

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL010220\
 Data File : VL034549.D
 Acq On : 2 Jan 2020 16:41
 Operator : SY/AP
 Sample : K6473-02
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-2

Quant Time: Jan 03 01:11:04 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	943610	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.19	114	1859479	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.12	117	1818420	10.00	ppbv	0.00

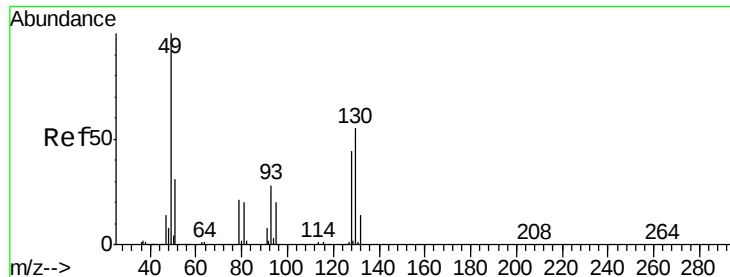
System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	1537441	10.13	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	101.30%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	43799	0.294	ppbv	100
3) Chlorodifluoromethane	2.93	51	234695	2.088	ppbv #	76
4) Chloromethane	3.11	50	28092	0.421	ppbv	99
9) Propene	3.18	41	90521	2.088	ppbv	86
10) Heptane	8.13	43	3647	0.033	ppbv #	1
11) Trichlorofluoromethane	3.93	101	44578	0.259	ppbv	98
12) 1,1,2-Trichlorotrifluoroet	4.47	101	3080	0.028	ppbv #	1
13) Ethanol	3.59	45	4225273	351.321	ppbv	98
15) Acetone	3.83	43	910490	6.612	ppbv	96
16) 1,3-Butadiene	3.27	39	9754	0.184	ppbv #	8
17) tert-Butyl alcohol	4.29	59	10845	0.098	ppbv #	72
19) Isopropyl Alcohol	3.96	45	504897	5.664	ppbv #	97
20) Methylene Chloride	4.33	84	16323	0.301	ppbv #	67
23) Vinyl Acetate	5.07	43	3202	0.020	ppbv #	1
25) Ethyl Acetate	5.68	43	58503	0.272	ppbv #	95
26) Hexane	5.68	57	27841	0.307	ppbv	93
29) Chloroform	5.75	83	5310	0.034	ppbv	86
31) cis-1,2-Dichloroethene	5.67	61	2911	0.032	ppbv #	29
34) 2-Butanone	5.24	43	148295	1.116	ppbv	98
35) Carbon Tetrachloride	7.04	117	7626	0.045	ppbv #	49
36) Benzene	6.91	78	14637	0.090	ppbv #	92
37) 1,2-Dichloroethane	6.32	62	2754	0.021	ppbv #	88
39) 1,2-Dichloropropane	7.19	63	563238	8.450	ppbv #	21
41) Tetrahydrofuran	6.05	42	8366	0.123	ppbv #	38
52) Tetrachloroethene	11.26	164	1618	0.026	ppbv #	33
53) Toluene	9.84	91	64899	0.364	ppbv #	63
58) Ethyl Benzene	12.76	91	5176	0.021	ppbv	95
59) m/p-Xylene	13.03	91	4438	0.021	ppbv #	32
74) 1,2,4-Trimethylbenzene	16.81	105	7913	0.031	ppbv #	72

(#) = 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: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-2

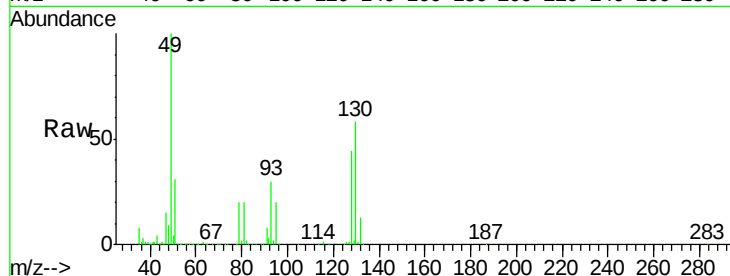
Tgt Ion: 49 Resp: 943610

Ion Ratio Lower Upper

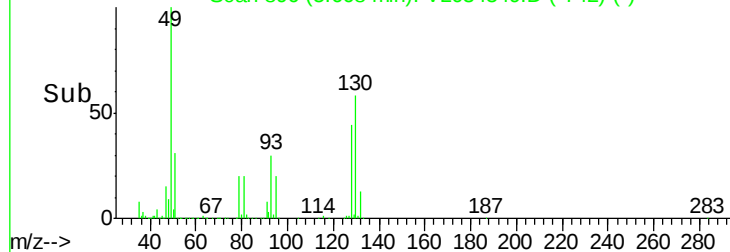
49 100

128 44.7 22.4 67.2

130 56.3 28.3 85.0



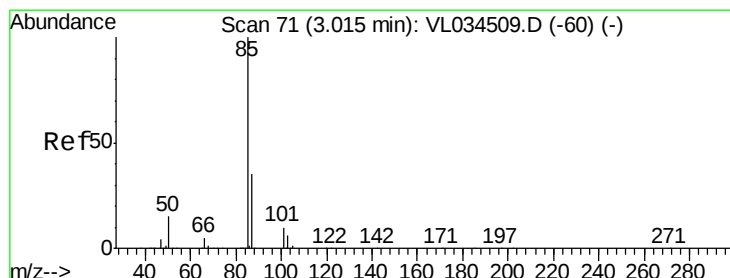
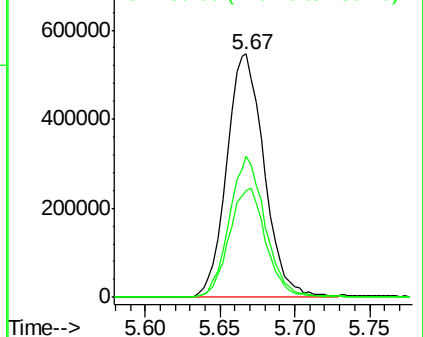
Scan 896 (5.668 min): VL034549.D (-742) (-)



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: 0.294 ppbv

RT: 3.02 min Scan# 71

Delta R.T. -0.00 min

Lab File: VL034549.D

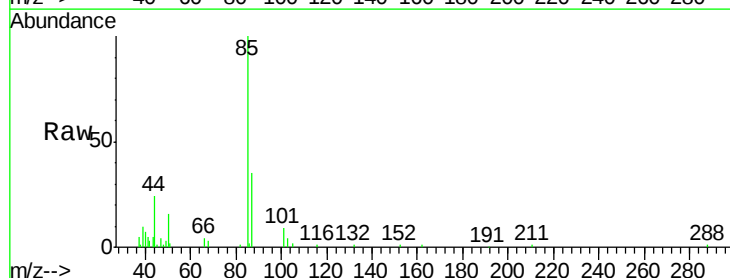
Acq: 2 Jan 2020 16:41

Tgt Ion: 85 Resp: 43799

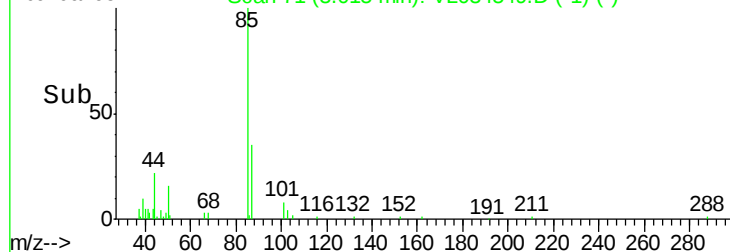
Ion Ratio Lower Upper

85 100

87 34.8 27.9 41.9

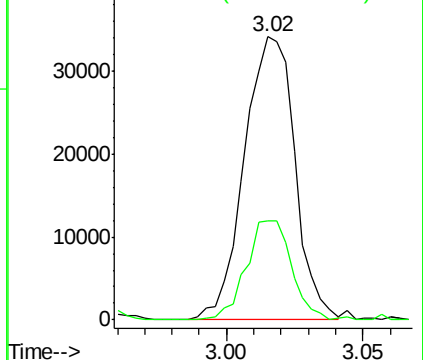


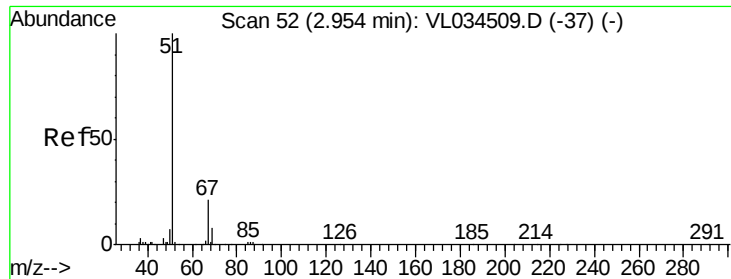
Scan 71 (3.015 min): VL034549.D (-1) (-)



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 2.088 ppbv

RT: 2.93 min Scan# 44

Delta R.T. -0.03 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

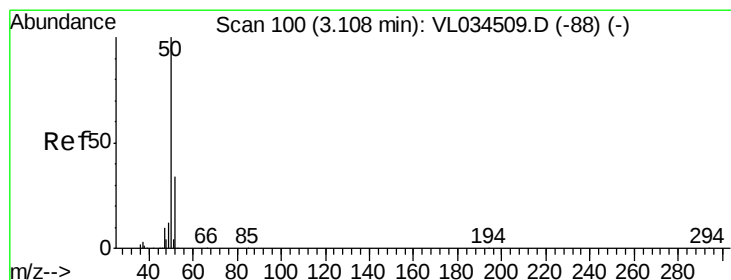
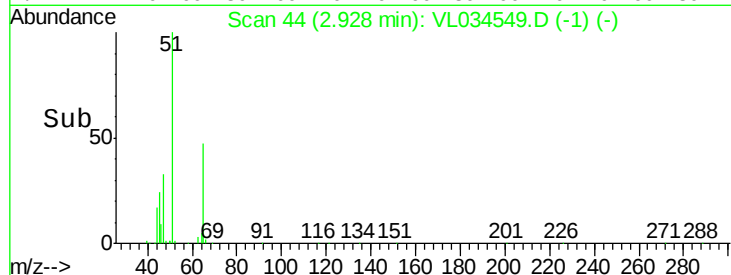
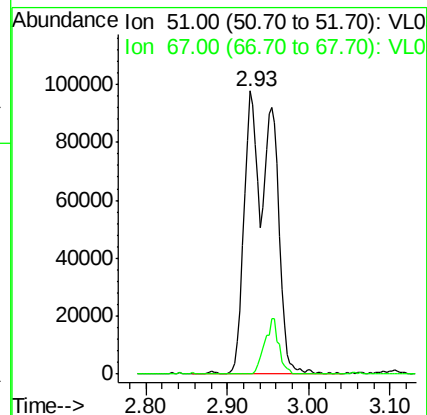
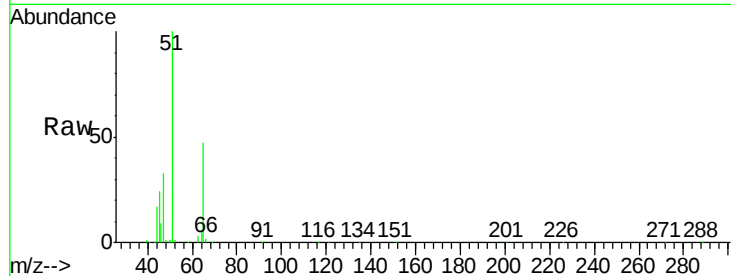
MJ-2

Tgt Ion: 51 Resp: 234695

Ion Ratio Lower Upper

51 100

67 9.7 16.8 25.2#



#4

Chloromethane

Concen: 0.421 ppbv

RT: 3.11 min Scan# 100

Delta R.T. -0.00 min

Lab File: VL034549.D

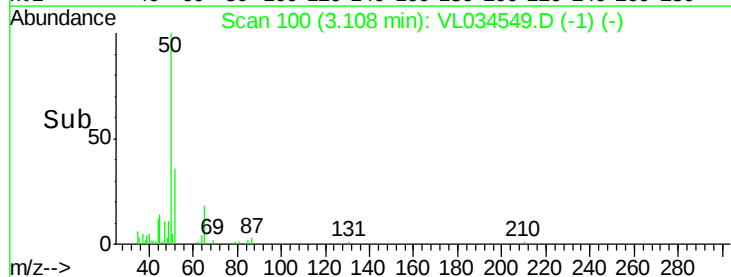
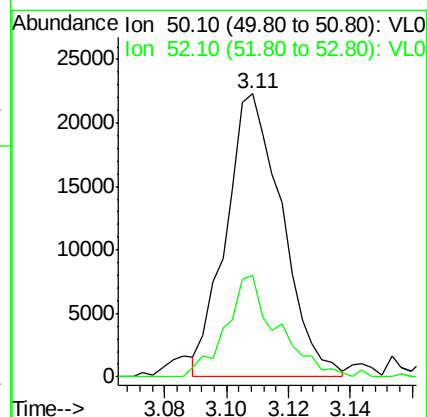
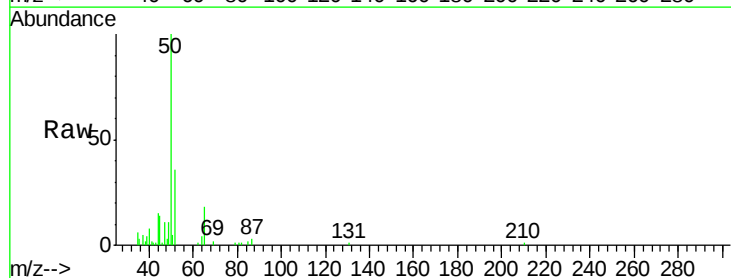
Acq: 2 Jan 2020 16:41

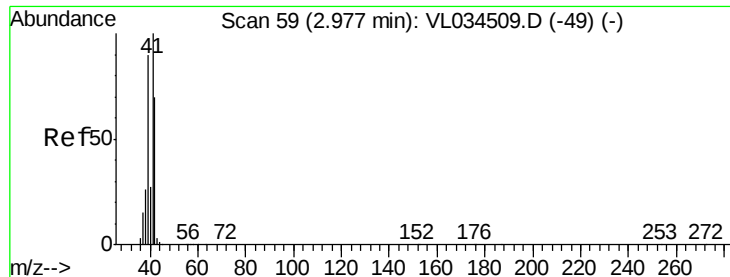
Tgt Ion: 50 Resp: 28092

Ion Ratio Lower Upper

50 100

52 35.0 27.6 41.4





#9

Propene

Concen: 2.088 ppbv

RT: 3.18 min Scan# 121

Delta R.T. 0.20 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

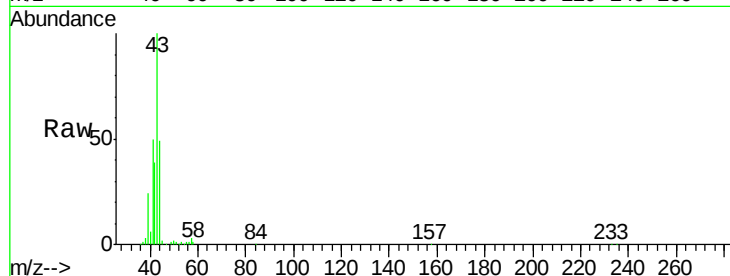
MJ-2

Tgt Ion: 41 Resp: 90521

Ion Ratio Lower Upper

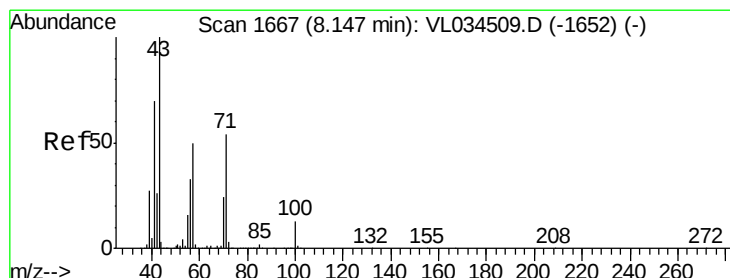
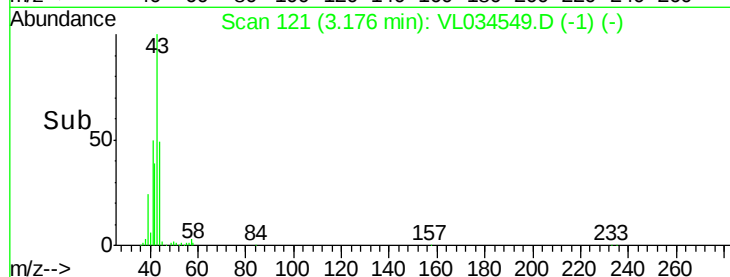
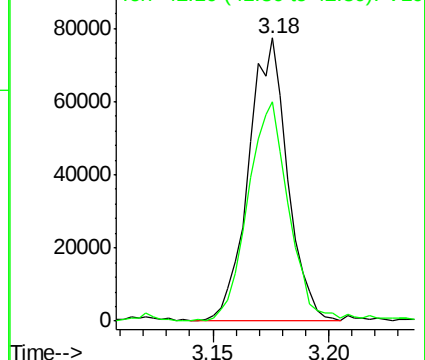
41 100

42 81.4 55.8 83.6



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0



#10

Heptane

Concen: 0.033 ppbv

RT: 8.13 min Scan# 1662

Delta R.T. -0.02 min

Lab File: VL034549.D

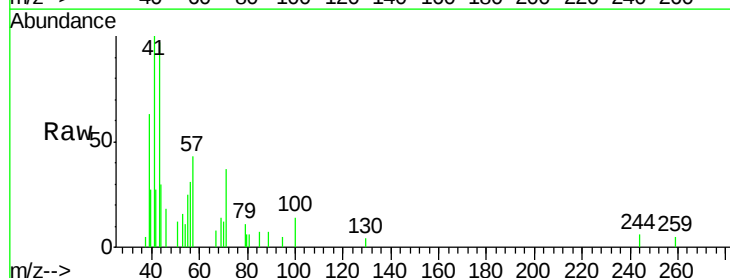
Acq: 2 Jan 2020 16:41

Tgt Ion: 43 Resp: 3647

Ion Ratio Lower Upper

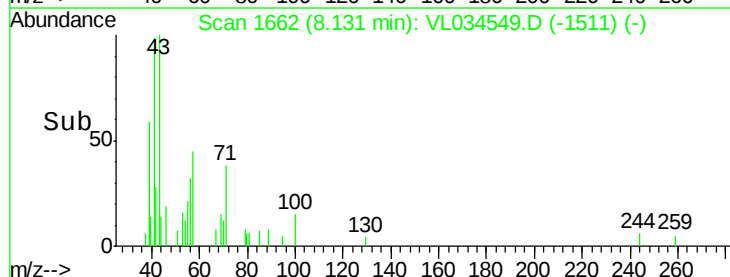
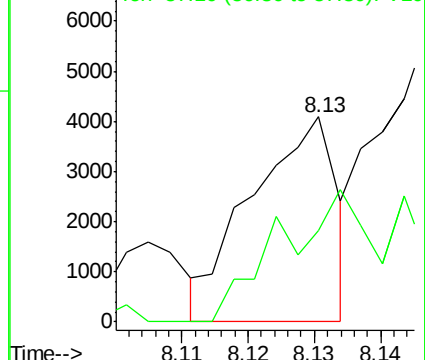
43 100

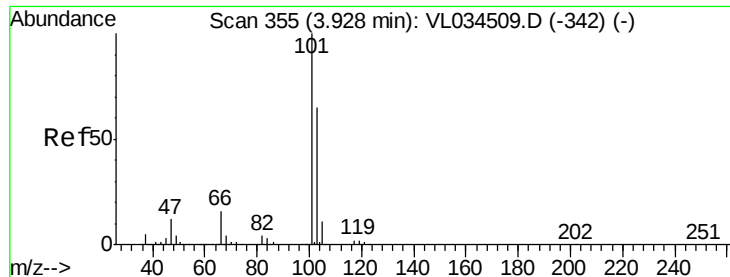
57 133.5 41.0 61.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 57.10 (56.80 to 57.80): VL0





#11

Trichlorofluoromethane

Concen: 0.259 ppbv

RT: 3.93 min Scan# 356

Delta R.T. 0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

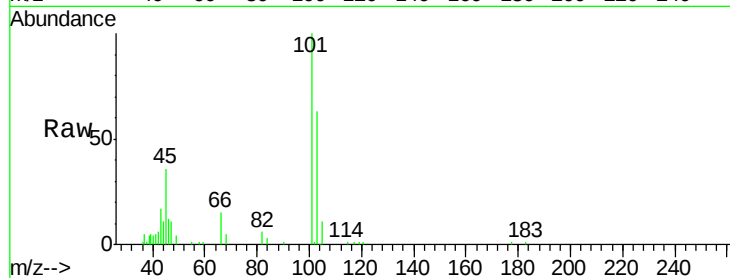
MJ-2

Tgt Ion:101 Resp: 44578

Ion Ratio Lower Upper

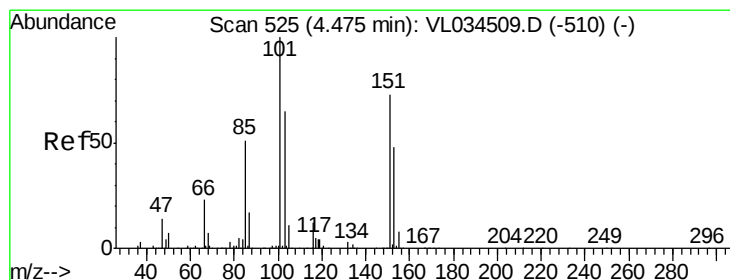
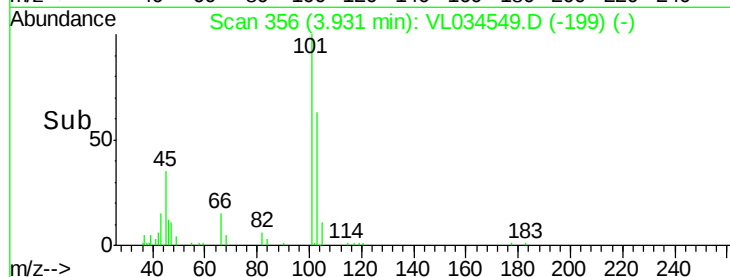
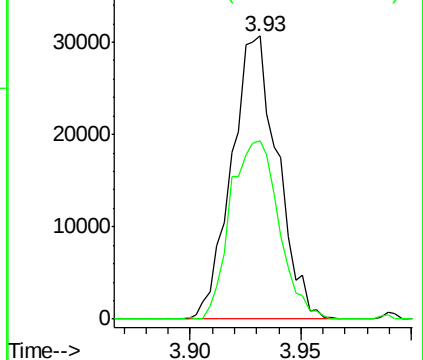
101 100

103 63.2 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: 0.028 ppbv

RT: 4.47 min Scan# 523

Delta R.T. -0.01 min

Lab File: VL034549.D

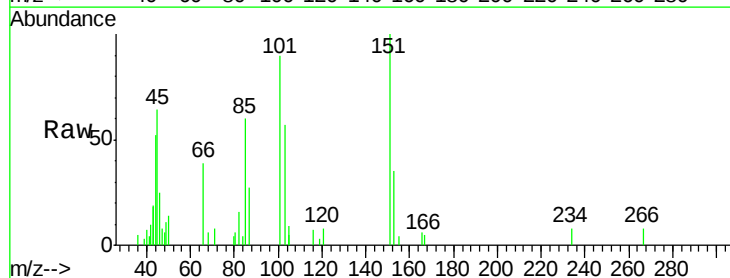
Acq: 2 Jan 2020 16:41

Tgt Ion:101 Resp: 3080

Ion Ratio Lower Upper

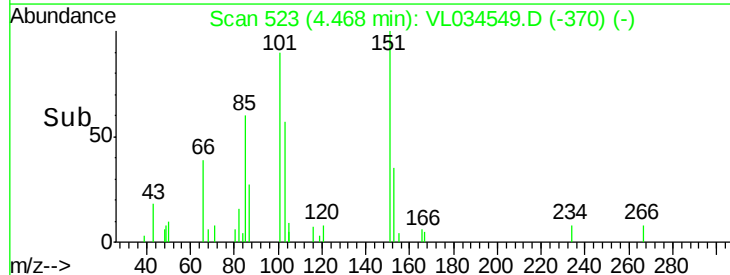
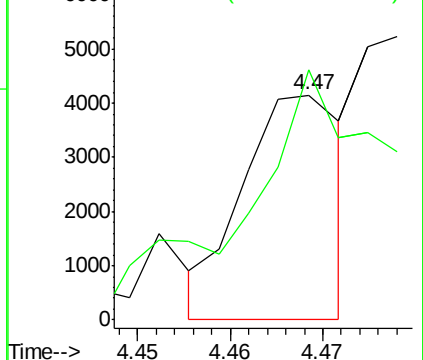
101 100

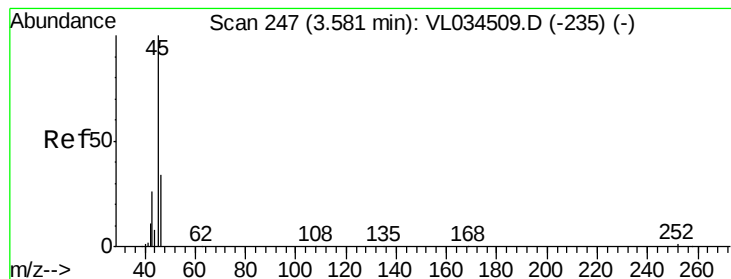
151 212.3 57.8 86.6#



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 151.00 (150.70 to 151.70): V





#13

Ethanol

Concen: 351.321 ppbv

RT: 3.59 min Scan# 249

Delta R.T. 0.01 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

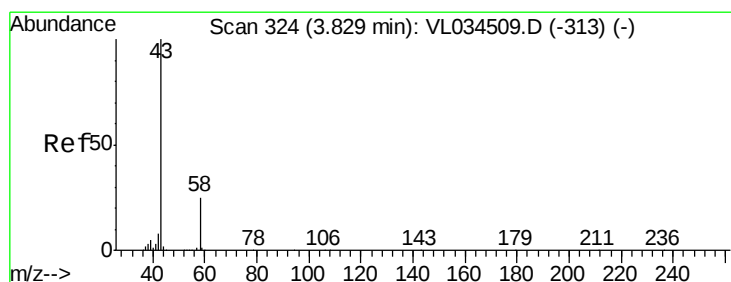
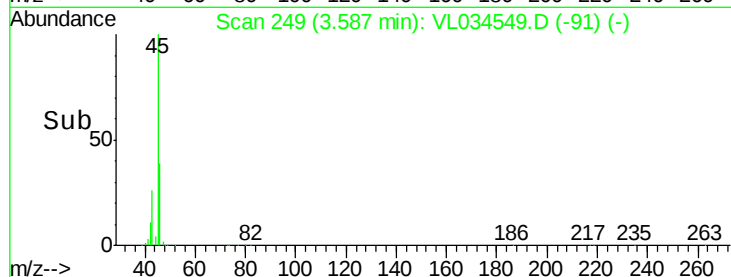
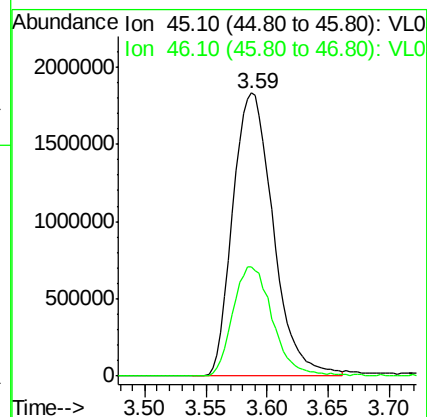
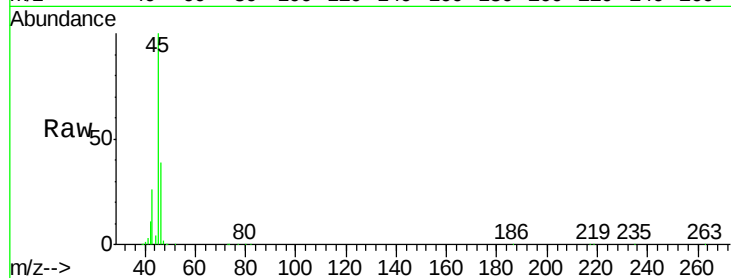
MJ-2

Tgt Ion: 45 Resp: 4225273

Ion Ratio Lower Upper

45 100

46 38.4 14.9 59.7



#15

Acetone

Concen: 6.612 ppbv

RT: 3.83 min Scan# 323

Delta R.T. -0.00 min

Lab File: VL034549.D

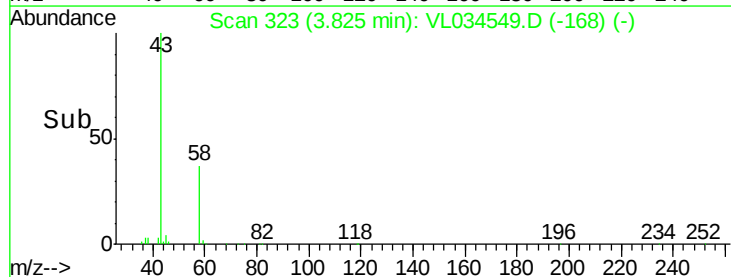
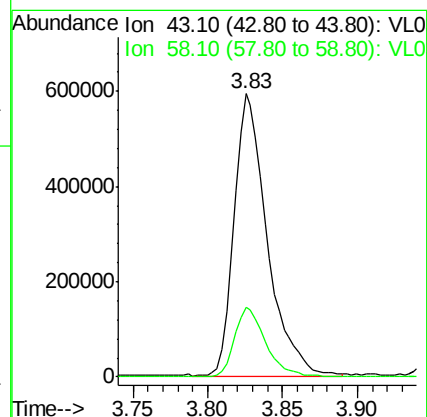
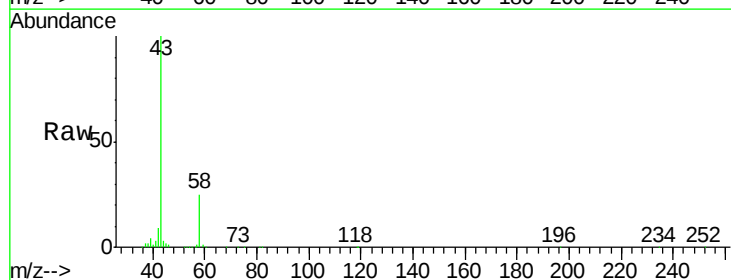
Acq: 2 Jan 2020 16:41

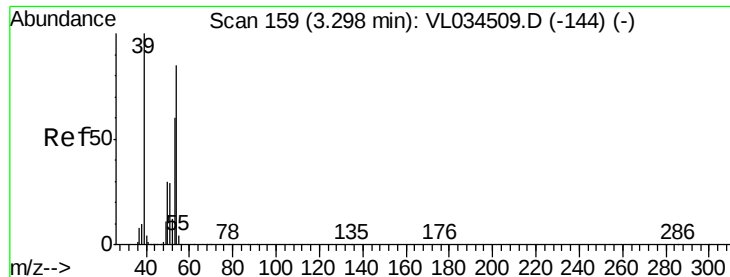
Tgt Ion: 43 Resp: 910490

Ion Ratio Lower Upper

43 100

58 23.2 20.4 30.6





#16

1,3-Butadiene

Concen: 0.184 ppbv

RT: 3.27 min Scan# 151

Delta R.T. -0.03 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

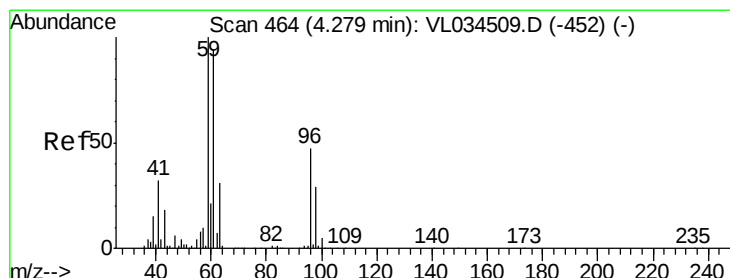
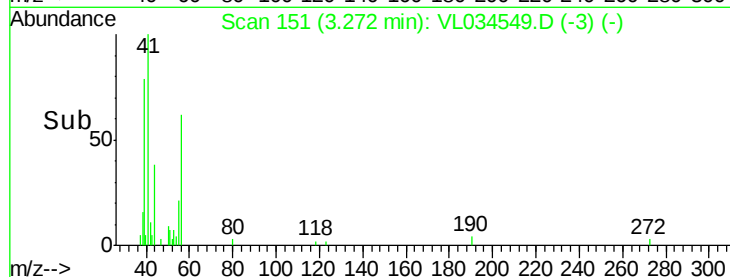
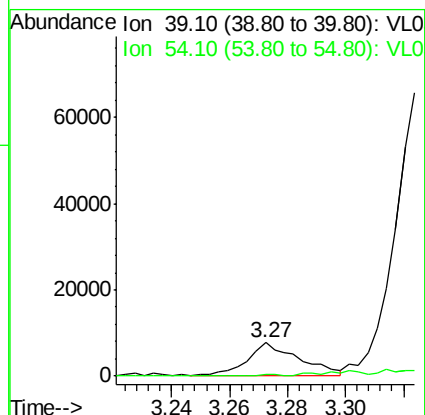
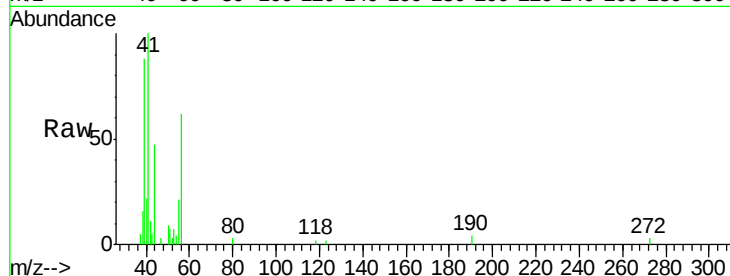
MJ-2

Tgt Ion: 39 Resp: 9754

Ion Ratio Lower Upper

39 100

54 0.0 66.2 99.2#



#17

tert-Butyl alcohol

Concen: 0.098 ppbv

RT: 4.29 min Scan# 468

Delta R.T. 0.01 min

Lab File: VL034549.D

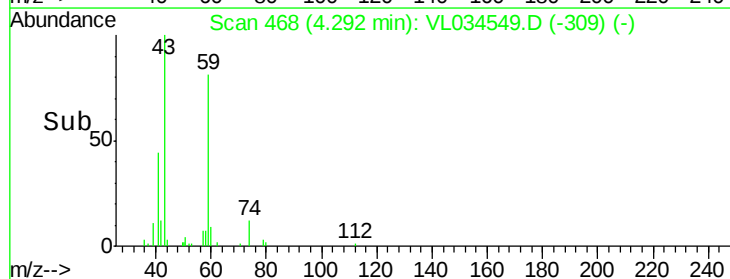
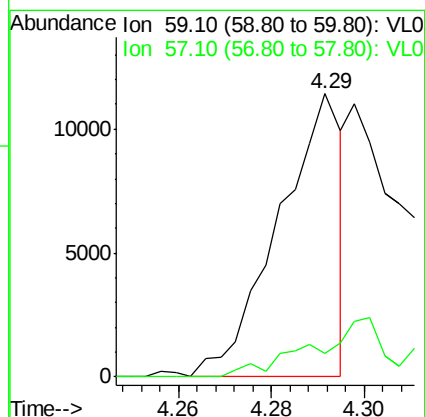
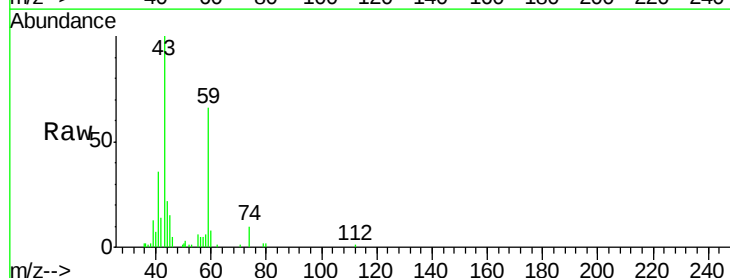
Acq: 2 Jan 2020 16:41

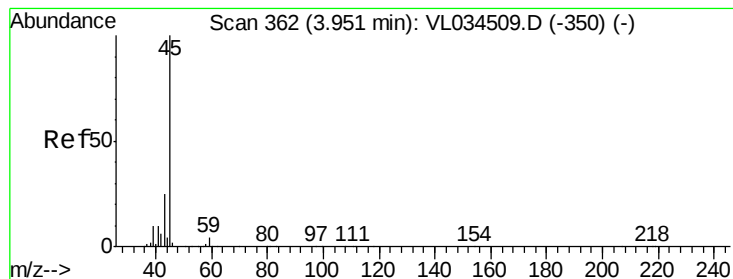
Tgt Ion: 59 Resp: 10845

Ion Ratio Lower Upper

59 100

57 0.0 8.6 12.8#





#19

Isopropyl Alcohol

Concen: 5.664 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.01 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

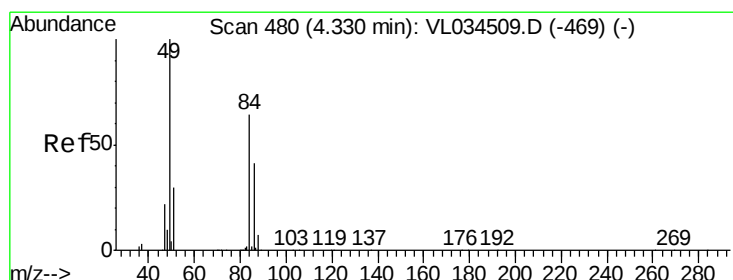
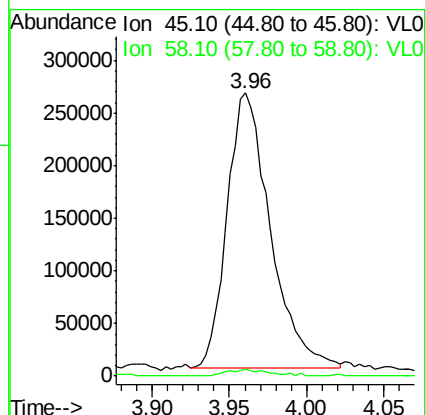
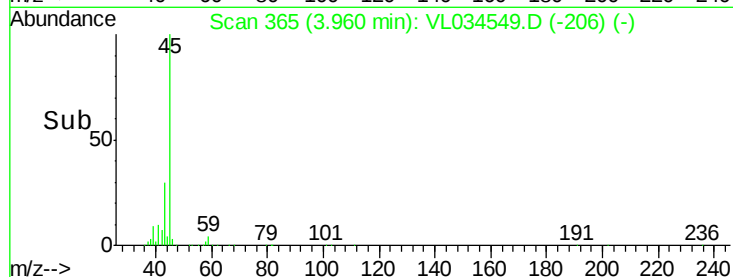
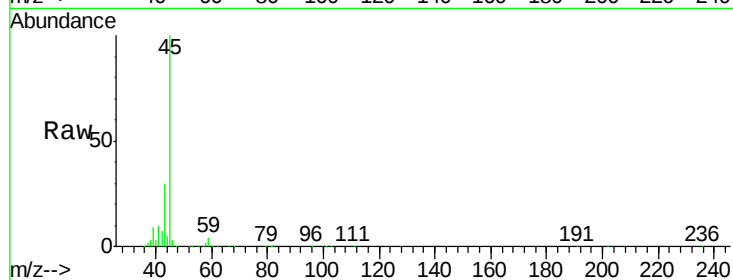
MJ-2

Tgt Ion: 45 Resp: 504897

Ion Ratio Lower Upper

45 100

58 2.9 1.4 2.0#



#20

Methylene Chloride

Concen: 0.301 ppbv

RT: 4.33 min Scan# 479

Delta R.T. -0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Tgt Ion: 84 Resp: 16323

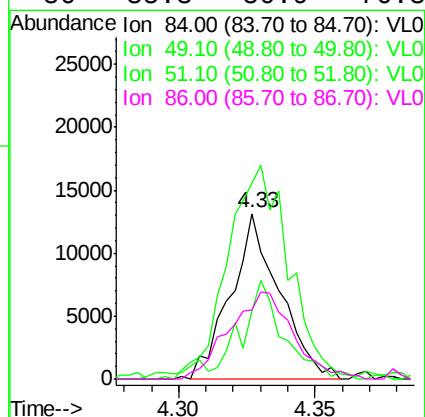
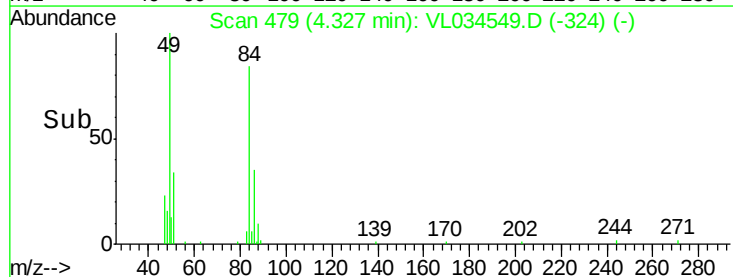
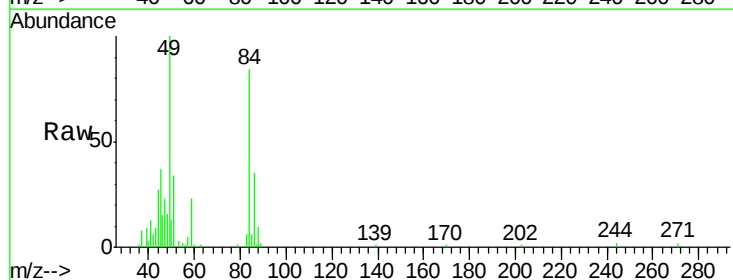
Ion Ratio Lower Upper

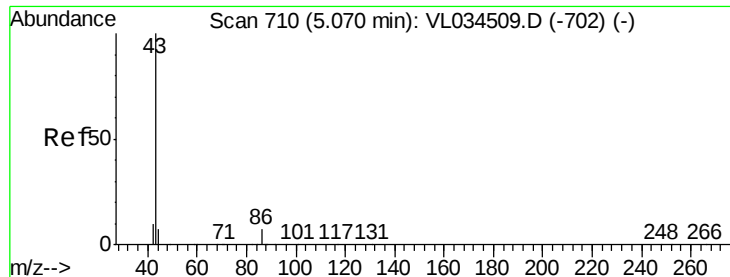
84 100

49 108.5 124.4 186.6#

51 33.7 37.0 55.6#

86 35.3 50.9 76.3#





#23

Vinyl Acetate

Concen: 0.020 ppbv

RT: 5.07 min Scan# 710

Delta R.T. 0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-2

Tgt Ion: 43 Resp: 3202

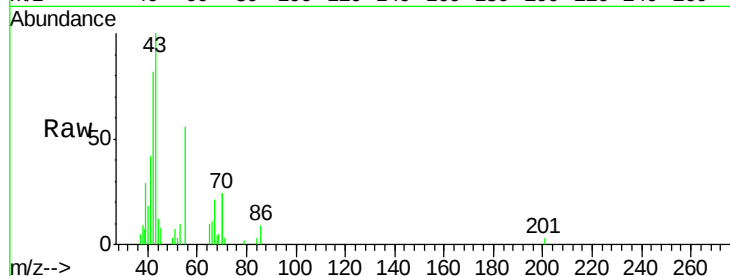
Ion Ratio Lower Upper

43 100

86 0.0 5.4 8.2#

42 87.8 8.9 13.3#

44 0.0 5.0 7.4#

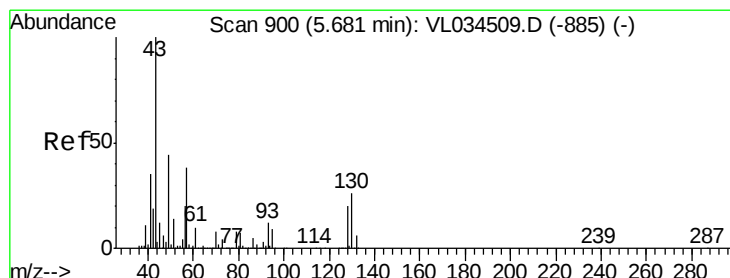
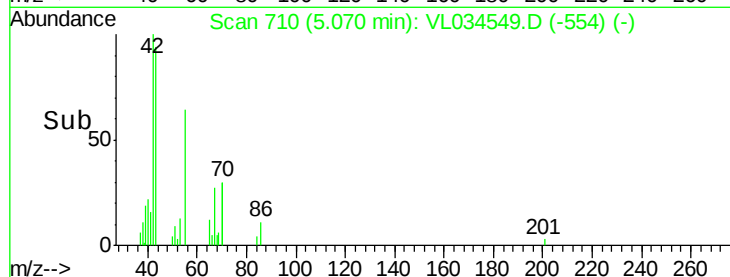
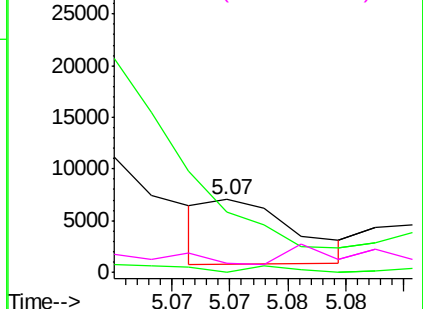


Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 86.10 (85.80 to 86.80): VL0

Ion 42.10 (41.80 to 42.80): VL0

Ion 44.10 (43.80 to 44.80): VL0



#25

Ethyl Acetate

Concen: 0.272 ppbv

RT: 5.68 min Scan# 899

Delta R.T. -0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Tgt Ion: 43 Resp: 58503

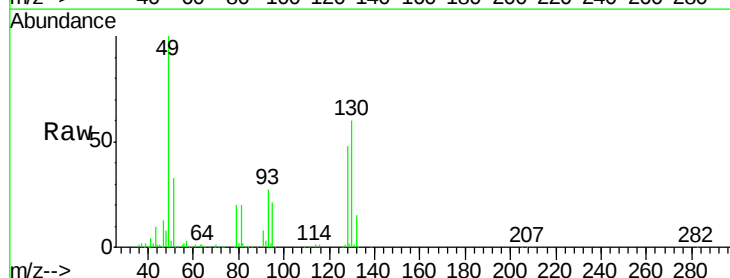
Ion Ratio Lower Upper

43 100

45 14.1 8.3 12.5#

61 9.1 7.8 11.6

70 6.3 5.8 8.8

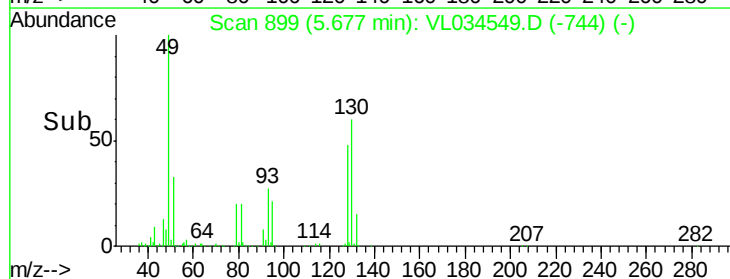
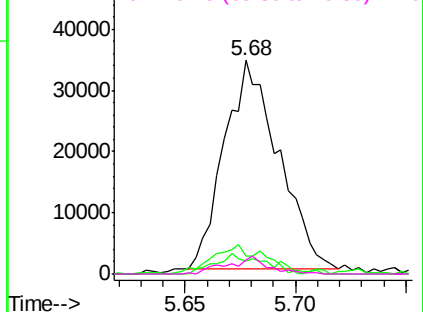


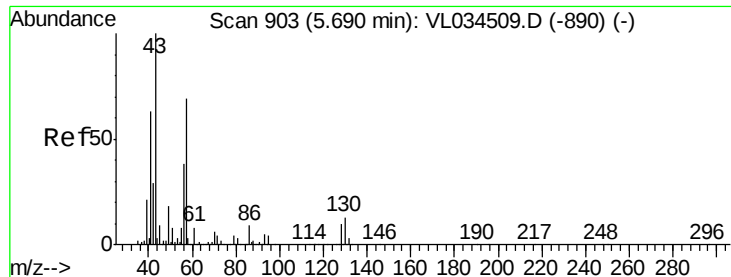
Abundance Ion 43.10 (42.80 to 43.80): VL0

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

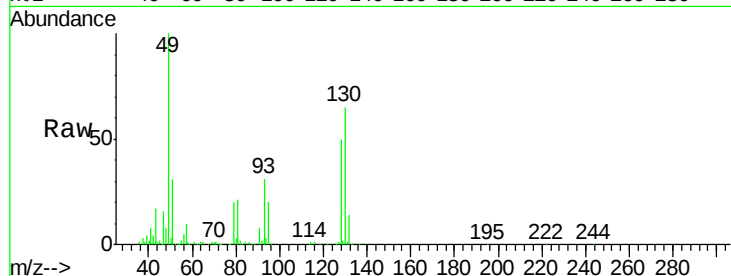




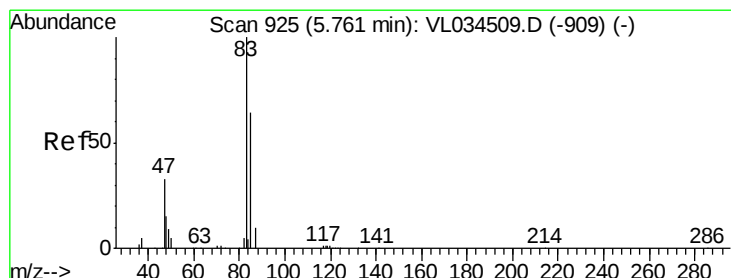
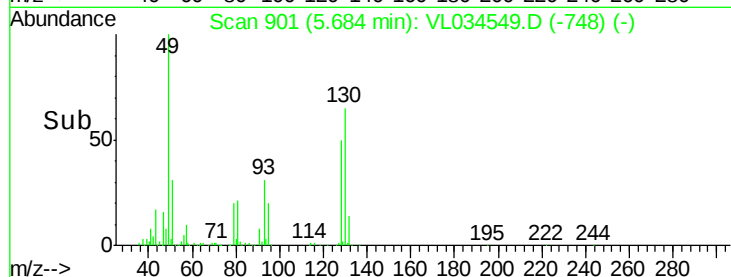
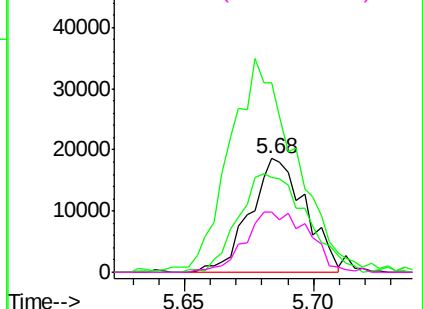
#26
Hexane
Concen: 0.307 ppbv
RT: 5.68 min Scan# 901
Delta R.T. -0.01 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

Instrument :
MSVOA_L
ClientSampleId :
MJ-2

Tgt Ion: 57 Resp: 27841
Ion Ratio Lower Upper
57 100
41 107.7 75.3 112.9
43 231.0 189.4 284.2
56 61.1 42.8 64.2

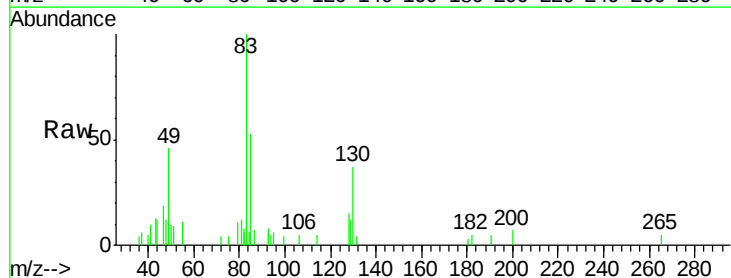


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

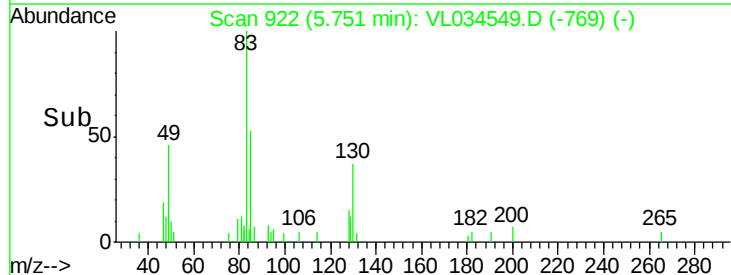
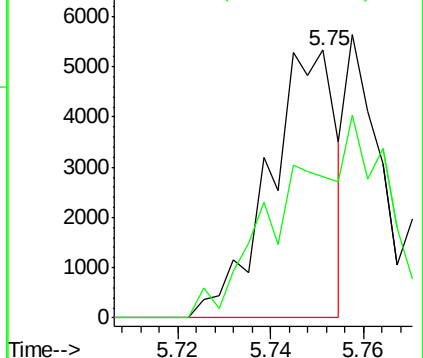


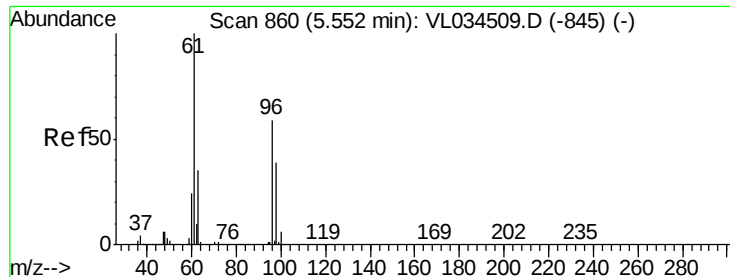
#29
Chloroform
Concen: 0.034 ppbv
RT: 5.75 min Scan# 922
Delta R.T. -0.01 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

Tgt Ion: 83 Resp: 5310
Ion Ratio Lower Upper
83 100
85 52.9 51.0 76.6



Abundance Ion 83.00 (82.70 to 83.70): VL0
Ion 85.00 (84.70 to 85.70): VL0



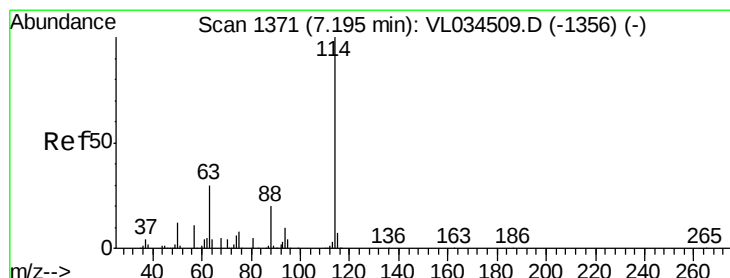
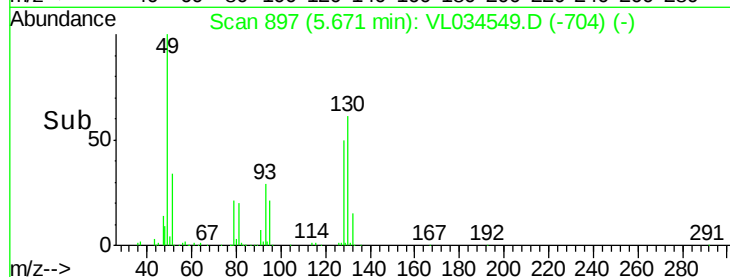
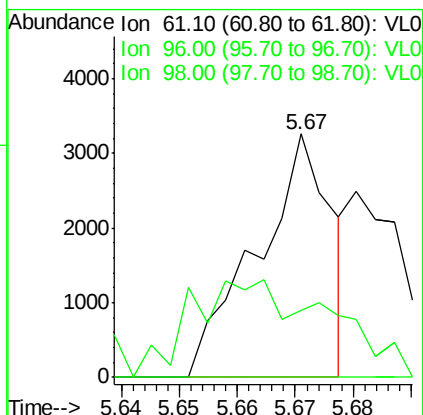
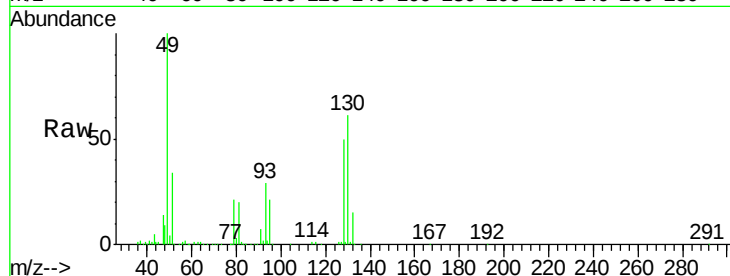


#31

cis-1,2-Dichloroethene
 Concen: 0.032 ppbv
 RT: 5.67 min Scan# 897
 Delta R.T. 0.12 min
 Lab File: VL034549.D
 Acq: 2 Jan 2020 16:41

Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-2

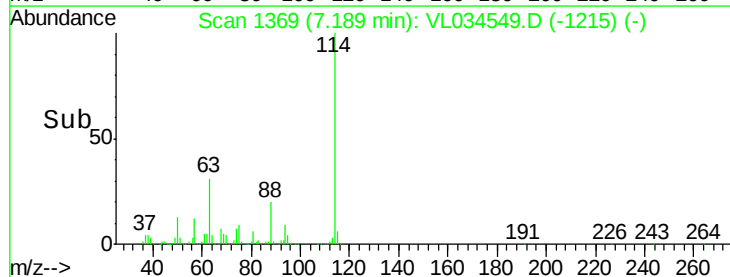
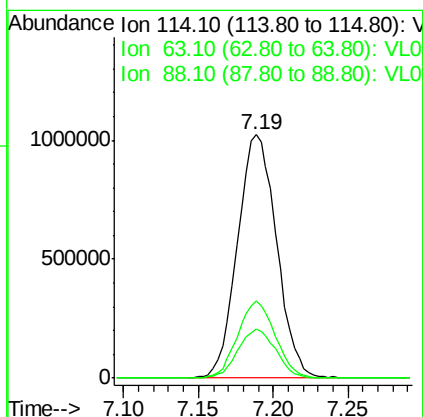
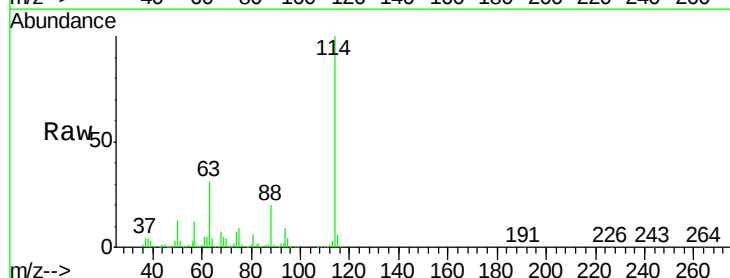
Tgt Ion: 61 Resp: 2911
 Ion Ratio Lower Upper
 61 100
 96 2.3 47.1 70.7#
 98 0.0 31.0 46.6#

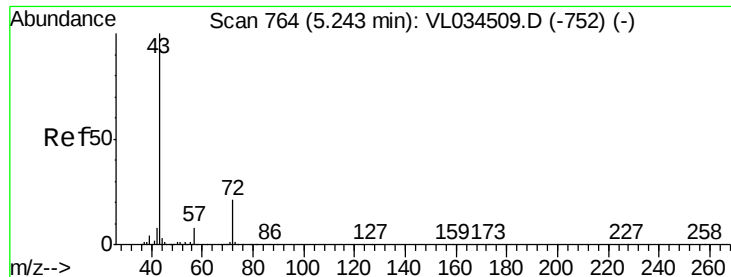


#33

1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.19 min Scan# 1369
 Delta R.T. -0.01 min
 Lab File: VL034549.D
 Acq: 2 Jan 2020 16:41

Tgt Ion: 114 Resp: 1859479
 Ion Ratio Lower Upper
 114 100
 63 30.6 24.1 36.1
 88 19.7 15.7 23.5





#34

2-Butanone

Concen: 1.116 ppbv

RT: 5.24 min Scan# 764

Delta R.T. -0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

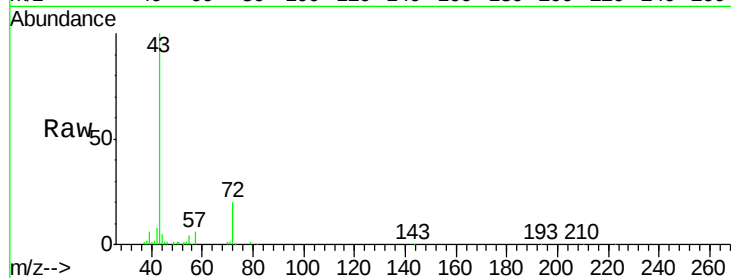
MJ-2

Tgt Ion: 43 Resp: 148295

Ion Ratio Lower Upper

43 100

72 20.2 17.0 25.4



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

5.24

100000

80000

60000

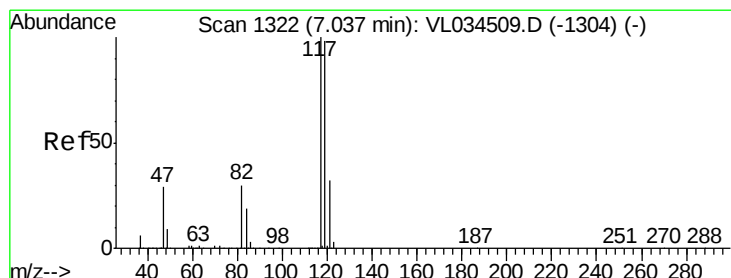
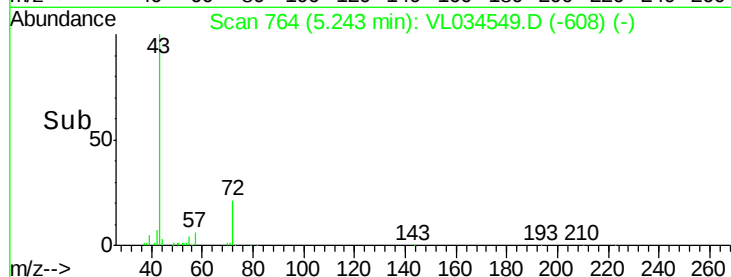
40000

20000

0

5.20 5.25 5.30

Time-->



#35

Carbon Tetrachloride

Concen: 0.045 ppbv

RT: 7.04 min Scan# 1322

Delta R.T. 0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

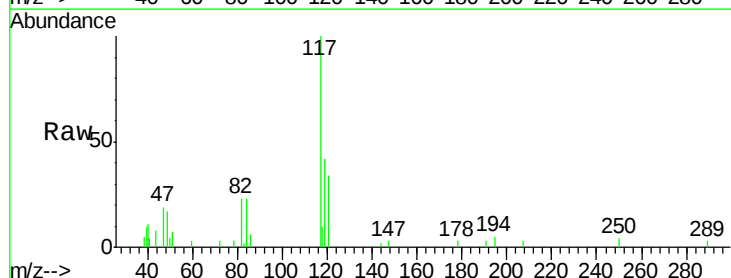
Tgt Ion: 117 Resp: 7626

Ion Ratio Lower Upper

117 100

119 31.9 78.7 118.1#

121 31.1 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

10000

8000

6000

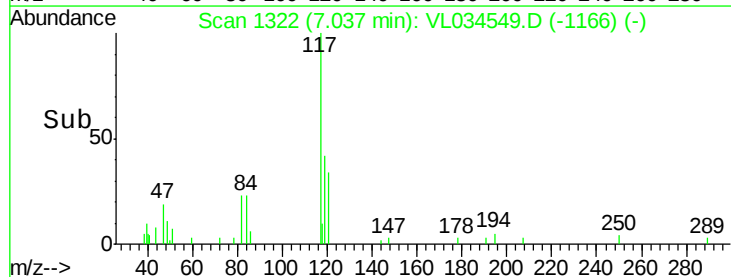
4000

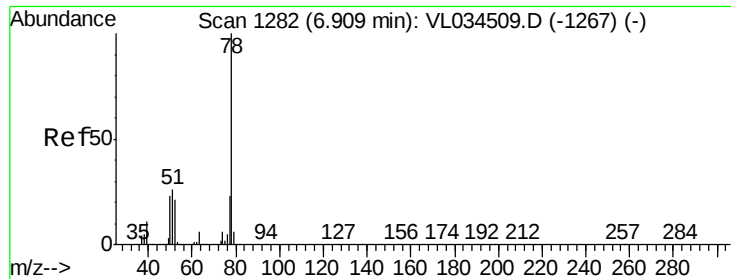
2000

0

7.02 7.04 7.06 7.08

Time-->





#36

Benzene

Concen: 0.090 ppbv

RT: 6.91 min Scan# 1281

Delta R.T. -0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-2

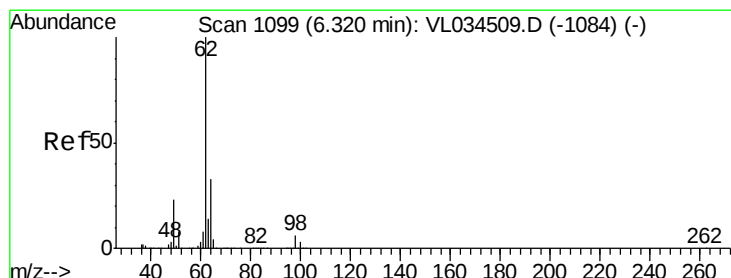
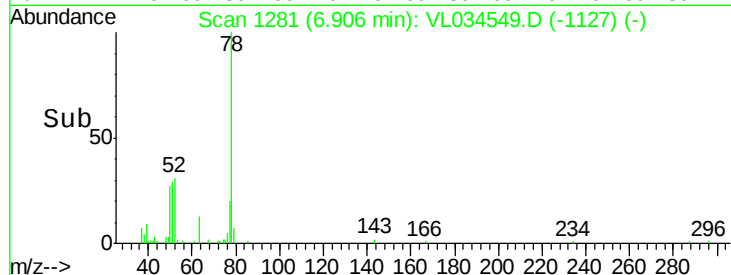
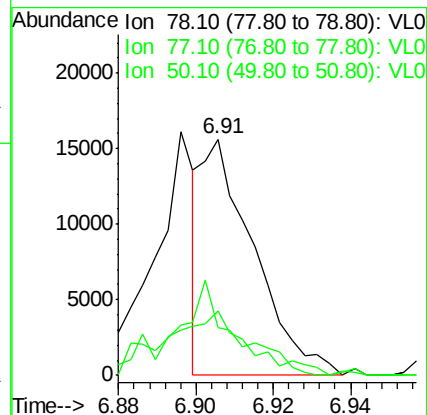
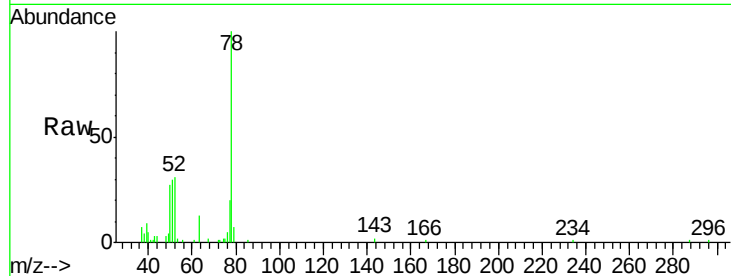
Tgt Ion: 78 Resp: 14637

Ion Ratio Lower Upper

78 100

77 18.2 18.6 28.0#

50 26.2 18.8 28.2



#37

1,2-Dichloroethane

Concen: 0.021 ppbv

RT: 6.32 min Scan# 1098

Delta R.T. -0.00 min

Lab File: VL034549.D

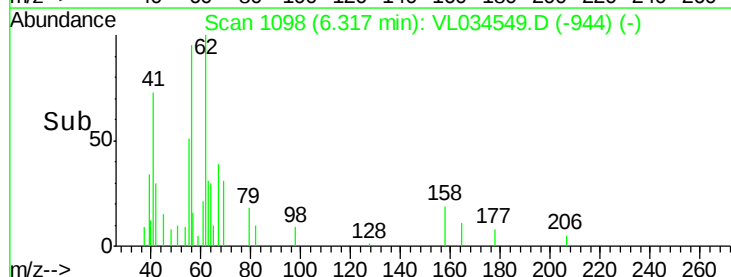
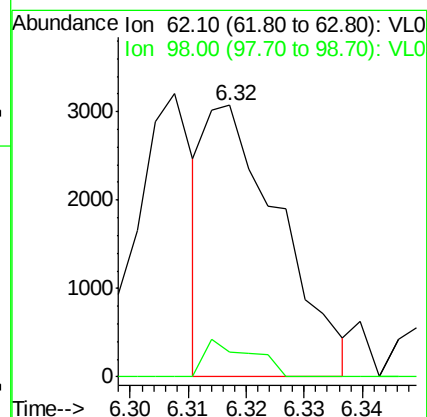
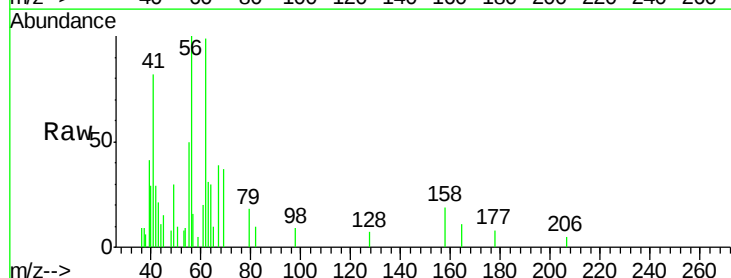
Acq: 2 Jan 2020 16:41

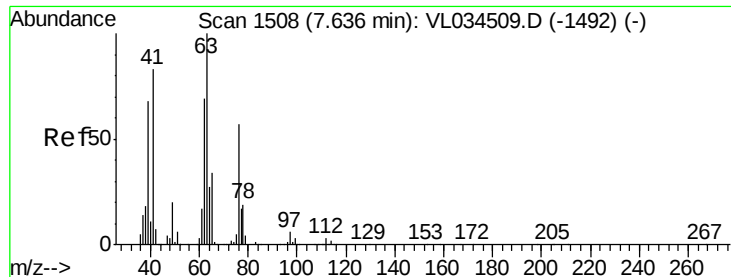
Tgt Ion: 62 Resp: 2754

Ion Ratio Lower Upper

62 100

98 8.6 3.8 5.6#





#39

1,2-Dichloropropane

Concen: 8.450 ppbv

RT: 7.19 min Scan# 1369

Delta R.T. -0.45 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-2

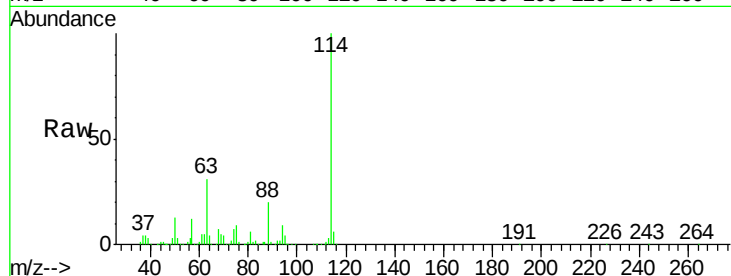
Tgt Ion: 63 Resp: 563238

Ion Ratio Lower Upper

63 100

41 0.0 66.1 99.1#

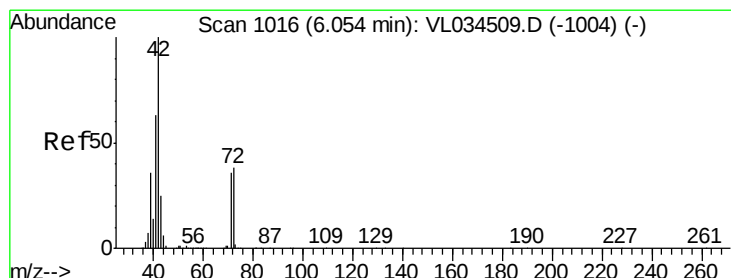
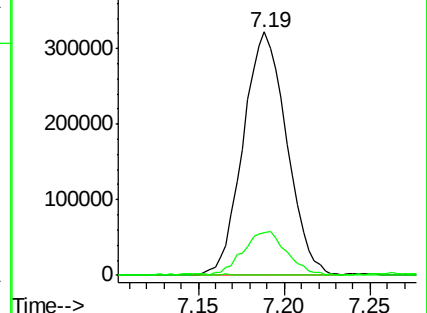
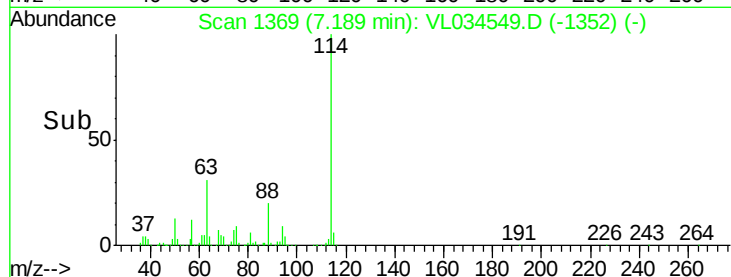
62 17.4 54.9 82.3#



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: 0.123 ppbv

RT: 6.05 min Scan# 1016

Delta R.T. 0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

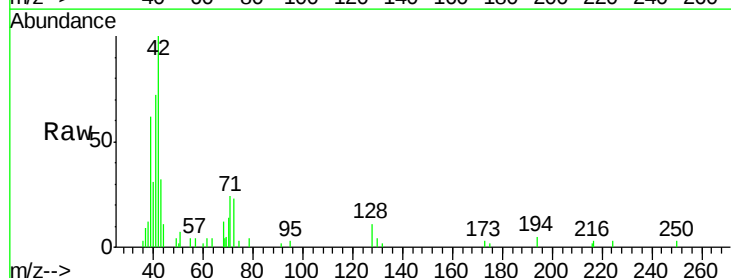
Tgt Ion: 42 Resp: 8366

Ion Ratio Lower Upper

42 100

72 0.0 30.9 46.3#

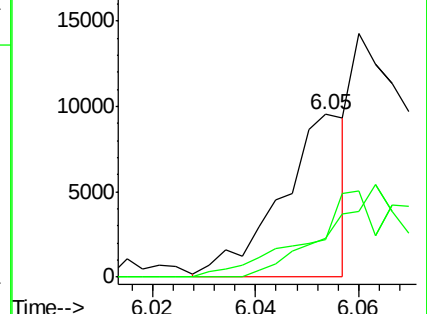
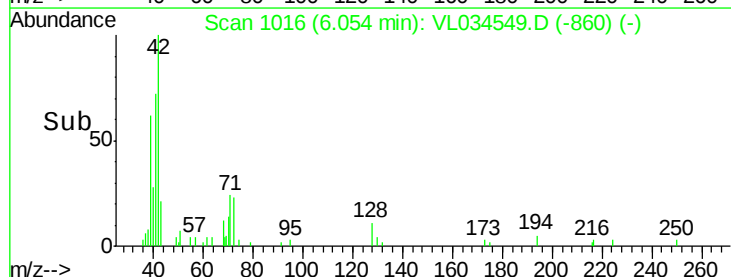
71 0.0 28.9 43.3#

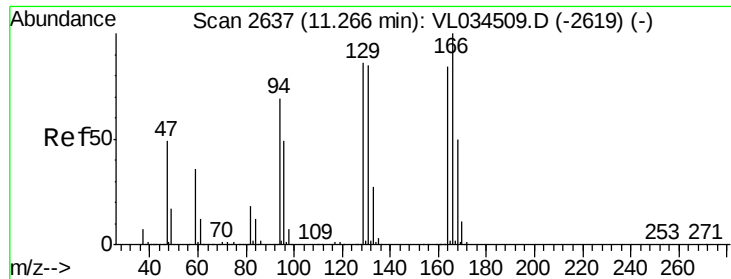


Abundance Ion 42.10 (41.80 to 42.80): VL0

Ion 72.10 (71.80 to 72.80): VL0

Ion 71.10 (70.80 to 71.80): VL0





#52

Tetrachloroethene

Concen: 0.026 ppbv

RT: 11.26 min Scan# 2636

Delta R.T. -0.00 min

Lab File: VL034549.D

Acq: 2 Jan 2020 16:41

Instrument :

MSVOA_L

ClientSampleId :

MJ-2

Tgt Ion:164 Resp: 1618

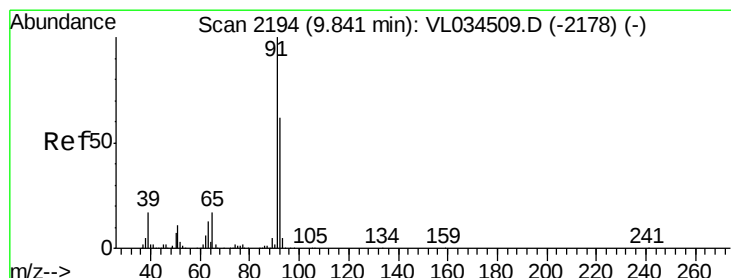
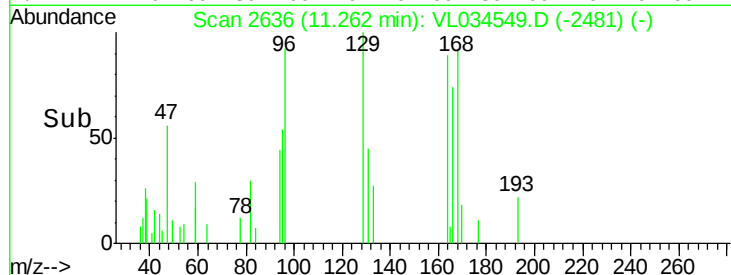
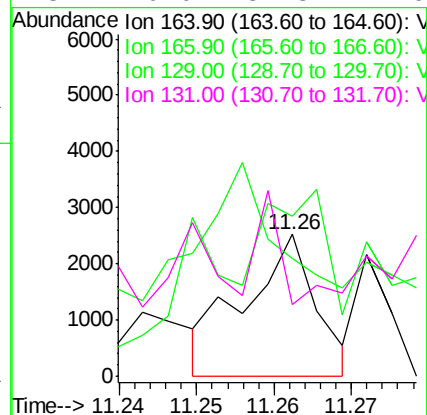
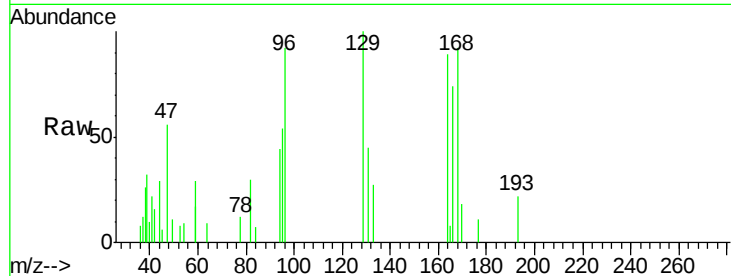
Ion Ratio Lower Upper

164 100

166 26.1 95.7 143.5#

129 88.5 82.2 123.2

131 0.0 81.3 121.9#



#53

Toluene

Concen: 0.364 ppbv

RT: 9.84 min Scan# 2193

Delta R.T. -0.00 min

Lab File: VL034549.D

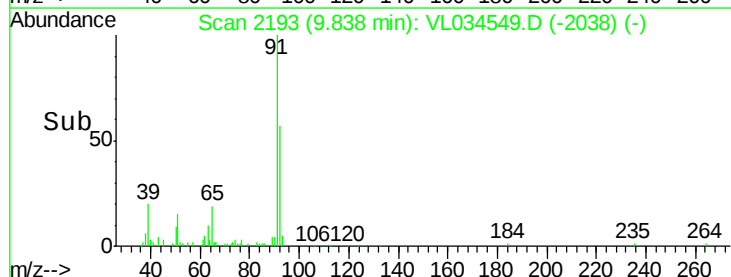
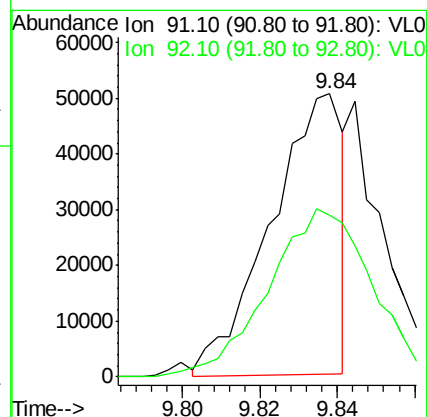
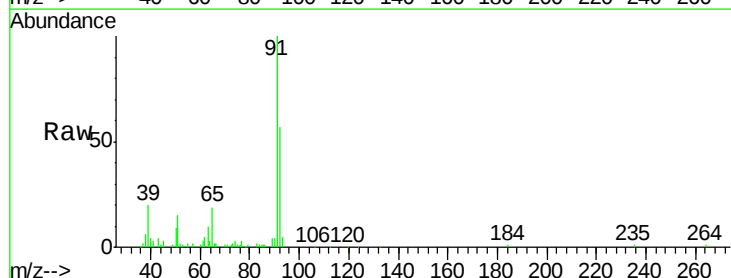
Acq: 2 Jan 2020 16:41

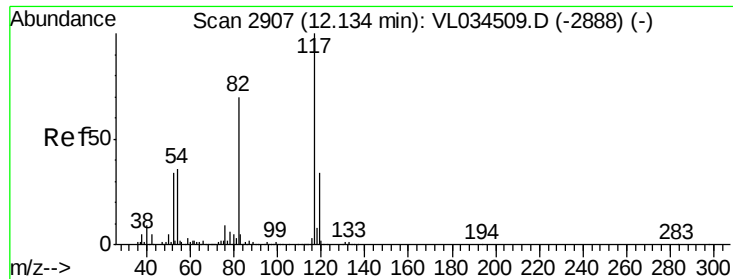
Tgt Ion: 91 Resp: 64899

Ion Ratio Lower Upper

91 100

92 88.4 48.4 72.6#

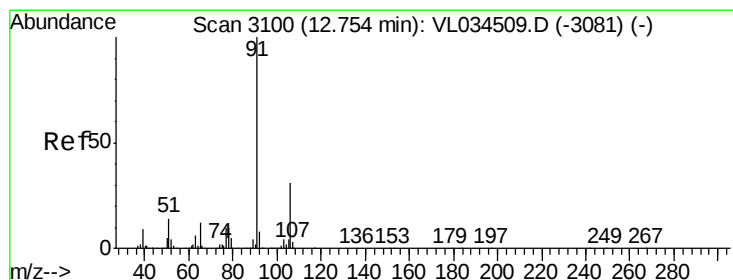
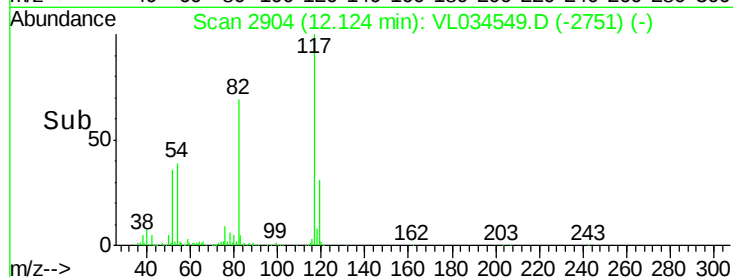
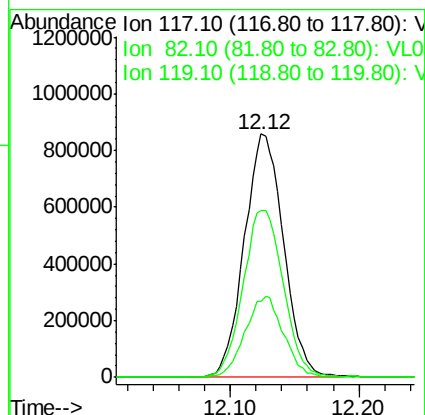
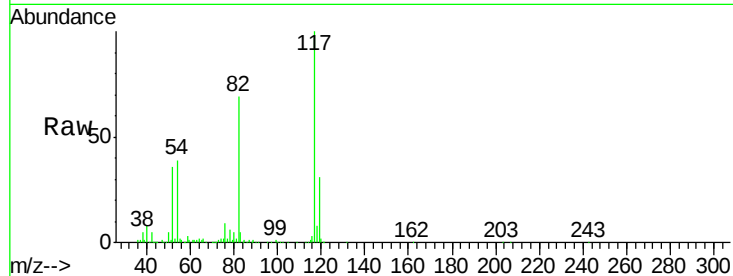




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.12 min Scan# 2904
Delta R.T. -0.01 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

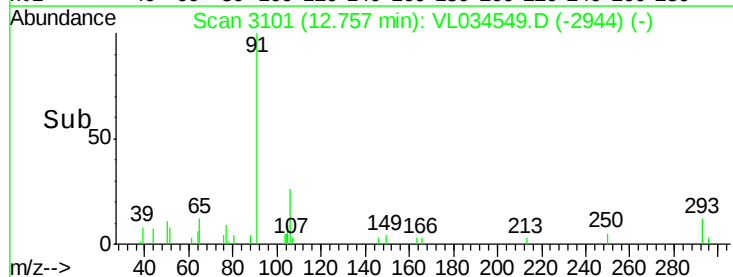
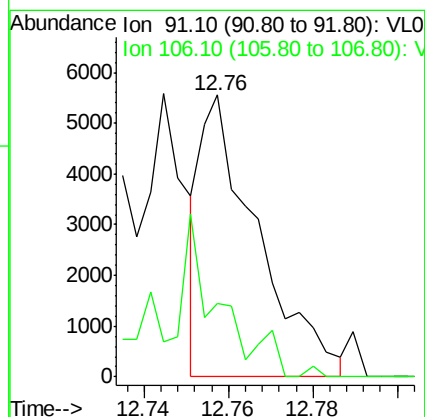
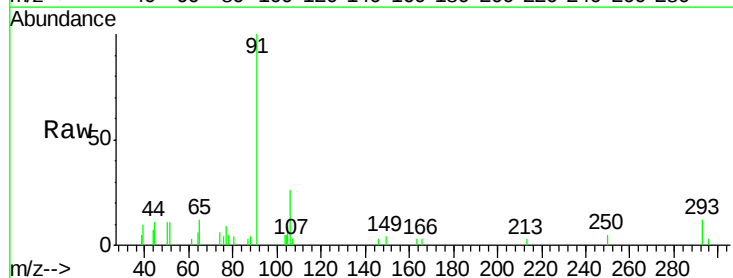
Instrument :
MSVOA_L
ClientSampleID :
MJ-2

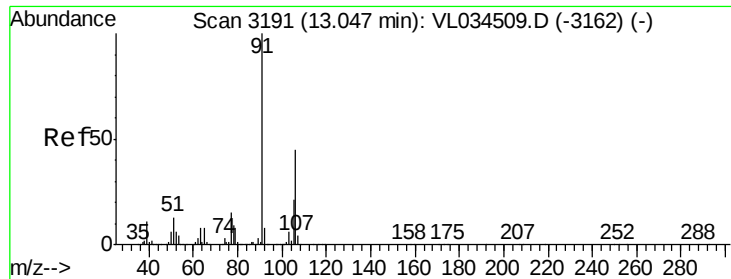
Tgt Ion:117 Resp: 1818420
Ion Ratio Lower Upper
117 100
82 71.0 56.2 84.4
119 32.4 27.1 40.7



#58
Ethyl Benzene
Concen: 0.021 ppbv
RT: 12.76 min Scan# 3101
Delta R.T. 0.00 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

Tgt Ion: 91 Resp: 5176
Ion Ratio Lower Upper
91 100
106 27.8 24.6 36.8

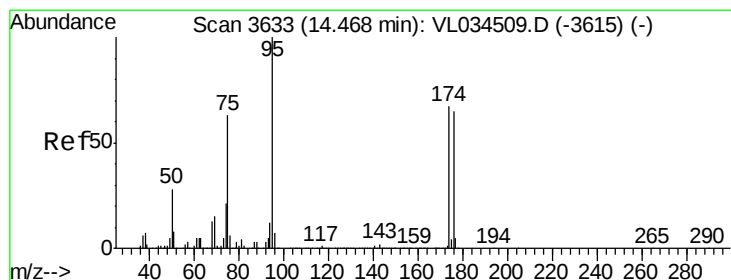
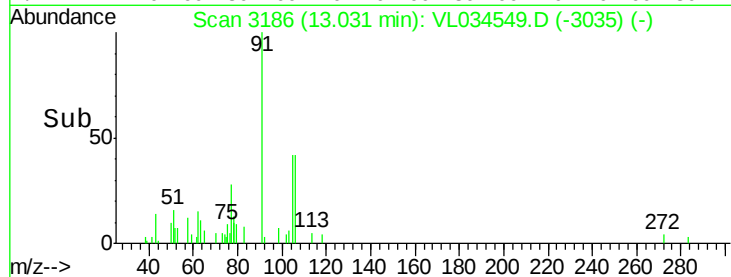
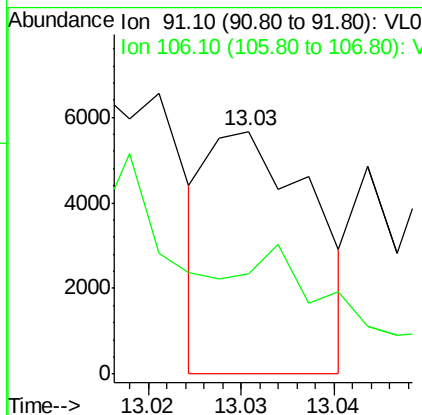
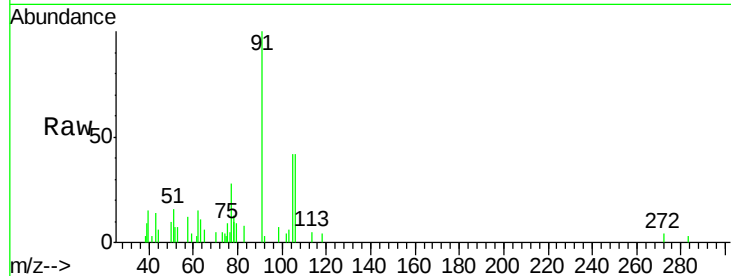




#59
m/p-Xylene
Concen: 0.021 ppbv
RT: 13.03 min Scan# 3186
Delta R.T. -0.02 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

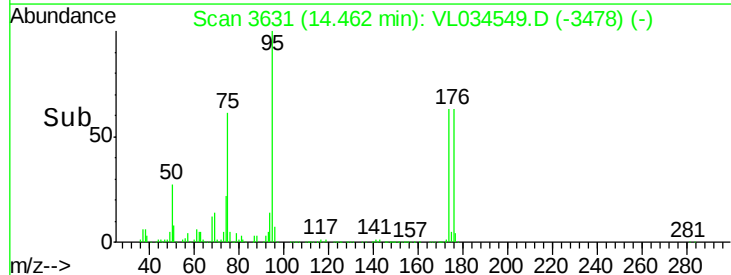
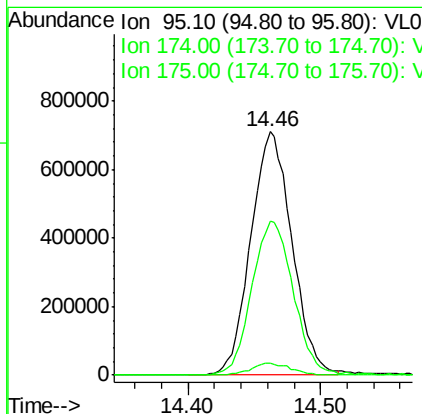
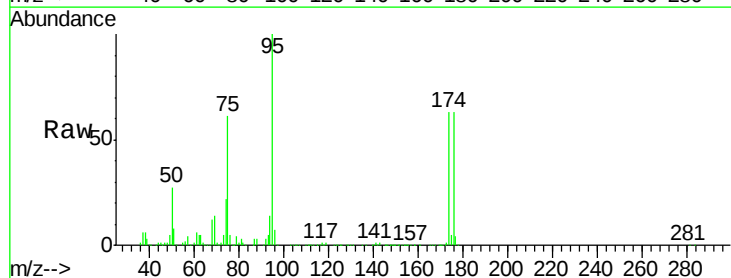
Instrument :
MSVOA_L
ClientSampled :
MJ-2

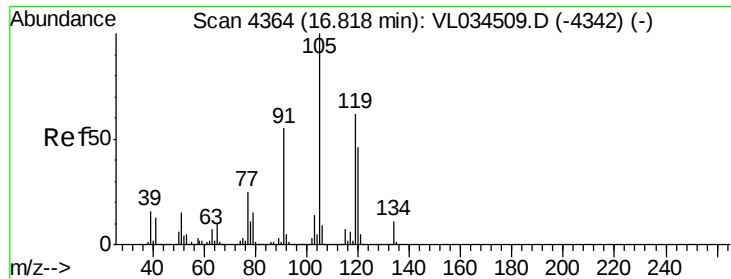
Tgt Ion: 91 Resp: 4438
Ion Ratio Lower Upper
91 100
106 0.0 35.6 53.4#



#68
1-Bromo-4-Fluorobenzene
Concen: 10.132 ppbv
RT: 14.46 min Scan# 3631
Delta R.T. -0.01 min
Lab File: VL034549.D
Acq: 2 Jan 2020 16:41

Tgt Ion: 95 Resp: 1537441
Ion Ratio Lower Upper
95 100
174 64.4 52.4 78.6
175 4.8 3.9 5.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.031 ppbv
 RT: 16.81 min Scan# 4360
 Delta R.T. -0.01 min
 Lab File: VL034549.D
 Acq: 2 Jan 2020 16:41

Instrument :
 MSVOA_L
 ClientSampleId :
 MJ-2

Tgt Ion:	105	Resp:	7913
Ion	Ratio	Lower	Upper
105	100		
120	43.8	36.7	55.1
91	19.3	44.0	66.0#
77	11.9	19.9	29.9#

