

Data Path : Z:\VOASRV\HPCHEM1\MSVOA_L\DATA\VL120919\
 Data File : VL034473.D
 Acq On : 9 Dec 2019 20:49
 Operator : SY/AP
 Sample : K6195-04DUP
 Misc : 400ml/MSVOA_L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-HWDUP

Quant Time: Dec 10 03:41:21 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA_L\METHODS\VL111919AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Tue Nov 19 14:15:35 2019
 QLast Update : Tue Nov 19 14:15:35 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.67	49	842253	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.20	114	1673444	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.14	117	1687939	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.47	95	1428522	10.06	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.60%

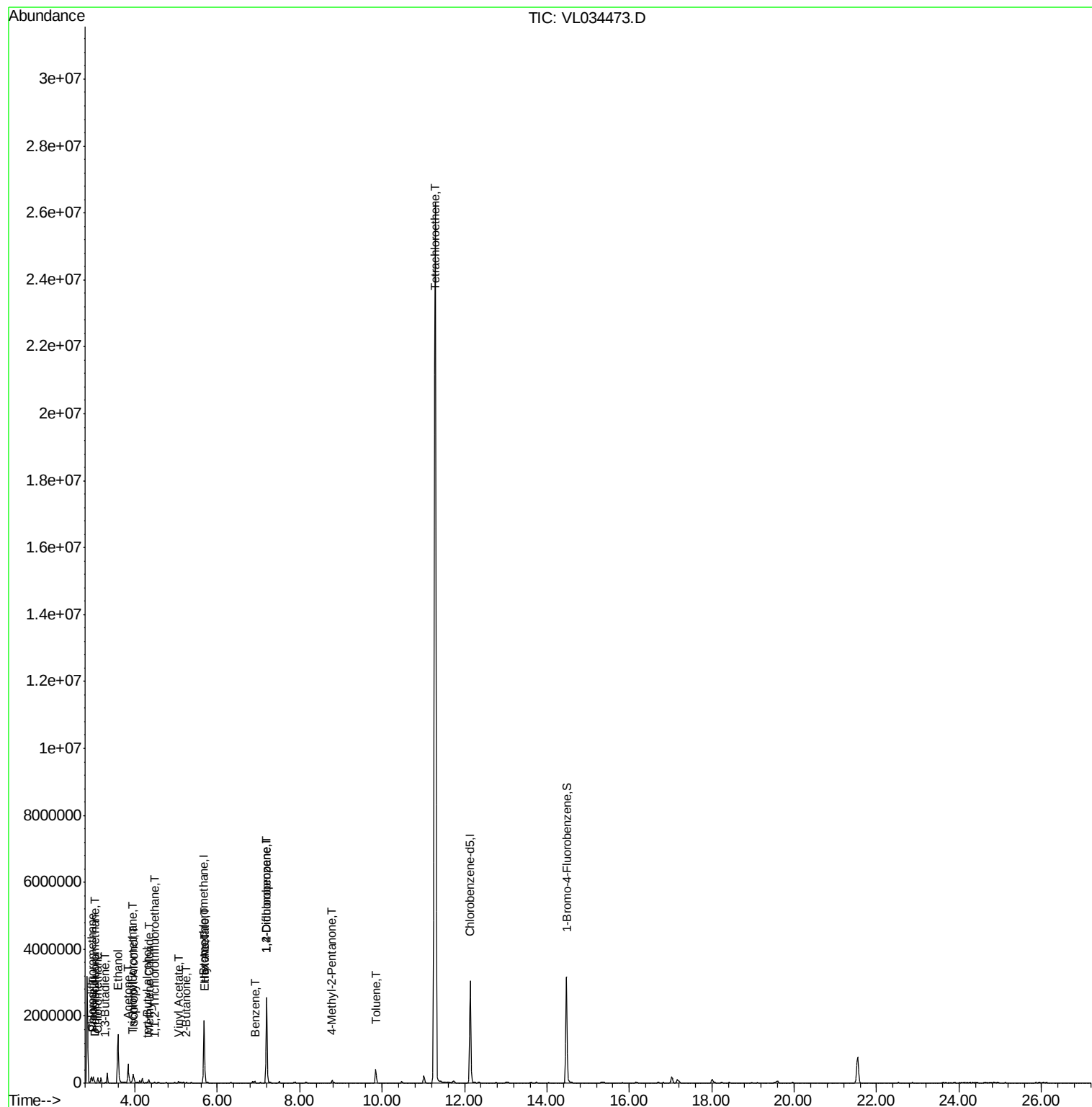
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.02	85	33287	0.218	ppbv	97
3) Chlorodifluoromethane	2.96	51	215410	2.050	ppbv #	84
4) Chloromethane	3.11	50	30422	0.491	ppbv	99
9) Propene	2.99	41	34213	0.733	ppbv #	75
11) Trichlorofluoromethane	3.93	101	38354	0.253	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.47	101	3118	0.031	ppbv #	14
13) Ethanol	3.59	45	1552962	119.493	ppbv	95
15) Acetone	3.83	43	548742	4.550	ppbv	99
16) 1,3-Butadiene	3.28	39	8306	0.158	ppbv #	40
17) tert-Butyl alcohol	4.29	59	3169	0.031	ppbv #	25
19) Isopropyl Alcohol	3.96	45	291820	3.775	ppbv #	97
20) Methylene Chloride	4.34	84	29226	0.683	ppbv	93
23) Vinyl Acetate	5.06	43	19680	0.125	ppbv #	51
25) Ethyl Acetate	5.69	43	67988	0.316	ppbv #	84
26) Hexane	5.69	57	84998	0.919	ppbv #	42
34) 2-Butanone	5.25	43	25513	0.185	ppbv #	84
36) Benzene	6.91	78	12393	0.074	ppbv	95
39) 1,2-Dichloropropane	7.20	63	496600	7.706	ppbv #	25
50) 4-Methyl-2-Pentanone	8.79	43	71154	0.357	ppbv	95
52) Tetrachloroethene	11.29	164	8542129	118.018	ppbv	86
53) Toluene	9.84	91	279375	1.470	ppbv	99

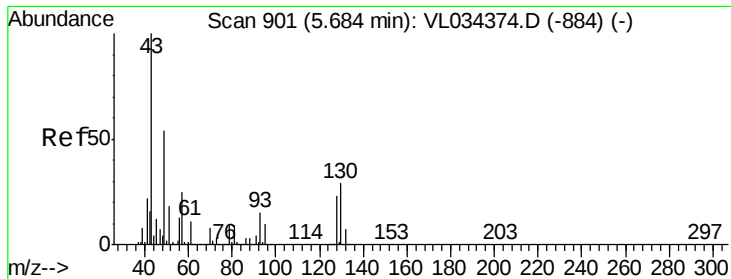
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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QLast Update : Tue Nov 19 14:15:35 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.67 min Scan# 898

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

IA-HWDUP

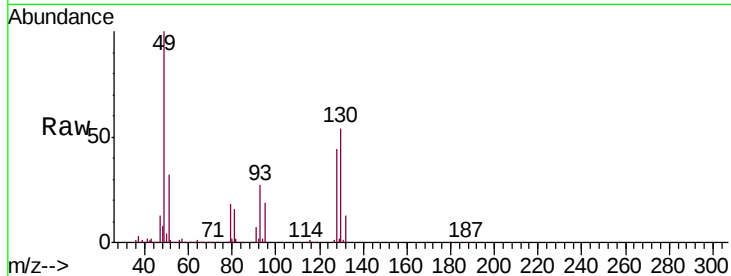
Tgt Ion: 49 Resp: 842253

Ion Ratio Lower Upper

49 100

128 43.6 21.8 65.3

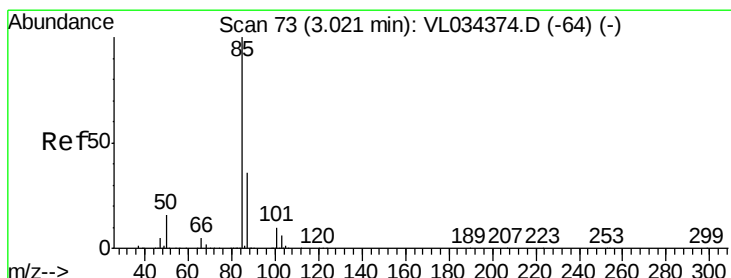
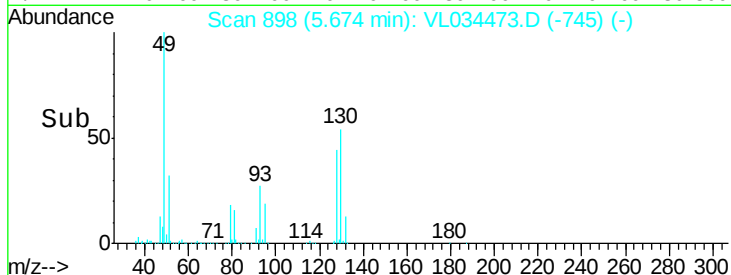
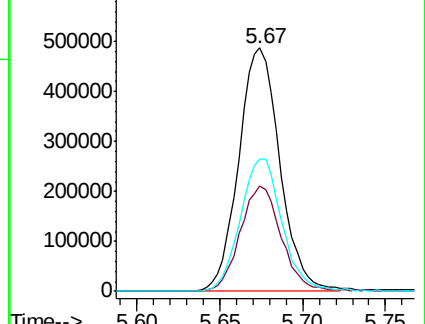
130 55.7 28.0 84.0



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: 0.218 ppbv

RT: 3.02 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL034473.D

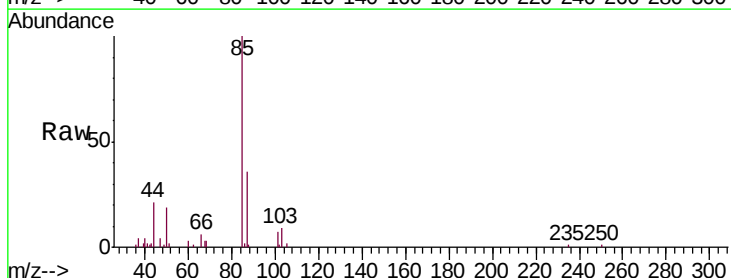
Acq: 9 Dec 2019 20:49

Tgt Ion: 85 Resp: 33287

Ion Ratio Lower Upper

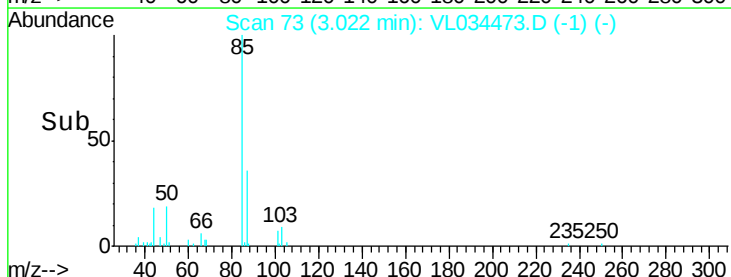
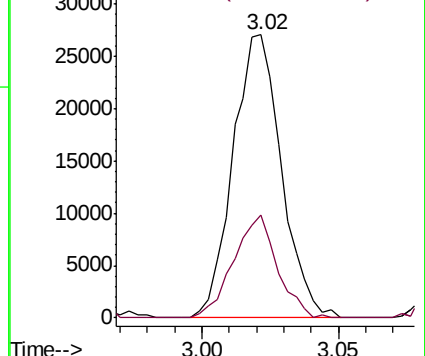
85 100

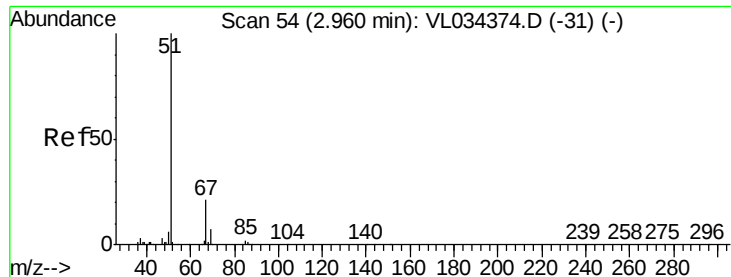
87 37.6 28.5 42.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 2.050 ppbv

RT: 2.96 min Scan# 53

Delta R.T. -0.00 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

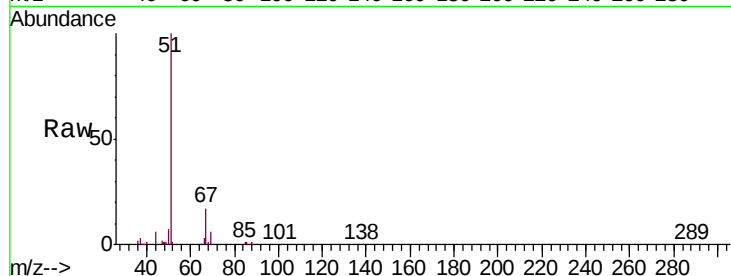
IA-HWDUP

Tgt Ion: 51 Resp: 215410

Ion Ratio Lower Upper

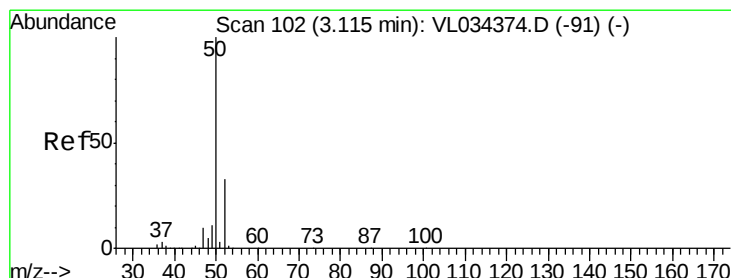
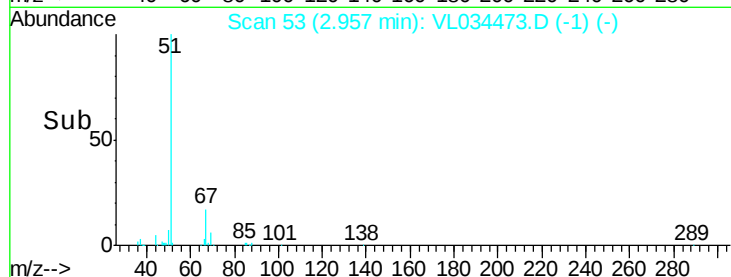
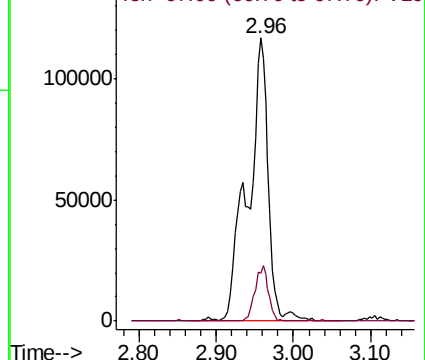
51 100

67 13.0 16.2 24.2#



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.491 ppbv

RT: 3.11 min Scan# 101

Delta R.T. -0.00 min

Lab File: VL034473.D

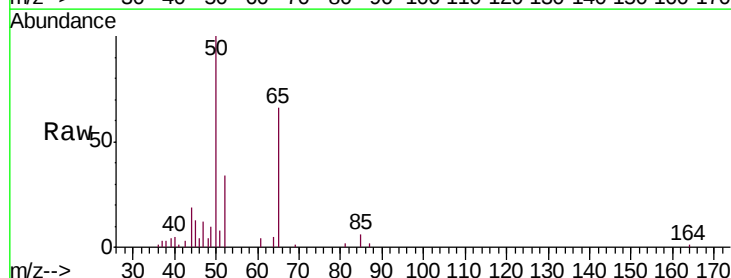
Acq: 9 Dec 2019 20:49

Tgt Ion: 50 Resp: 30422

Ion Ratio Lower Upper

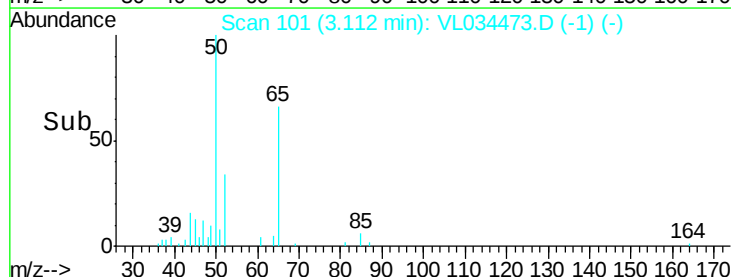
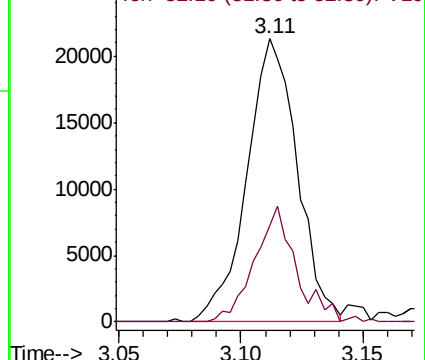
50 100

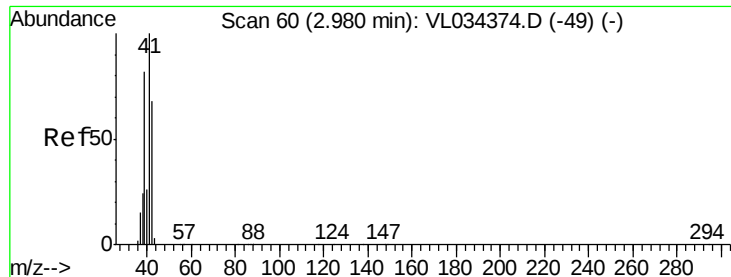
52 34.1 26.8 40.2



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

Concen: 0.733 ppbv

RT: 2.99 min Scan# 63

Delta R.T. 0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

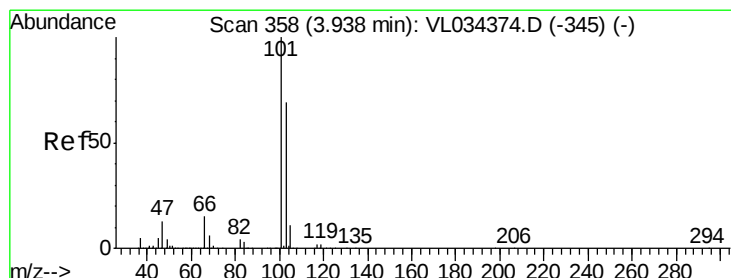
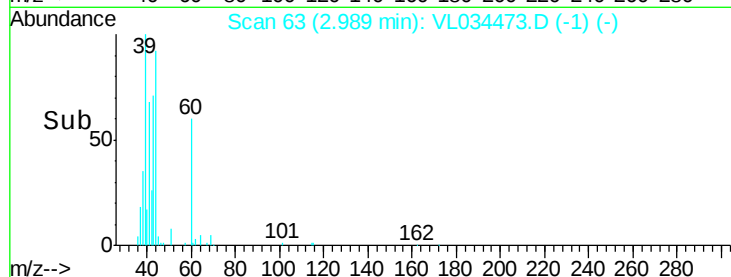
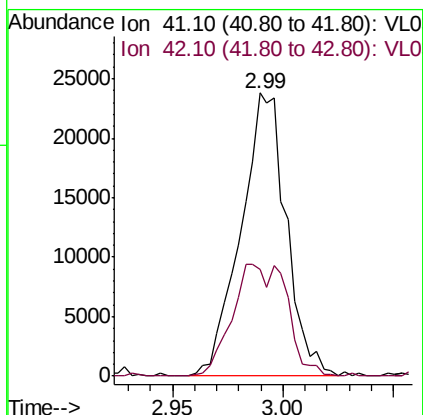
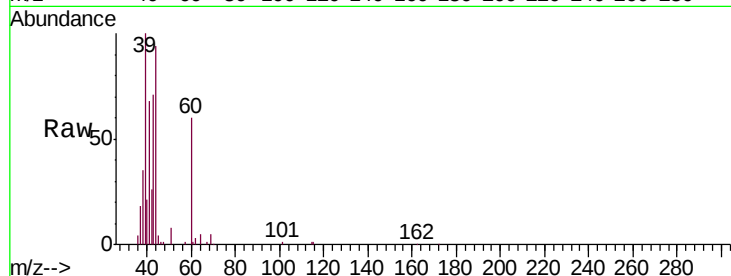
IA-HWDUP

Tgt Ion: 41 Resp: 34213

Ion Ratio Lower Upper

41 100

42 47.7 54.6 82.0#



#11

Trichlorofluoromethane

Concen: 0.253 ppbv

RT: 3.93 min Scan# 357

Delta R.T. -0.00 min

Lab File: VL034473.D

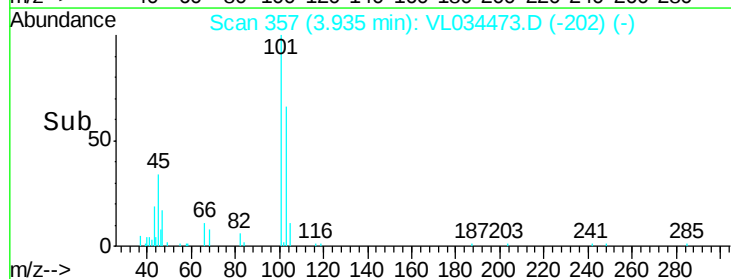
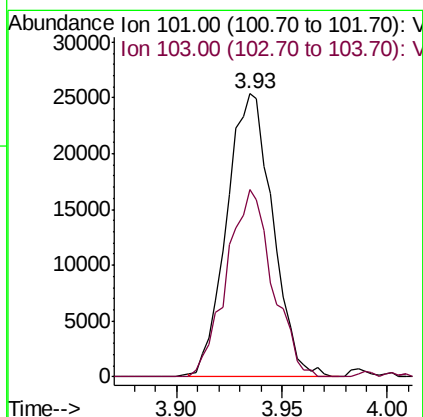
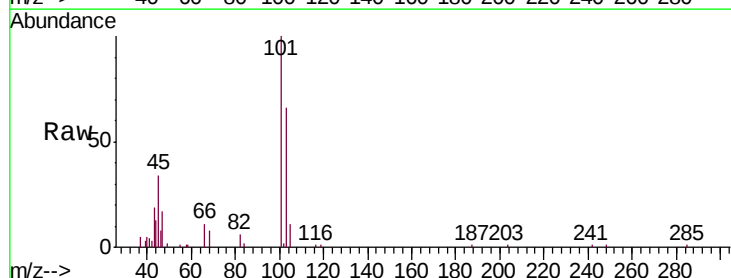
Acq: 9 Dec 2019 20:49

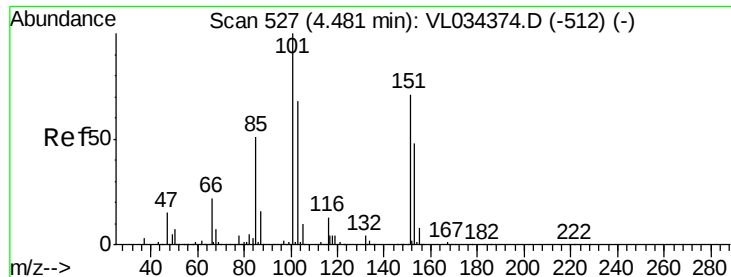
Tgt Ion: 101 Resp: 38354

Ion Ratio Lower Upper

101 100

103 66.4 55.4 83.0





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.031 ppbv

RT: 4.47 min Scan# 524

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

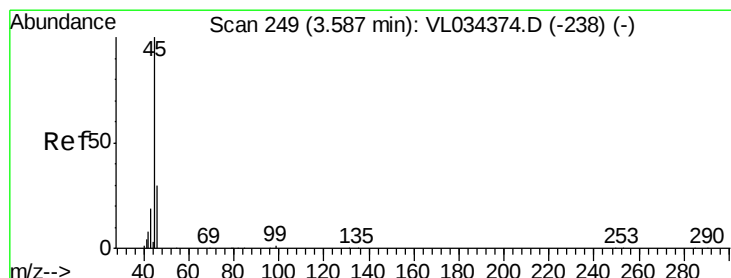
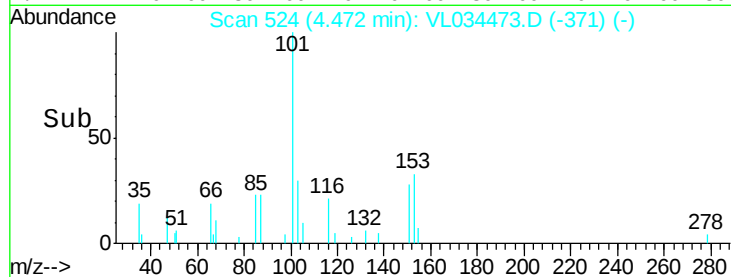
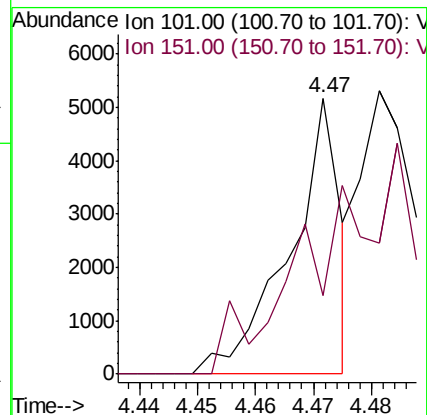
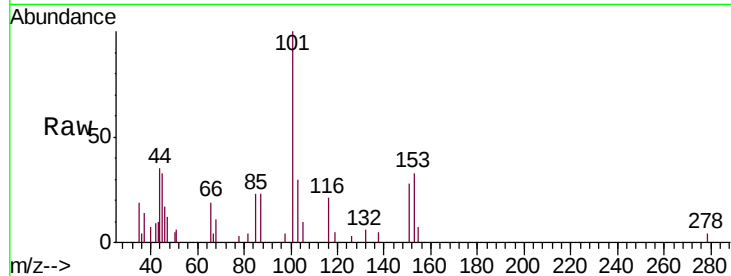
IA-HWDUP

Tgt Ion: 101 Resp: 3118

Ion Ratio Lower Upper

101 100

151 0.0 57.4 86.2#



#13

Ethanol

Concen: 119.493 ppbv

RT: 3.59 min Scan# 249

Delta R.T. 0.00 min

Lab File: VL034473.D

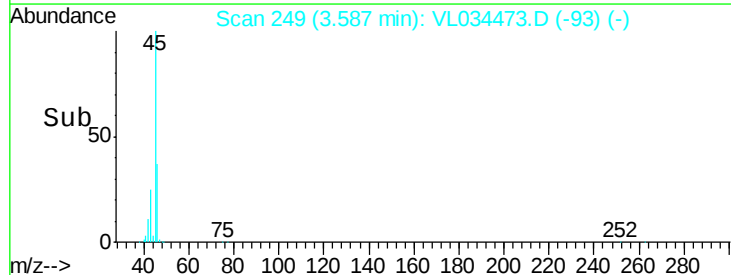
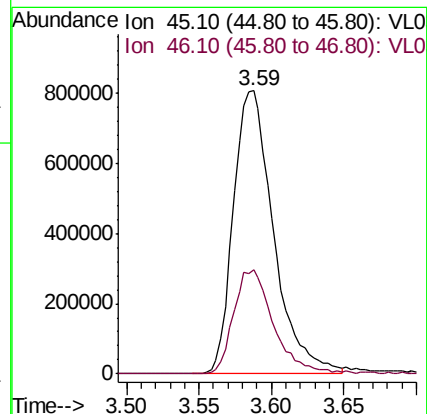
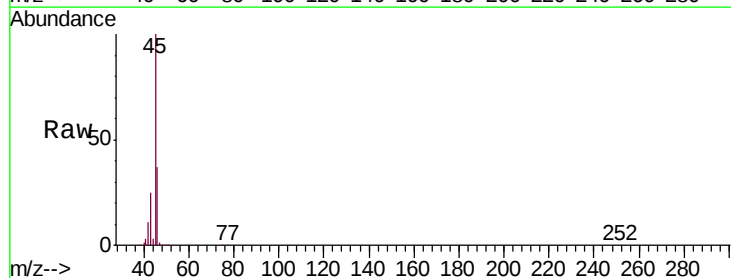
Acq: 9 Dec 2019 20:49

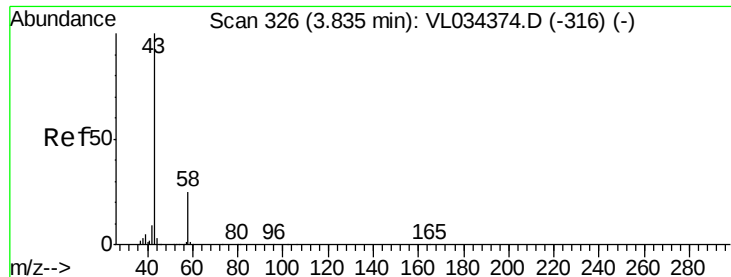
Tgt Ion: 45 Resp: 1552962

Ion Ratio Lower Upper

45 100

46 37.4 13.8 55.4





#15

Acetone

Concen: 4.550 ppbv

RT: 3.83 min Scan# 325

Delta R.T. -0.00 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

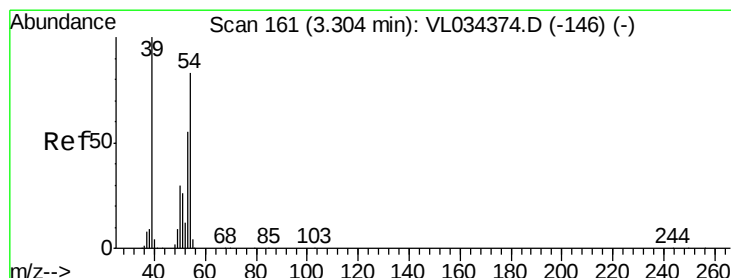
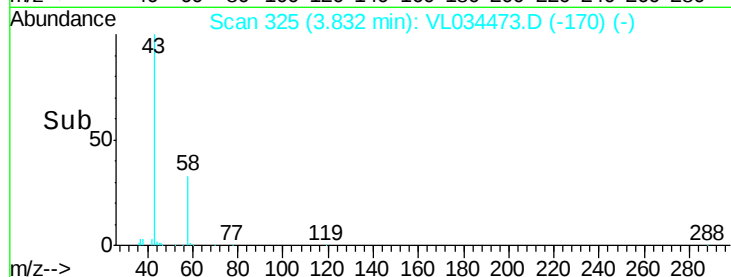
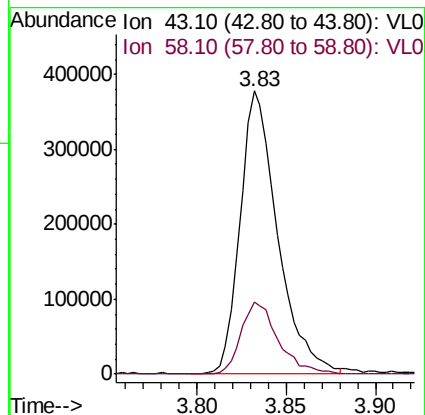
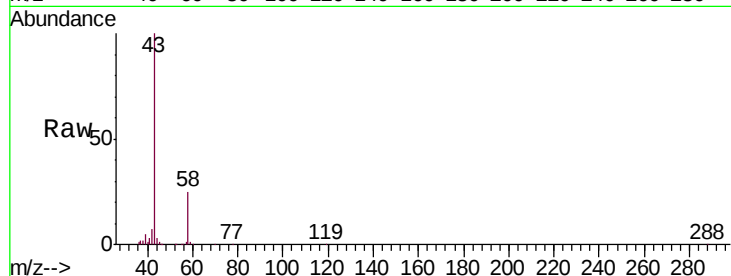
IA-HWDUP

Tgt Ion: 43 Resp: 548742

Ion Ratio Lower Upper

43 100

58 25.7 20.2 30.4



#16

1,3-Butadiene

Concen: 0.158 ppbv

RT: 3.28 min Scan# 154

Delta R.T. -0.02 min

Lab File: VL034473.D

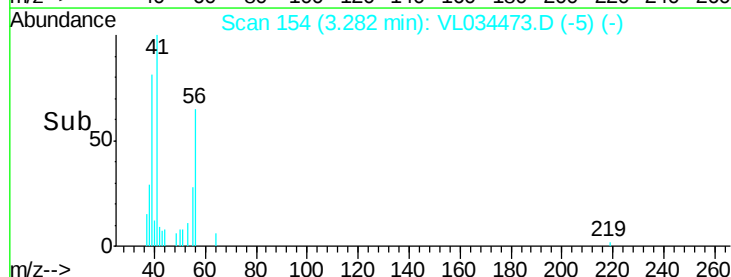
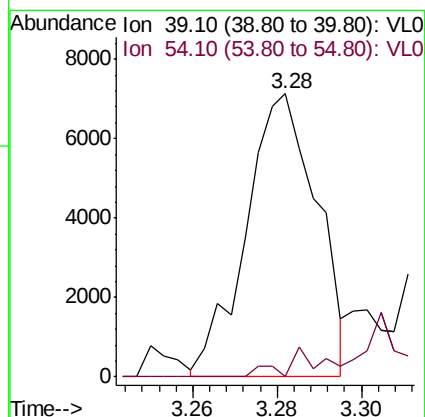
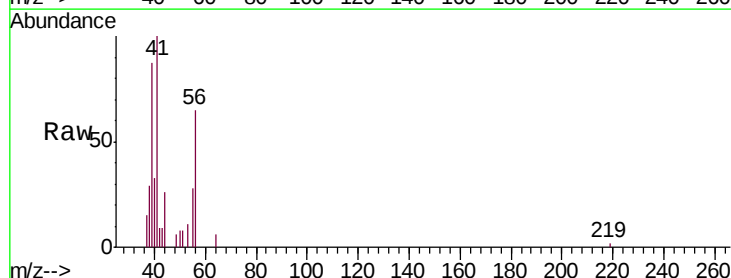
Acq: 9 Dec 2019 20:49

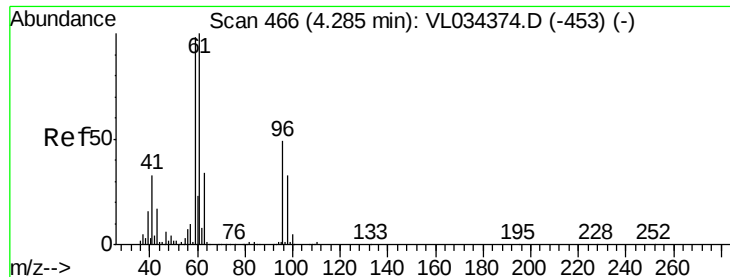
Tgt Ion: 39 Resp: 8306

Ion Ratio Lower Upper

39 100

54 28.1 64.7 97.1#





#17

tert-Butyl alcohol

Concen: 0.031 ppbv

RT: 4.29 min Scan# 467

Delta R.T. 0.00 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampled :

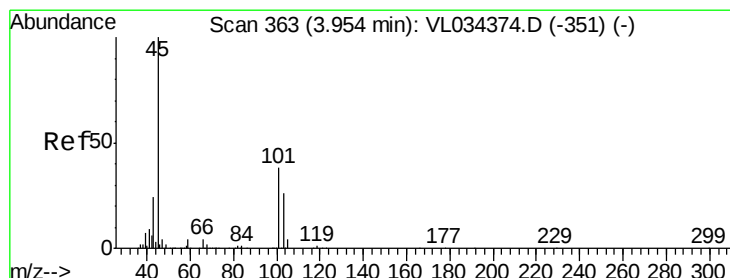
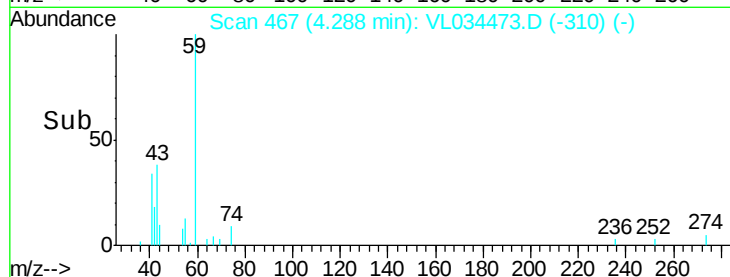
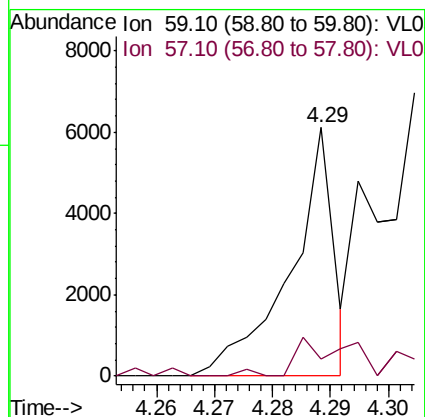
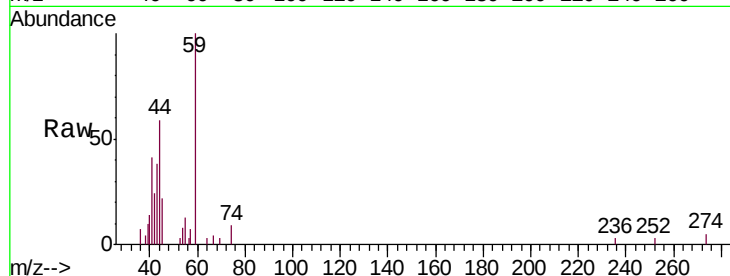
IA-HWDUP

Tgt Ion: 59 Resp: 3169

Ion Ratio Lower Upper

59 100

57 39.5 8.8 13.2#



#19

Isopropyl Alcohol

Concen: 3.775 ppbv

RT: 3.96 min Scan# 365

Delta R.T. 0.01 min

Lab File: VL034473.D

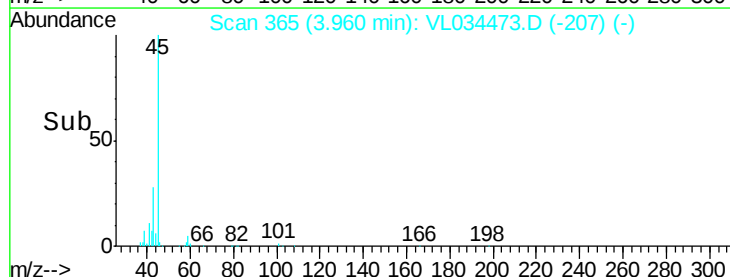
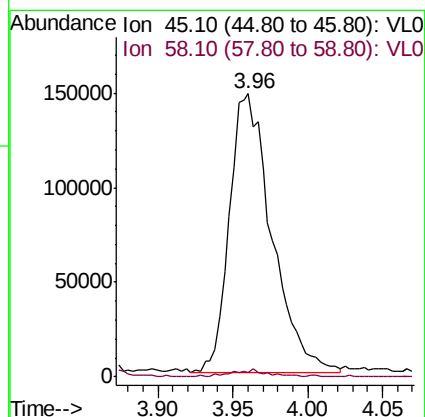
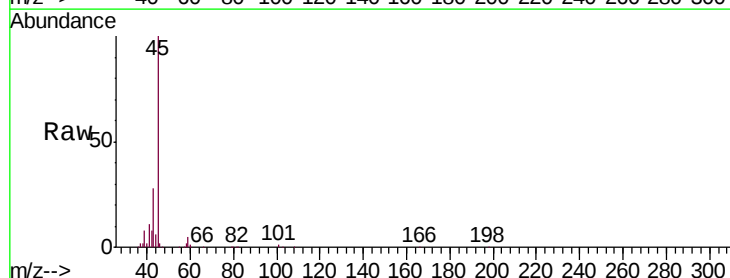
Acq: 9 Dec 2019 20:49

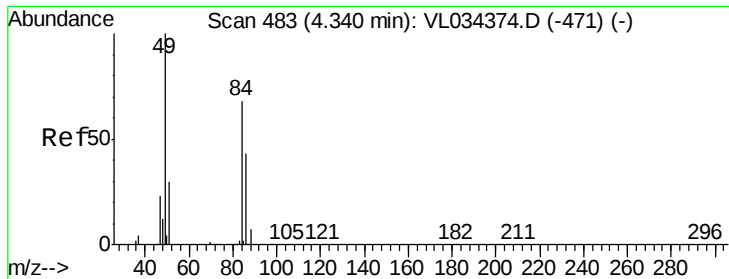
Tgt Ion: 45 Resp: 291820

Ion Ratio Lower Upper

45 100

58 2.7 1.3 1.9#

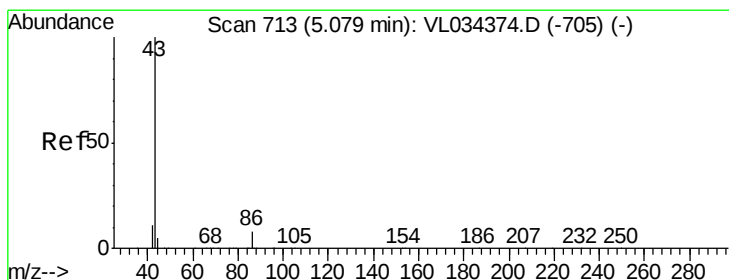
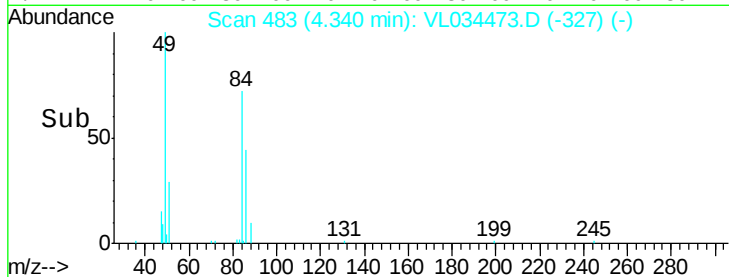
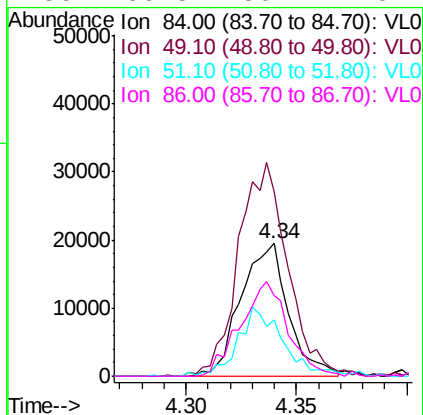
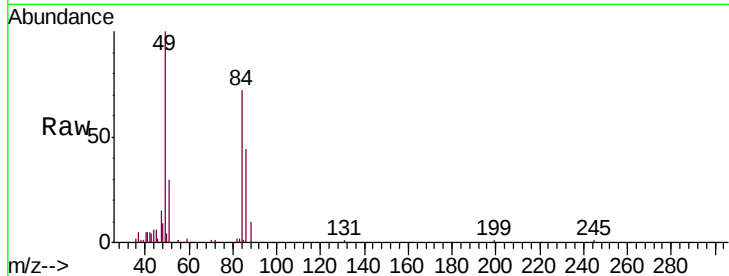




#20
Methylene Chloride
Concen: 0.683 ppbv
RT: 4.34 min Scan# 483
Delta R.T. 0.00 min
Lab File: VL034473.D
Acq: 9 Dec 2019 20:49

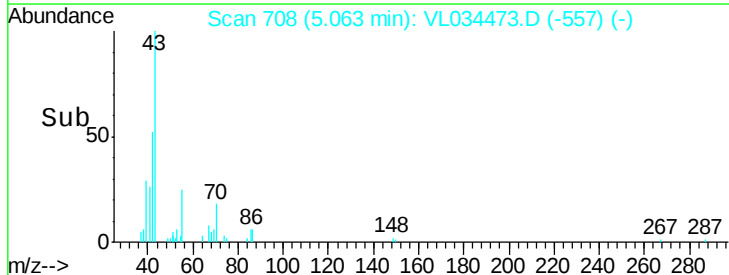
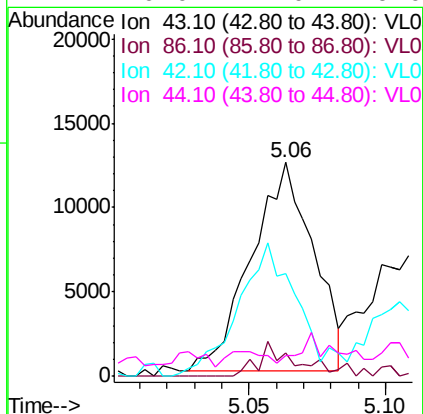
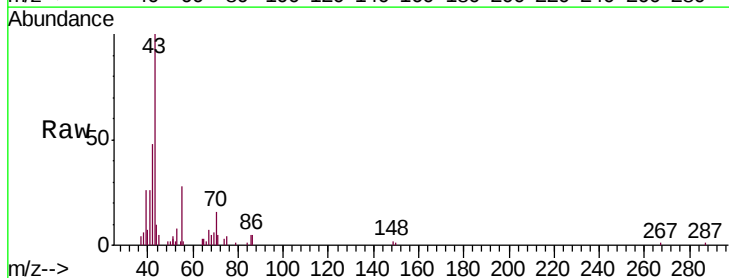
Instrument :
MSVOA_L
ClientSampleId :
IA-HWDUP

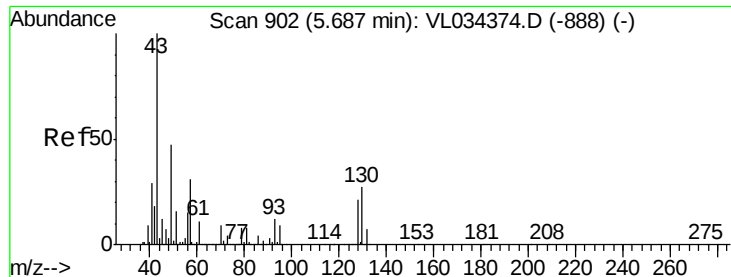
Tgt Ion:	84	Resp:	29226
Ion	Ratio	Lower	Upper
84	100		
49	136.0	116.8	175.2
51	39.1	35.6	53.4
86	60.5	50.7	76.1



#23
Vinyl Acetate
Concen: 0.125 ppbv
RT: 5.06 min Scan# 708
Delta R.T. -0.02 min
Lab File: VL034473.D
Acq: 9 Dec 2019 20:49

Tgt Ion:	43	Resp:	19680
Ion	Ratio	Lower	Upper
43	100		
86	10.8	5.8	8.6#
42	45.2	8.9	13.3#
44	0.0	4.0	6.0#





#25

Ethyl Acetate

Concen: 0.316 ppbv

RT: 5.69 min Scan# 904

Delta R.T. 0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

IA-HWDUP

Tgt Ion: 43 Resp: 67988

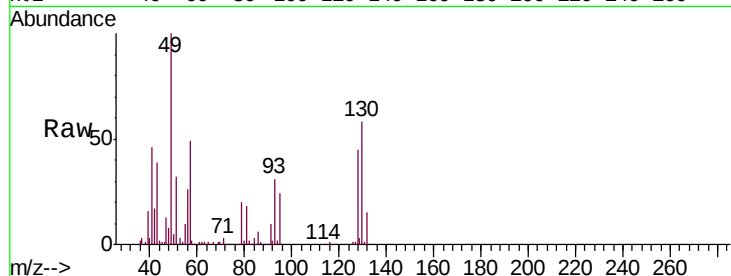
Ion Ratio Lower Upper

43 100

45 3.9 8.2 12.4#

61 2.1 7.5 11.3#

70 4.0 5.7 8.5#

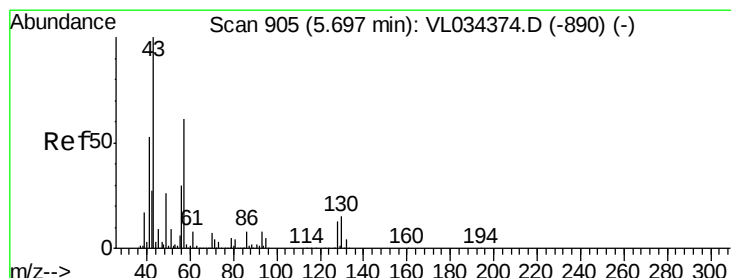
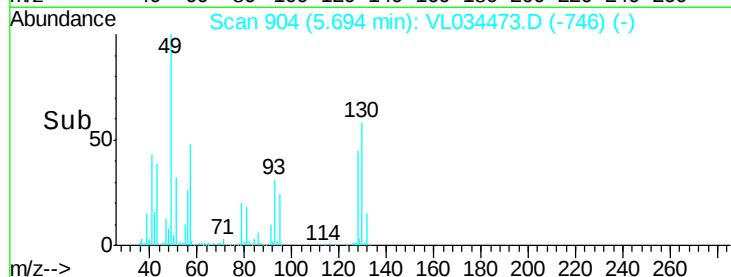
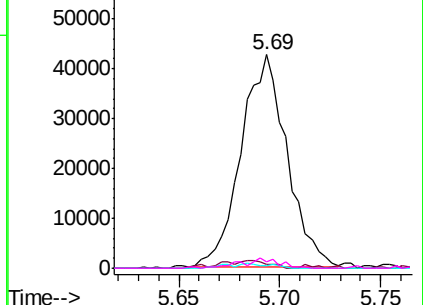


Abundance Ion 43.10 (42.80 to 43.80): VL0

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: 0.919 ppbv

RT: 5.69 min Scan# 903

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Tgt Ion: 57 Resp: 84998

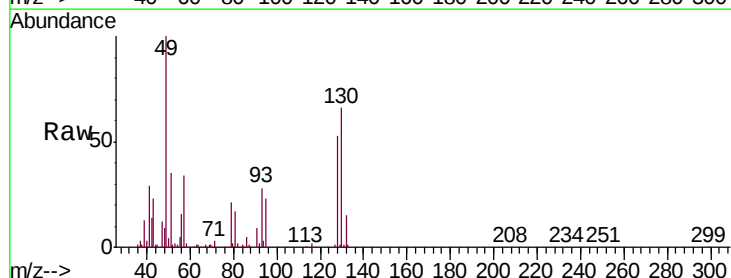
Ion Ratio Lower Upper

57 100

41 99.4 75.0 112.4

43 81.9 186.6 279.8#

56 54.4 41.5 62.3

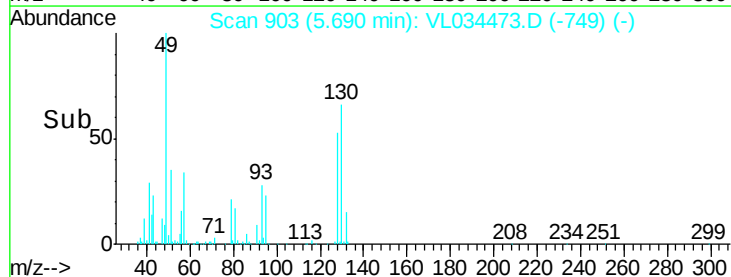
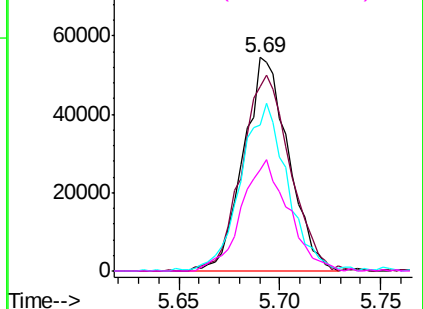


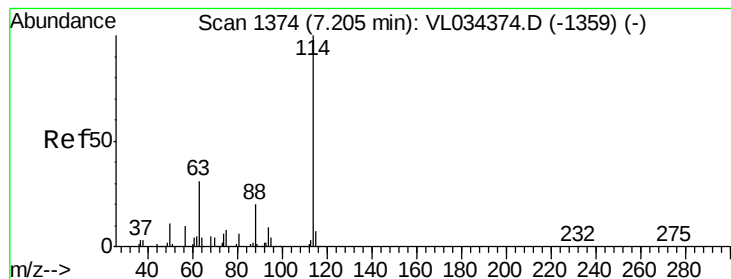
Abundance Ion 57.10 (56.80 to 57.80): VL0

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: 7.20 min Scan# 1372

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

IA-HWDUP

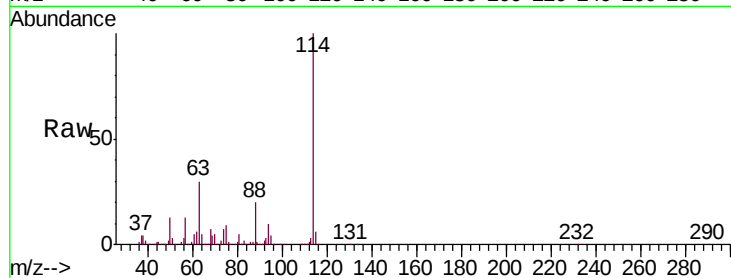
Tgt Ion:114 Resp: 1673444

Ion Ratio Lower Upper

114 100

63 29.8 24.2 36.4

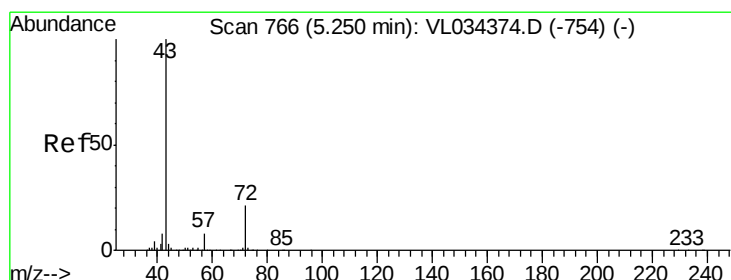
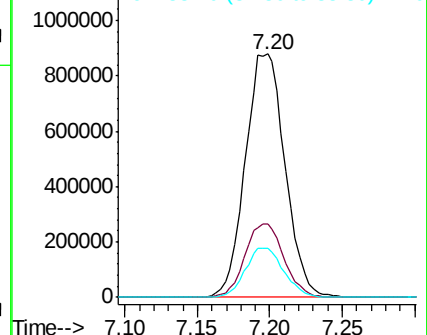
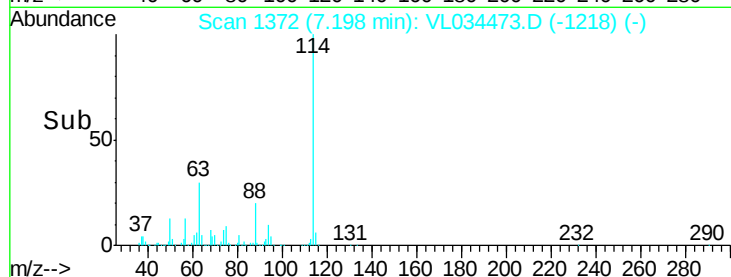
88 19.8 15.9 23.9



Abundance Ion 114.10 (113.80 to 114.80): V

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



#34

2-Butanone

Concen: 0.185 ppbv

RT: 5.25 min Scan# 766

Delta R.T. 0.00 min

Lab File: VL034473.D

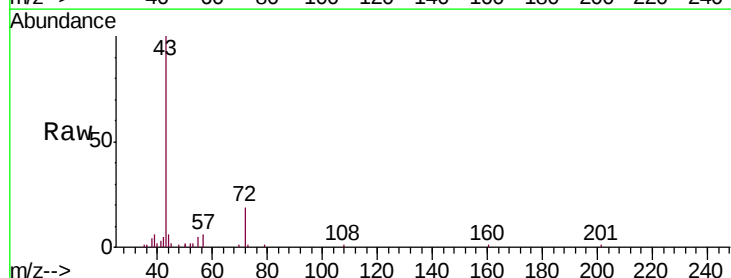
Acq: 9 Dec 2019 20:49

Tgt Ion: 43 Resp: 25513

Ion Ratio Lower Upper

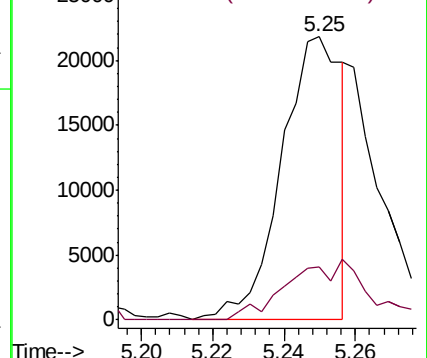
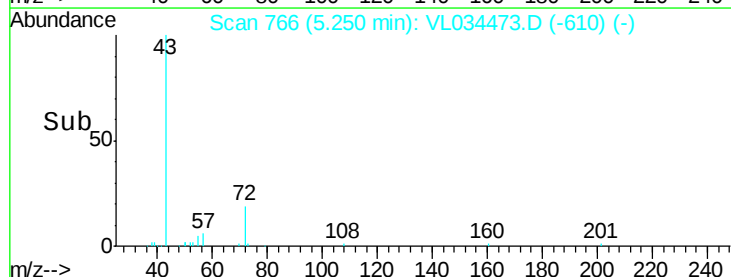
43 100

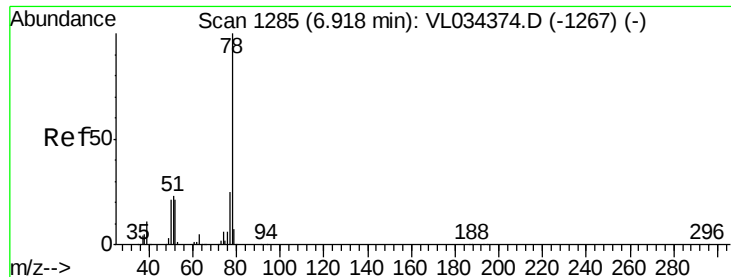
72 28.9 17.0 25.6#



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#36

Benzene

Concen: 0.074 ppbv

RT: 6.91 min Scan# 1283

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

IA-HWDUP

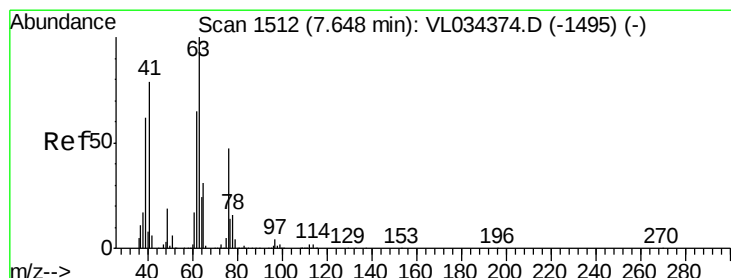
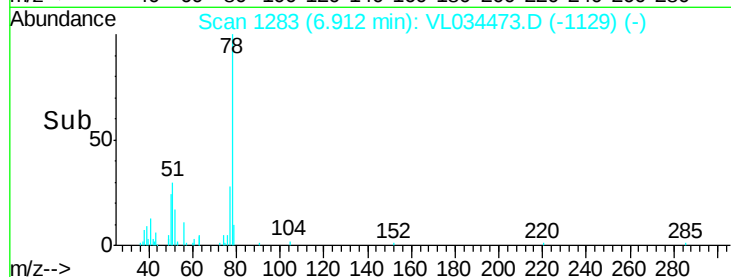
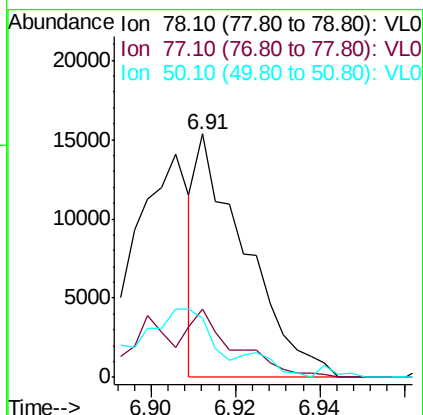
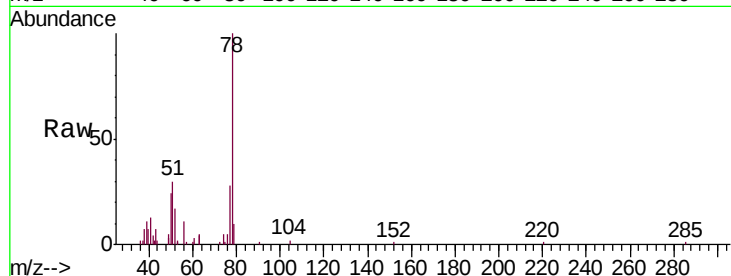
Tgt Ion: 78 Resp: 12393

Ion Ratio Lower Upper

78 100

77 28.2 20.2 30.4

50 23.2 17.1 25.7



#39

1,2-Dichloropropane

Concen: 7.706 ppbv

RT: 7.20 min Scan# 1372

Delta R.T. -0.45 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

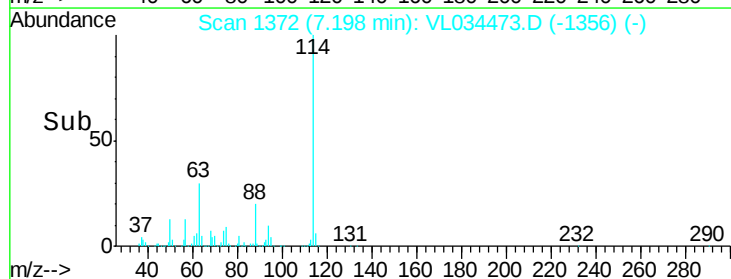
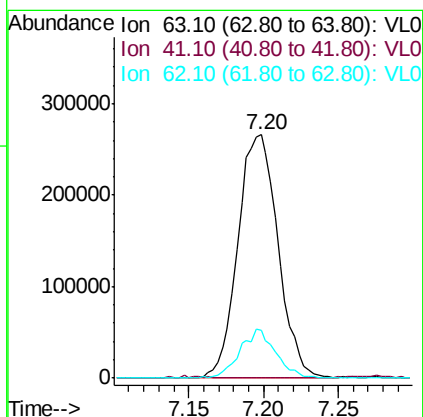
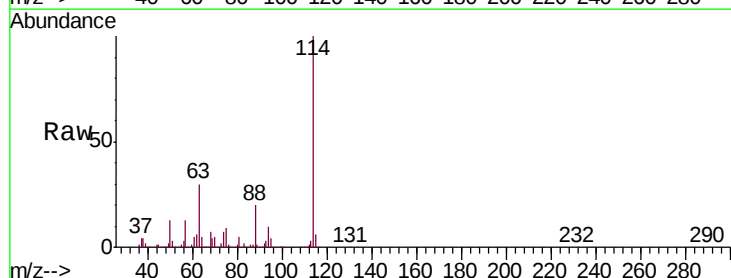
Tgt Ion: 63 Resp: 496600

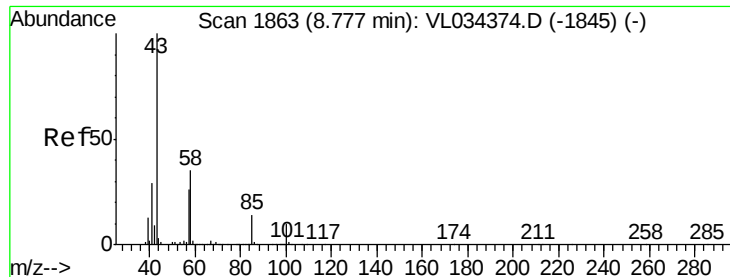
Ion Ratio Lower Upper

63 100

41 0.0 63.1 94.7#

62 19.8 52.3 78.5#

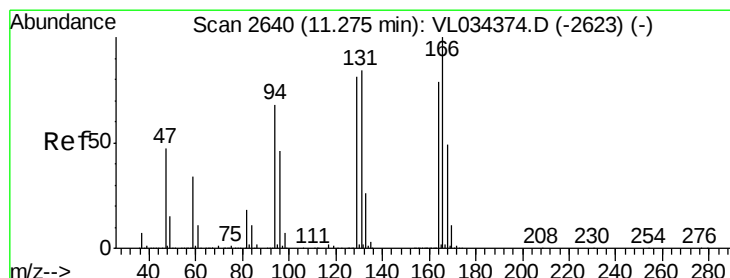
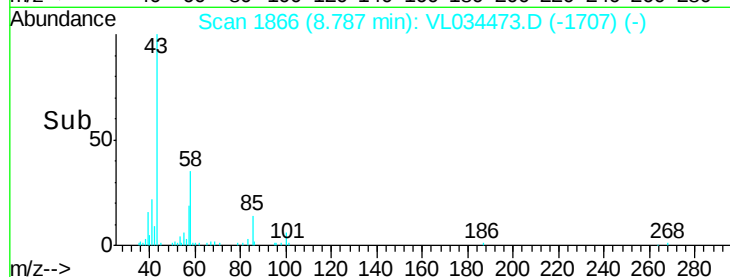
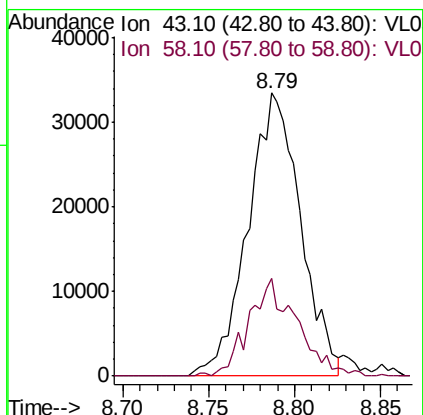
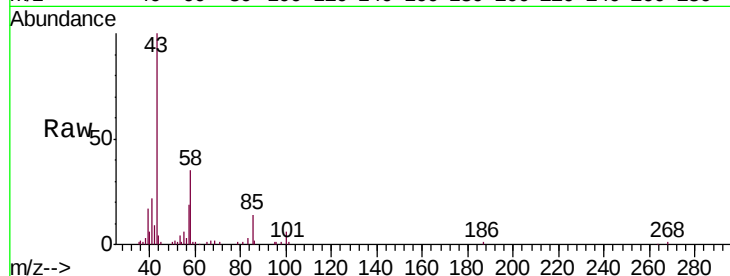




#50
 4-Methyl-2-Pentanone
 Concen: 0.357 ppbv
 RT: 8.79 min Scan# 1866
 Delta R.T. 0.01 min
 Lab File: VL034473.D
 Acq: 9 Dec 2019 20:49

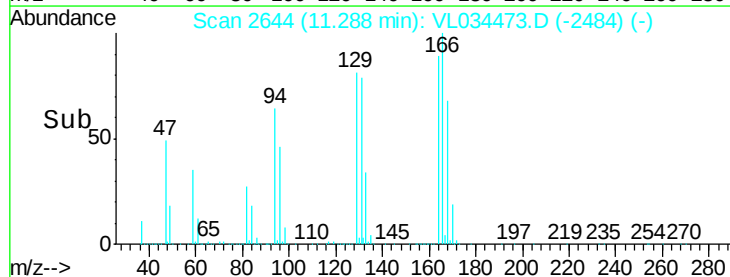
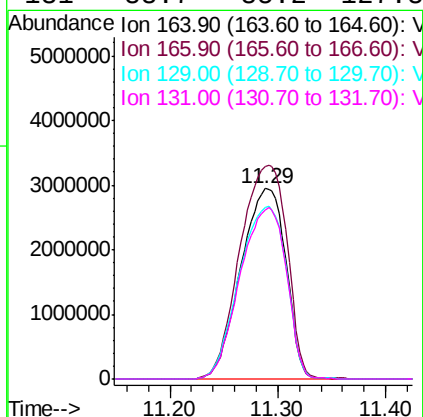
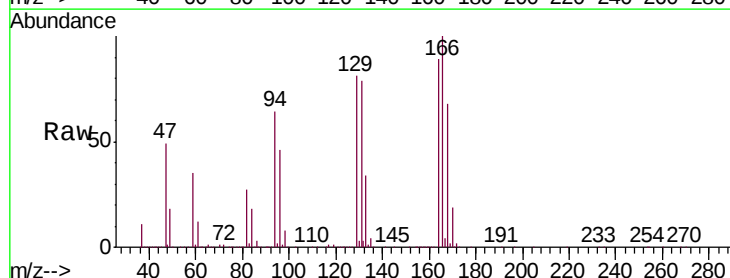
Instrument :
 MSVOA_L
 ClientSampleId :
 IA-HWDUP

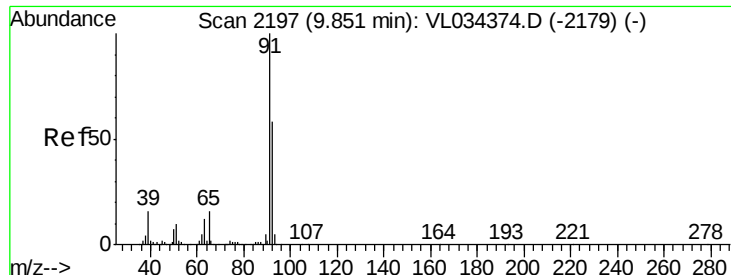
Tgt Ion: 43 Resp: 71154
 Ion Ratio Lower Upper
 43 100
 58 31.7 27.9 41.9



#52
 Tetrachloroethene
 Concen: 118.018 ppbv
 RT: 11.29 min Scan# 2644
 Delta R.T. 0.01 min
 Lab File: VL034473.D
 Acq: 9 Dec 2019 20:49

Tgt Ion: 164 Resp: 8542129
 Ion Ratio Lower Upper
 164 100
 166 112.0 101.7 152.5
 129 90.4 82.6 123.8
 131 88.7 85.2 127.8





#53

Toluene

Concen: 1.470 ppbv

RT: 9.84 min Scan# 2195

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

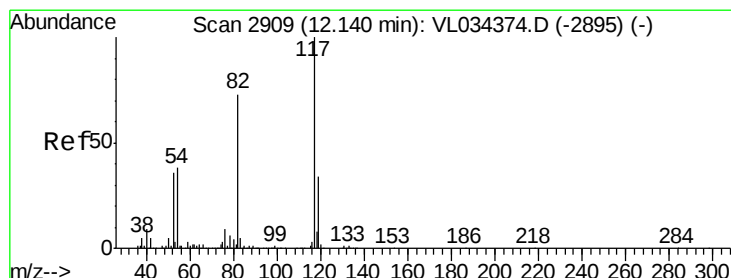
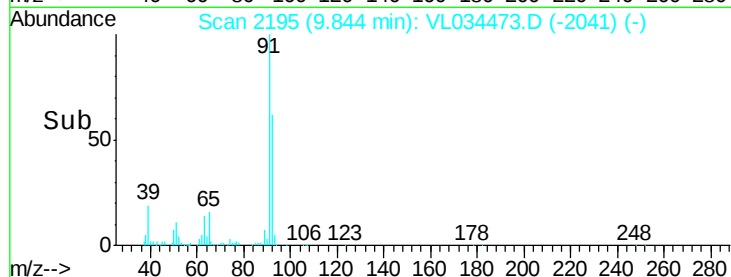
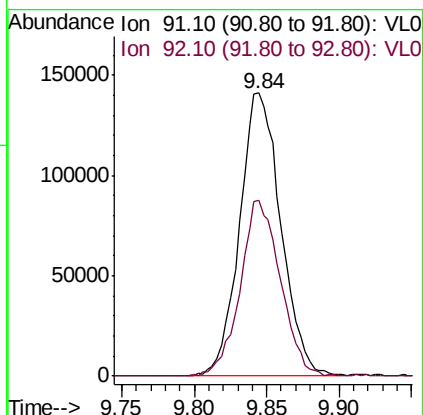
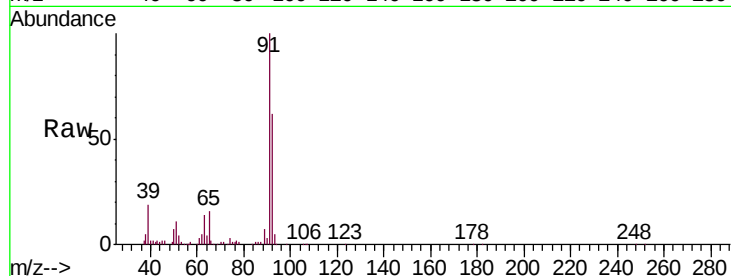
IA-HWDUP

Tgt Ion: 91 Resp: 279375

Ion Ratio Lower Upper

91 100

92 60.7 47.9 71.9



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.14 min Scan# 2909

Delta R.T. 0.00 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

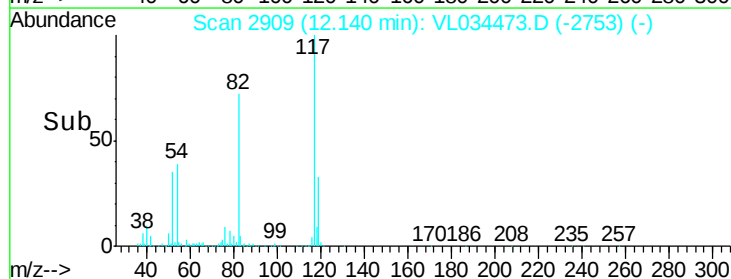
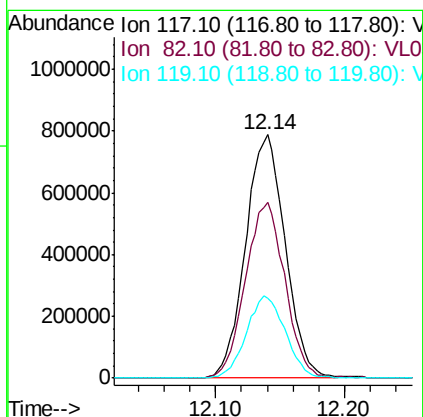
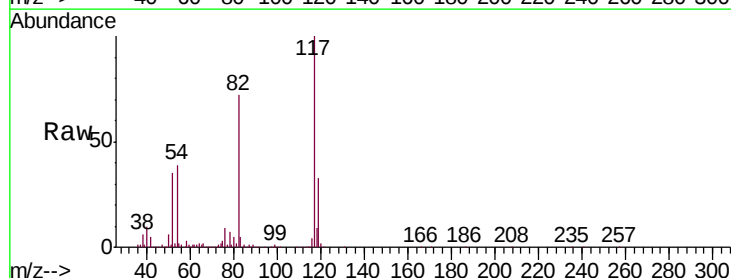
Tgt Ion: 117 Resp: 1687939

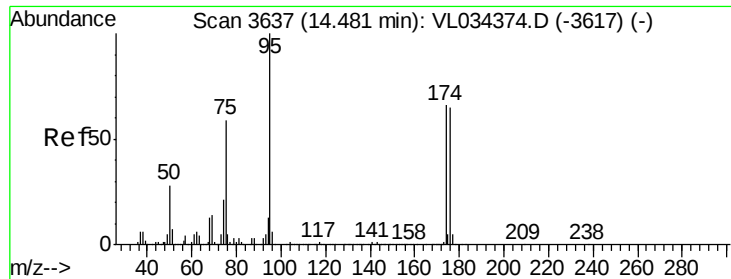
Ion Ratio Lower Upper

117 100

82 72.4 57.5 86.3

119 33.4 25.4 38.2





#68

1-Bromo-4-Fluorobenzene

Concen: 10.060 ppbv

RT: 14.47 min Scan# 3634

Delta R.T. -0.01 min

Lab File: VL034473.D

Acq: 9 Dec 2019 20:49

Instrument :

MSVOA_L

ClientSampleId :

IA-HWDUP

Tgt Ion: 95 Resp: 1428522

Ion Ratio Lower Upper

95 100

174 65.9 52.2 78.2

175 4.5 3.8 5.8

