

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121718\
 Data File : VL033018.D
 Acq On : 18 Dec 2018 5:46
 Operator : SY/AP
 Sample : J6444-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 18 09:18:51 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL120718AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018
 QLast Update : Fri Dec 07 09:35:17 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1066353	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2563463	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	1886164	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2012743	14.44	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	144.40%#

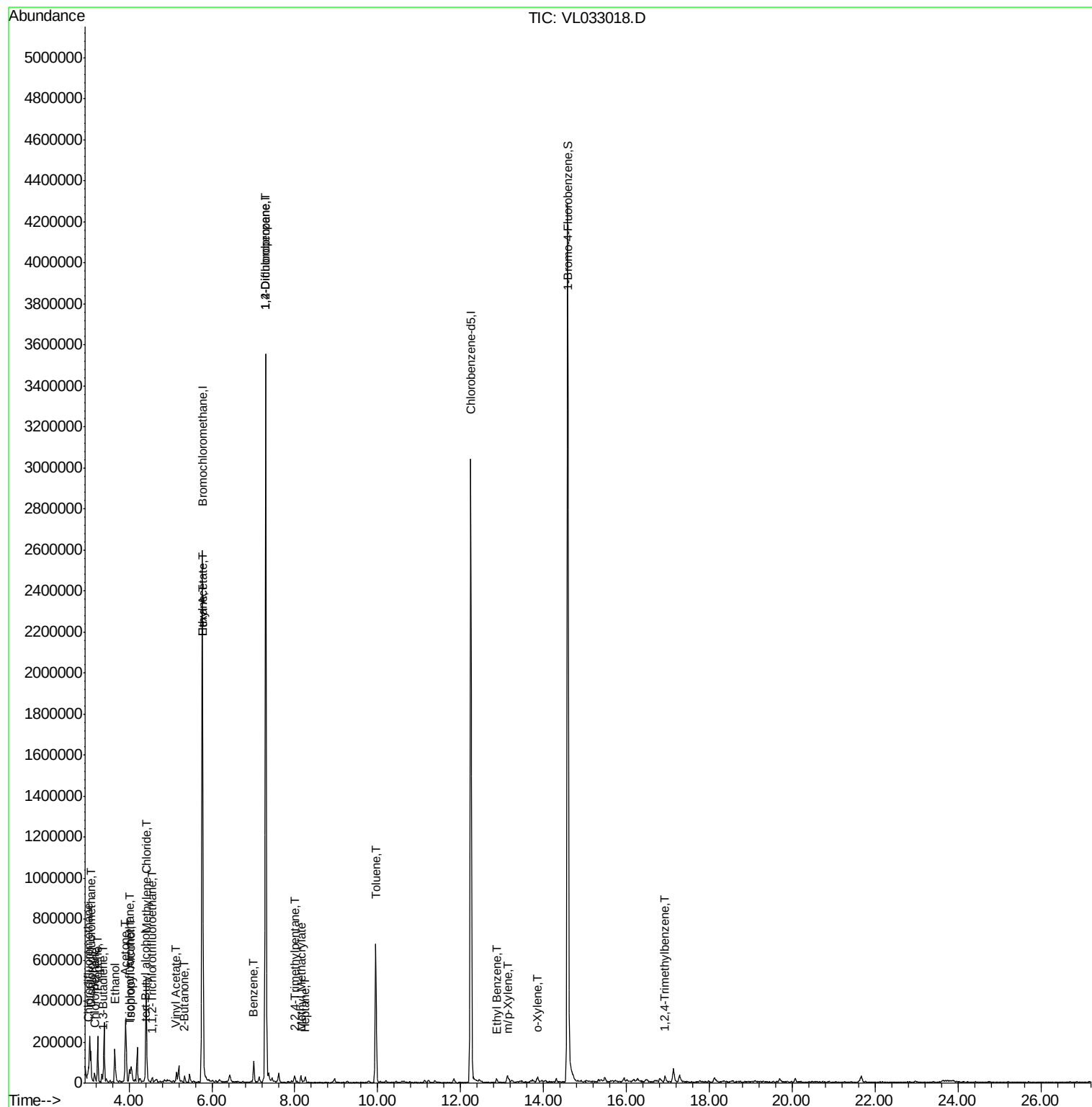
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	96037	0.675	ppbv	97
3) Chlorodifluoromethane	3.02	51	74665	0.925	ppbv #	87
4) Chloromethane	3.18	50	32278	0.687	ppbv	96
9) Propene	3.24	41	51091	1.600	ppbv	97
10) Heptane	8.24	43	4578	0.038	ppbv #	26
11) Trichlorofluoromethane	4.01	101	38975	0.291	ppbv	97
12) 1,1,2-Trichlorotrifluoroet	4.55	101	3874	0.034	ppbv #	26
13) Ethanol	3.66	45	164717	14.981	ppbv	97
15) Acetone	3.91	43	329502	3.600	ppbv	96
16) 1,3-Butadiene	3.37	39	2715	0.075	ppbv #	14
17) tert-Butyl alcohol	4.38	59	1237	0.053	ppbv #	98
19) Isopropyl Alcohol	4.04	45	90071	1.567	ppbv #	96
20) Methylene Chloride	4.41	84	176662	3.949	ppbv	98
23) Vinyl Acetate	5.15	43	18332	0.118	ppbv #	1
25) Ethyl Acetate	5.79	43	146349	0.677	ppbv #	88
26) Hexane	5.79	57	156505	1.568	ppbv #	54
34) 2-Butanone	5.34	43	29944	0.268	ppbv	93
36) Benzene	7.01	78	73204	0.388	ppbv #	90
39) 1,2-Dichloropropane	7.30	63	618366	8.648	ppbv #	20
43) Methyl Methacrylate	8.14	69	4209	0.060	ppbv #	1
44) 2,2,4-Trimethylpentane	8.00	57	14369	0.045	ppbv #	1
53) Toluene	9.95	91	479999	2.400	ppbv	97
58) Ethyl Benzene	12.87	91	10578	0.053	ppbv	89
59) m/p-Xylene	13.16	91	8508	0.047	ppbv #	100
60) o-Xylene	13.85	91	17363	0.094	ppbv	95
74) 1,2,4-Trimethylbenzene	16.92	105	7454	0.033	ppbv #	56

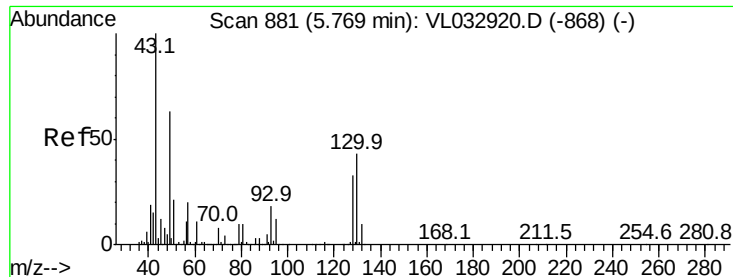
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Dec 07 09:35:17 2018
QLast Update : Fri Dec 07 09:35:17 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 879

Delta R.T. -0.01 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :
MSVOA_L
ClientSampled :

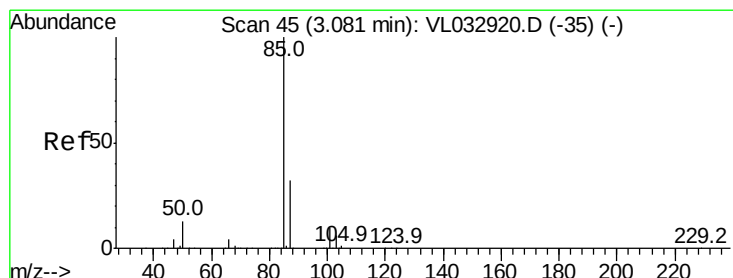
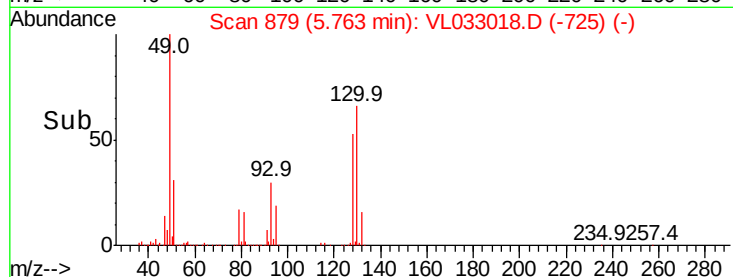
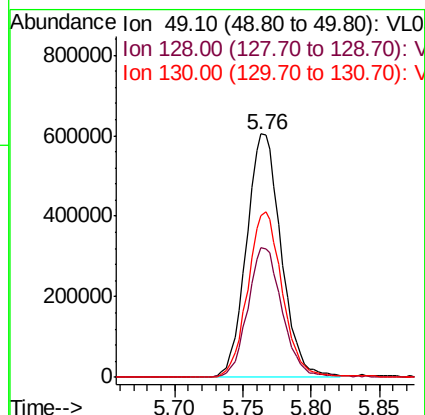
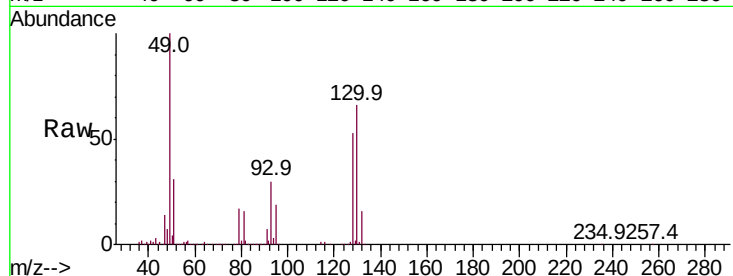
Tot Ion: 49 Resp: 1066353

Ion Ratio Lower Upper

49 100

128 53.0 26.3 78.8

130 68.4 33.9 101.7



#2

Dichlorodifluoromethane

Concen: 0.675 ppbv

RT: 3.08 min Scan# 45

Delta R.T. 0.00 min

Lab File: VL033018.D

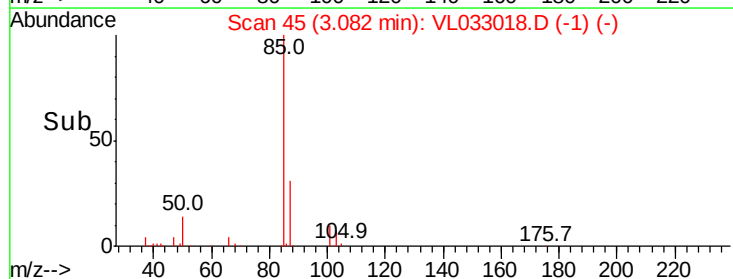
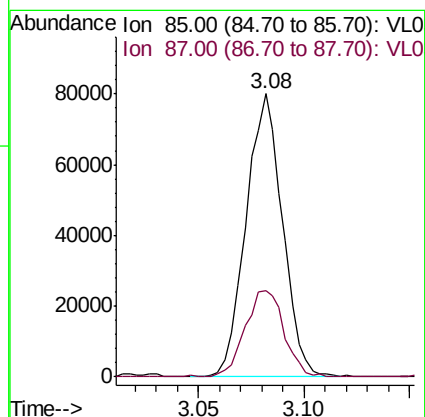
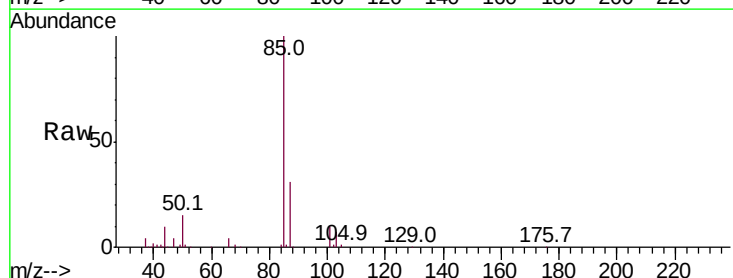
Acq: 18 Dec 2018 5:46

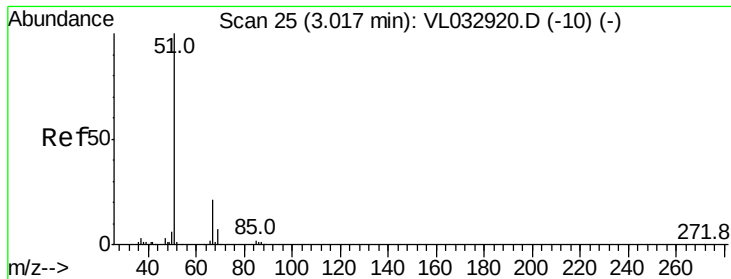
Tgt Ion: 85 Resp: 96037

Ion Ratio Lower Upper

85 100

87 30.7 25.7 38.5





#3

Chlorodifluoromethane

Concen: 0.925 ppbv

RT: 3.02 min Scan# 25

Delta R.T. 0.00 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

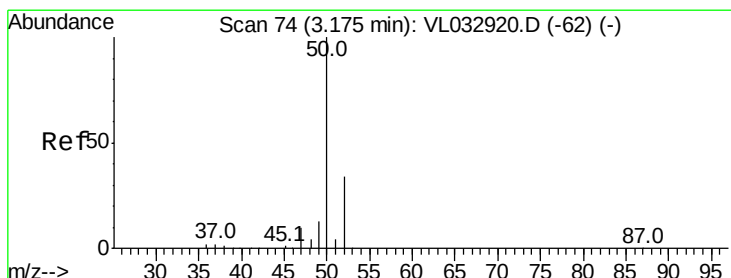
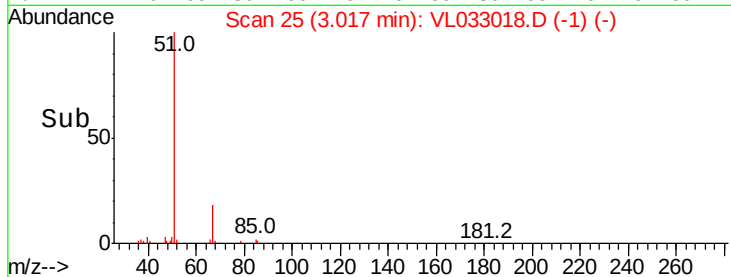
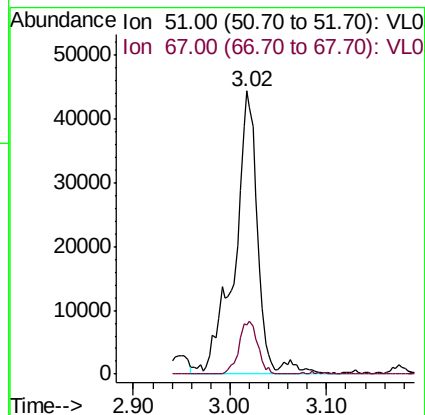
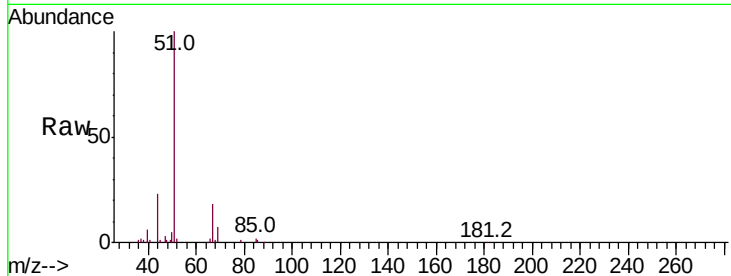
ClientSampleId :

Tot Ion: 51 Resp: 74665

Ion Ratio Lower Upper

51 100

67 15.1 16.8 25.2#



#4

Chloromethane

Concen: 0.687 ppbv

RT: 3.18 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL033018.D

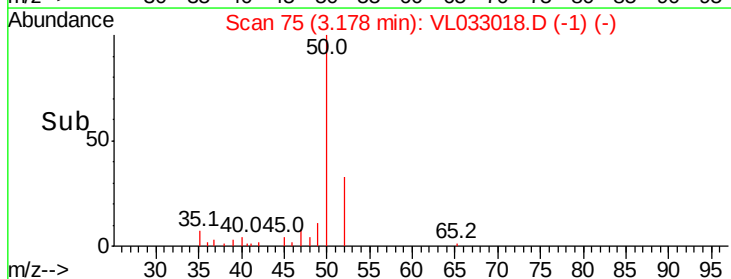
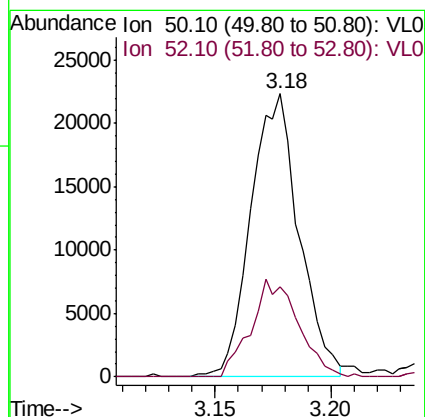
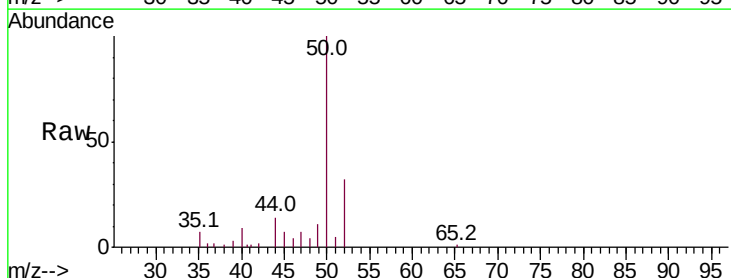
Acq: 18 Dec 2018 5:46

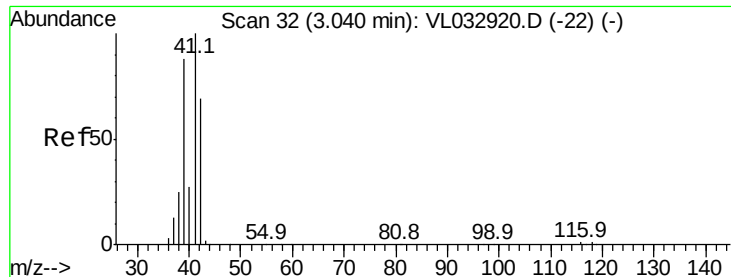
Tgt Ion: 50 Resp: 32278

Ion Ratio Lower Upper

50 100

52 31.8 27.3 40.9





#9

Propene

Concen: 1.600 ppbv

RT: 3.24 min Scan# 95

Delta R.T. 0.20 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

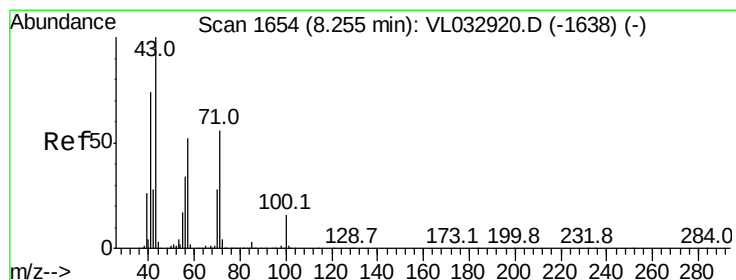
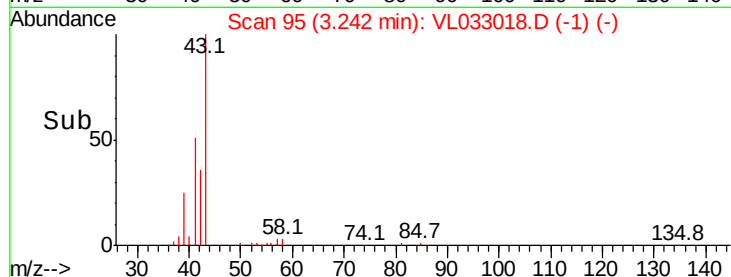
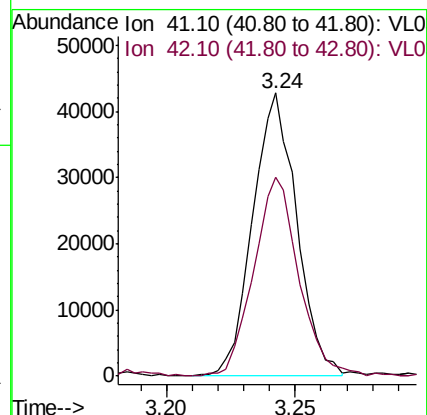
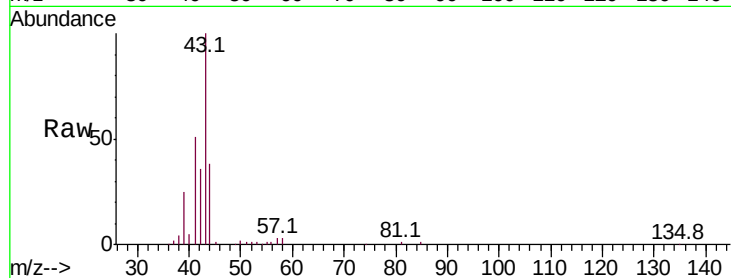
ClientSampleId :

Tot Ion: 41 Resp: 51091

Ion Ratio Lower Upper

41 100

42 72.9 56.2 84.2



#10

Heptane

Concen: 0.038 ppbv

RT: 8.24 min Scan# 1650

Delta R.T. -0.01 min

Lab File: VL033018.D

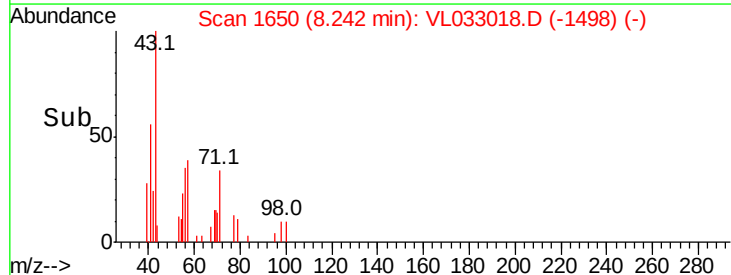
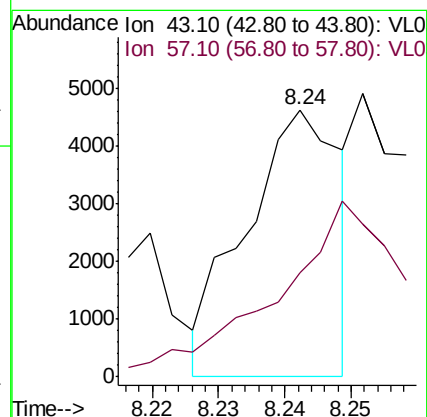
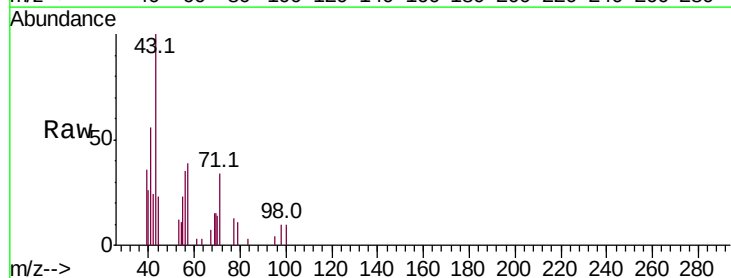
Acq: 18 Dec 2018 5:46

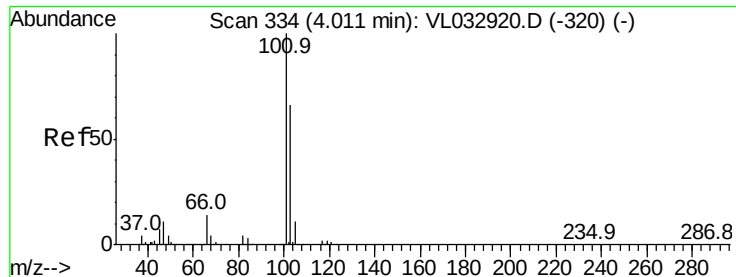
Tgt Ion: 43 Resp: 4578

Ion Ratio Lower Upper

43 100

57 0.0 41.8 62.6#





#11

Trichlorofluoromethane

Concen: 0.291 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.00 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

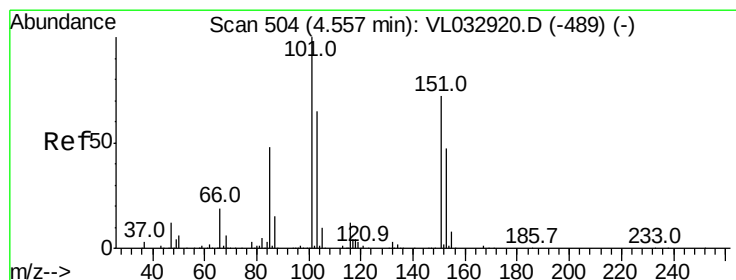
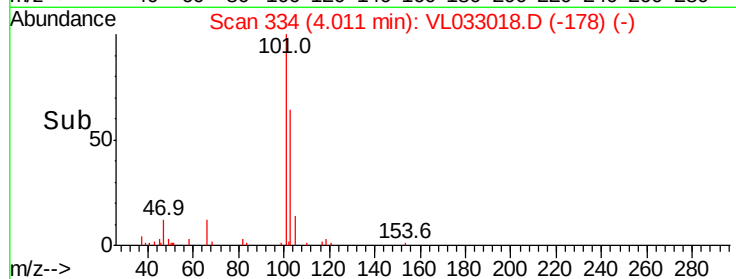
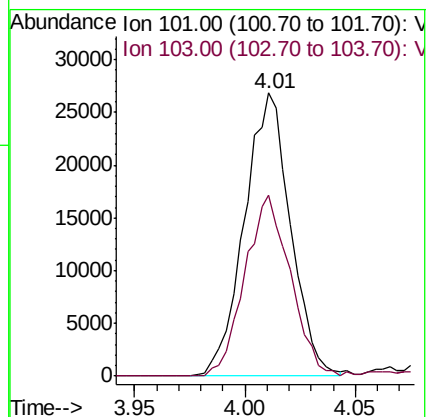
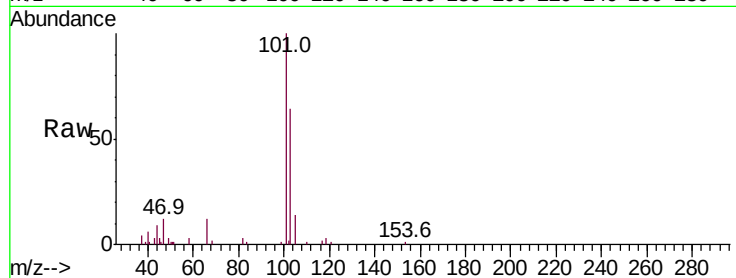
ClientSampleId :

Tot Ion:101 Resp: 38975

Ion Ratio Lower Upper

101 100

103 63.8 52.7 79.1



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.034 ppbv

RT: 4.55 min Scan# 503

Delta R.T. -0.00 min

Lab File: VL033018.D

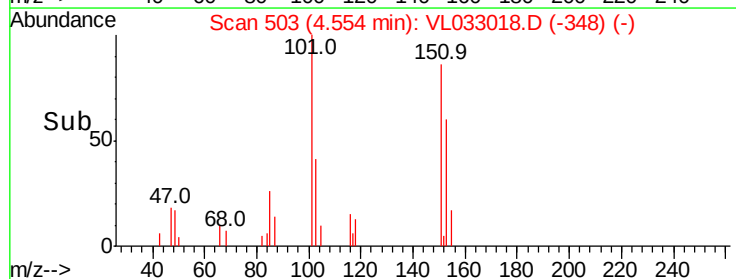
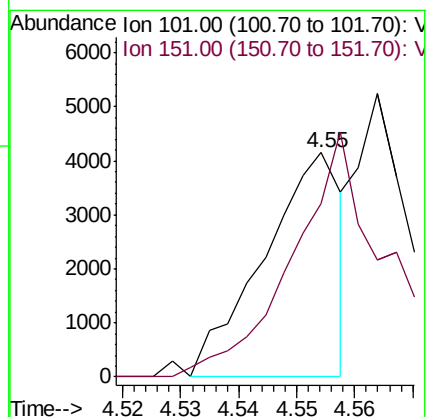
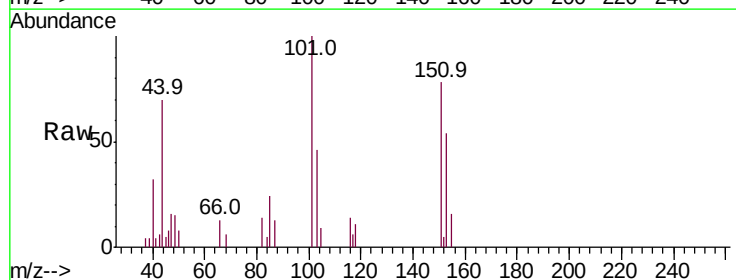
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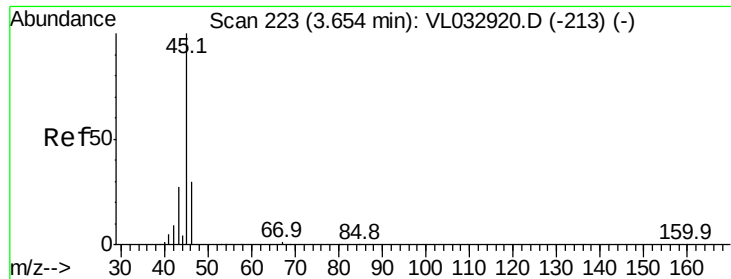
Tgt Ion:101 Resp: 3874

Ion Ratio Lower Upper

101 100

151 136.8 59.3 88.9#





#13

Ethanol

Concen: 14.981 ppbv

RT: 3.66 min Scan# 224

Delta R.T. 0.00 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

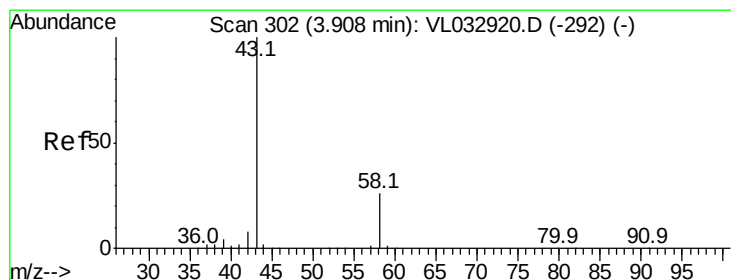
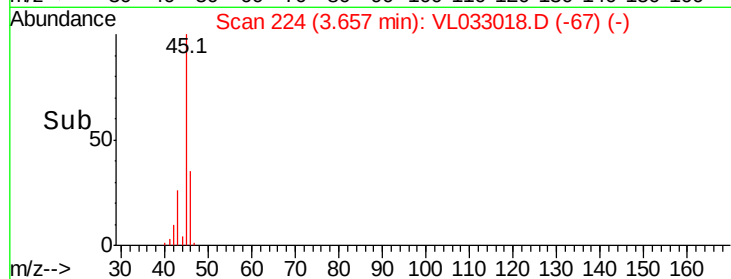
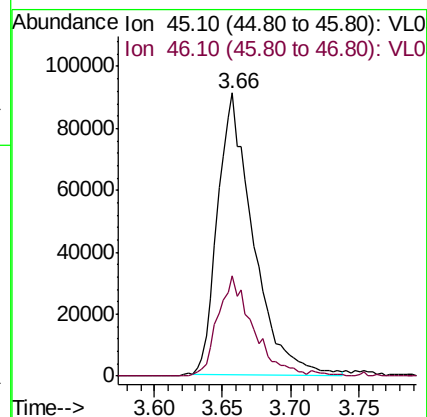
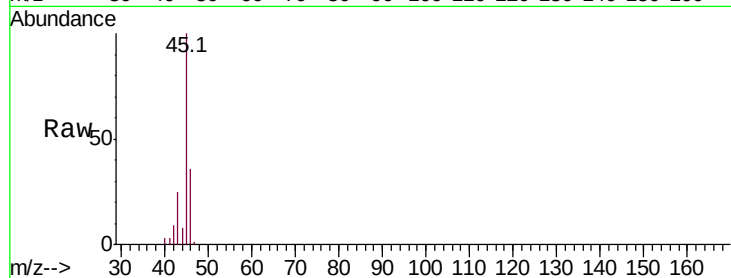
ClientSampleId :

Tot Ion: 45 Resp: 164717

Ion Ratio Lower Upper

45 100

46 36.3 13.8 55.4



#15

Acetone

Concen: 3.600 ppbv

RT: 3.91 min Scan# 303

Delta R.T. 0.00 min

Lab File: VL033018.D

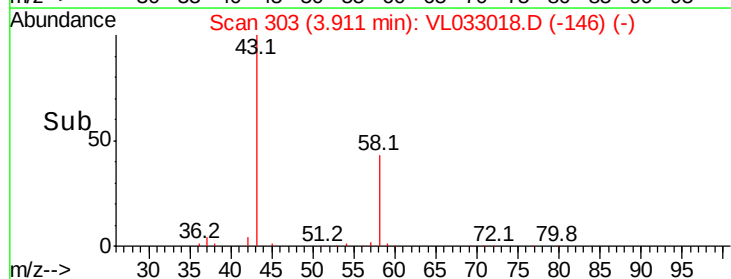
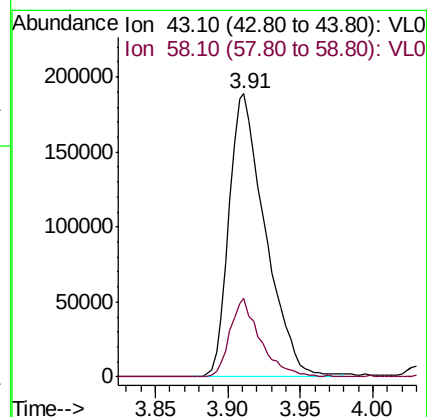
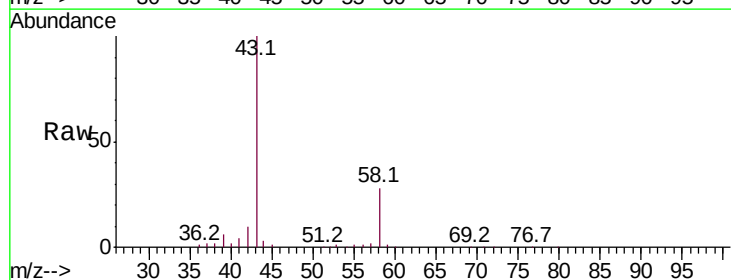
Acq: 18 Dec 2018 5:46

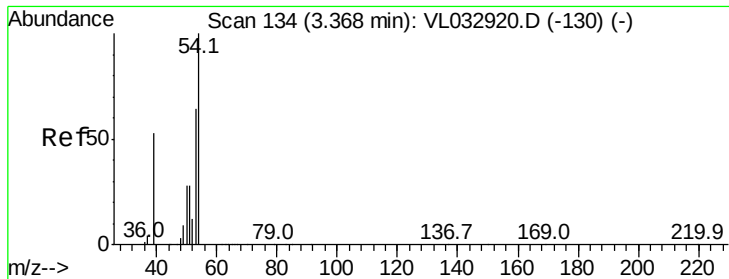
Tgt Ion: 43 Resp: 329502

Ion Ratio Lower Upper

43 100

58 23.5 20.6 30.8

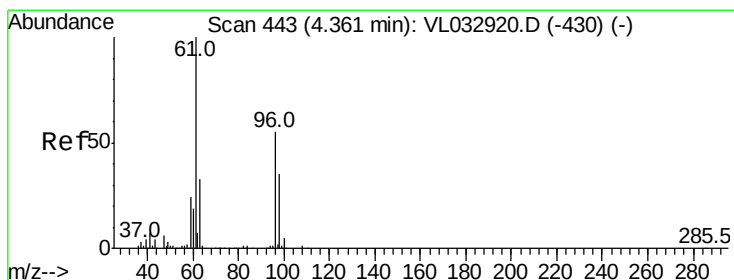
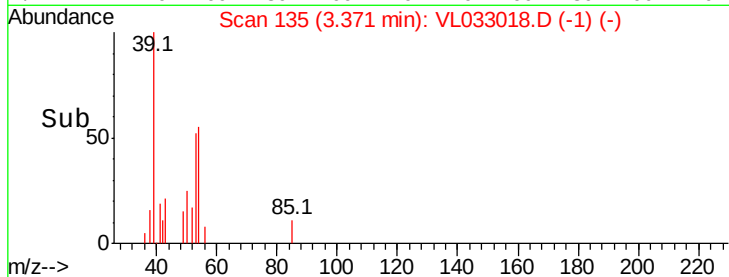
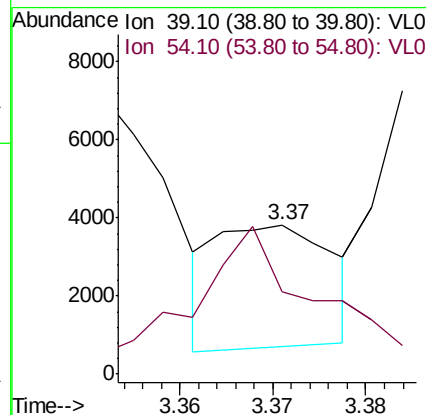
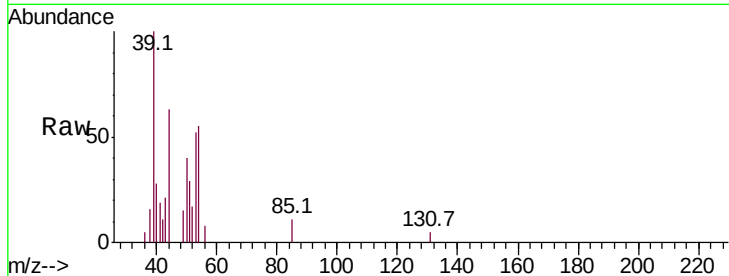




#16
 1,3-Butadiene
 Concen: 0.075 ppbv
 RT: 3.37 min Scan# 135
 Delta R.T. 0.00 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

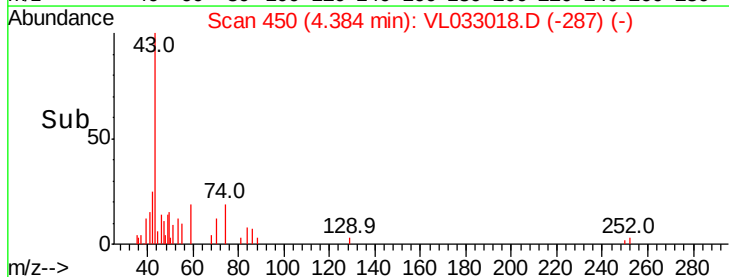
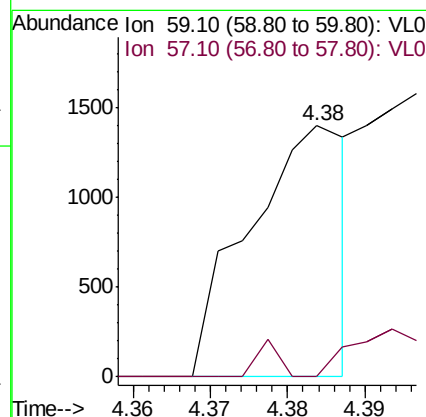
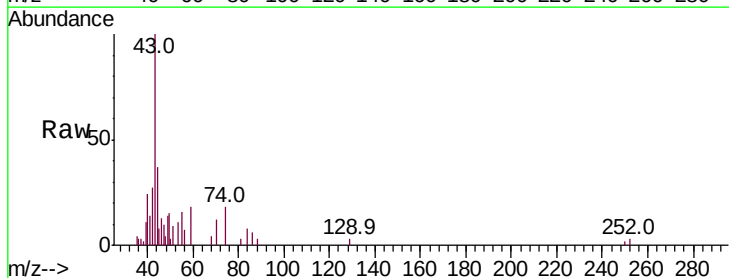
Instrument :
 MSVOA_L
 ClientSampleId :

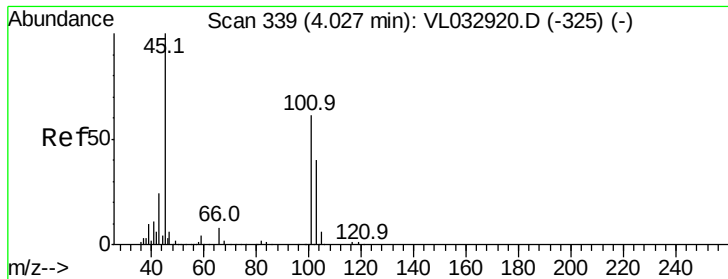
Tot Ion: 39 Resp: 2715
 Ion Ratio Lower Upper
 39 100
 54 172.8 72.7 109.1#



#17
 tert-Butyl alcohol
 Concen: 0.053 ppbv
 RT: 4.38 min Scan# 450
 Delta R.T. 0.02 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Tgt Ion: 59 Resp: 1237
 Ion Ratio Lower Upper
 59 100
 57 0.0 0.6 1.0#



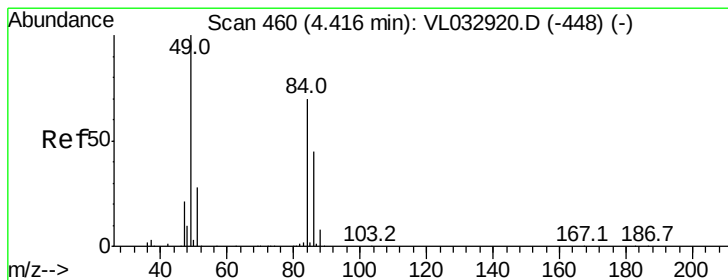
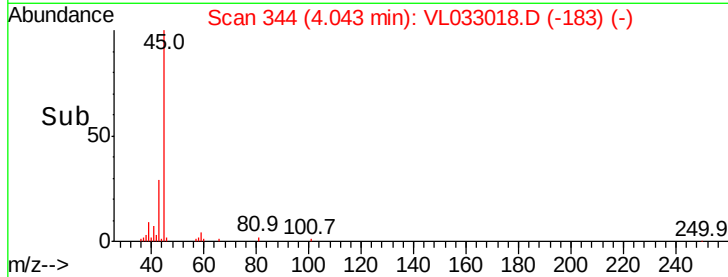
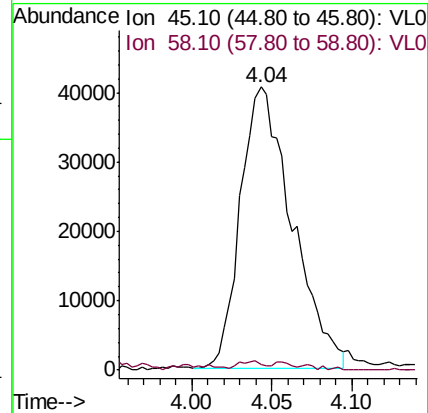
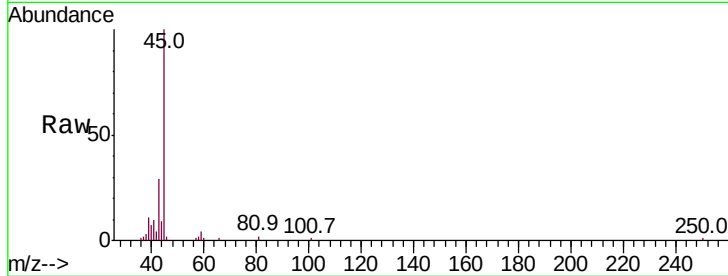


#19

Isopropyl Alcohol
 Concen: 1.567 ppbv
 RT: 4.04 min Scan# 344
 Delta R.T. 0.02 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Instrument :
 MSVOA_L
 ClientSampleId :

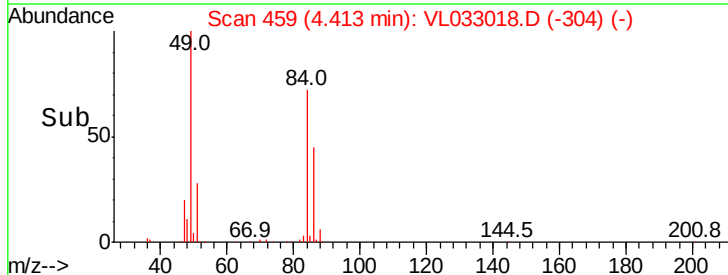
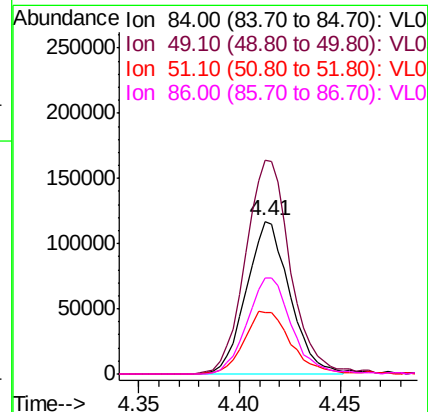
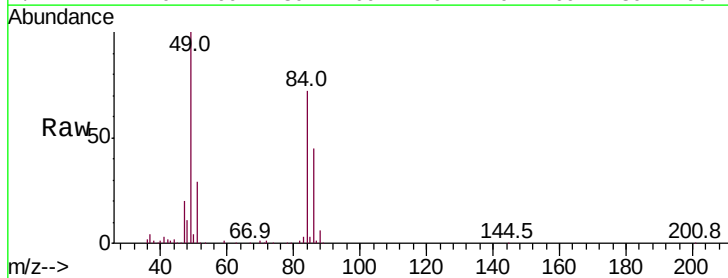
Tot Ion: 45 Resp: 90071
 Ion Ratio Lower Upper
 45 100
 58 3.3 1.4 2.2#

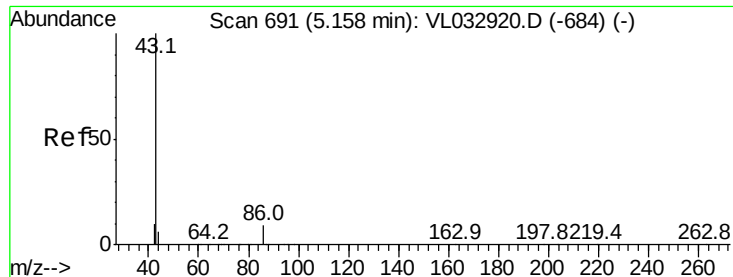


#20

Methylene Chloride
 Concen: 3.949 ppbv
 RT: 4.41 min Scan# 459
 Delta R.T. -0.00 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Tgt Ion: 84 Resp: 176662
 Ion Ratio Lower Upper
 84 100
 49 139.8 113.8 170.8
 51 39.9 31.8 47.8
 86 62.5 50.8 76.2

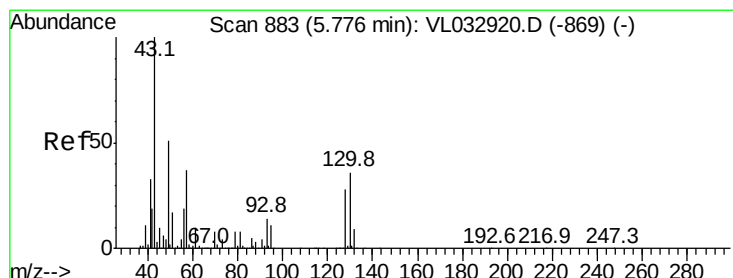
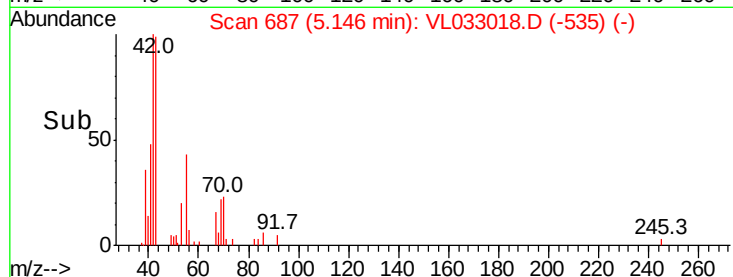
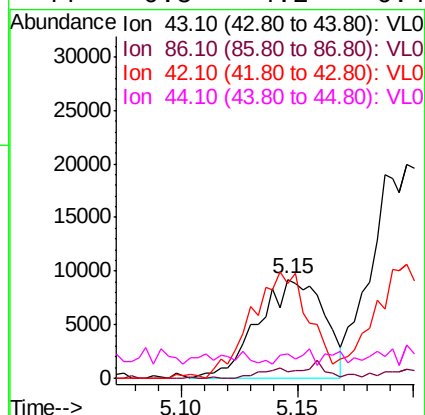
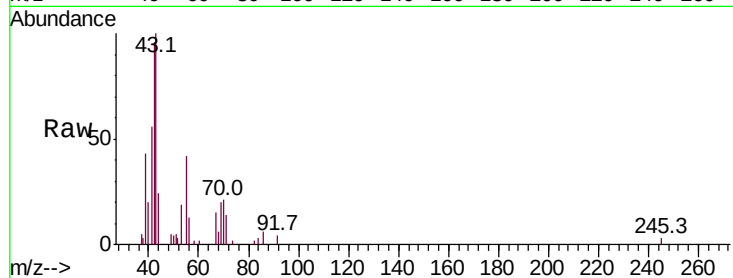




#23
 Vinyl Acetate
 Concen: 0.118 ppbv
 RT: 5.15 min Scan# 687
 Delta R.T. -0.01 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

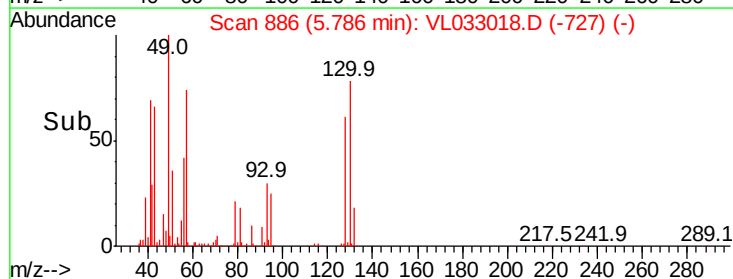
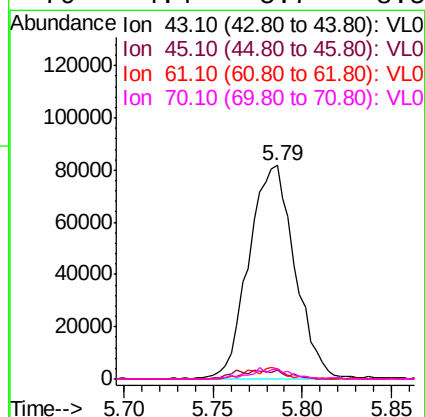
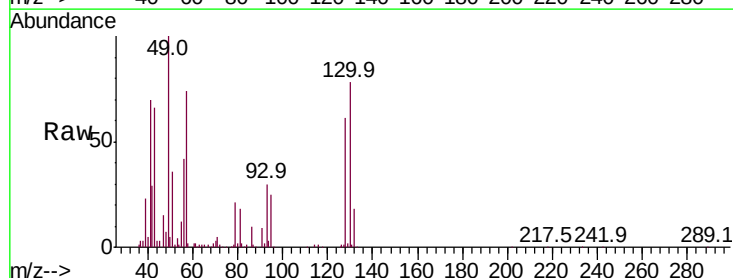
Instrument :
 MSVOA_L
 ClientSampleId :

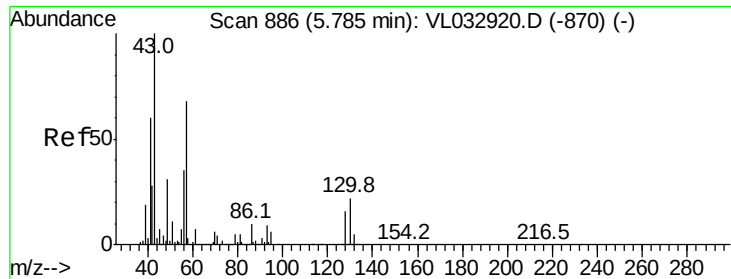
Tot Ion:	43	Resp:	18332
Ion	Ratio	Lower	Upper
43	100		
86	4.3	6.6	9.8#
42	92.9	8.3	12.5#
44	0.5	4.2	6.4#



#25
 Ethyl Acetate
 Concen: 0.677 ppbv
 RT: 5.79 min Scan# 886
 Delta R.T. 0.01 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Tgt Ion:	43	Resp:	146349
Ion	Ratio	Lower	Upper
43	100		
45	4.8	7.8	11.6#
61	4.3	7.4	11.2#
70	4.4	5.7	8.5#





#26

Hexane

Concen: 1.568 ppbv

RT: 5.79 min Scan# 886

Delta R.T. 0.00 min

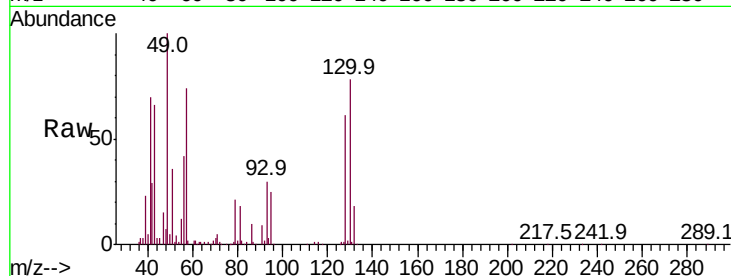
Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

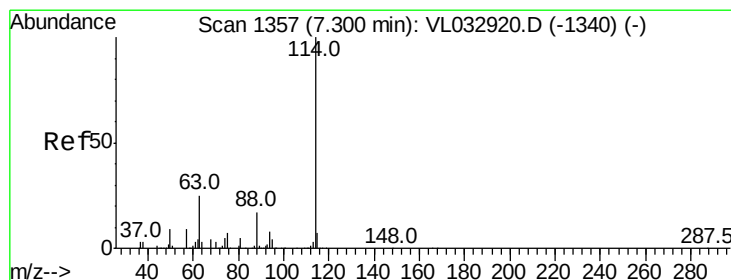
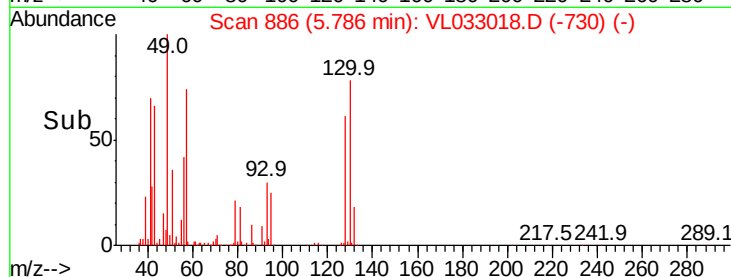
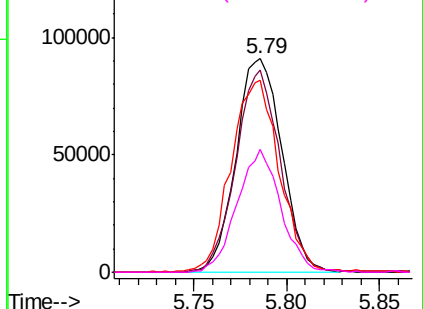
Instrument :
MSVOA_L
ClientSampleId :

Tot Ion: 57 Resp: 156505

Ion	Ratio	Lower	Upper
57	100		
41	92.2	72.2	108.2
43	95.1	171.9	257.9#
56	54.7	42.2	63.2



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



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.29 min Scan# 1355

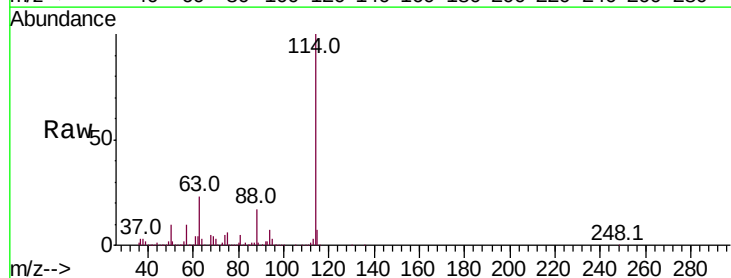
Delta R.T. -0.01 min

Lab File: VL033018.D

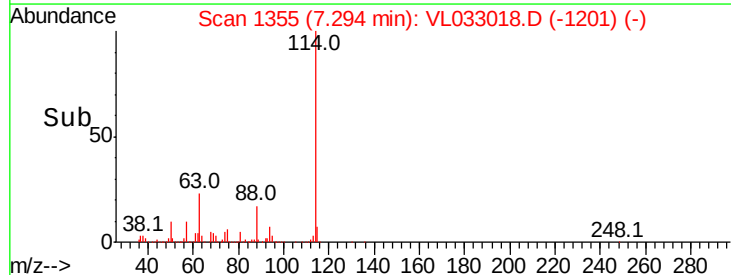
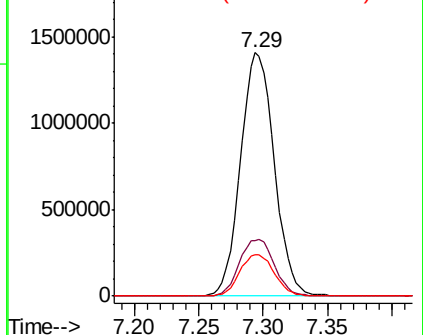
Acq: 18 Dec 2018 5:46

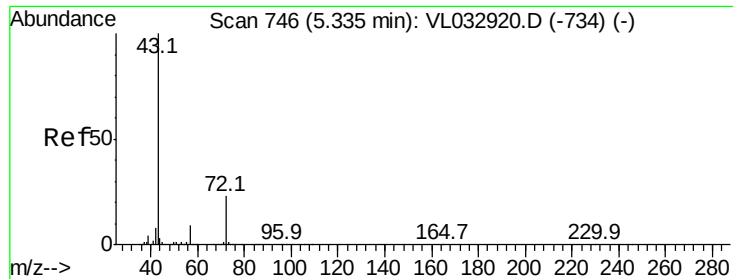
Tgt Ion: 114 Resp: 2563463

Ion	Ratio	Lower	Upper
114	100		
63	24.2	20.1	30.1
88	17.6	14.2	21.4



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

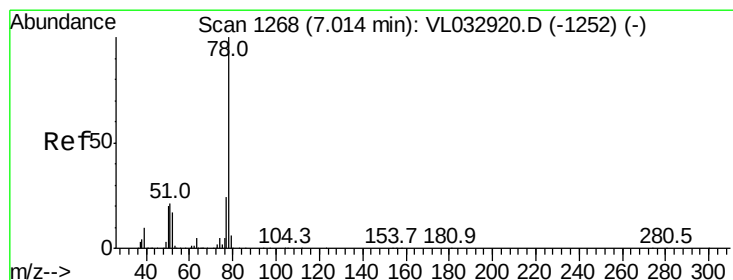
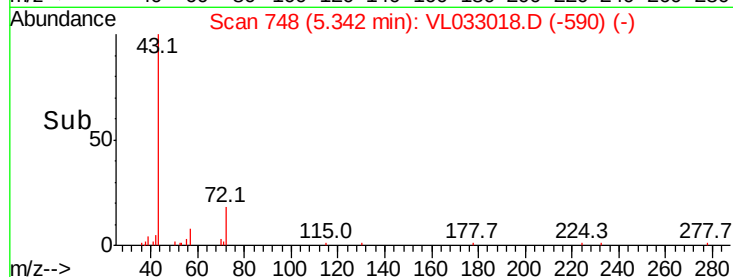
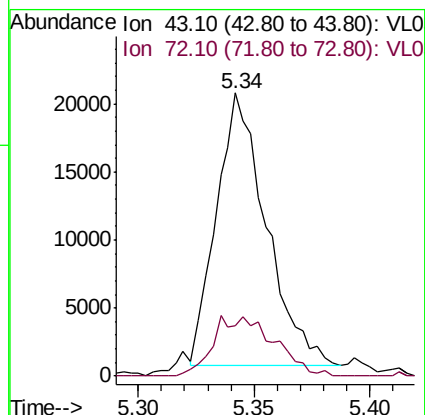
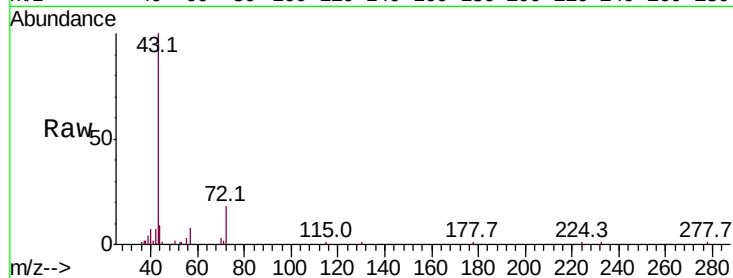




#34
2-Butanone
Concen: 0.268 ppbv
RT: 5.34 min Scan# 748
Delta R.T. 0.01 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

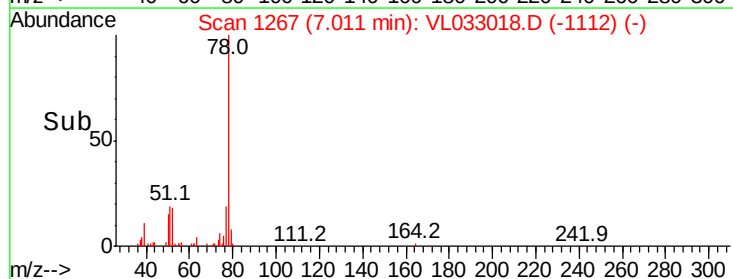
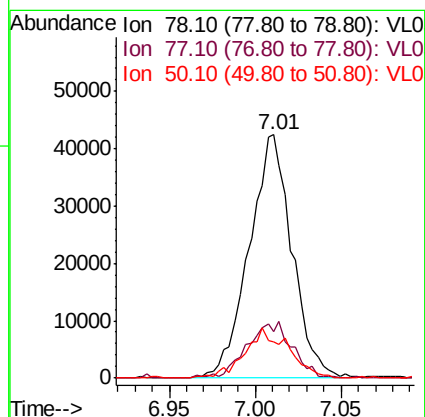
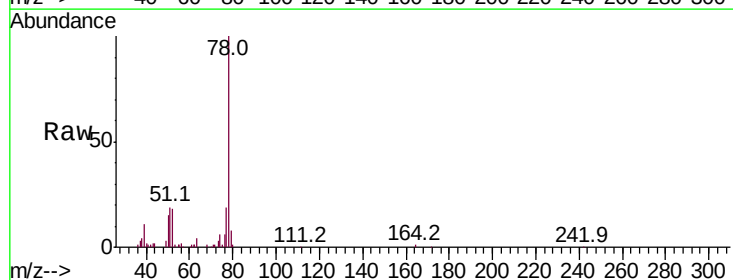
Instrument :
MSVOA_L
ClientSampleId :

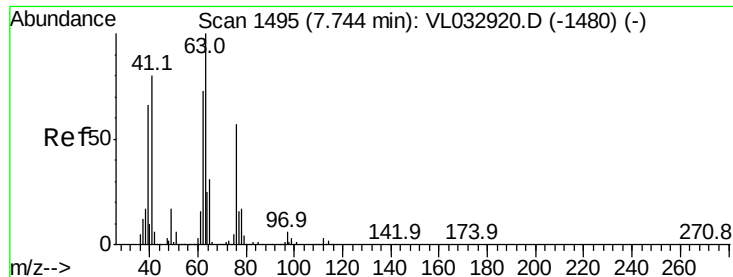
Tot Ion: 43 Resp: 29944
Ion Ratio Lower Upper
43 100
72 26.9 18.8 28.2



#36
Benzene
Concen: 0.388 ppbv
RT: 7.01 min Scan# 1267
Delta R.T. -0.00 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

Tgt Ion: 78 Resp: 73204
Ion Ratio Lower Upper
78 100
77 19.4 18.9 28.3
50 15.2 16.1 24.1#





#39

1,2-Dichloropropane

Concen: 8.648 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.45 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

ClientSampled :

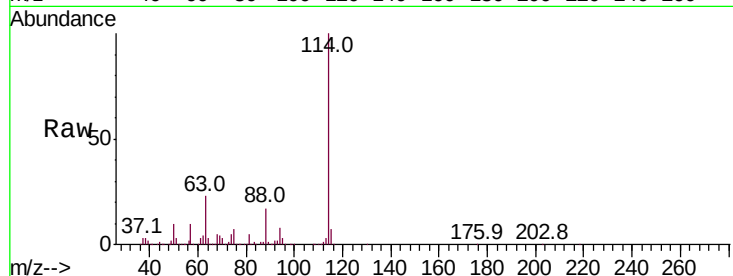
Tot Ion: 63 Resp: 618366

Ion Ratio Lower Upper

63 100

41 0.0 63.9 95.9#

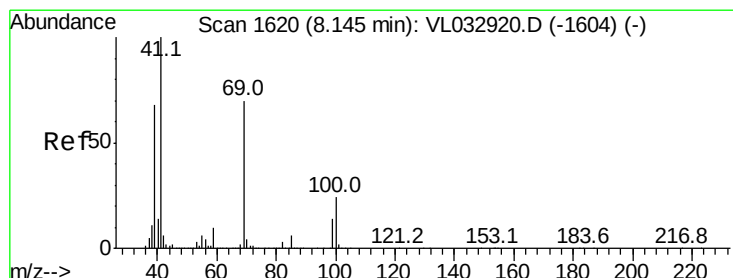
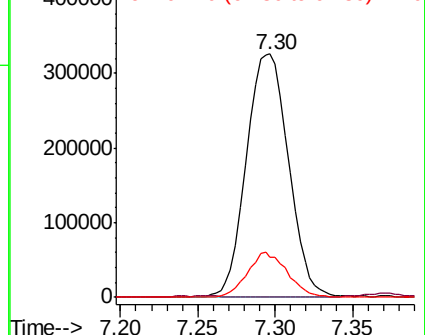
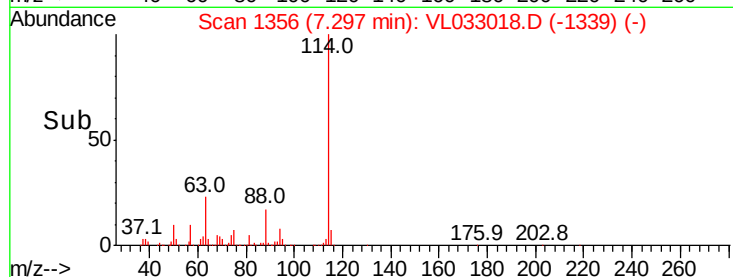
62 16.6 58.8 88.2#



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



#43

Methyl Methacrylate

Concen: 0.060 ppbv

RT: 8.14 min Scan# 1617

Delta R.T. -0.01 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

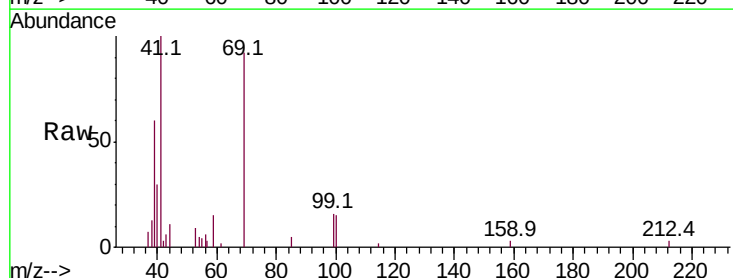
Tgt Ion: 69 Resp: 4209

Ion Ratio Lower Upper

69 100

41 0.0 116.6 175.0#

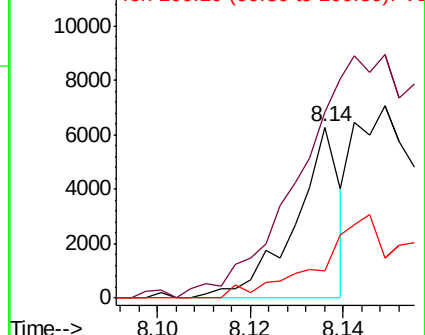
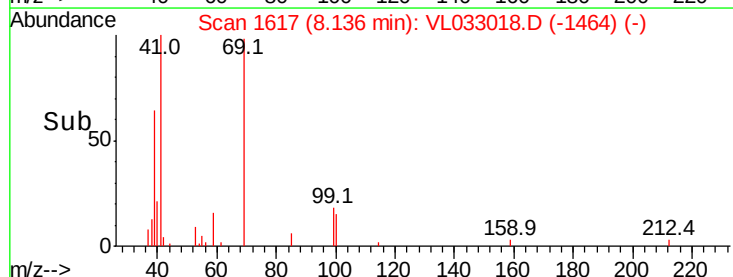
100 0.0 26.5 39.7#

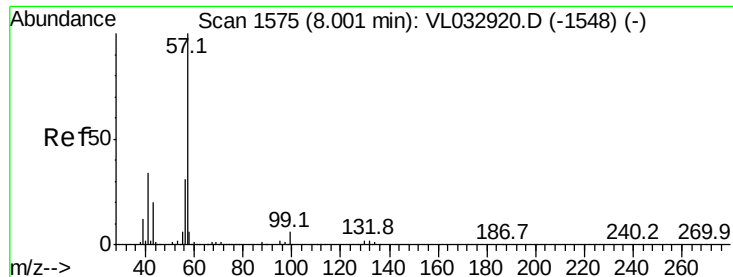


Abundance Ion 69.10 (68.80 to 69.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 100.10 (99.80 to 100.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 0.045 ppbv

RT: 8.00 min Scan# 1574

Delta R.T. -0.00 min

Lab File: VL033018.D

Acq: 18 Dec 2018 5:46

Instrument :

MSVOA_L

ClientSampleId :

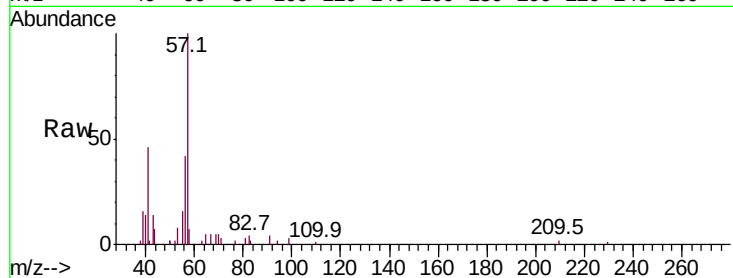
Tot Ion: 57 Resp: 14369

Ion Ratio Lower Upper

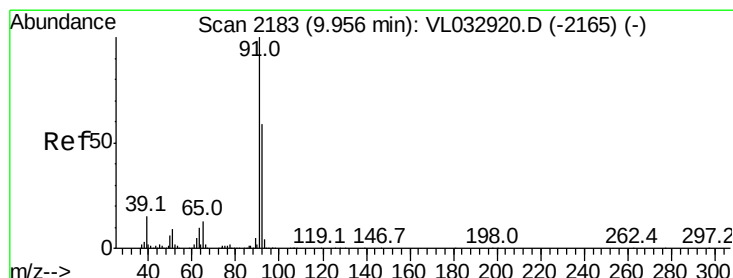
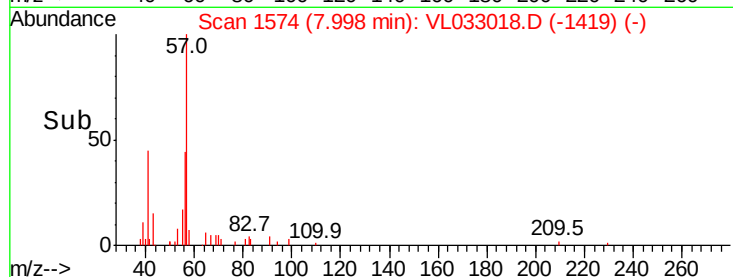
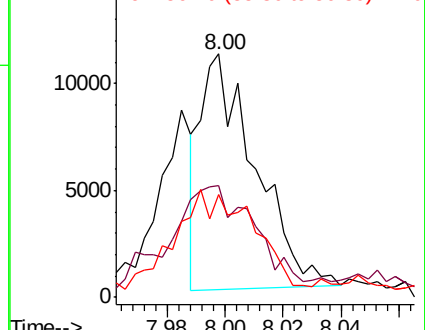
57 100

41 98.7 27.0 40.4#

56 83.1 24.6 37.0#



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



#53

Toluene

Concen: 2.400 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.00 min

Lab File: VL033018.D

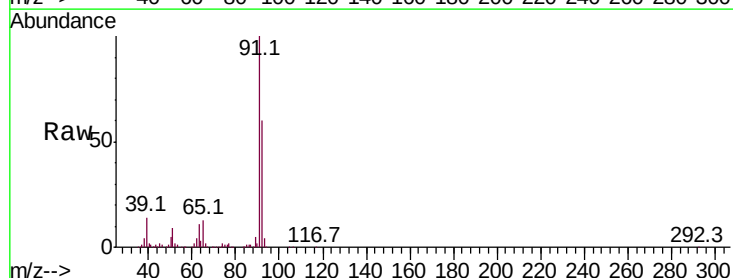
Acq: 18 Dec 2018 5:46

Tgt Ion: 91 Resp: 479999

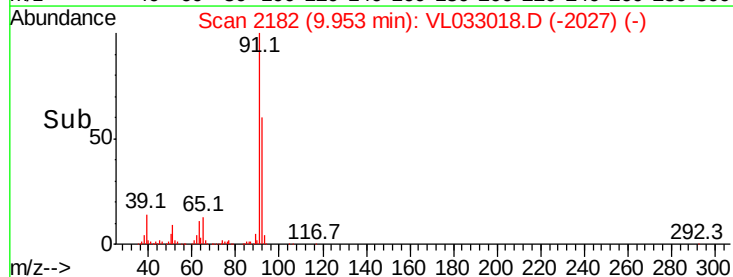
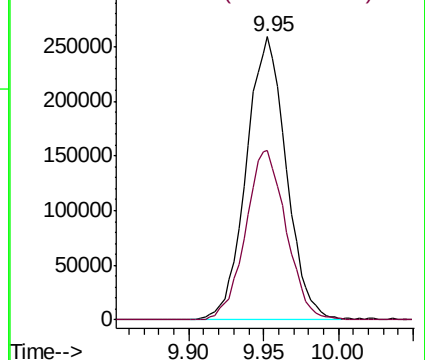
Ion Ratio Lower Upper

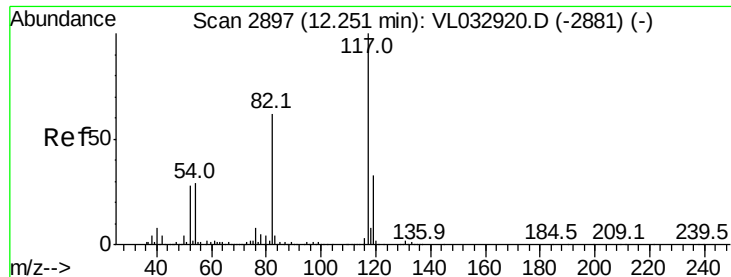
91 100

92 61.1 47.4 71.0



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 92.10 (91.80 to 92.80): VL0

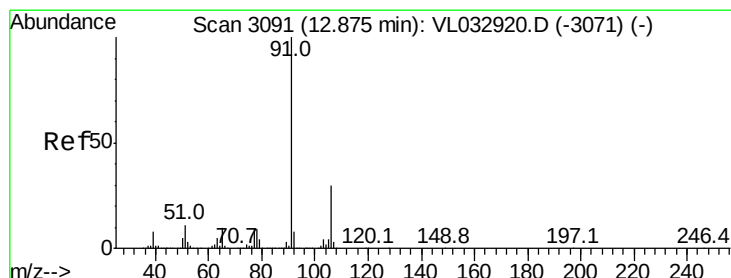
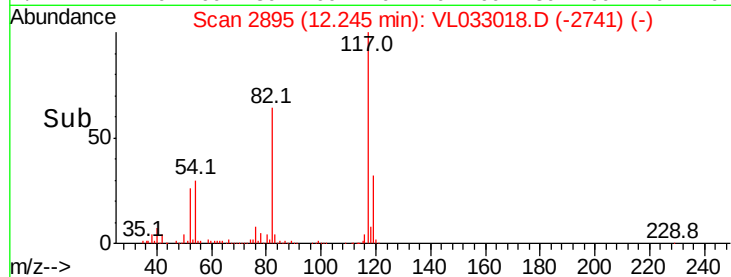
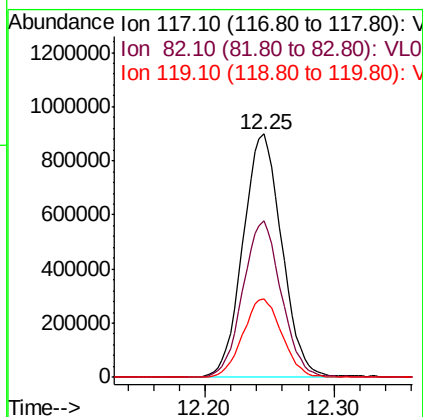
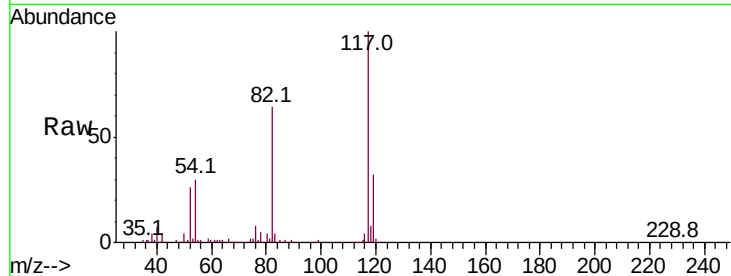




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.25 min Scan# 2895
Delta R.T. -0.01 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

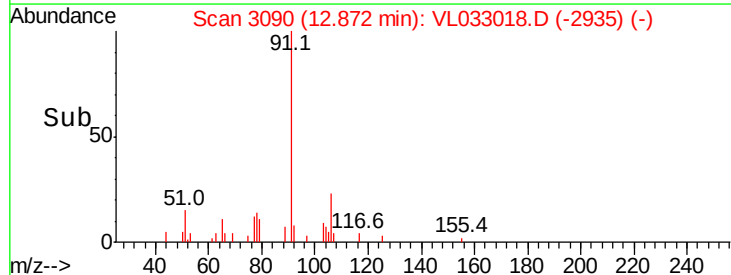
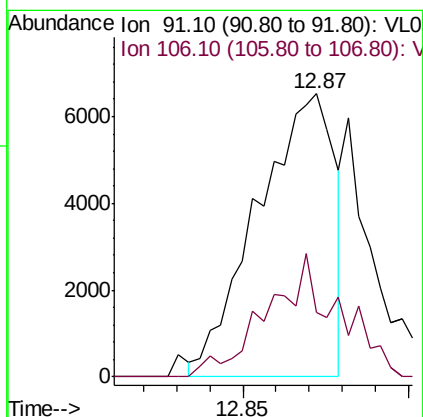
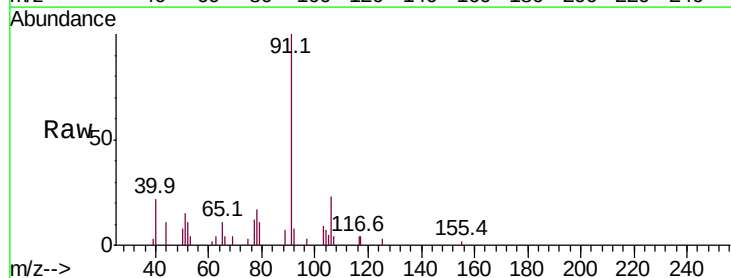
Instrument :
MSVOA_L
ClientSampled :

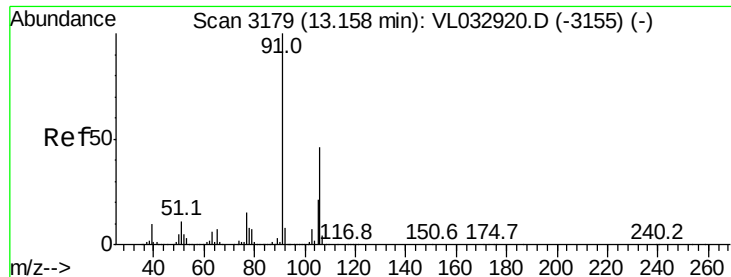
Tot Ion:117 Resp: 1886164
Ion Ratio Lower Upper
117 100
82 64.2 47.8 71.8
119 32.7 43.1 64.7#



#58
Ethyl Benzene
Concen: 0.053 ppbv
RT: 12.87 min Scan# 3090
Delta R.T. -0.00 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

Tgt Ion: 91 Resp: 10578
Ion Ratio Lower Upper
91 100
106 24.2 23.9 35.9

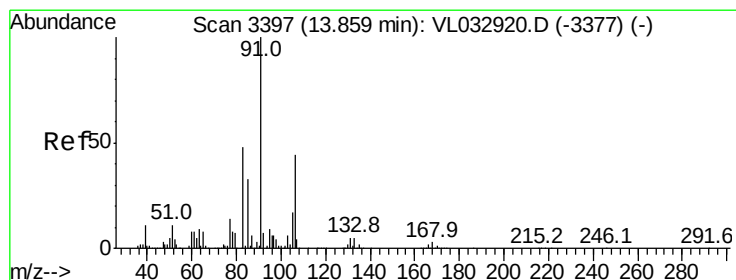
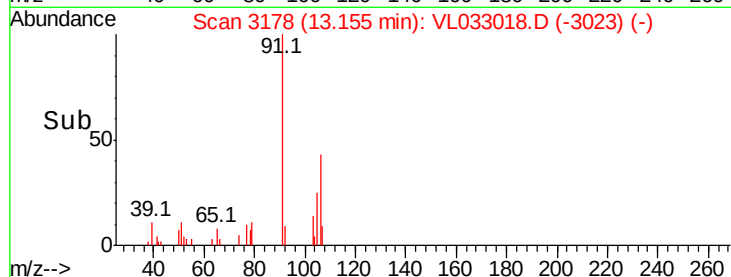
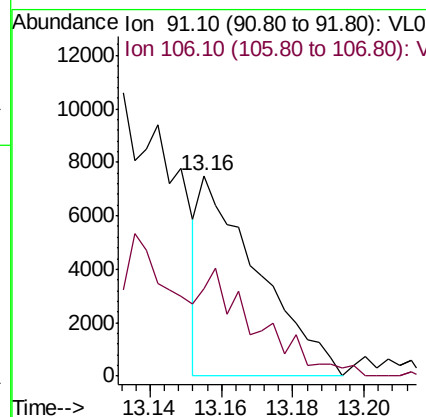
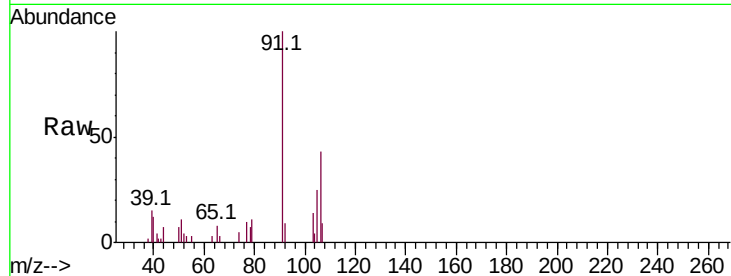




#59
m/p-Xylene
Concen: 0.047 ppbv
RT: 13.16 min Scan# 3178
Delta R.T. -0.00 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

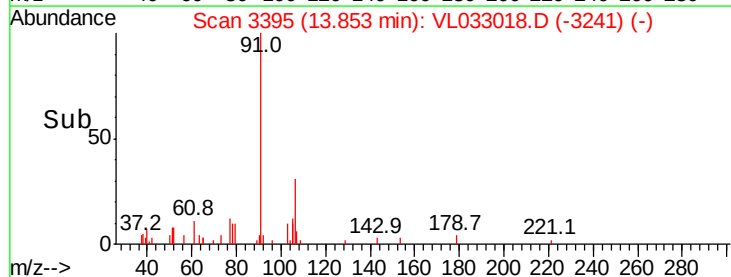
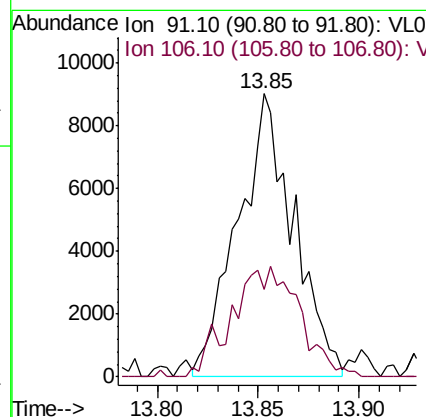
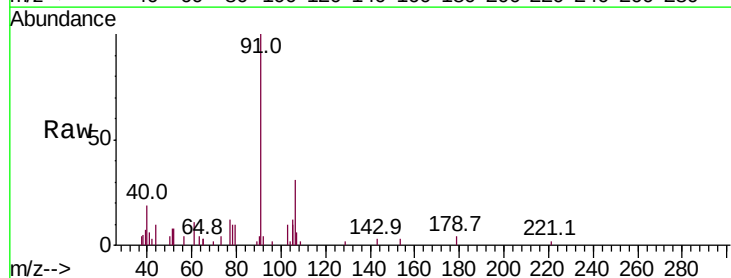
Instrument :
MSVOA_L
ClientSampled :

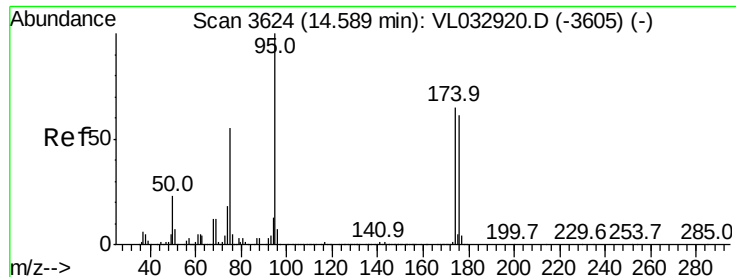
Tot Ion: 91 Resp: 8508
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#60
o-Xylene
Concen: 0.094 ppbv
RT: 13.85 min Scan# 3395
Delta R.T. -0.01 min
Lab File: VL033018.D
Acq: 18 Dec 2018 5:46

Tgt Ion: 91 Resp: 17363
Ion Ratio Lower Upper
91 100
106 47.3 21.9 65.8

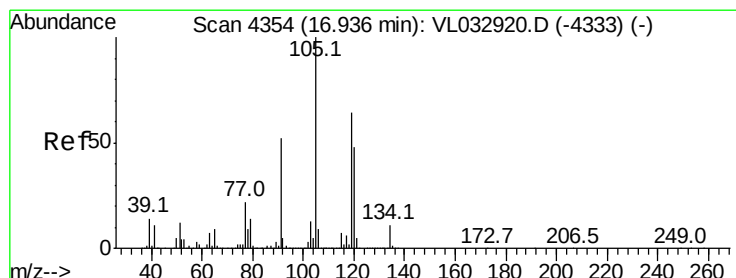
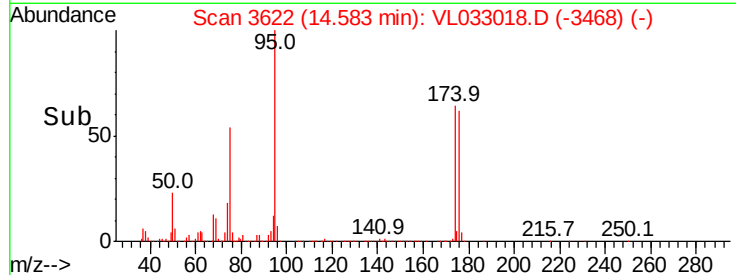
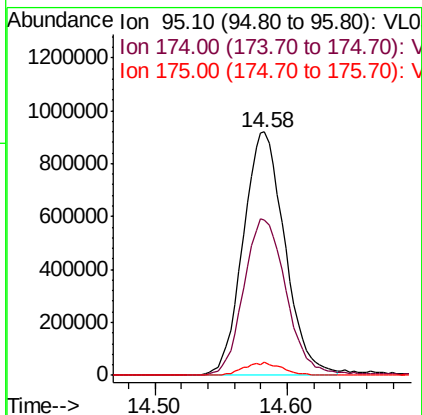
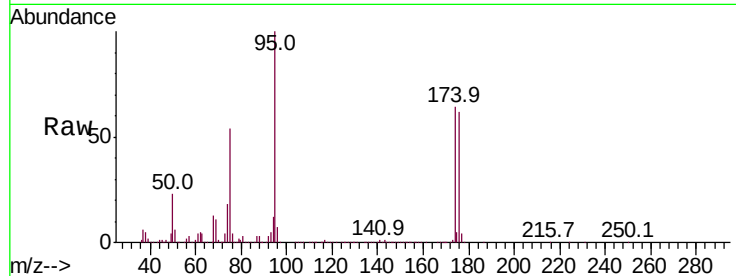




#68
 1-Bromo-4-Fluorobenzene
 Concen: 14.444 ppbv
 RT: 14.58 min Scan# 3622
 Delta R.T. -0.01 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Instrument :
 MSVOA_L
 ClientSampleId :

Tot Ion: 95 Resp: 2012743
 Ion Ratio Lower Upper
 95 100
 174 66.8 51.4 77.0
 175 5.0 3.8 5.6



#74
 1,2,4-Trimethylbenzene
 Concen: 0.033 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033018.D
 Acq: 18 Dec 2018 5:46

Tgt Ion: 105 Resp: 7454
 Ion Ratio Lower Upper
 105 100
 120 31.3 38.6 58.0#
 91 2.8 41.7 62.5#
 77 10.7 17.4 26.2#

