

Data File : VL034459.D
Acq On : 3 Dec 2019 14:08
Operator : SY/AP
Sample : K6068-04DL2 80X
Misc : 400ml/MSVOA_L
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_L
ClientSampleId :
SV-4DL2

Quant Time: Dec 03 14:39:07 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	5.69	49	989271	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.21	114	1964236	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.15	117	1922562	10.00	ppbv	0.00

System Monitoring Compounds
68) 1-Bromo-4-Fluorobenzene 14.48 95 1671481 10.33 ppbv 0.00
Spiked Amount 10.000 Range 65 - 135 Recovery = 103.30%

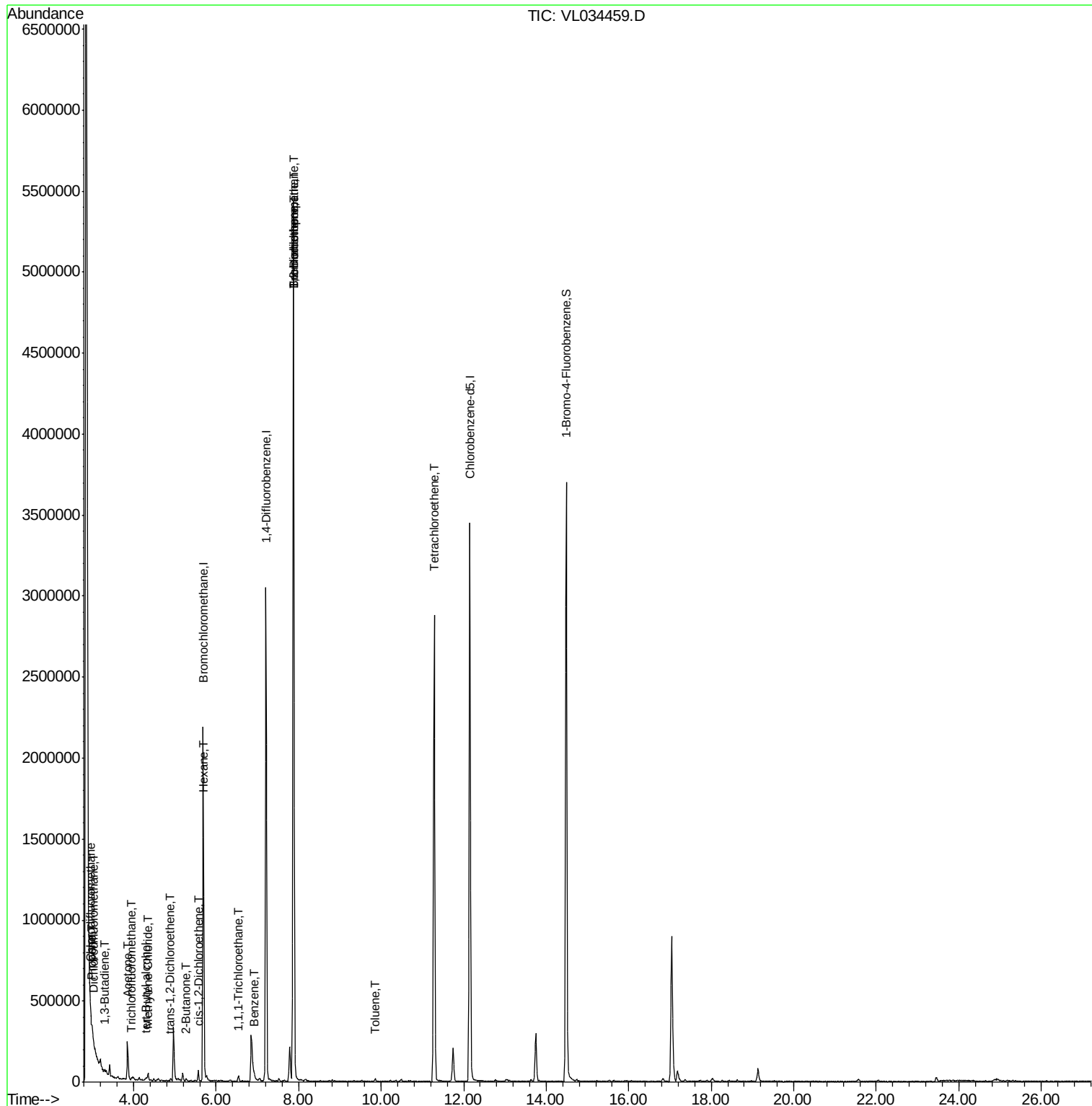
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	3.03	85	5600	0.031	ppbv	92
3) Chlorodifluoromethane	2.96	51	5748	0.047	ppbv	94
9) Propene	3.00	41	4686	0.086	ppbv #	1
11) Trichlorofluoromethane	3.94	101	6745	0.038	ppbv	90
15) Acetone	3.85	43	241212	1.703	ppbv	99
16) 1,3-Butadiene	3.30	39	2574	0.042	ppbv #	9
17) tert-Butyl alcohol	4.31	59	7554	0.063	ppbv	100
20) Methylene Chloride	4.35	84	12070	0.240	ppbv #	93
22) trans-1,2-Dichloroethene	4.89	96	1617	0.031	ppbv #	38
26) Hexane	5.71	57	7586	0.070	ppbv #	56
31) cis-1,2-Dichloroethene	5.57	61	31237	0.278	ppbv	95
32) 1,1,1-Trichloroethane	6.54	97	13287	0.081	ppbv #	62
34) 2-Butanone	5.28	43	14780	0.091	ppbv	95
36) Benzene	6.92	78	8035	0.041	ppbv #	61
38) Trichloroethene	7.87	130	1586245	19.686	ppbv	99
39) 1,2-Dichloropropane	7.87	63	8170	0.108	ppbv #	1
42) Bromodichloromethane	7.89	83	7435	0.041	ppbv	100
52) Tetrachloroethene	11.28	164	650565	7.658	ppbv	97
53) Toluene	9.86	91	6966	0.031	ppbv #	68

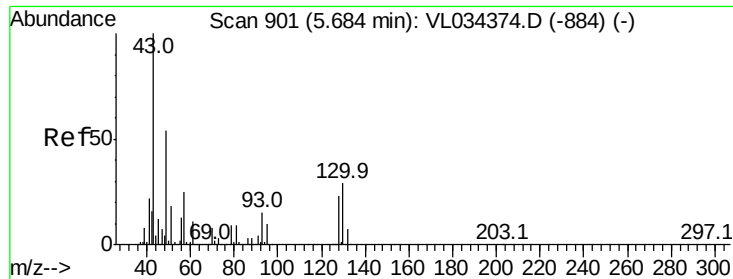
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.69 min Scan# 902

Delta R.T. 0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleID :

SV-4DL2

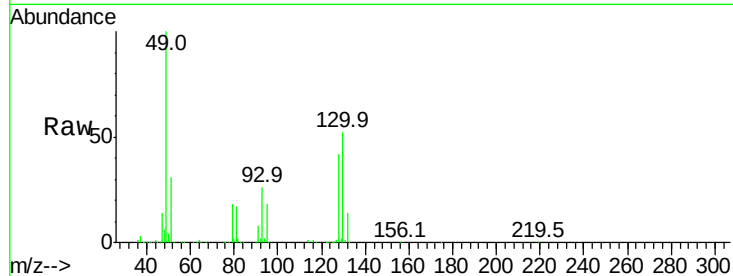
Tgt Ion: 49 Resp: 989271

Ion Ratio Lower Upper

49 100

128 42.6 21.8 65.3

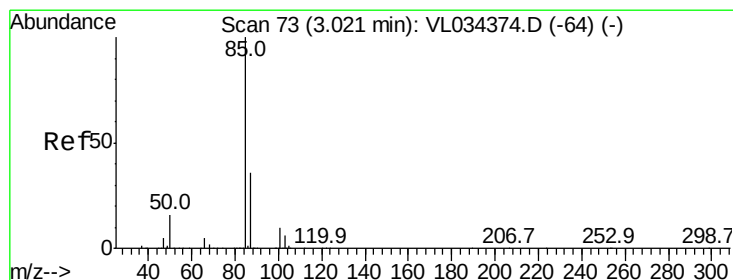
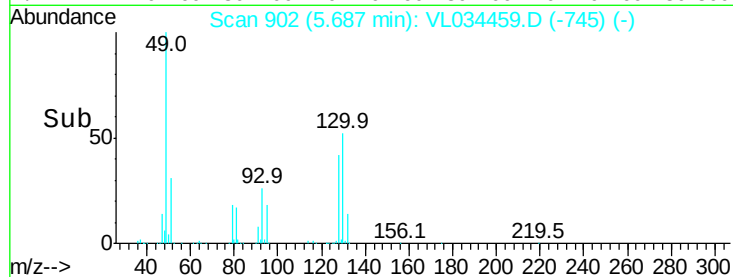
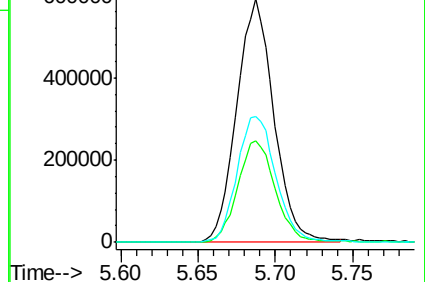
130 55.0 28.0 84.0



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: 0.031 ppbv

RT: 3.03 min Scan# 75

Delta R.T. 0.01 min

Lab File: VL034459.D

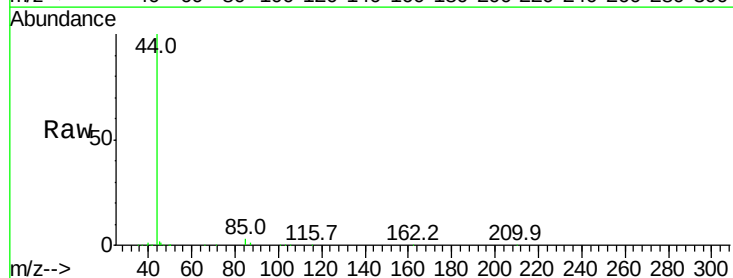
Acq: 3 Dec 2019 14:08

Tgt Ion: 85 Resp: 5600

Ion Ratio Lower Upper

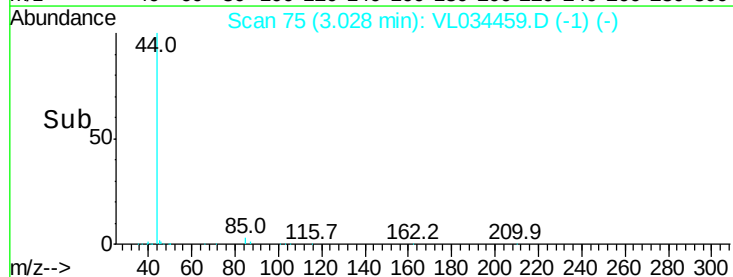
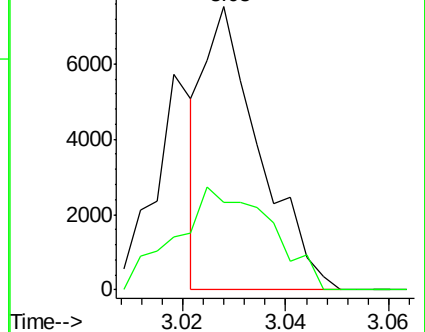
85 100

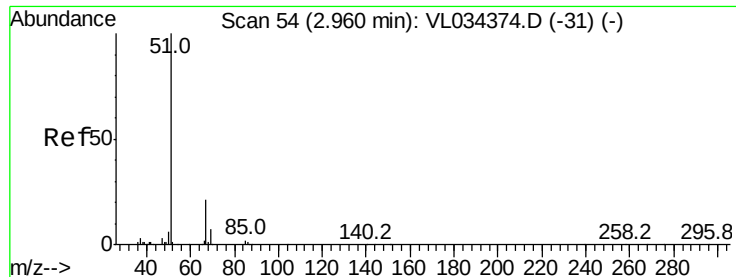
87 31.1 28.5 42.7



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.047 ppbv

RT: 2.96 min Scan# 54

Delta R.T. 0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

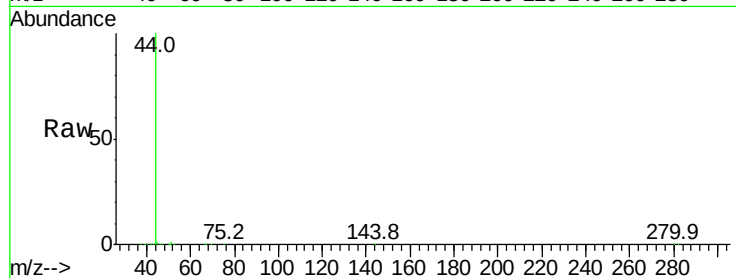
SV-4DL2

Tgt Ion: 51 Resp: 5748

Ion Ratio Lower Upper

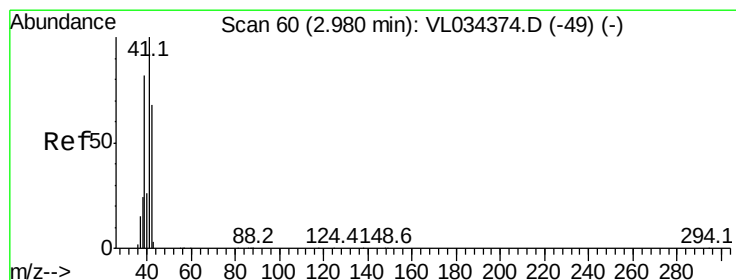
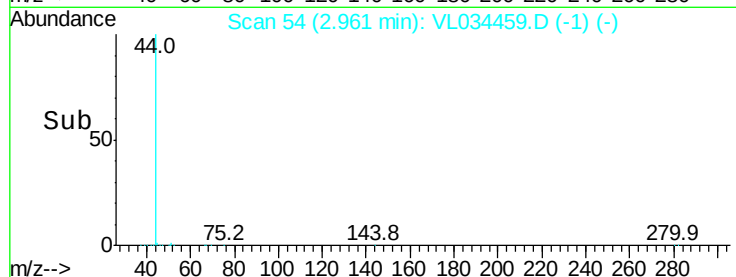
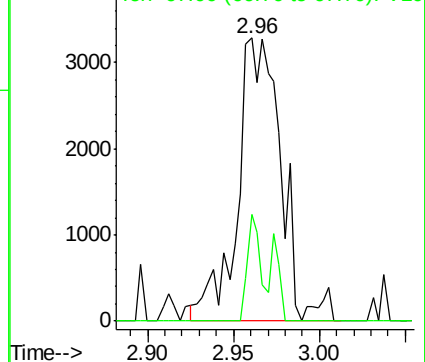
51 100

67 17.4 16.2 24.2



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#9

Propene

Concen: 0.086 ppbv

RT: 3.00 min Scan# 66

Delta R.T. 0.02 min

Lab File: VL034459.D

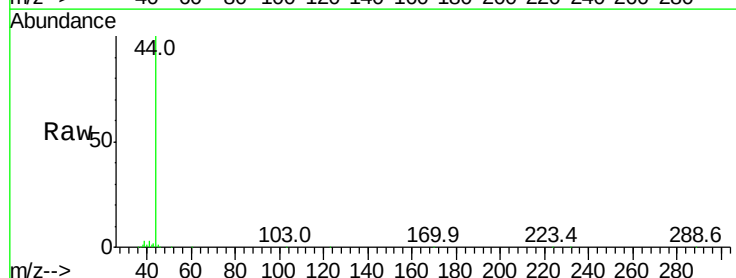
Acq: 3 Dec 2019 14:08

Tgt Ion: 41 Resp: 4686

Ion Ratio Lower Upper

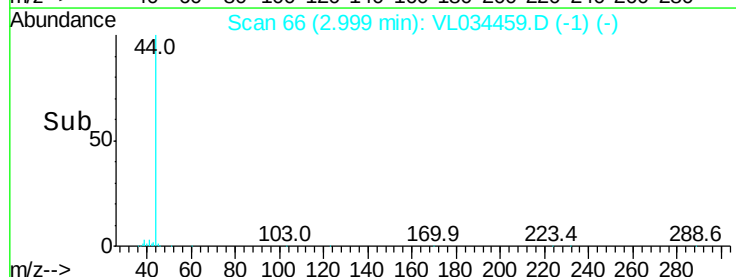
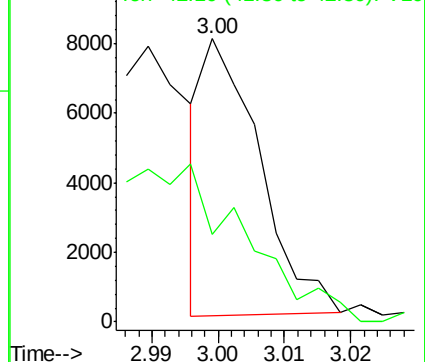
41 100

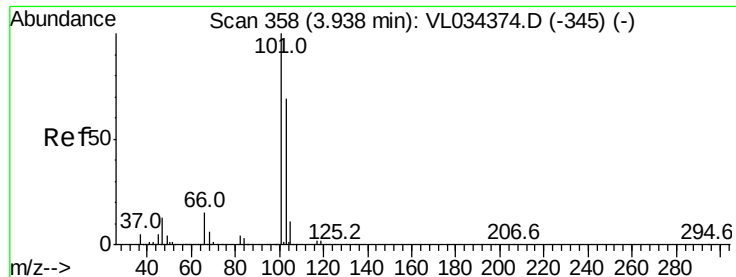
42 171.4 54.6 82.0#



Abundance Ion 41.10 (40.80 to 41.80): VL0

Ion 42.10 (41.80 to 42.80): VL0





#11

Trichlorofluoromethane

Concen: 0.038 ppbv

RT: 3.94 min Scan# 360

Delta R.T. 0.01 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

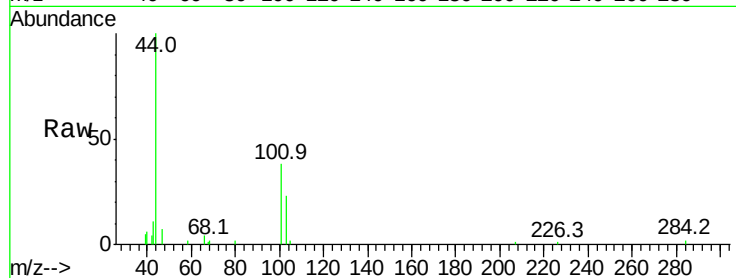
SV-4DL2

Tgt Ion:101 Resp: 6745

Ion Ratio Lower Upper

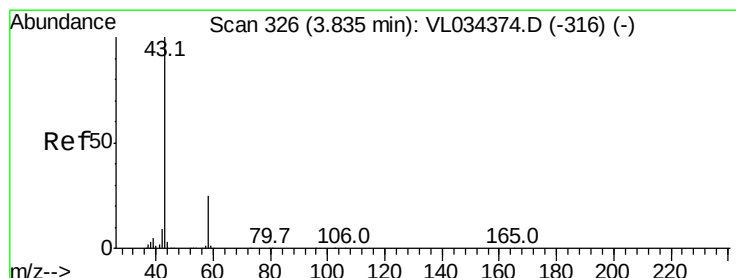
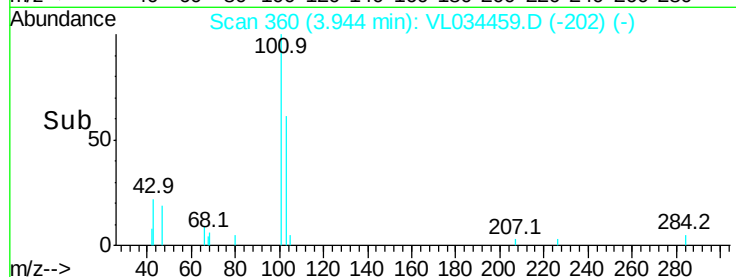
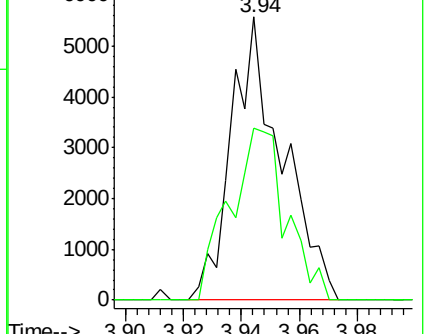
101 100

103 60.7 55.4 83.0



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#15

Acetone

Concen: 1.703 ppbv

RT: 3.85 min Scan# 331

Delta R.T. 0.02 min

Lab File: VL034459.D

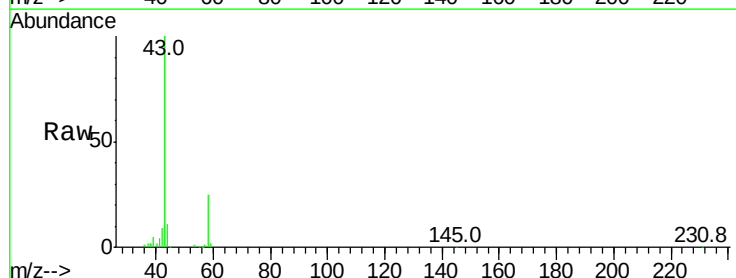
Acq: 3 Dec 2019 14:08

Tgt Ion: 43 Resp: 241212

Ion Ratio Lower Upper

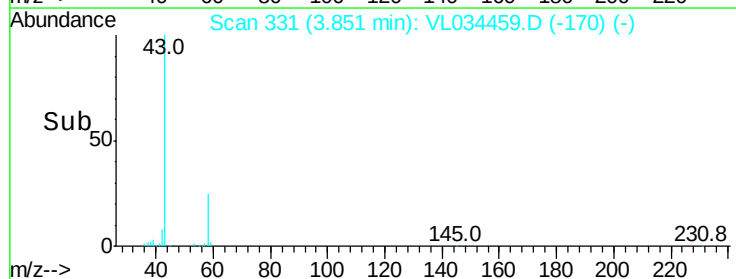
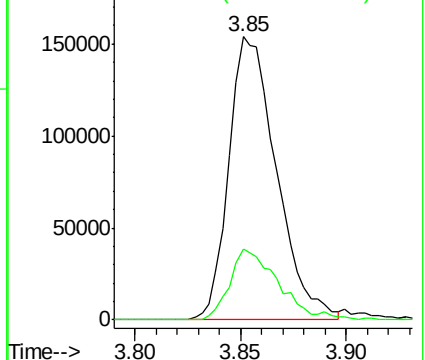
43 100

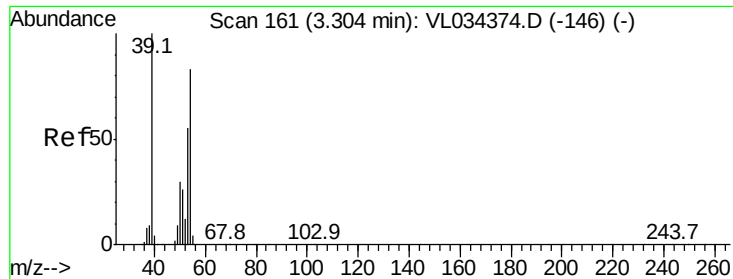
58 25.6 20.2 30.4



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0





#16

1,3-Butadiene

Concen: 0.042 ppbv

RT: 3.30 min Scan# 160

Delta R.T. -0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

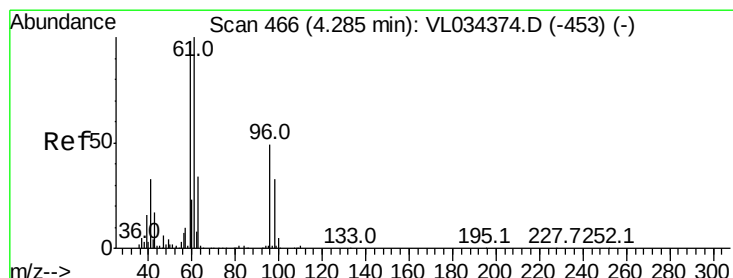
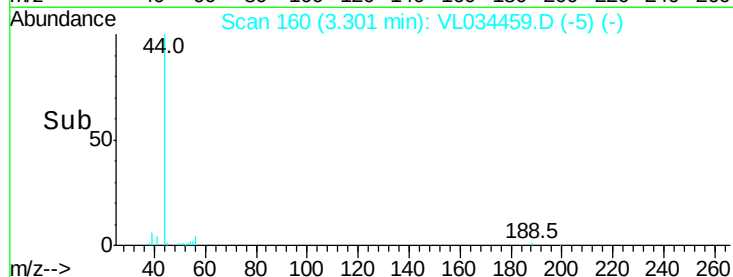
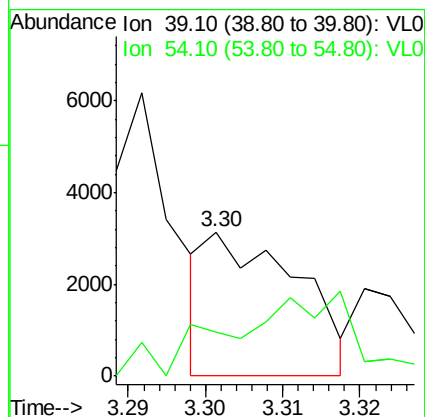
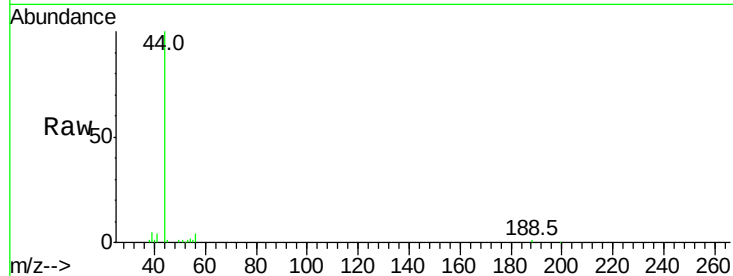
SV-4DL2

Tgt Ion: 39 Resp: 2574

Ion Ratio Lower Upper

39 100

54 0.0 64.7 97.1#



#17

tert-Butyl alcohol

Concen: 0.063 ppbv

RT: 4.31 min Scan# 474

Delta R.T. 0.03 min

Lab File: VL034459.D

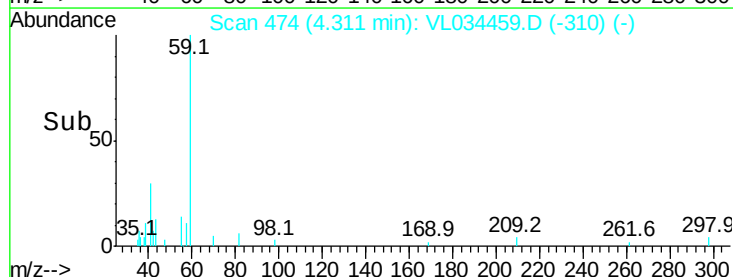
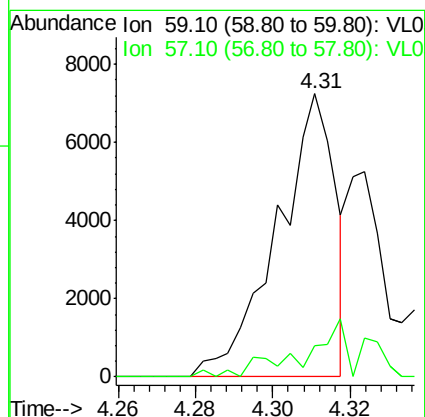
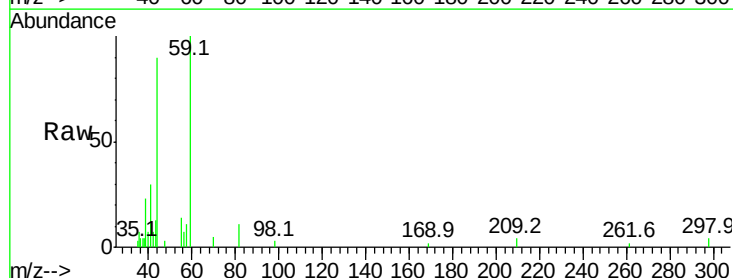
Acq: 3 Dec 2019 14:08

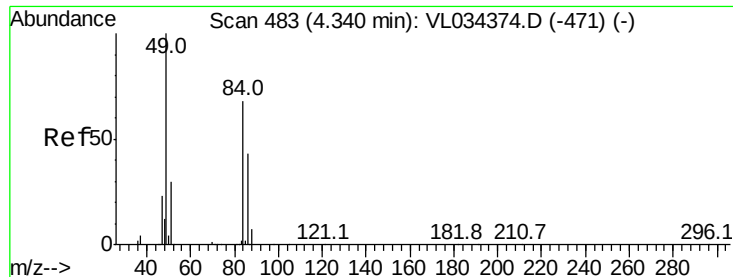
Tgt Ion: 59 Resp: 7554

Ion Ratio Lower Upper

59 100

57 11.1 8.8 13.2





#20

Methylene Chloride

Concen: 0.240 ppbv

RT: 4.35 min Scan# 486

Delta R.T. 0.01 min

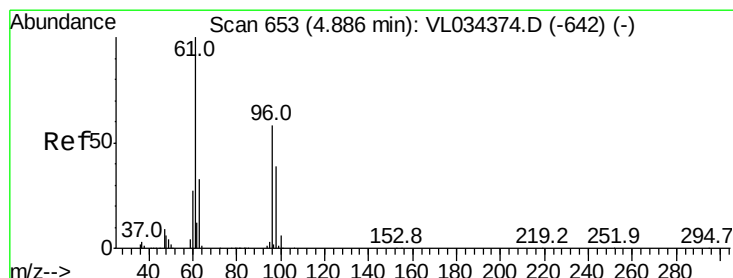
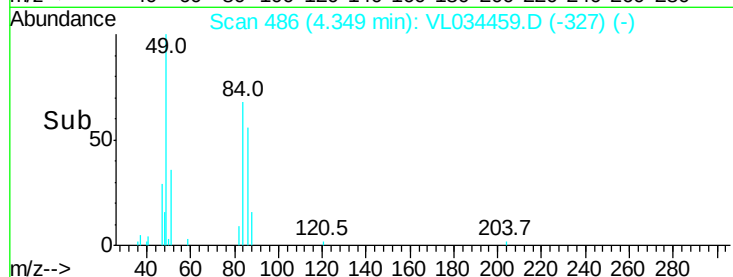
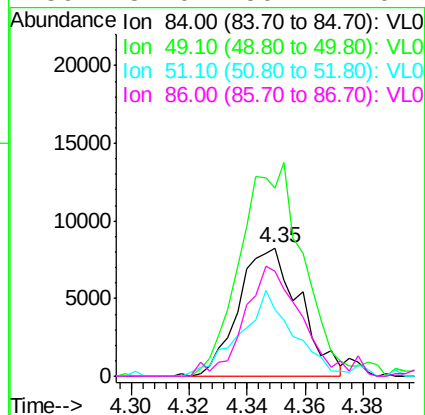
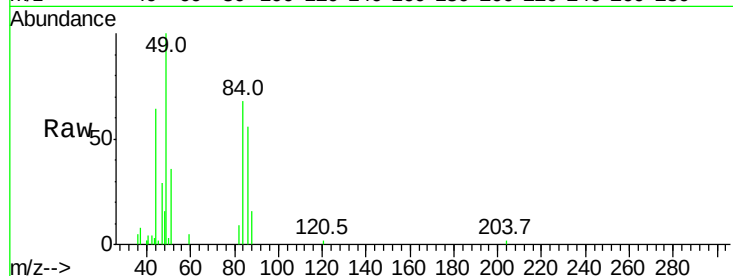
Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :
MSVOA_L
ClientSampleId :
SV-4DL2

Tgt Ion: 84 Resp: 12070

Ion	Ratio	Lower	Upper
84	100		
49	146.4	116.8	175.2
51	48.5	35.6	53.4
86	82.0	50.7	76.1#



#22

trans-1,2-Dichloroethene

Concen: 0.031 ppbv

RT: 4.89 min Scan# 655

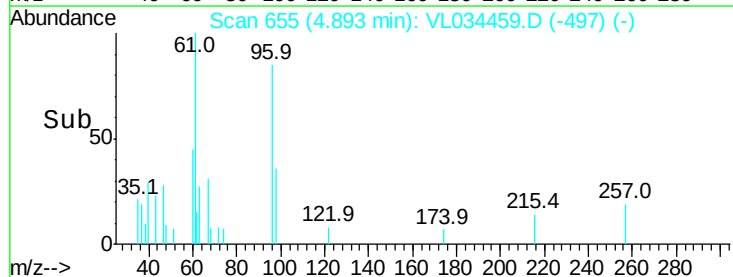
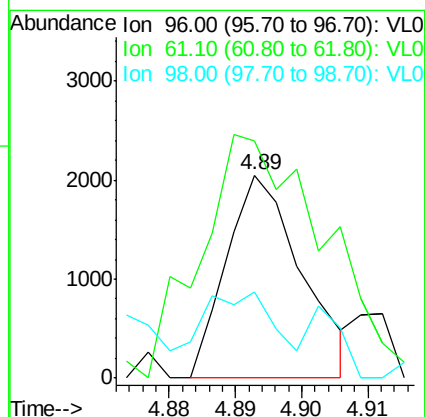
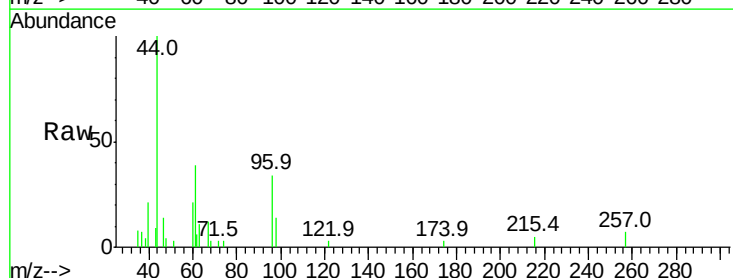
Delta R.T. 0.01 min

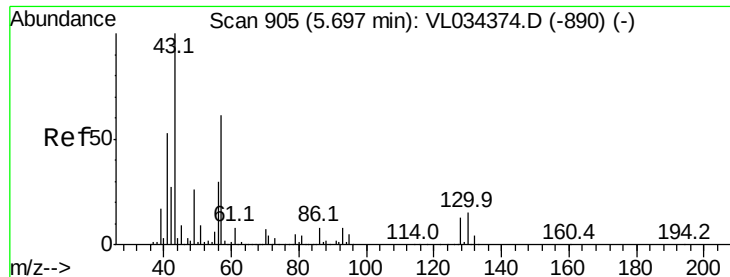
Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Tgt Ion: 96 Resp: 1617

Ion	Ratio	Lower	Upper
96	100		
61	81.0	137.9	206.9#
98	26.9	53.5	80.3#

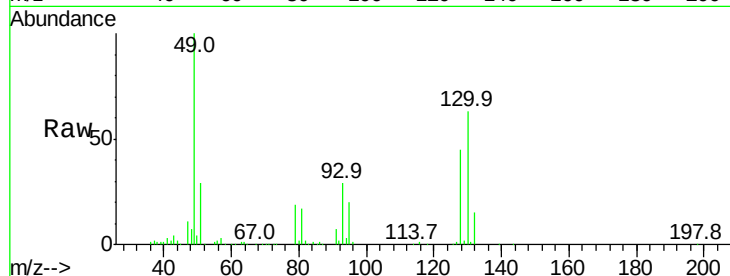




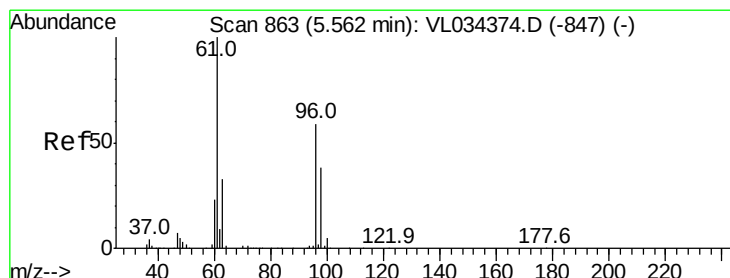
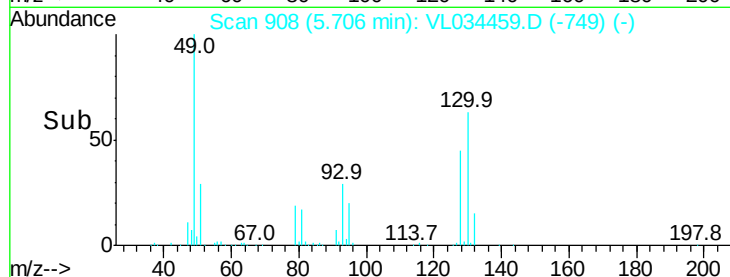
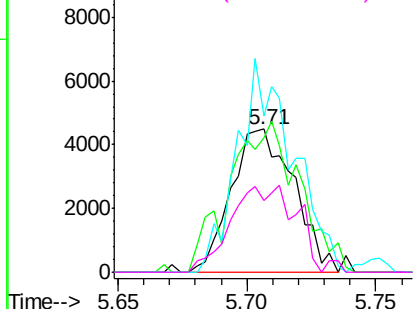
#26
Hexane
Concen: 0.070 ppbv
RT: 5.71 min Scan# 908
Delta R.T. 0.01 min
Lab File: VL034459.D
Acq: 3 Dec 2019 14:08

Instrument :
MSVOA_L
ClientSampleId :
SV-4DL2

Tgt Ion: 57 Resp: 7586
Ion Ratio Lower Upper
57 100
41 118.0 75.0 112.4#
43 136.4 186.6 279.8#
56 64.8 41.5 62.3#

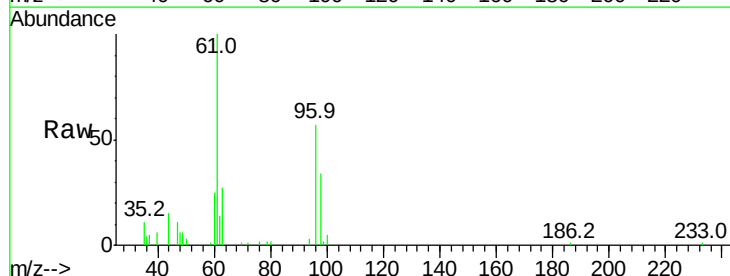


Abundance Ion 57.10 (56.80 to 57.80): VL0
Ion 41.10 (40.80 to 41.80): VL0
Ion 43.10 (42.80 to 43.80): VL0
Ion 56.10 (55.80 to 56.80): VL0

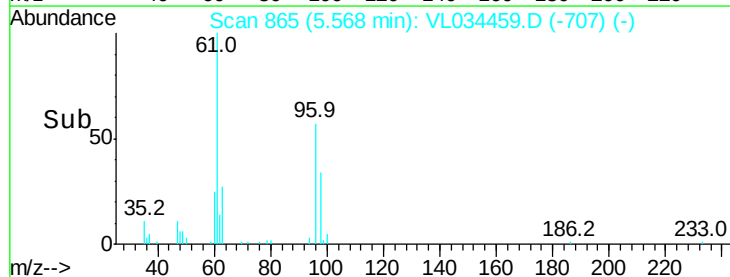
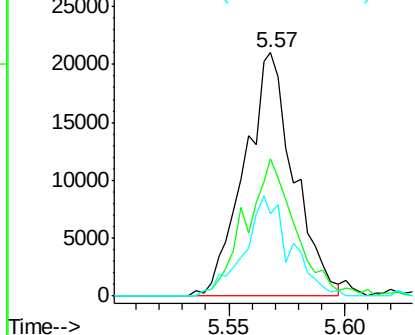


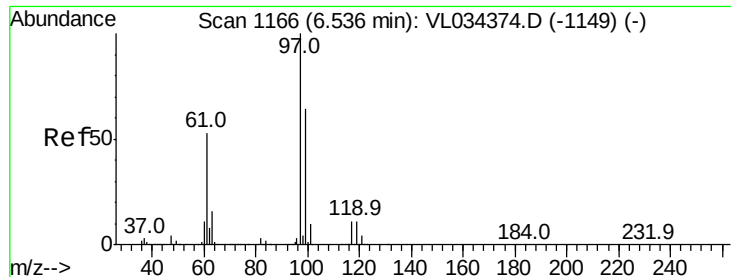
#31
cis-1,2-Dichloroethene
Concen: 0.278 ppbv
RT: 5.57 min Scan# 865
Delta R.T. 0.01 min
Lab File: VL034459.D
Acq: 3 Dec 2019 14:08

Tgt Ion: 61 Resp: 31237
Ion Ratio Lower Upper
61 100
96 56.6 47.4 71.2
98 33.8 30.6 45.8



Abundance Ion 61.10 (60.80 to 61.80): VL0
Ion 96.00 (95.70 to 96.70): VL0
Ion 98.00 (97.70 to 98.70): VL0





#32

1,1,1-Trichloroethane

Concen: 0.081 ppbv

RT: 6.54 min Scan# 1166

Delta R.T. 0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL2

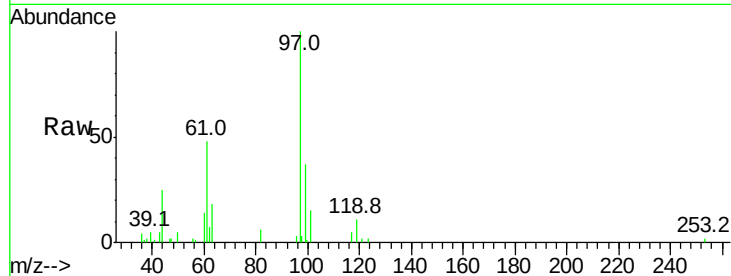
Tgt Ion: 97 Resp: 13287

Ion Ratio Lower Upper

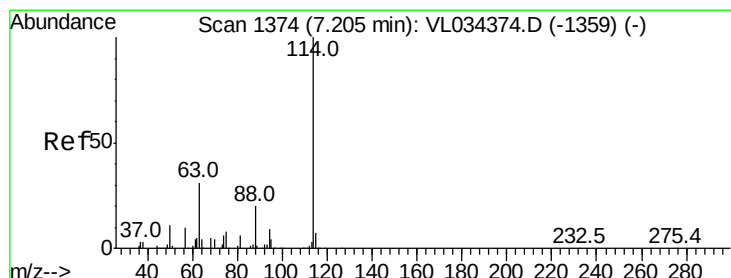
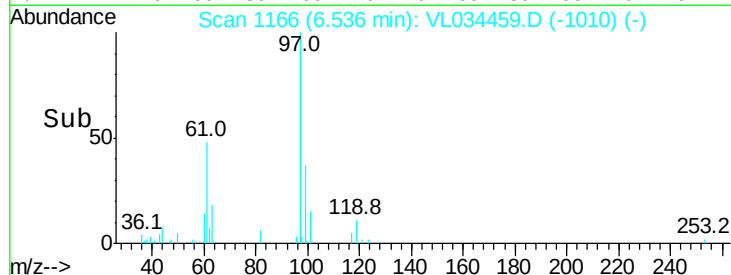
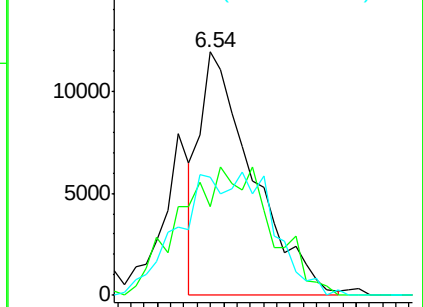
97 100

99 90.7 52.3 78.5#

61 87.8 43.7 65.5#



Abundance Ion 97.00 (96.70 to 97.70): VL0
Ion 99.00 (98.70 to 99.70): VL0
Ion 61.10 (60.80 to 61.80): VL0



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.21 min Scan# 1376

Delta R.T. 0.01 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

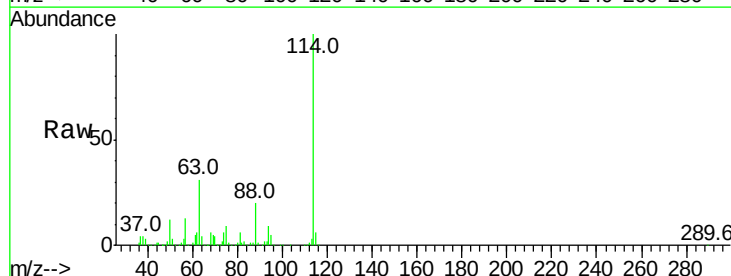
Tgt Ion: 114 Resp: 1964236

Ion Ratio Lower Upper

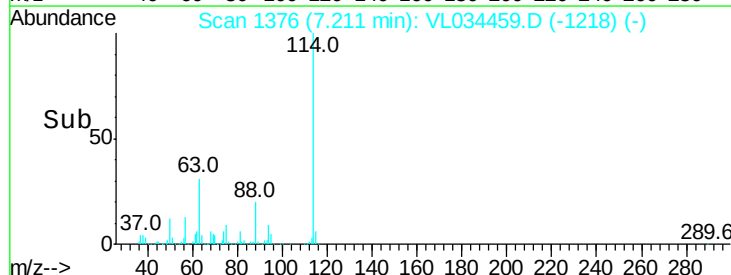
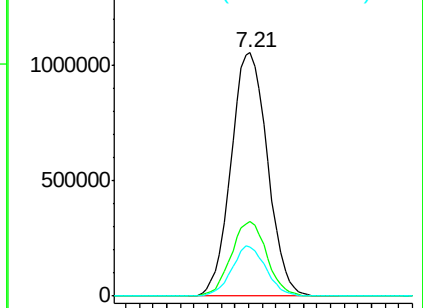
114 100

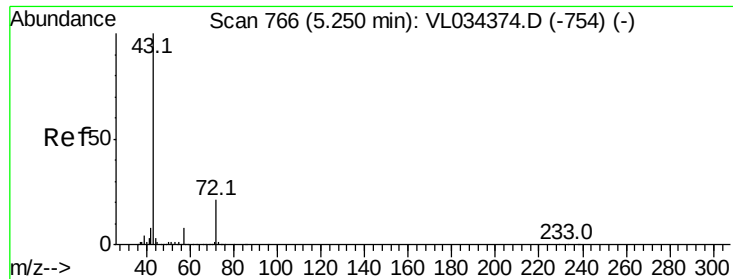
63 30.0 24.2 36.4

88 19.3 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

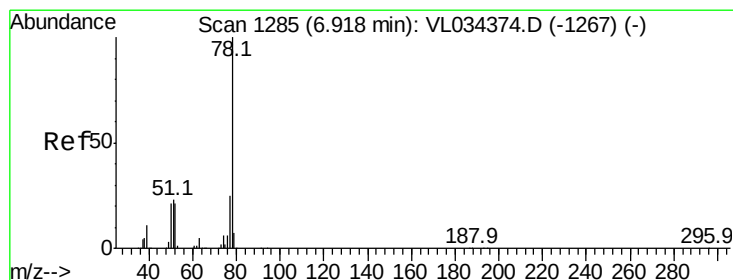
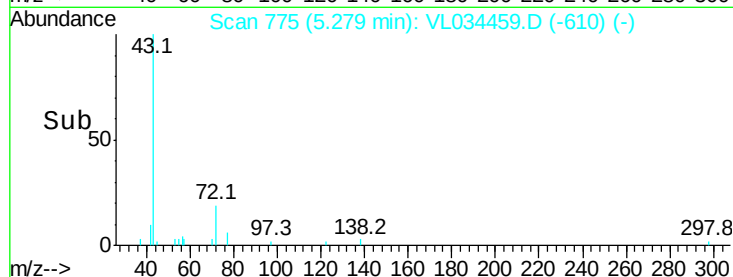
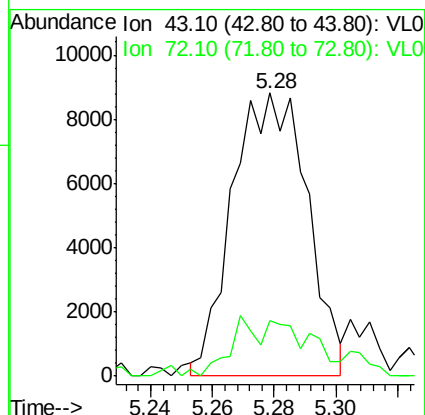
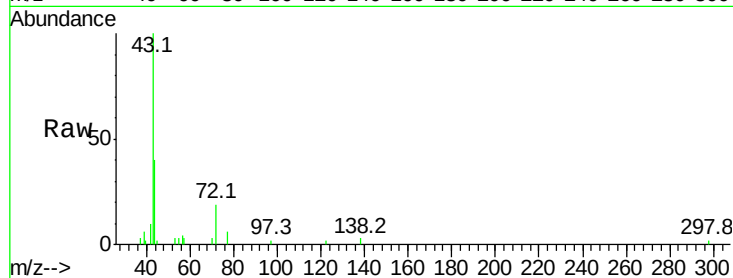




#34
2-Butanone
Concen: 0.091 ppbv
RT: 5.28 min Scan# 775
Delta R.T. 0.03 min
Lab File: VL034459.D
Acq: 3 Dec 2019 14:08

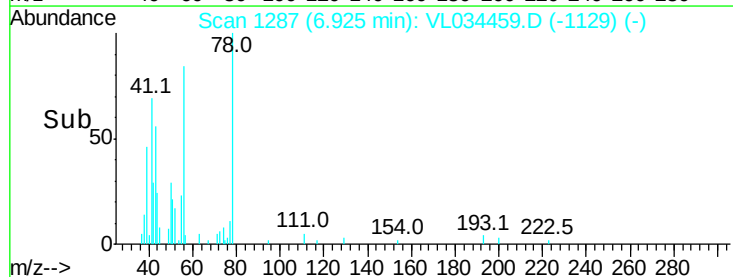
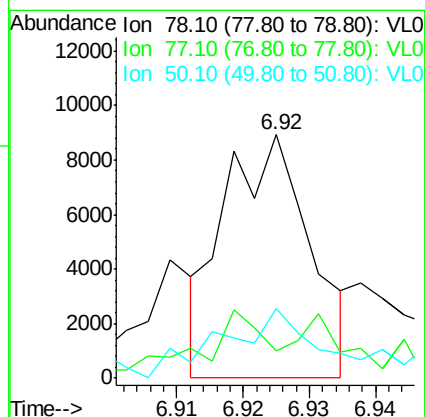
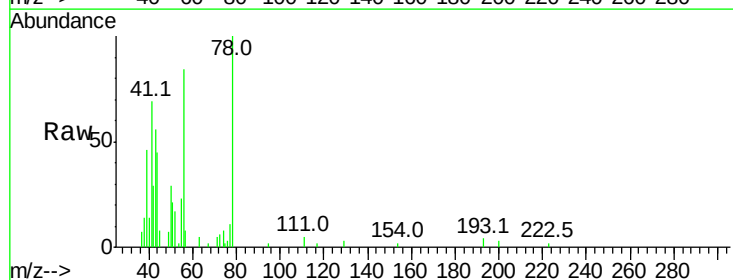
Instrument :
MSVOA_L
ClientSampleId :
SV-4DL2

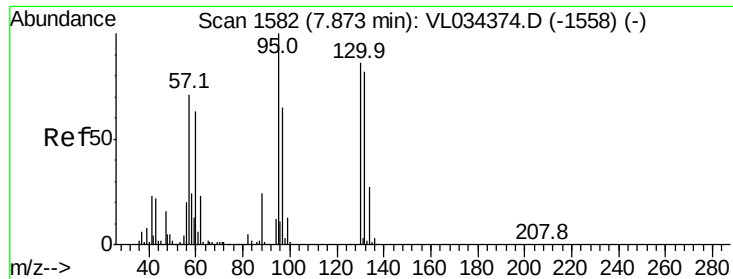
Tgt Ion: 43 Resp: 14780
Ion Ratio Lower Upper
43 100
72 23.5 17.0 25.6



#36
Benzene
Concen: 0.041 ppbv
RT: 6.92 min Scan# 1287
Delta R.T. 0.01 min
Lab File: VL034459.D
Acq: 3 Dec 2019 14:08

Tgt Ion: 78 Resp: 8035
Ion Ratio Lower Upper
78 100
77 0.8 20.2 30.4#
50 34.9 17.1 25.7#





#38

Trichloroethene

Concen: 19.686 ppbv

RT: 7.87 min Scan# 1582

Delta R.T. 0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL2

Tgt Ion:130 Resp: 1586245

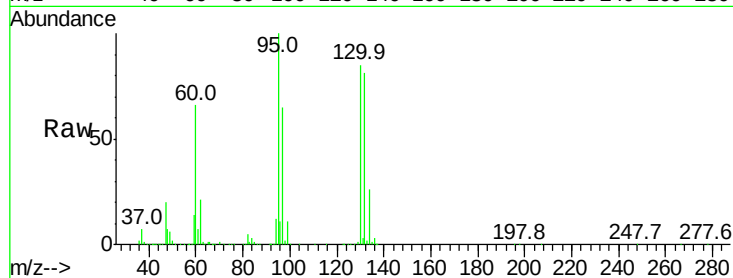
Ion Ratio Lower Upper

130 100

95 118.3 93.4 140.0

132 95.8 76.4 114.6

97 76.3 61.1 91.7

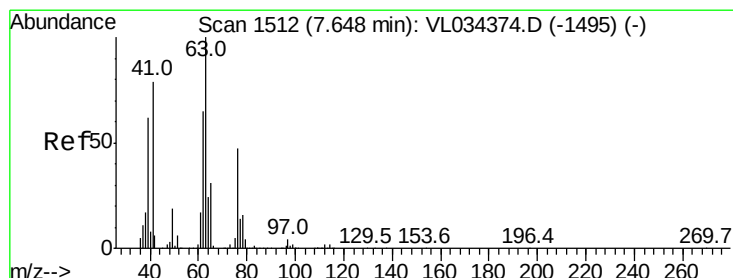
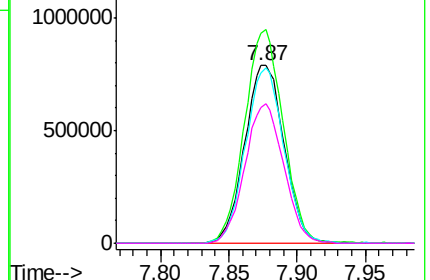
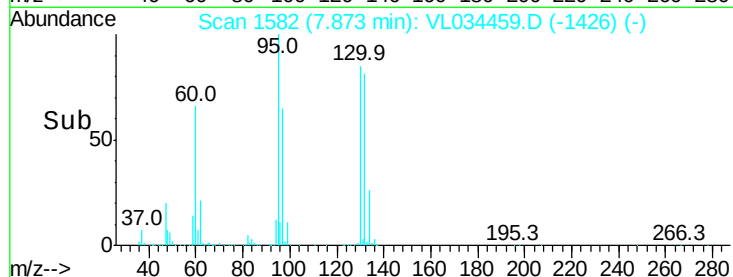


Abundance Ion 130.00 (129.70 to 130.70): V

Ion 95.00 (94.70 to 95.70): VL0

Ion 132.00 (131.70 to 132.70): V

Ion 97.00 (96.70 to 97.70): VL0



#39

1,2-Dichloropropane

Concen: 0.108 ppbv

RT: 7.87 min Scan# 1581

Delta R.T. 0.22 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

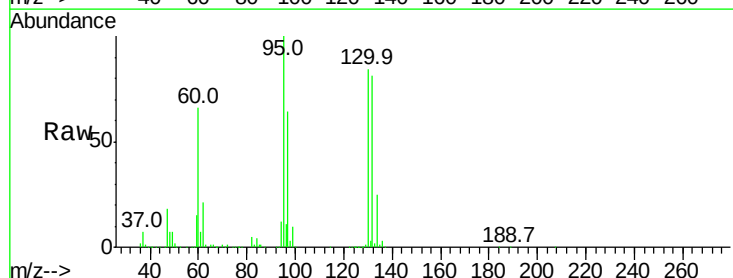
Tgt Ion: 63 Resp: 8170

Ion Ratio Lower Upper

63 100

41 0.0 63.1 94.7#

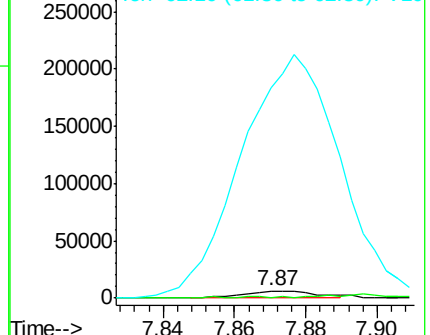
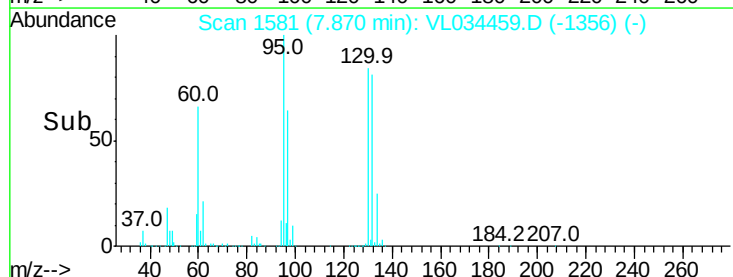
62 2734.4 52.3 78.5#

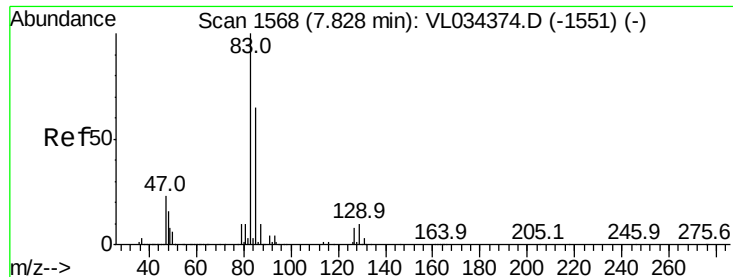


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#42

Bromodichloromethane

Concen: 0.041 ppbv

RT: 7.89 min Scan# 1586

Delta R.T. 0.06 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL2

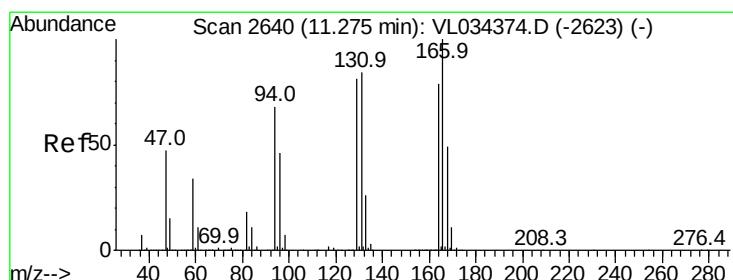
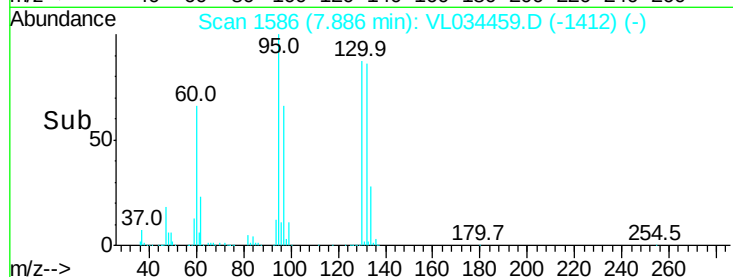
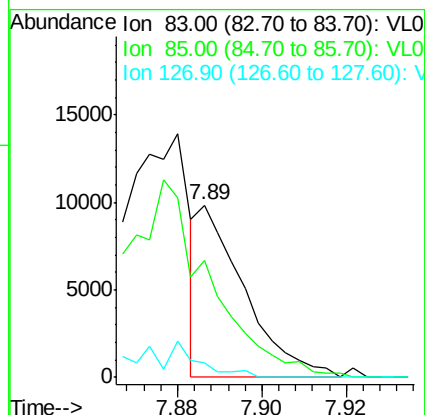
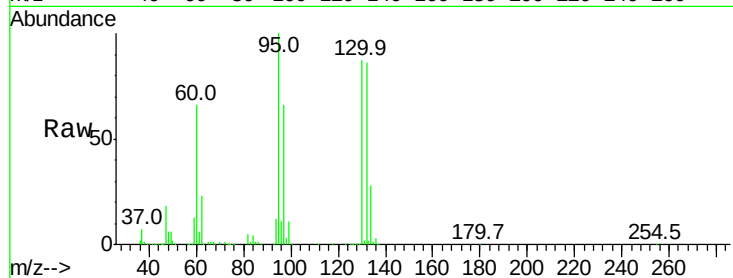
Tgt Ion: 83 Resp: 7435

Ion Ratio Lower Upper

83 100

85 65.4 52.3 78.5

127 8.5 6.1 9.1



#52

Tetrachloroethene

Concen: 7.658 ppbv

RT: 11.28 min Scan# 2642

Delta R.T. 0.01 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Tgt Ion: 164 Resp: 650565

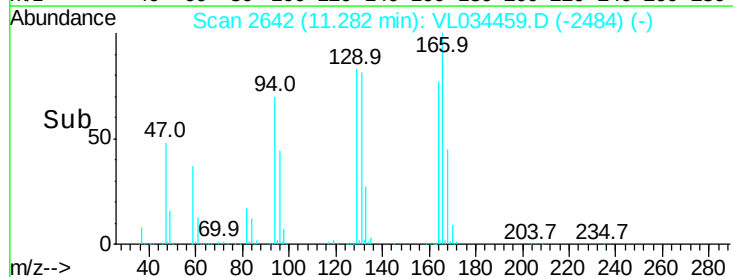
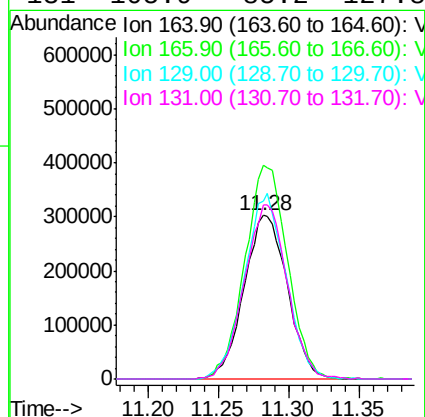
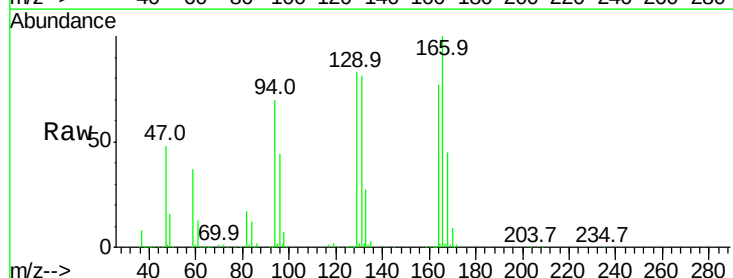
Ion Ratio Lower Upper

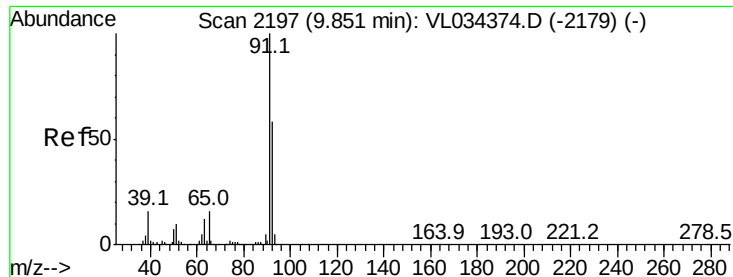
164 100

166 130.5 101.7 152.5

129 108.5 82.6 123.8

131 105.9 85.2 127.8





#53

Toluene

Concen: 0.031 ppbv

RT: 9.86 min Scan# 2199

Delta R.T. 0.01 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

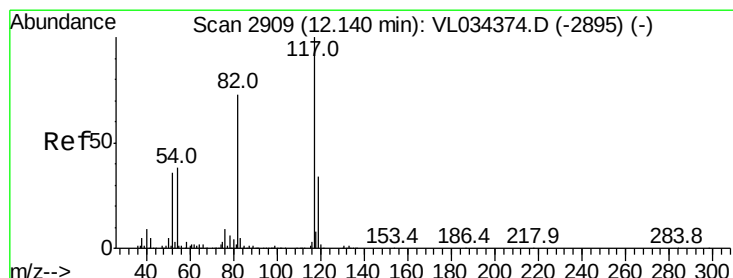
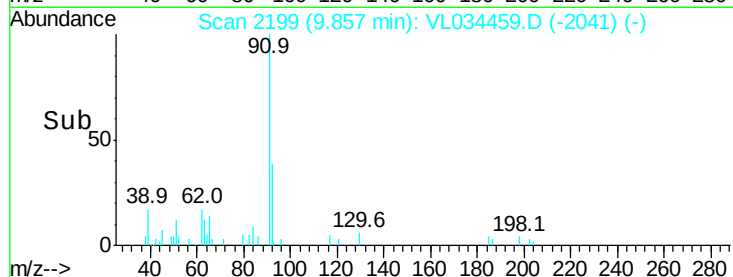
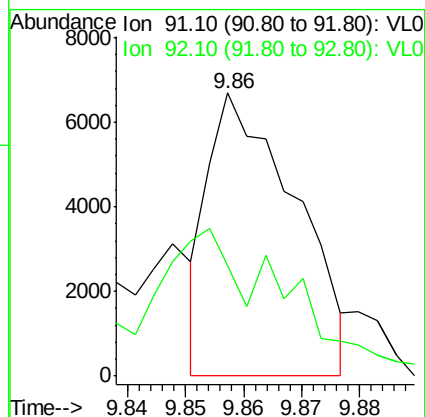
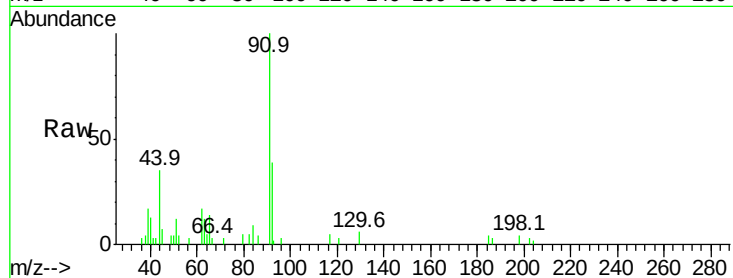
SV-4DL2

Tgt Ion: 91 Resp: 6966

Ion Ratio Lower Upper

91 100

92 84.1 47.9 71.9#



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.15 min Scan# 2911

Delta R.T. 0.01 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

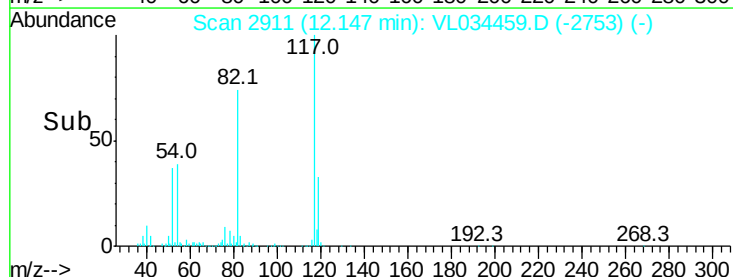
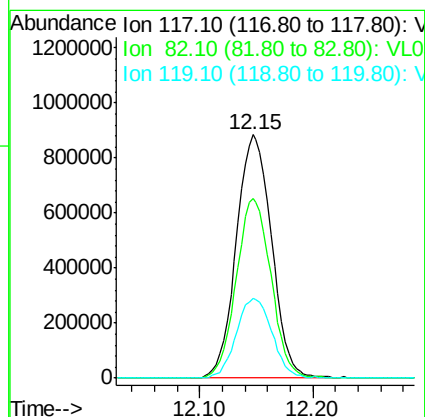
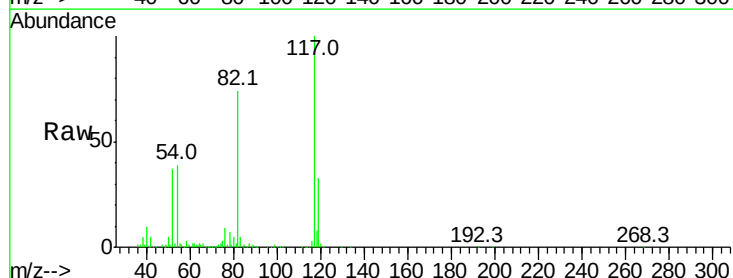
Tgt Ion: 117 Resp: 1922562

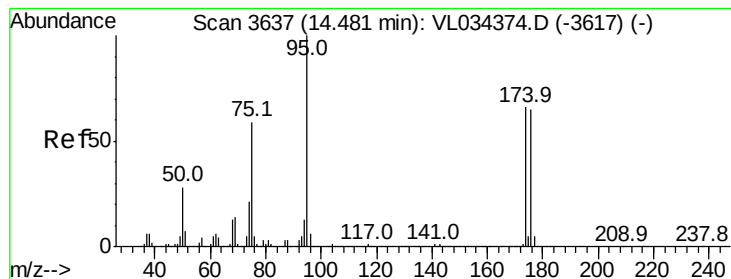
Ion Ratio Lower Upper

117 100

82 73.0 57.5 86.3

119 33.4 25.4 38.2





#68

1-Bromo-4-Fluorobenzene

Concen: 10.334 ppbv

RT: 14.48 min Scan# 3638

Delta R.T. 0.00 min

Lab File: VL034459.D

Acq: 3 Dec 2019 14:08

Instrument :

MSVOA_L

ClientSampleId :

SV-4DL2

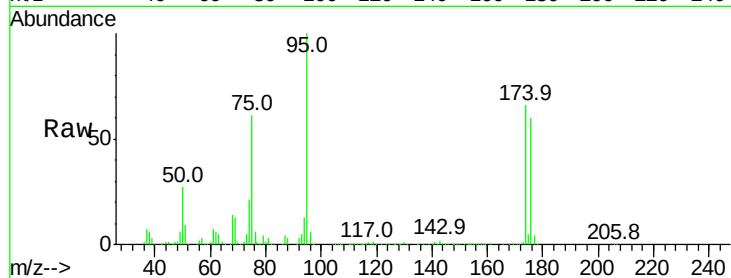
Tgt Ion: 95 Resp: 1671481

Ion Ratio Lower Upper

95 100

174 64.9 52.2 78.2

175 4.5 3.8 5.8



Abundance Ion 95.10 (94.80 to 95.80): VL0

Ion 174.00 (173.70 to 174.70): V

Ion 175.00 (174.70 to 175.70): V

