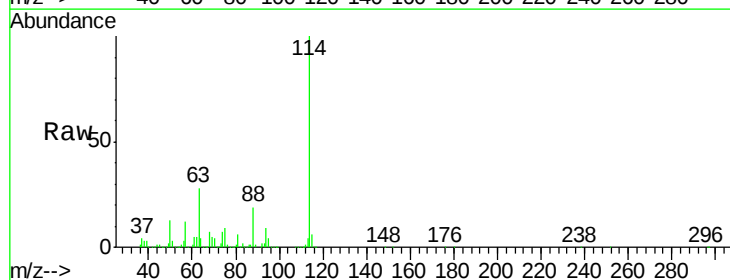
Tgt Ion: 114 Resp: 1725556

Ion Ratio Lower Upper

114 100

63 29.2 24.1 36.1

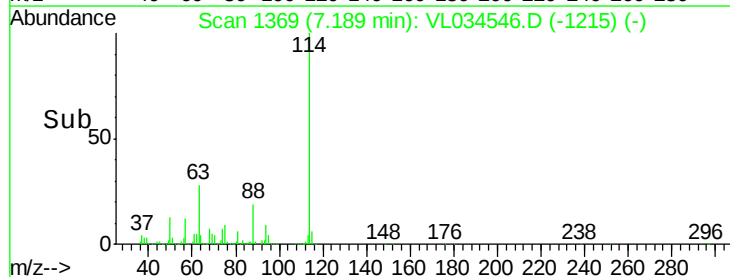
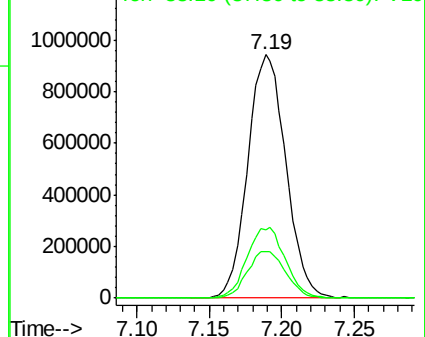
88 19.4 15.7 23.5

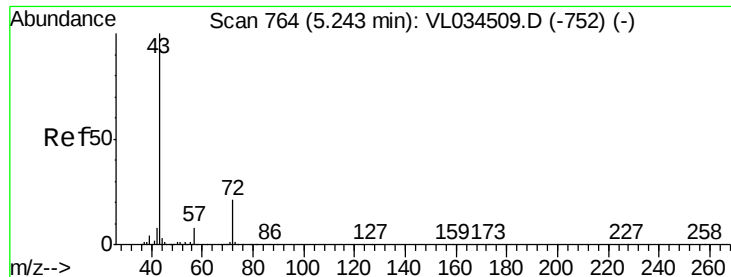


Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





#34

2-Butanone

Concen: 1.056 ppbv

RT: 5.24 min Scan# 763

Delta R.T. -0.00 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampleId :

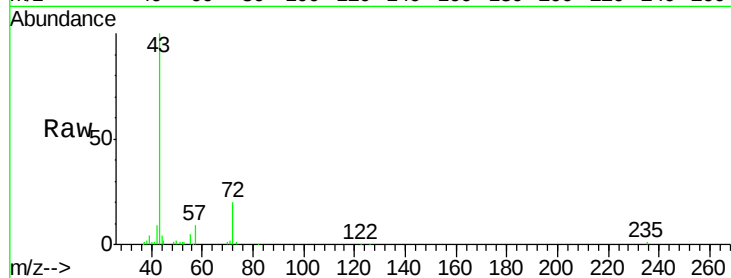
MJ-1

Tgt Ion: 43 Resp: 130268

Ion Ratio Lower Upper

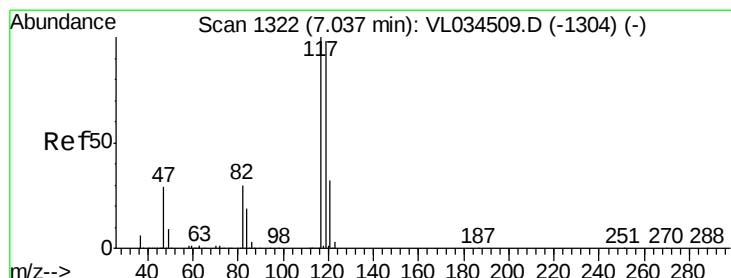
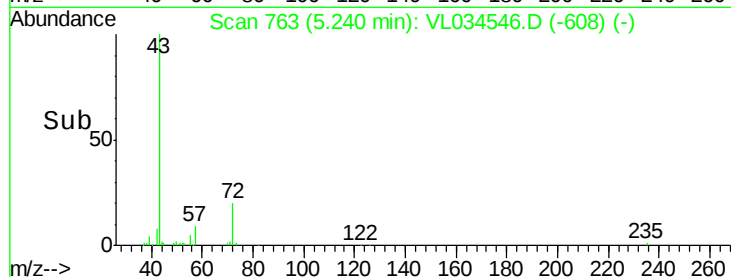
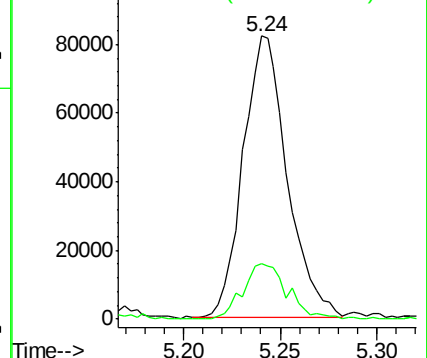
43 100

72 20.4 17.0 25.4



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0



#35

Carbon Tetrachloride

Concen: 0.033 ppbv

RT: 7.03 min Scan# 1321

Delta R.T. -0.00 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

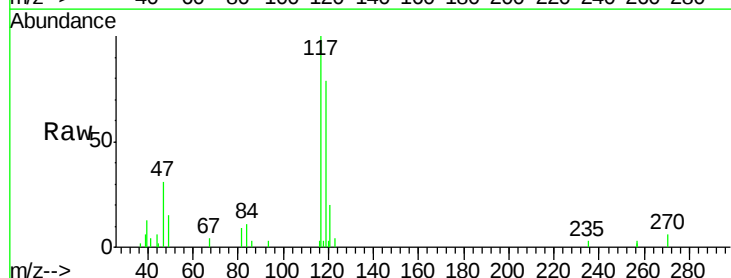
Tgt Ion: 117 Resp: 5239

Ion Ratio Lower Upper

117 100

119 74.9 78.7 118.1#

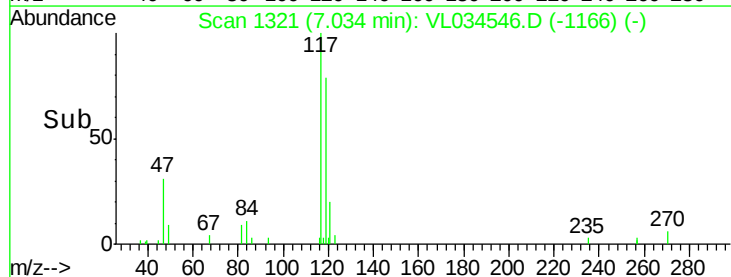
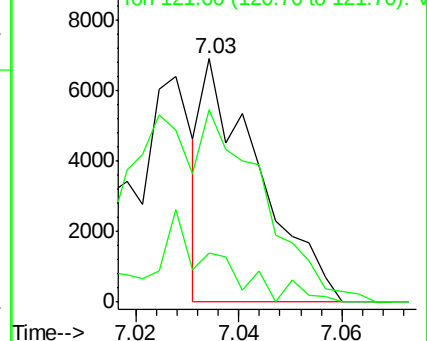
121 19.9 25.9 38.9#

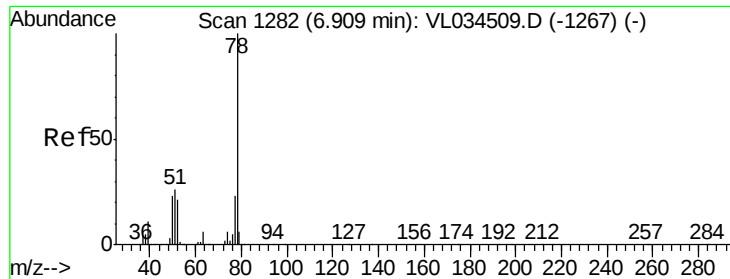


Abundance Ion 117.00 (116.70 to 117.70): V

Ion 119.00 (118.70 to 119.70): V

Ion 121.00 (120.70 to 121.70): V





#36

Benzene

Concen: 0.108 ppbv

RT: 6.91 min Scan# 1281

Delta R.T. -0.00 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampled :

MJ-1

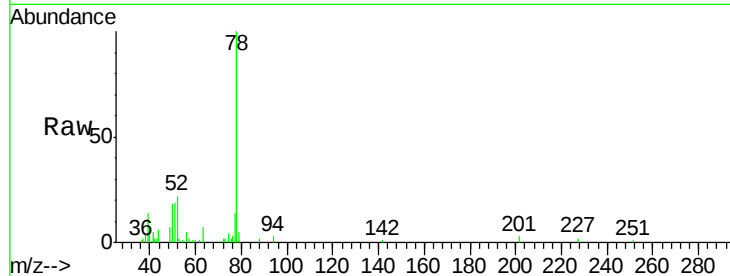
Tgt Ion: 78 Resp: 16203

Ion Ratio Lower Upper

78 100

77 14.2 18.6 28.0#

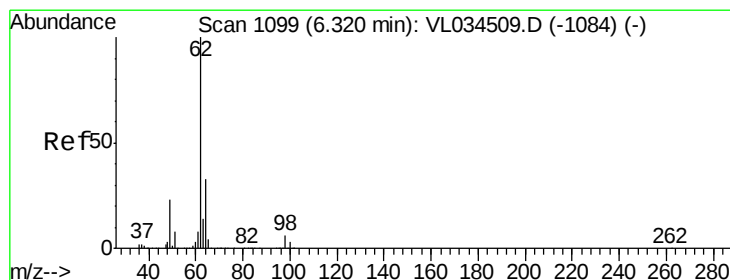
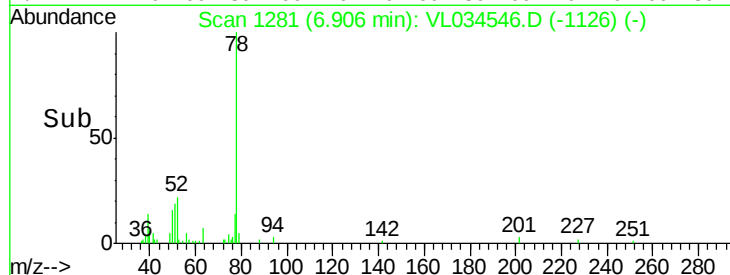
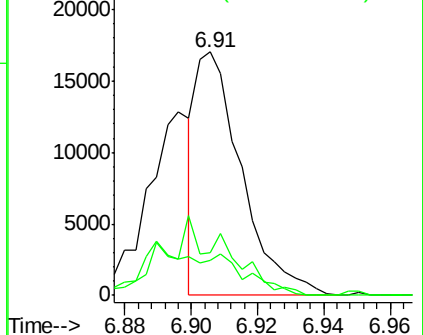
50 17.5 18.8 28.2#



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



#37

1,2-Dichloroethane

Concen: 0.037 ppbv

RT: 6.31 min Scan# 1096

Delta R.T. -0.01 min

Lab File: VL034546.D

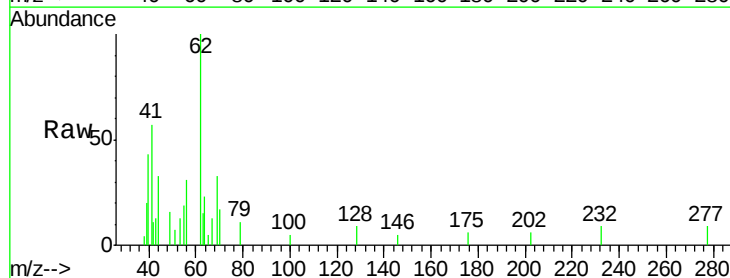
Acq: 2 Jan 2020 14:41

Tgt Ion: 62 Resp: 4529

Ion Ratio Lower Upper

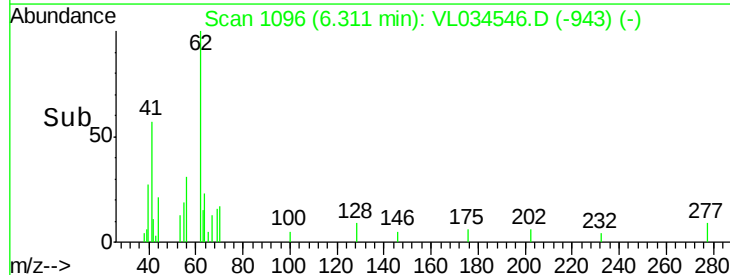
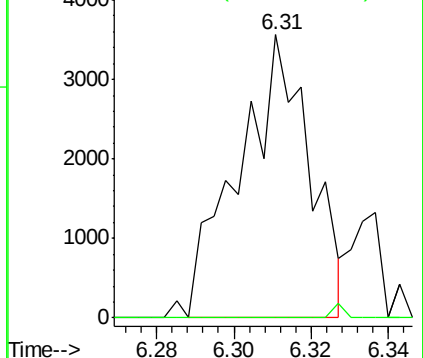
62 100

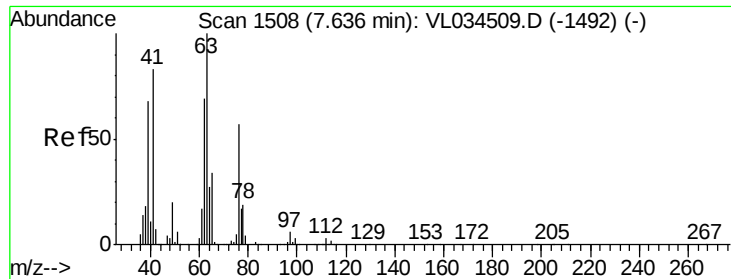
98 0.0 3.8 5.6#



Abundance Ion 62.10 (61.80 to 62.80): VL0

Ion 98.00 (97.70 to 98.70): VL0

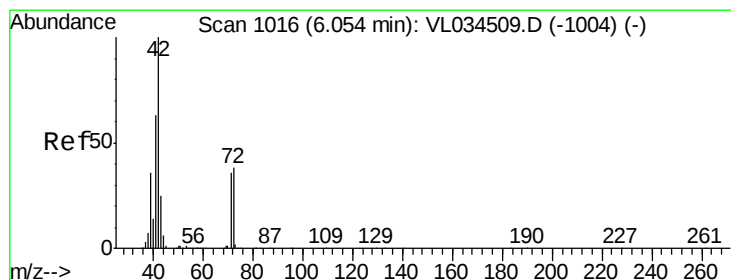
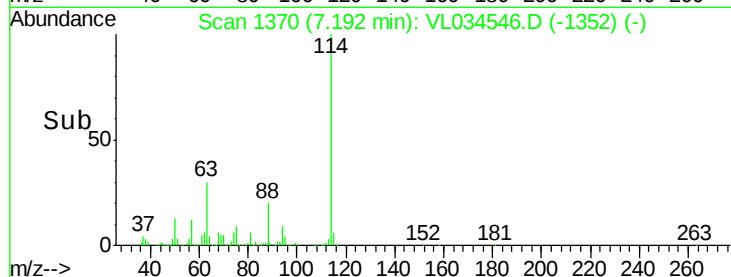
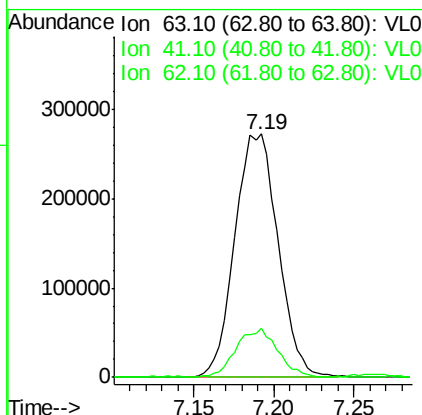
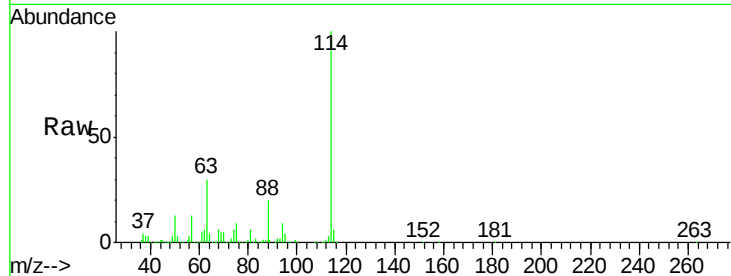




#39
 1,2-Dichloropropane
 Concen: 8.087 ppbv
 RT: 7.19 min Scan# 1370
 Delta R.T. -0.44 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

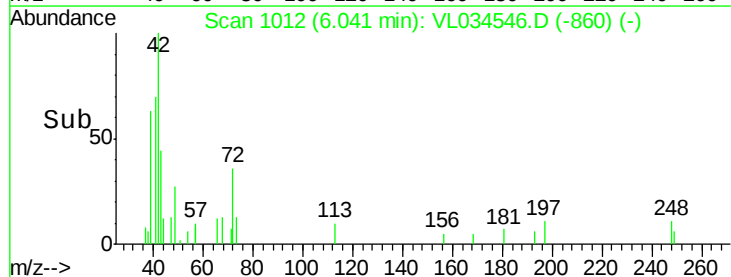
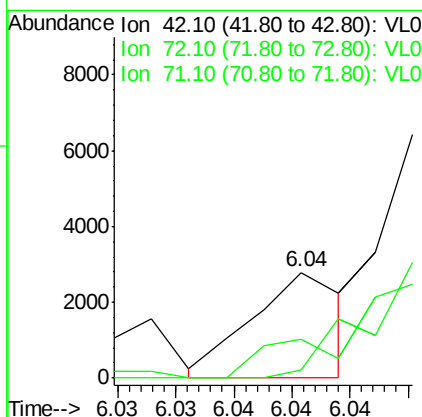
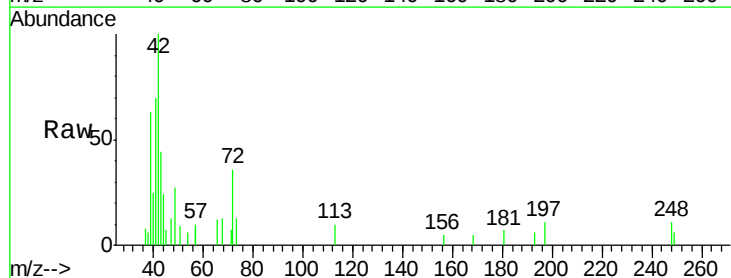
Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

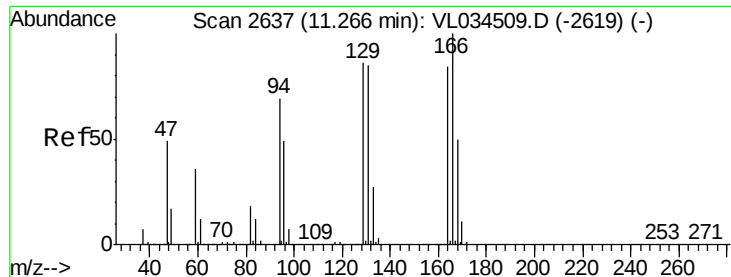
Tgt Ion: 63 Resp: 500191
 Ion Ratio Lower Upper
 63 100
 41 0.0 66.1 99.1#
 62 20.3 54.9 82.3#



#41
 Tetrahydrofuran
 Concen: 0.024 ppbv
 RT: 6.04 min Scan# 1012
 Delta R.T. -0.01 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

Tgt Ion: 42 Resp: 1523
 Ion Ratio Lower Upper
 42 100
 72 0.0 30.9 46.3#
 71 0.0 28.9 43.3#





#52

Tetrachloroethene

Concen: 0.265 ppbv

RT: 11.26 min Scan# 2634

Delta R.T. -0.01 min

Lab File: VL034546.D

Acq: 2 Jan 2020 14:41

Instrument :

MSVOA_L

ClientSampled :

MJ-1

Tgt Ion:164 Resp: 15584

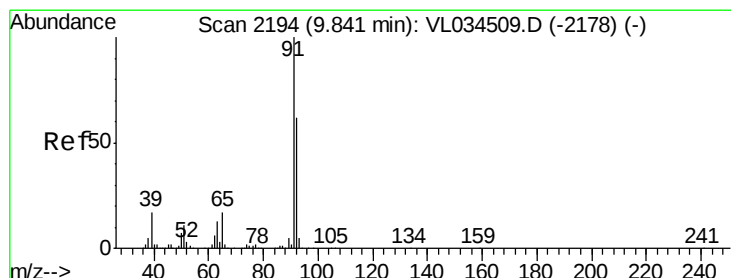
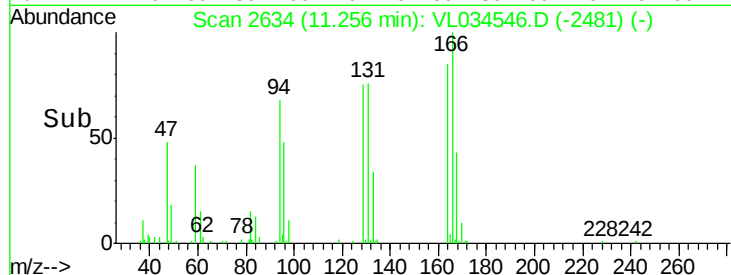
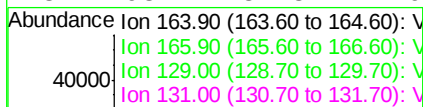
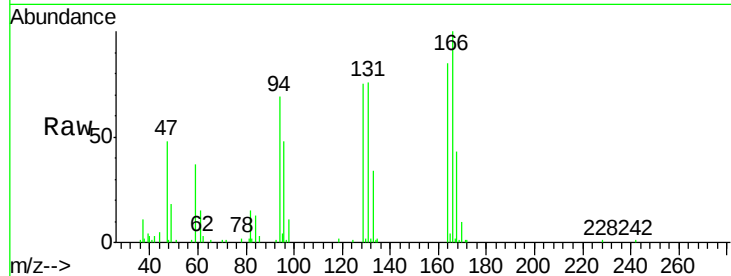
Ion Ratio Lower Upper

164 100

166 120.4 95.7 143.5

129 85.4 82.2 123.2

131 93.4 81.3 121.9



#53

Toluene

Concen: 0.799 ppbv

RT: 9.83 min Scan# 2192

Delta R.T. -0.01 min

Lab File: VL034546.D

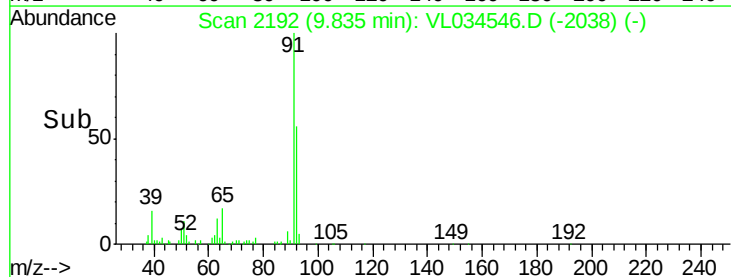
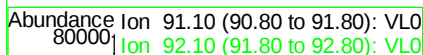
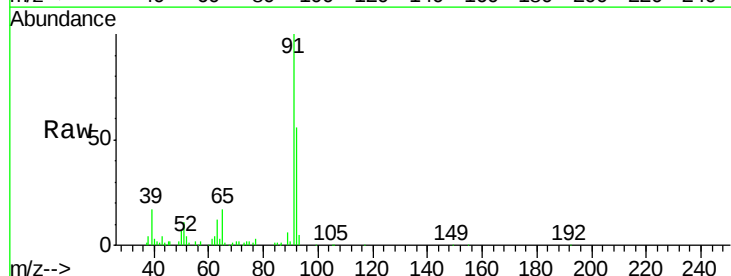
Acq: 2 Jan 2020 14:41

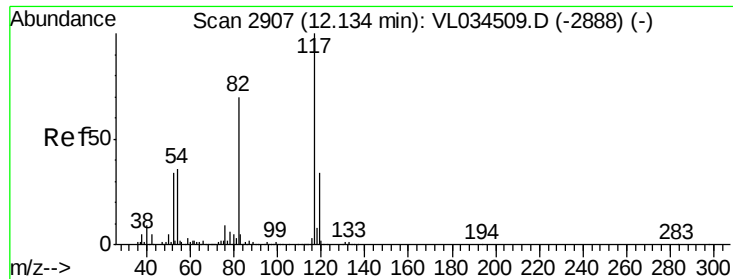
Tgt Ion: 91 Resp: 132064

Ion Ratio Lower Upper

91 100

92 57.6 48.4 72.6

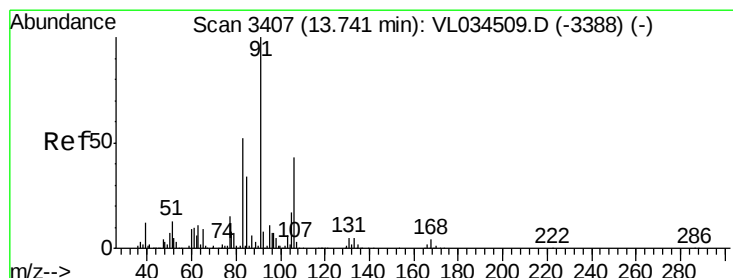
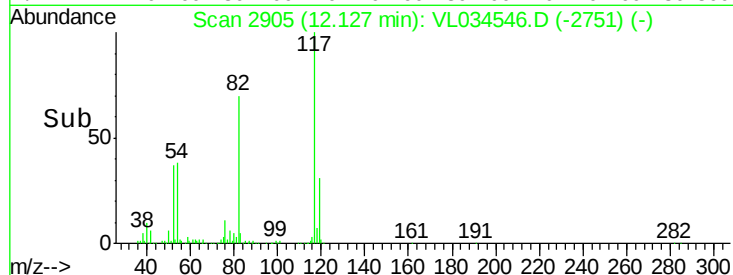
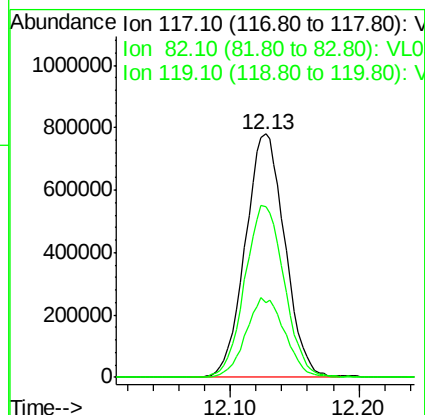
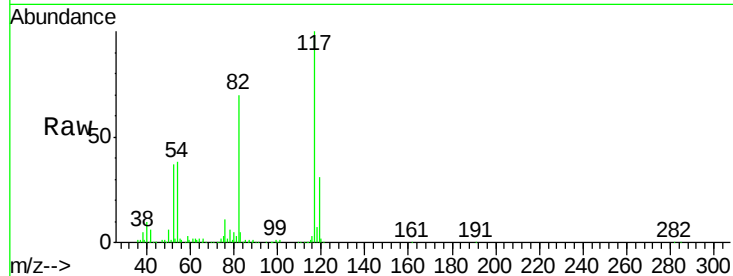




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.13 min Scan# 2905
Delta R.T. -0.01 min
Lab File: VL034546.D
Acq: 2 Jan 2020 14:41

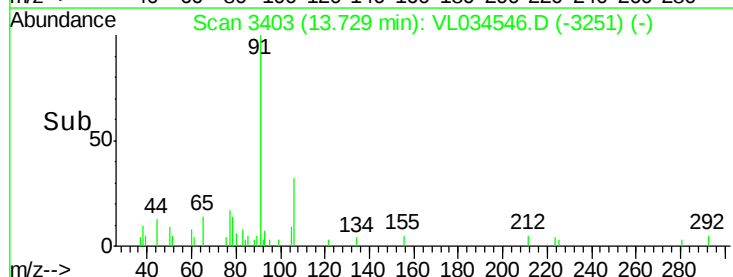
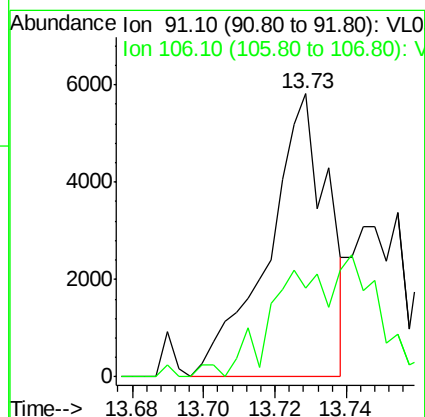
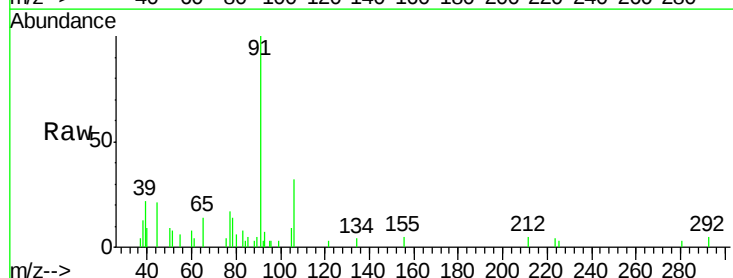
Instrument :
MSVOA_L
ClientSampleId :
MJ-1

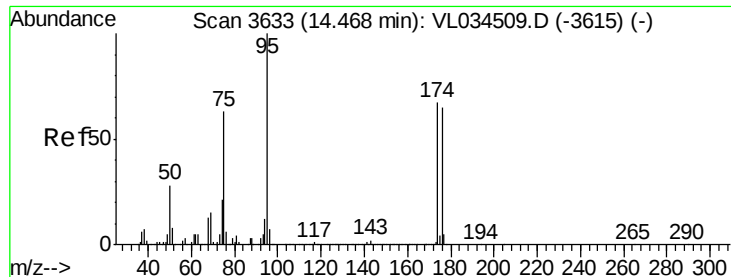
Tgt Ion:117 Resp: 1665641
Ion Ratio Lower Upper
117 100
82 71.2 56.2 84.4
119 32.4 27.1 40.7



#60
o-Xylene
Concen: 0.034 ppbv
RT: 13.73 min Scan# 3403
Delta R.T. -0.01 min
Lab File: VL034546.D
Acq: 2 Jan 2020 14:41

Tgt Ion: 91 Resp: 6709
Ion Ratio Lower Upper
91 100
106 0.0 21.4 64.3#

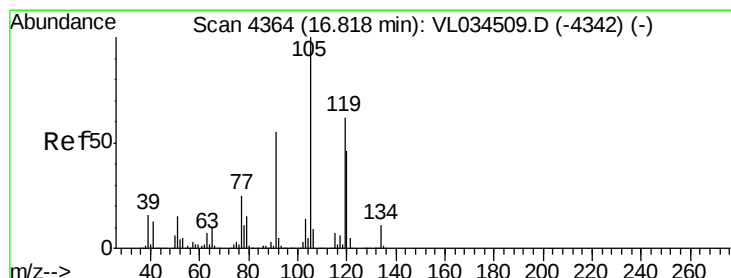
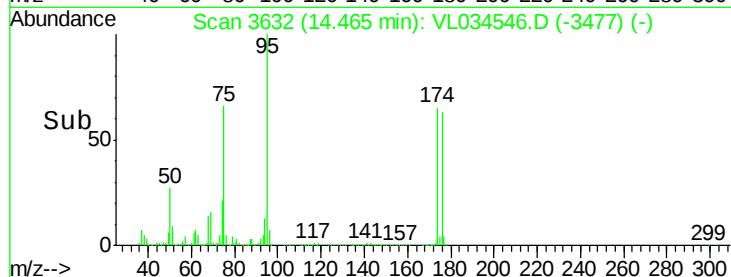
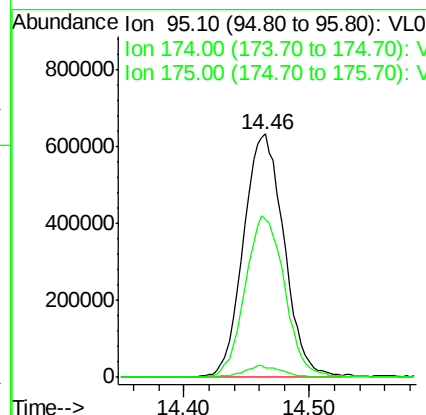
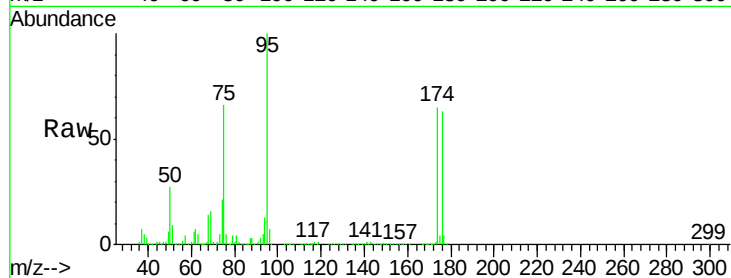




#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.219 ppbv
 RT: 14.46 min Scan# 3632
 Delta R.T. -0.00 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

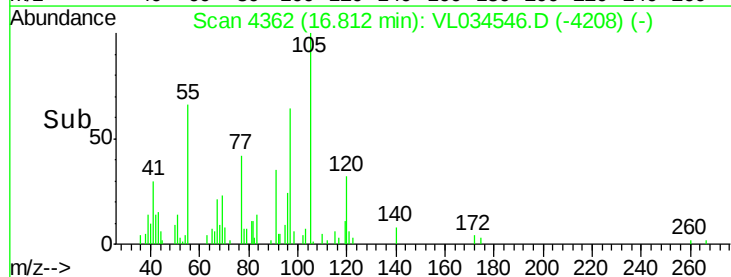
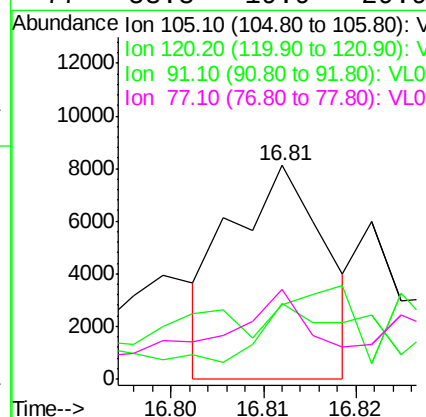
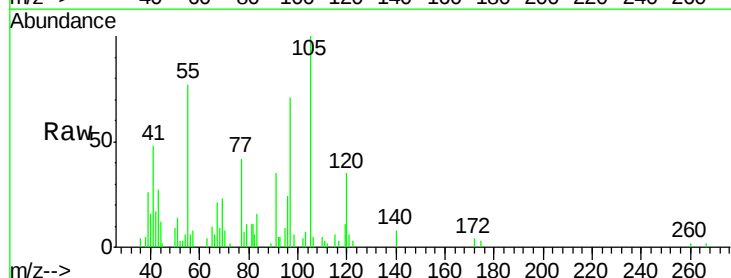
Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

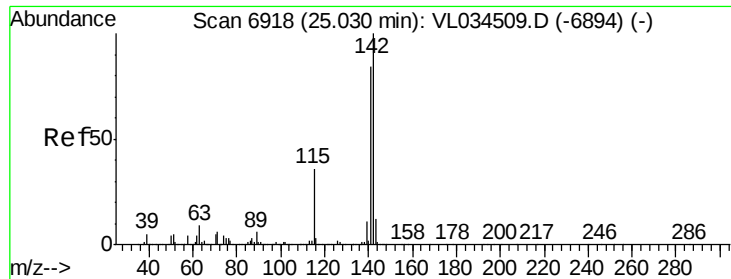
Tgt Ion: 95 Resp: 1420346
 Ion Ratio Lower Upper
 95 100
 174 65.1 52.4 78.6
 175 4.5 3.9 5.9



#74
 1,2,4-Trimethylbenzene
 Concen: 0.025 ppbv
 RT: 16.81 min Scan# 4362
 Delta R.T. -0.01 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

Tgt Ion: 105 Resp: 5761
 Ion Ratio Lower Upper
 105 100
 120 21.4 36.7 55.1#
 91 46.2 44.0 66.0
 77 53.8 19.9 29.9#

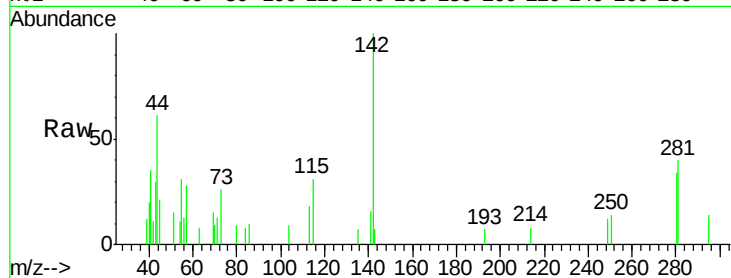




#80
 Naphthalene, 2-methyl-
 Concen: 0.076 ppbv
 RT: 25.04 min Scan# 6921
 Delta R.T. 0.01 min
 Lab File: VL034546.D
 Acq: 2 Jan 2020 14:41

Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-1

Tgt Ion	Ratio	Lower	Upper
142	100		
141	81.6	65.8	98.8
115	52.8	30.4	45.6



Abundance Ion 142.00 (141.70 to 142.70): V
 Ion 141.00 (140.70 to 141.70): V
 Ion 115.00 (114.70 to 115.70): V

