

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121118\
 Data File : VL032958.D
 Acq On : 11 Dec 2018 17:22
 Operator : SY/AP
 Sample : J6338-02DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 12 00:51:09 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	5.77	49	1371081	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	3196876	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	3159817	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2221511	9.52	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	95.20%

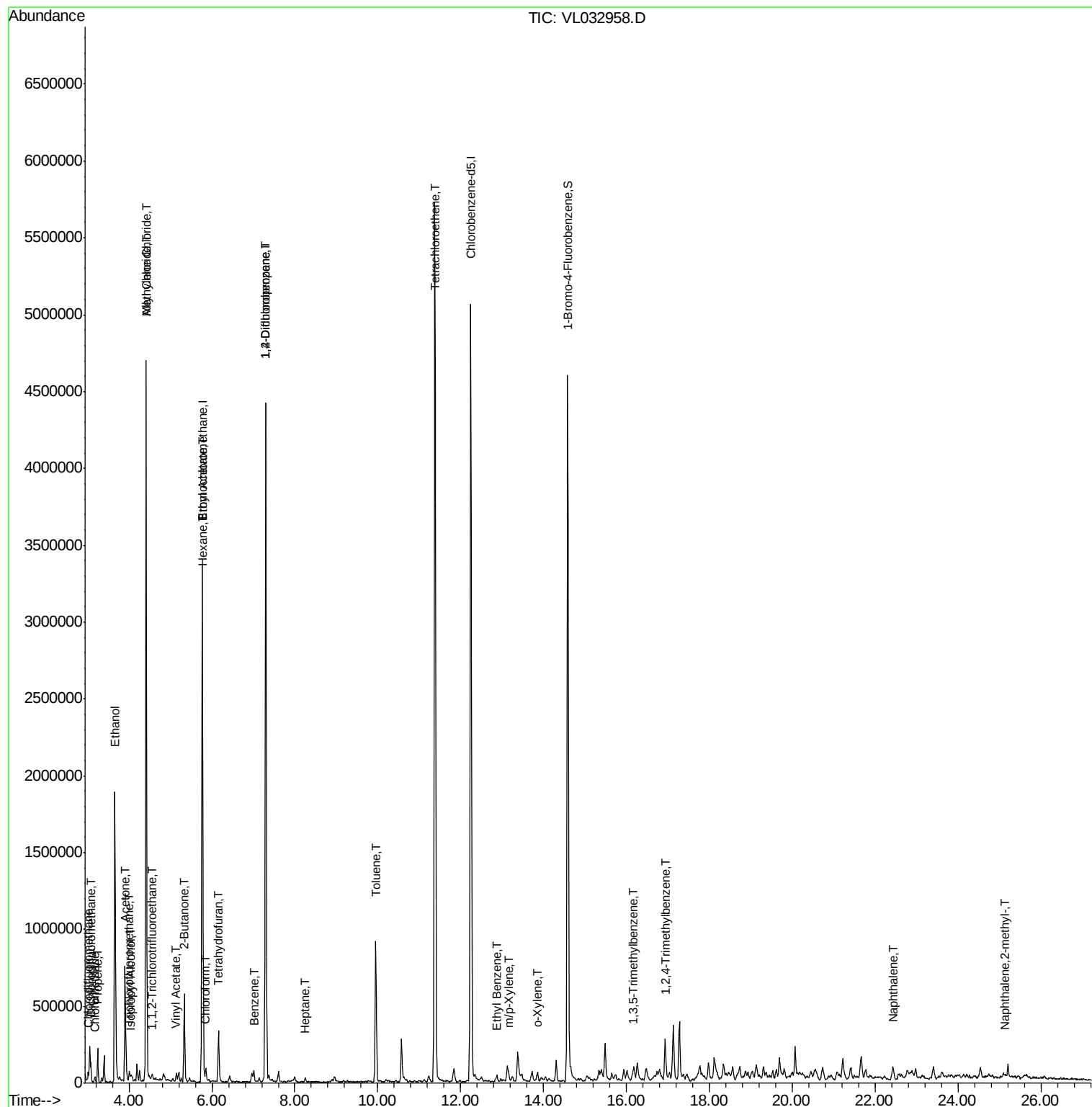
Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	90372	0.494	ppbv	92
3) Chlorodifluoromethane	3.02	51	55091	0.531	ppbv #	90
4) Chloromethane	3.18	50	31194	0.516	ppbv	95
9) Propene	3.24	41	42424	1.033	ppbv	85
10) Heptane	8.25	43	4636	0.030	ppbv #	21
11) Trichlorofluoromethane	4.01	101	38642	0.224	ppbv	94
12) 1,1,2-Trichlorotrifluoroet	4.55	101	11214	0.076	ppbv	95
13) Ethanol	3.66	45	2134960	151.022	ppbv	96
15) Acetone	3.90	43	718925	6.109	ppbv	97
19) Isopropyl Alcohol	4.04	45	28733	0.389	ppbv #	1
20) Methylene Chloride	4.41	84	1657852	28.823	ppbv	98
21) Allyl Chloride	4.41	41	64881	0.677	ppbv #	20
23) Vinyl Acetate	5.15	43	21246	0.107	ppbv #	54
25) Ethyl Acetate	5.78	43	253290	0.911	ppbv #	93
26) Hexane	5.78	57	204380	1.592	ppbv #	64
29) Chloroform	5.85	83	53287	0.233	ppbv	91
34) 2-Butanone	5.33	43	593357	4.261	ppbv	99
36) Benzene	7.01	78	52932	0.225	ppbv	93
39) 1,2-Dichloropropane	7.30	63	780814	8.756	ppbv #	21
41) Tetrahydrofuran	6.16	42	167409	1.933	ppbv	98
52) Tetrachloroethene	11.38	164	1398003	16.345	ppbv	98
53) Toluene	9.95	91	662461	2.656	ppbv	98
58) Ethyl Benzene	12.86	91	14322	0.042	ppbv	96
59) m/p-Xylene	13.16	91	17913	0.059	ppbv #	100
60) o-Xylene	13.86	91	38305	0.124	ppbv	94
73) 1,3,5-Trimethylbenzene	16.16	105	28427	0.085	ppbv	100
74) 1,2,4-Trimethylbenzene	16.94	105	141777	0.373	ppbv #	63
79) Naphthalene	22.42	128	22852	0.093	ppbv	99
80) Naphthalene,2-methyl-	25.13	142	9184	0.175	ppbv #	52

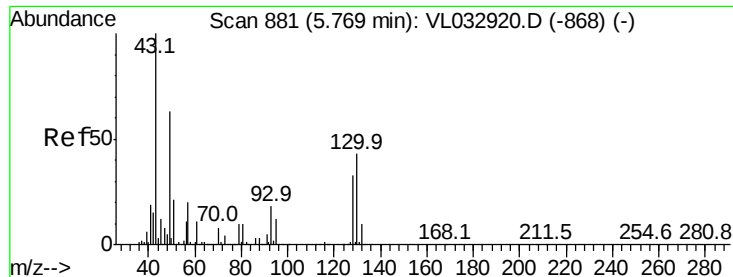
(#) = qualifier out of range (m) = manual integration (+) = signals summed

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ClientSampleId :

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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





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.77 min Scan# 880

Delta R.T. -0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :
MSVOA_L
ClientSampleId :

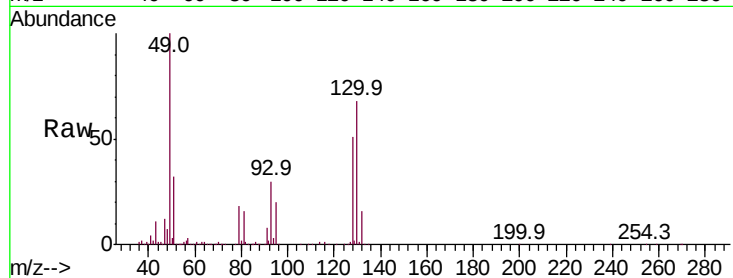
Tot Ion: 49 Resp: 1371081

Ion Ratio Lower Upper

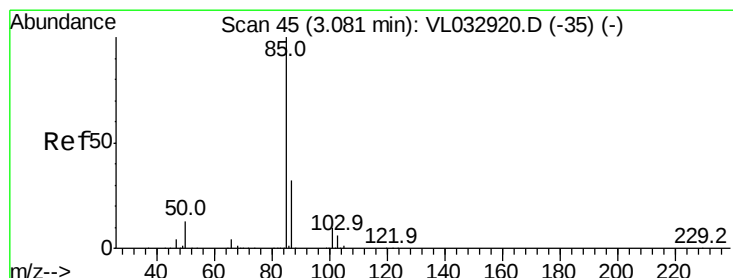
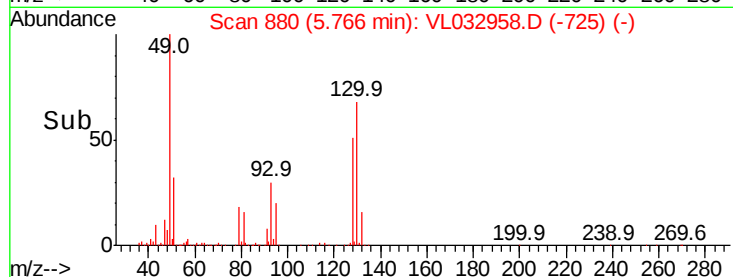
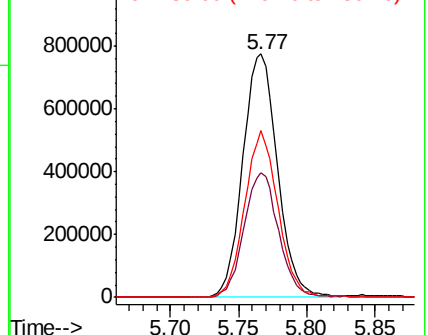
49 100

128 51.5 26.3 78.8

130 66.5 33.9 101.7



Abundance Ion 49.10 (48.80 to 49.80): VL0
Ion 128.00 (127.70 to 128.70): V
Ion 130.00 (129.70 to 130.70): V



#2

Dichlorodifluoromethane

Concen: 0.494 ppbv

RT: 3.08 min Scan# 44

Delta R.T. -0.00 min

Lab File: VL032958.D

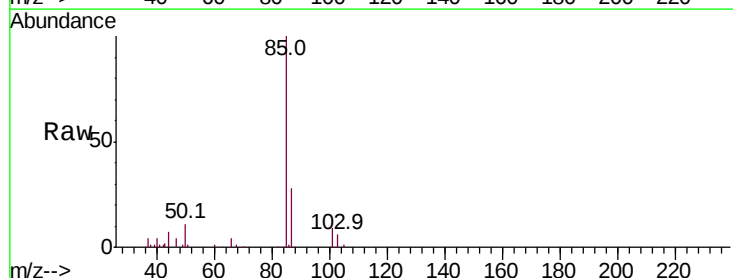
Acq: 11 Dec 2018 17:22

Tgt Ion: 85 Resp: 90372

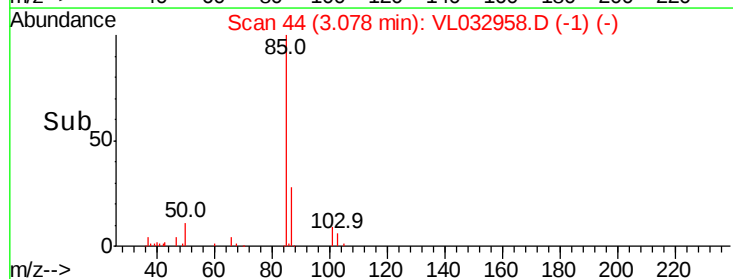
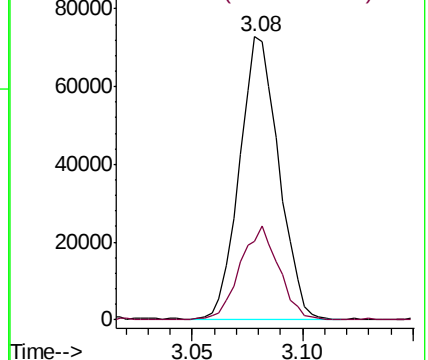
Ion Ratio Lower Upper

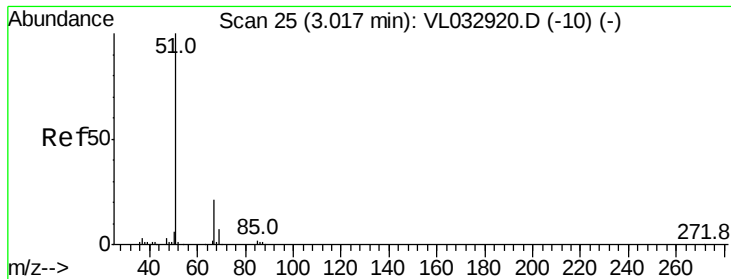
85 100

87 27.6 25.7 38.5



Abundance Ion 85.00 (84.70 to 85.70): VL0
Ion 87.00 (86.70 to 87.70): VL0





#3

Chlorodifluoromethane

Concen: 0.531 ppbv

RT: 3.02 min Scan# 25

Delta R.T. 0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

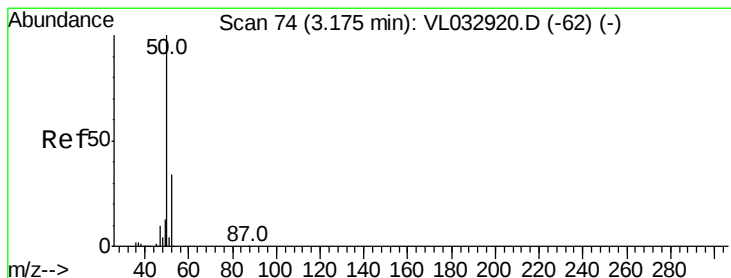
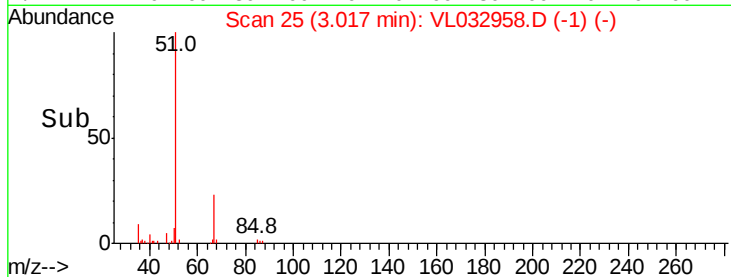
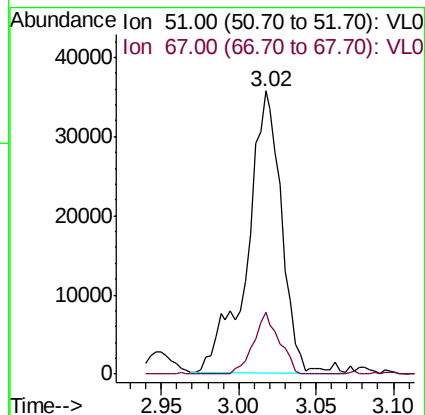
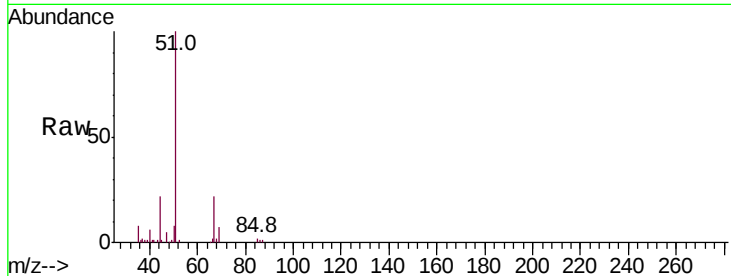
Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 51 Resp: 55091

Ion Ratio Lower Upper

51 100

67 16.4 16.8 25.2#



#4

Chloromethane

Concen: 0.516 ppbv

RT: 3.18 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL032958.D

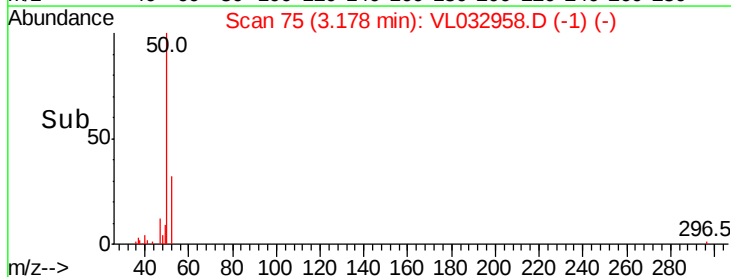
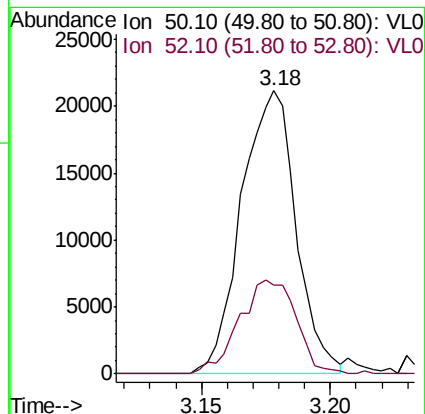
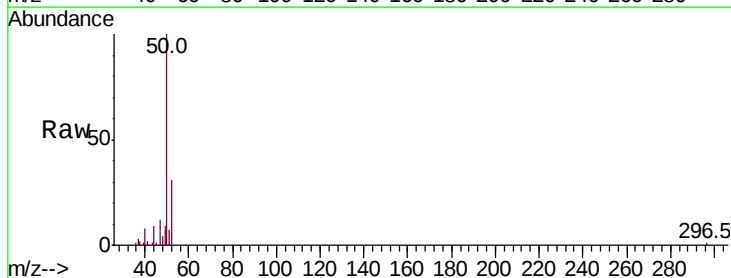
Acq: 11 Dec 2018 17:22

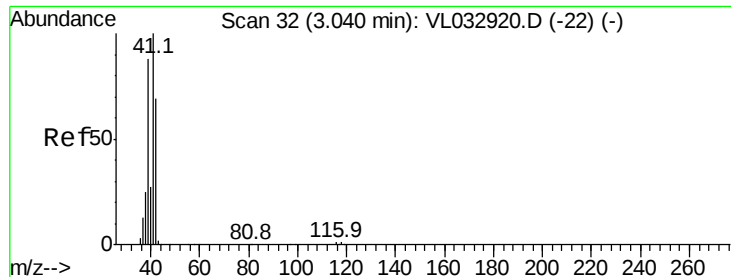
Tgt Ion: 50 Resp: 31194

Ion Ratio Lower Upper

50 100

52 31.3 27.3 40.9





#9

Propene

Concen: 1.033 ppbv

RT: 3.24 min Scan# 95

Delta R.T. 0.20 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

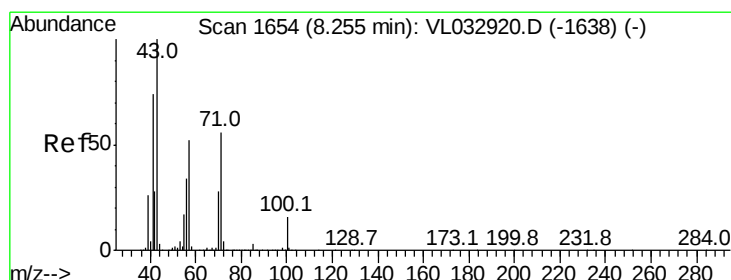
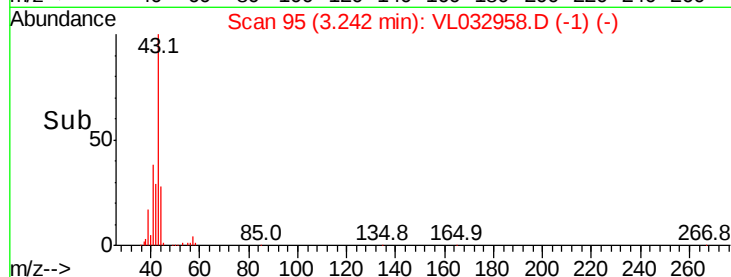
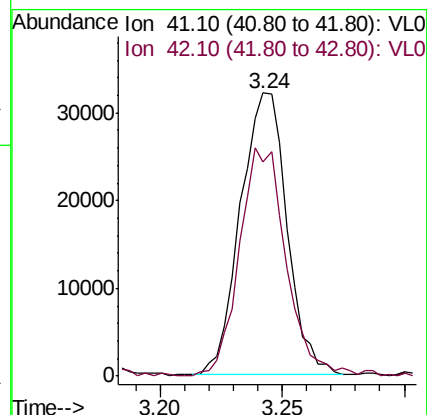
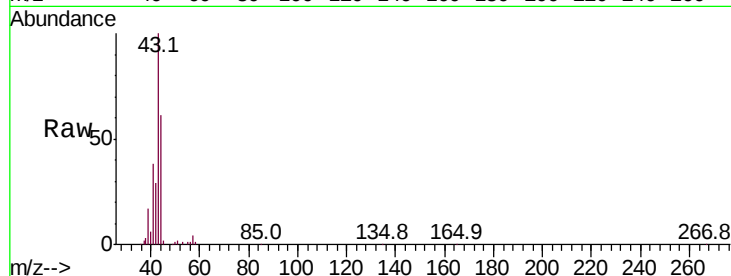
ClientSampleId :

Tot Ion: 41 Resp: 42424

Ion Ratio Lower Upper

41 100

42 82.2 56.2 84.2



#10

Heptane

Concen: 0.030 ppbv

RT: 8.25 min Scan# 1654

Delta R.T. 0.00 min

Lab File: VL032958.D

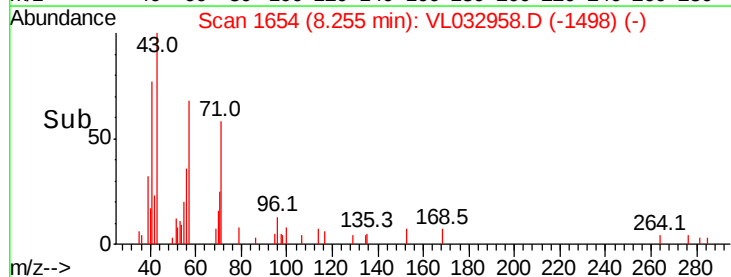
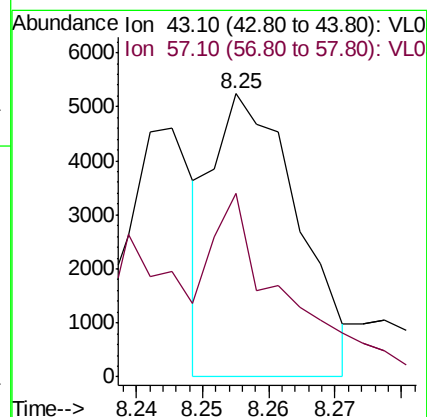
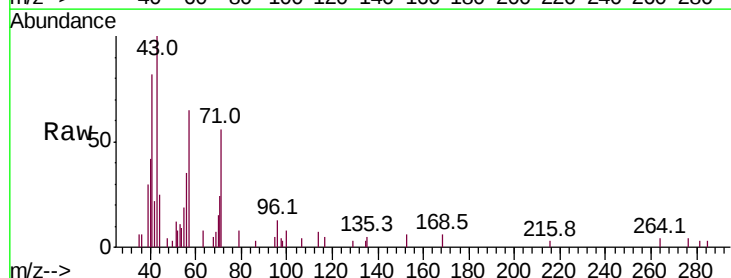
Acq: 11 Dec 2018 17:22

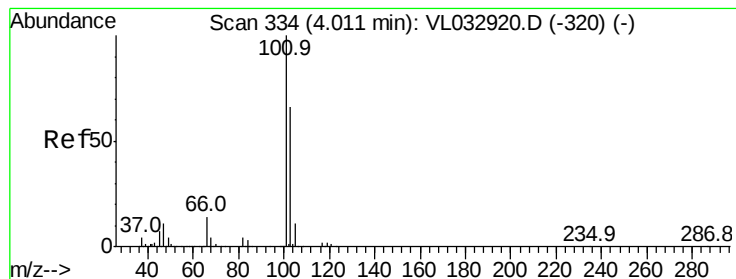
Tgt Ion: 43 Resp: 4636

Ion Ratio Lower Upper

43 100

57 107.9 41.8 62.6#





#11

Trichlorofluoromethane

Concen: 0.224 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

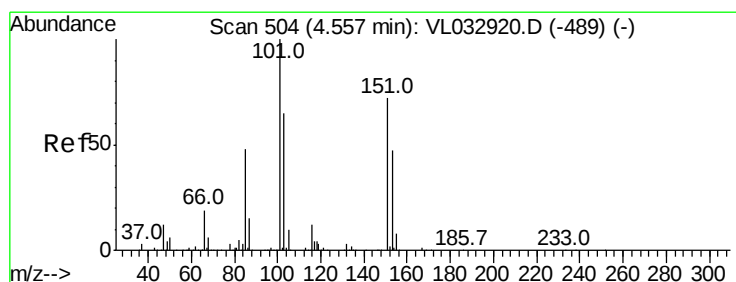
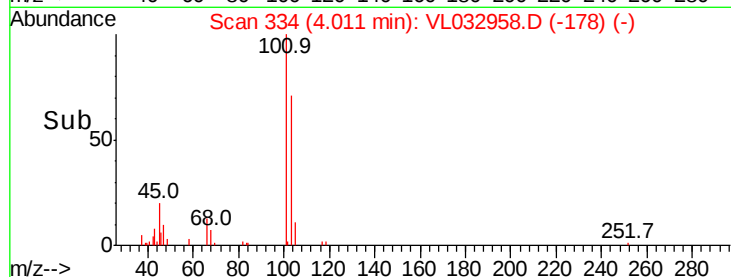
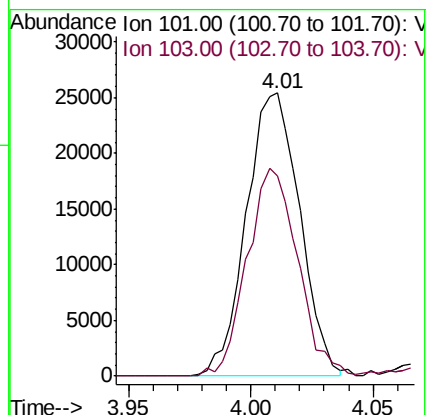
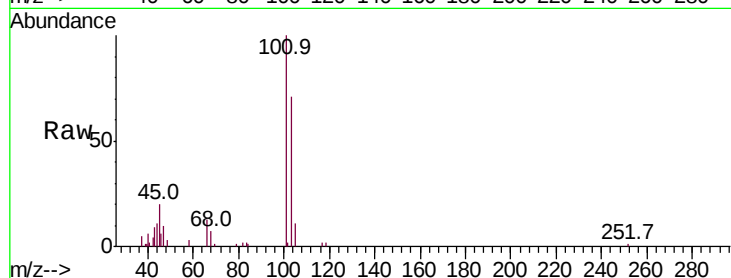
ClientSampleId :

Tot Ion:101 Resp: 38642

Ion Ratio Lower Upper

101 100

103 70.9 52.7 79.1



#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.076 ppbv

RT: 4.55 min Scan# 503

Delta R.T. -0.00 min

Lab File: VL032958.D

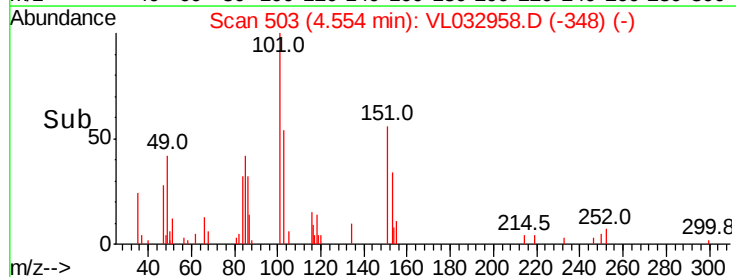
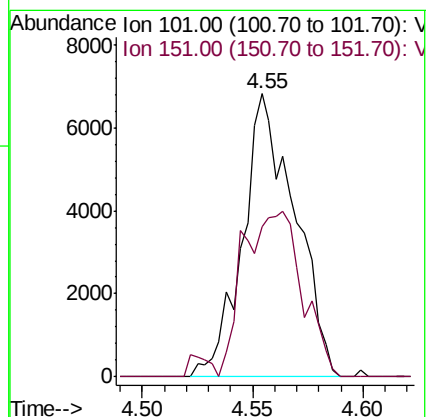
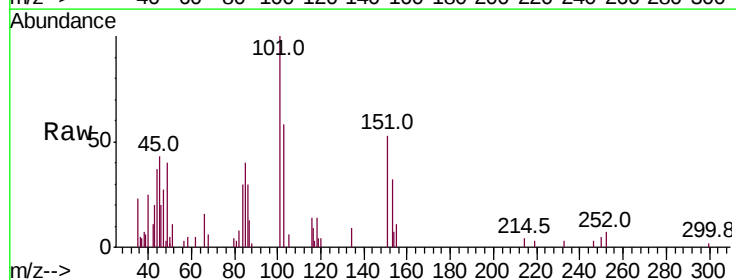
Acq: 11 Dec 2018 17:22

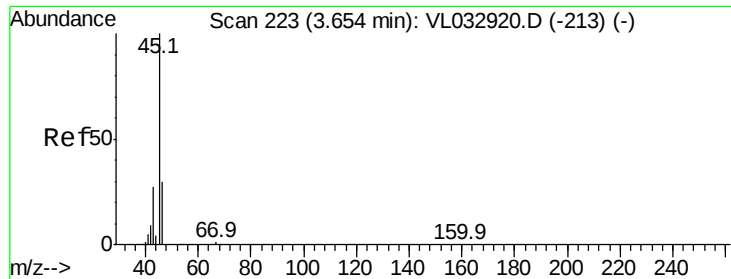
Tgt Ion:101 Resp: 11214

Ion Ratio Lower Upper

101 100

151 69.6 59.3 88.9





#13

Ethanol

Concen: 151.022 ppbv

RT: 3.66 min Scan# 224

Delta R.T. 0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

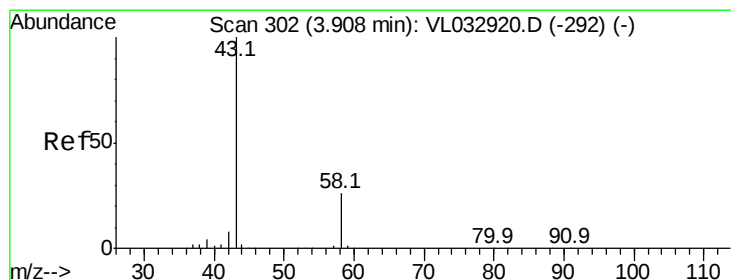
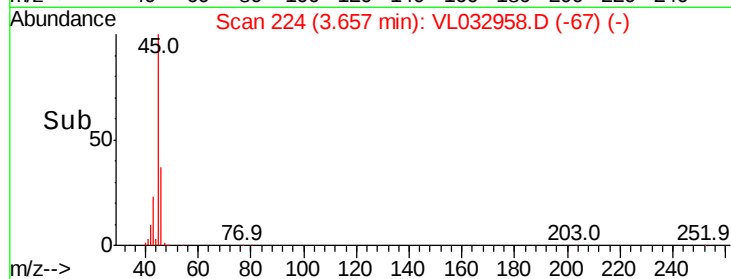
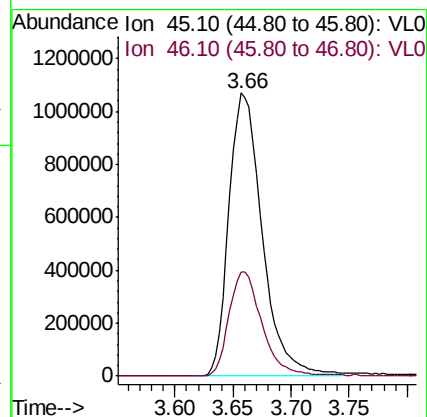
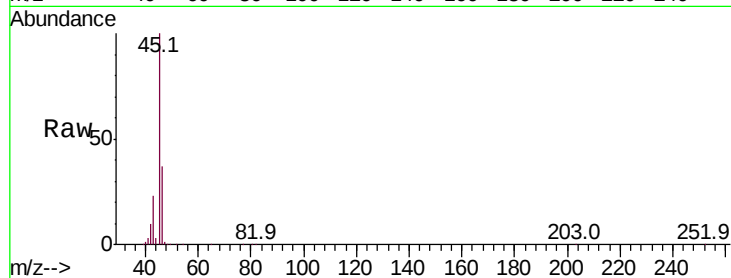
ClientSampleId :

Tot Ion: 45 Resp: 2134960

Ion Ratio Lower Upper

45 100

46 37.0 13.8 55.4



#15

Acetone

Concen: 6.109 ppbv

RT: 3.90 min Scan# 301

Delta R.T. -0.00 min

Lab File: VL032958.D

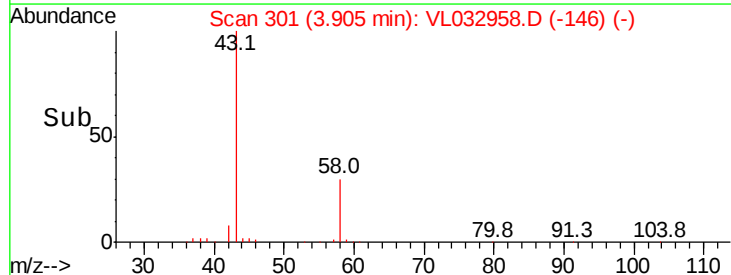
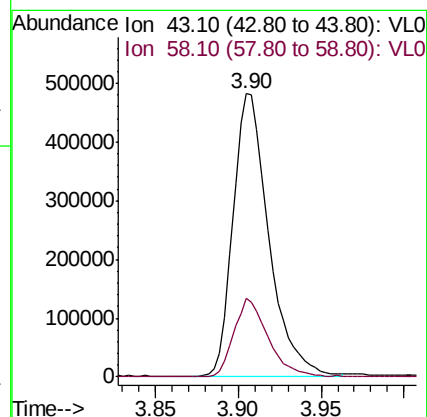
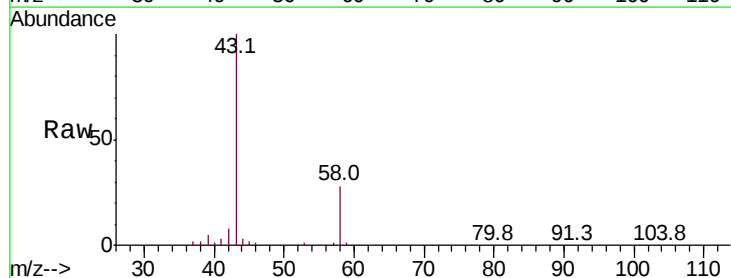
Acq: 11 Dec 2018 17:22

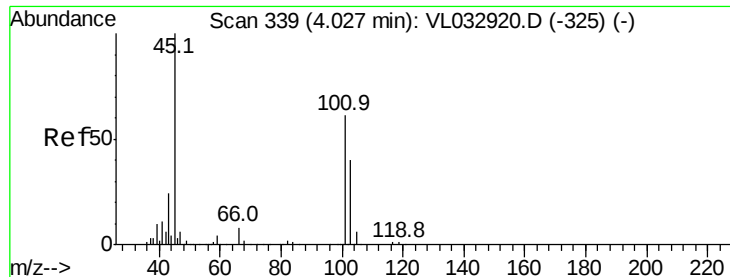
Tgt Ion: 43 Resp: 718925

Ion Ratio Lower Upper

43 100

58 27.1 20.6 30.8





#19

Isopropyl Alcohol

Concen: 0.389 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.01 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

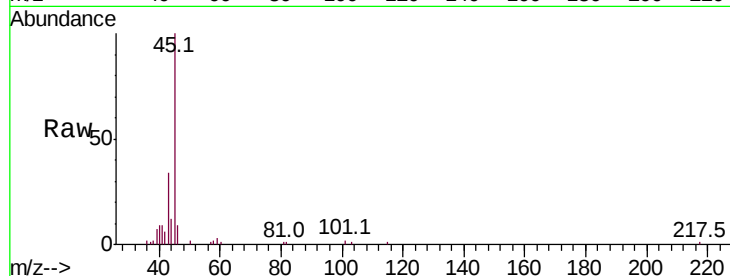
ClientSampleId :

Tot Ion: 45 Resp: 28733

Ion Ratio Lower Upper

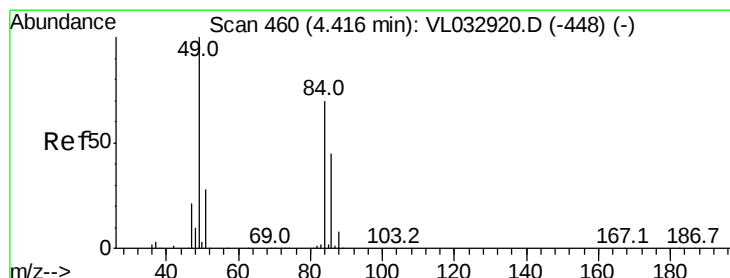
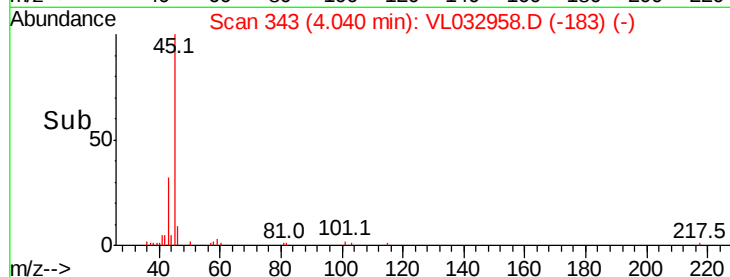
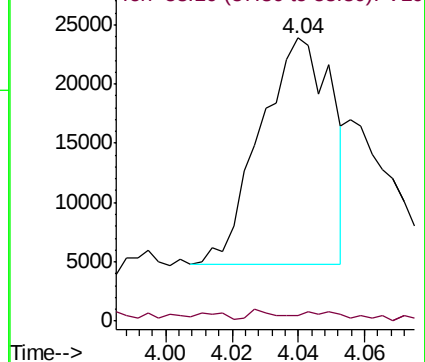
45 100

58 675.1 1.4 2.2#



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#20

Methylene Chloride

Concen: 28.823 ppbv

RT: 4.41 min Scan# 459

Delta R.T. -0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Tgt Ion: 84 Resp: 1657852

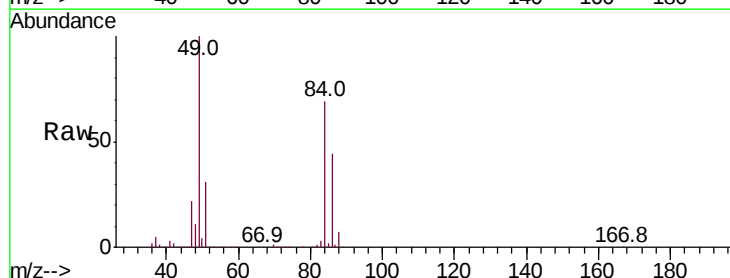
Ion Ratio Lower Upper

84 100

49 144.3 113.8 170.8

51 44.3 31.8 47.8

86 64.2 50.8 76.2

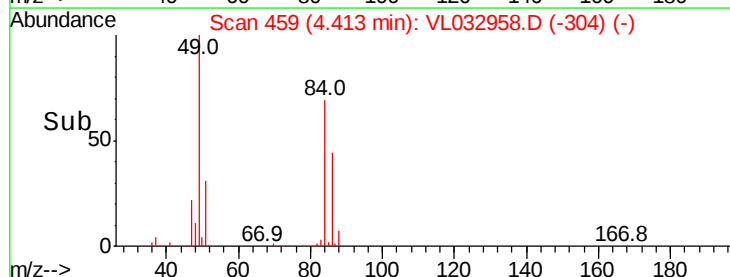
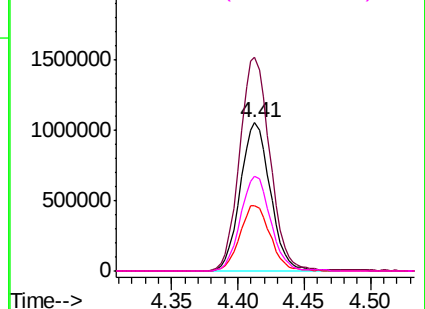


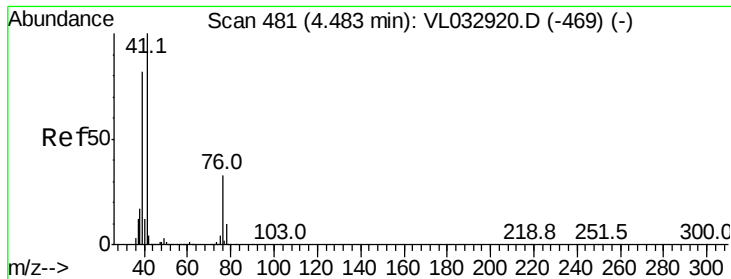
Abundance Ion 84.00 (83.70 to 84.70): VL0

Ion 49.10 (48.80 to 49.80): VL0

Ion 51.10 (50.80 to 51.80): VL0

Ion 86.00 (85.70 to 86.70): VL0

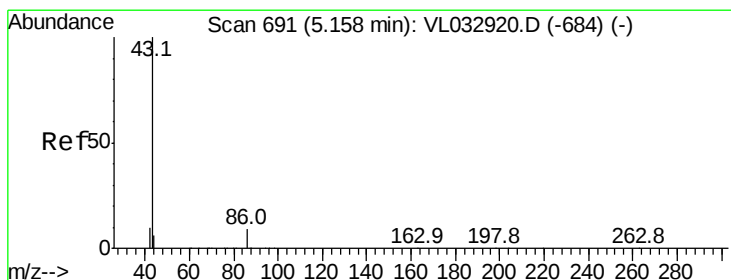
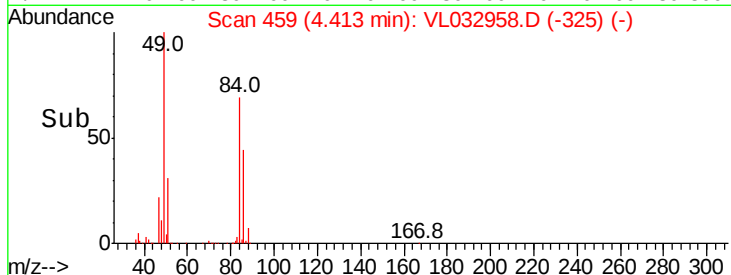
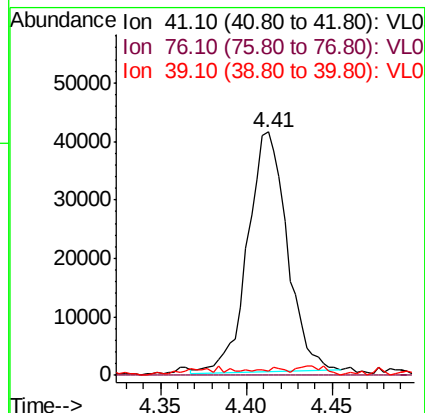
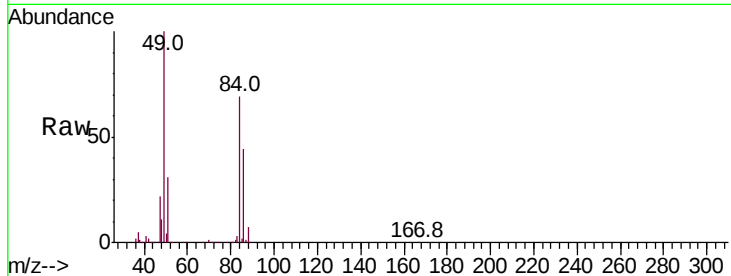




#21
Allvl Chloride
Concen: 0.677 ppbv
RT: 4.41 min Scan# 459
Delta R.T. -0.07 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

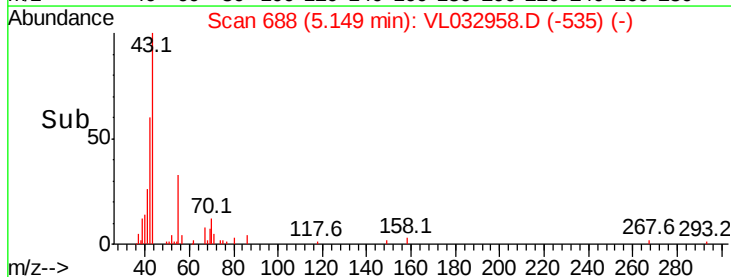
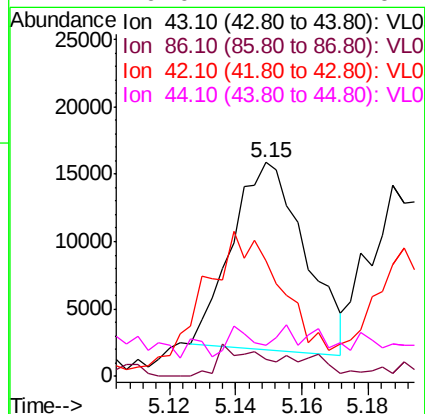
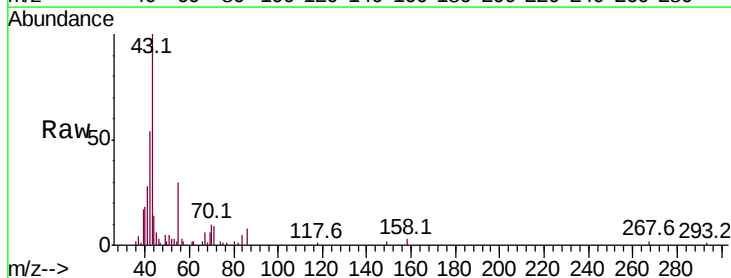
Instrument :
MSVOA_L
ClientSampleId :

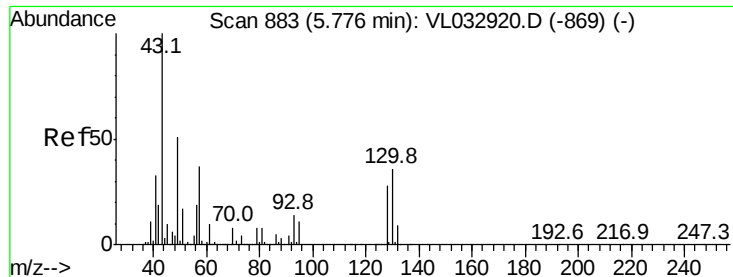
Tot Ion: 41 Resp: 64881
Ion Ratio Lower Upper
41 100
76 0.0 25.2 37.8#
39 2.6 65.2 97.8#



#23
Vinyl Acetate
Concen: 0.107 ppbv
RT: 5.15 min Scan# 688
Delta R.T. -0.01 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

Tgt Ion: 43 Resp: 21246
Ion Ratio Lower Upper
43 100
86 9.3 6.6 9.8
42 45.9 8.3 12.5#
44 0.0 4.2 6.4#

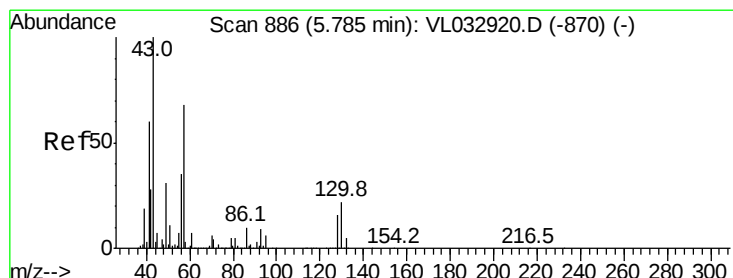
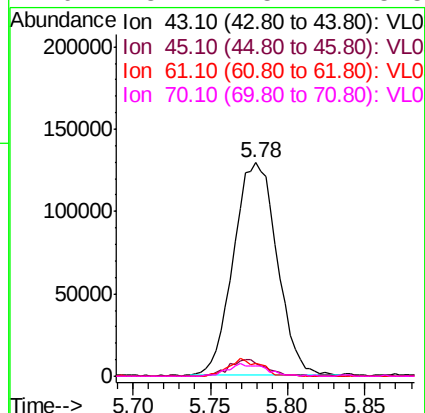
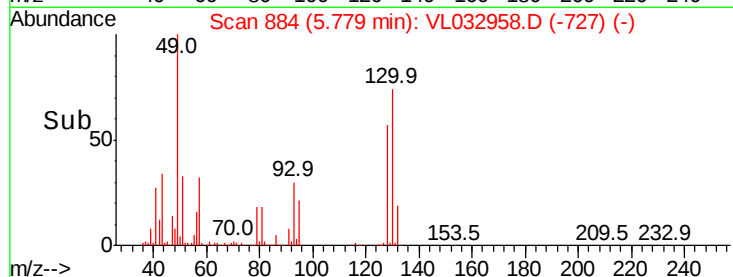
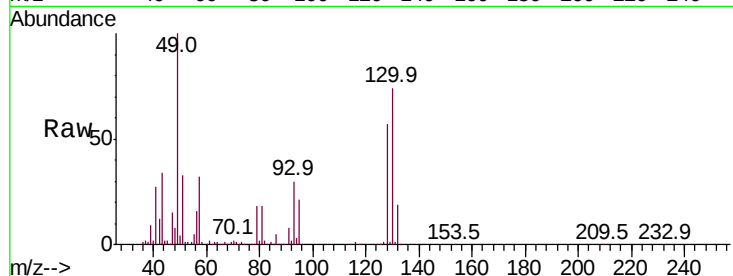




#25
Ethyl Acetate
Concen: 0.911 ppbv
RT: 5.78 min Scan# 884
Delta R.T. 0.00 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

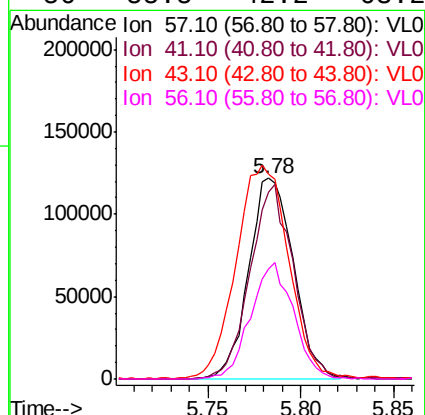
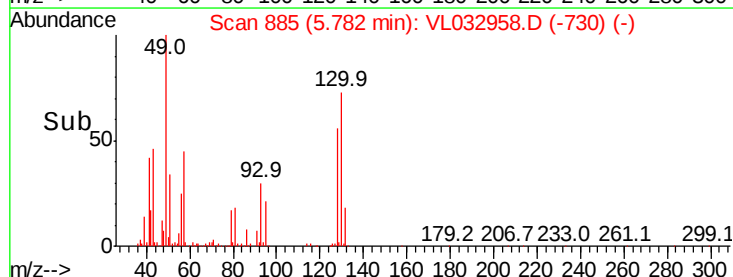
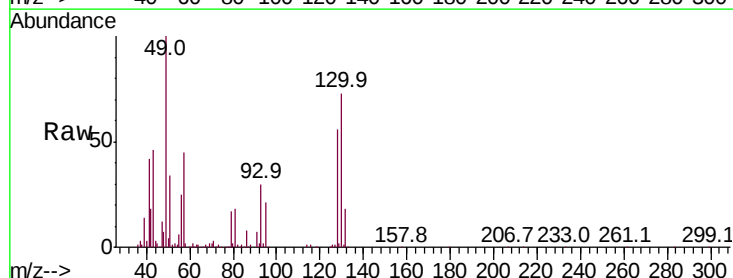
Instrument :
MSVOA_L
ClientSampleId :

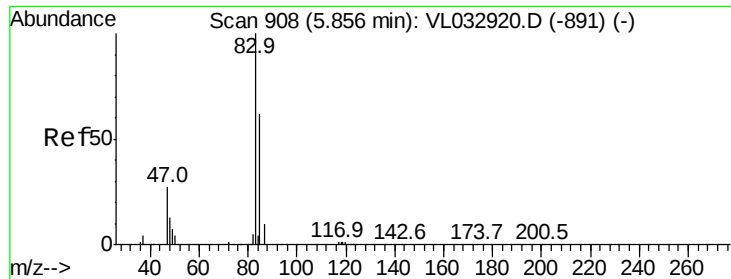
Tot Ion:	43	Resp:	253290
Ion	Ratio	Lower	Upper
43	100		
45	6.7	7.8	11.6#
61	6.3	7.4	11.2#
70	5.4	5.7	8.5#



#26
Hexane
Concen: 1.592 ppbv
RT: 5.78 min Scan# 885
Delta R.T. -0.00 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

Tgt Ion:	57	Resp:	204380
Ion	Ratio	Lower	Upper
57	100		
41	95.2	72.2	108.2
43	124.6	171.9	257.9#
56	55.5	42.2	63.2





#29

Chloroform

Concen: 0.233 ppbv

RT: 5.85 min Scan# 907

Delta R.T. -0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

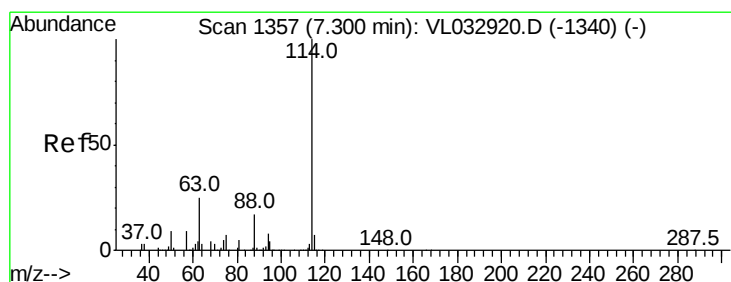
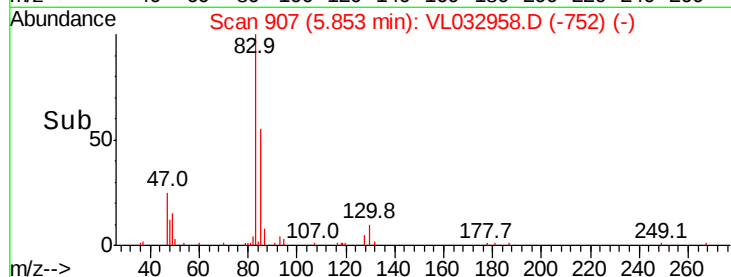
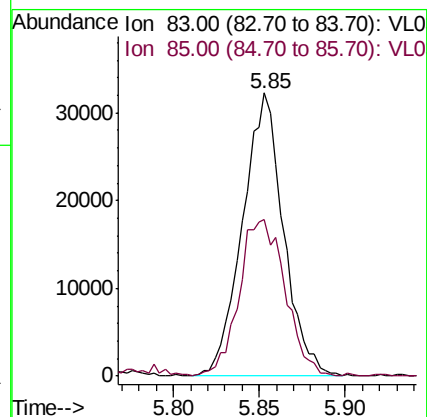
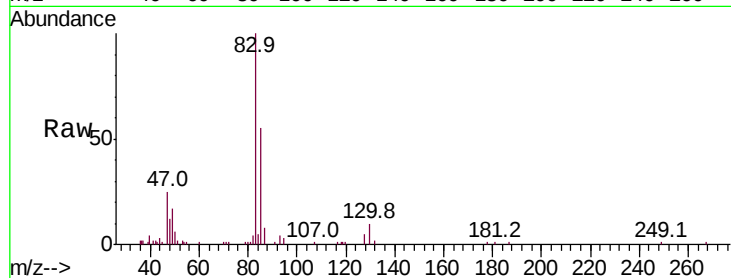
ClientSampleId :

Tot Ion: 83 Resp: 53287

Ion Ratio Lower Upper

83 100

85 55.4 49.8 74.8



#33

1,4-Difluorobenzene

Concen: 10.000 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

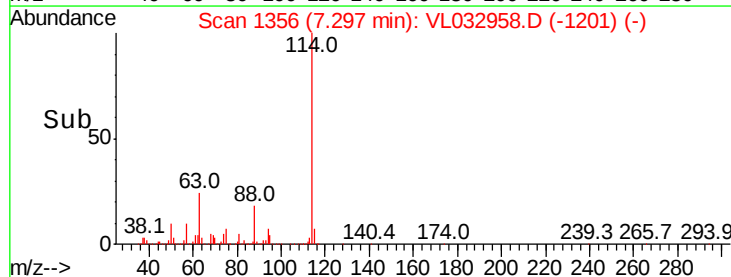
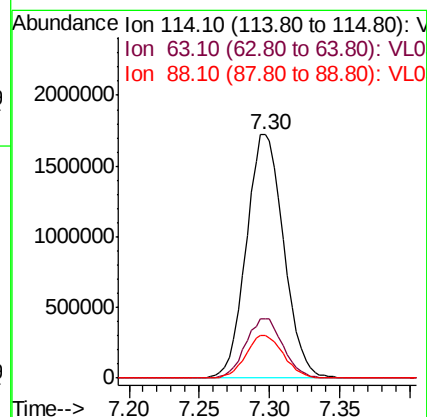
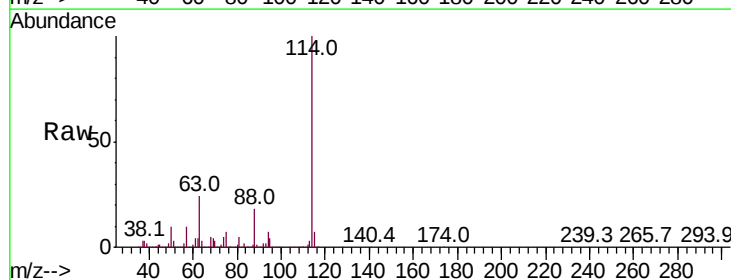
Tgt Ion: 114 Resp: 3196876

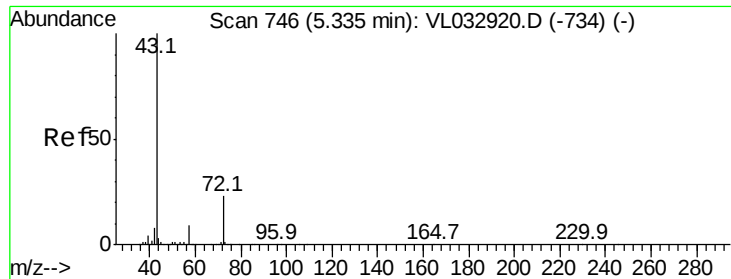
Ion Ratio Lower Upper

114 100

63 24.6 20.1 30.1

88 17.6 14.2 21.4

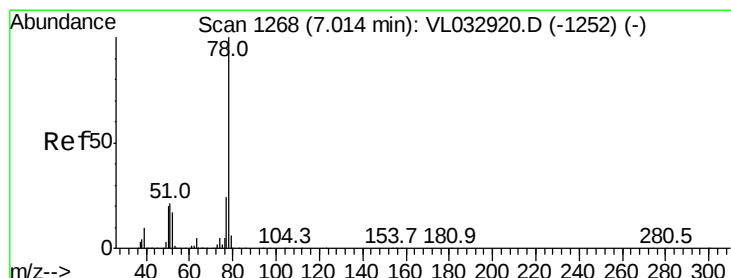
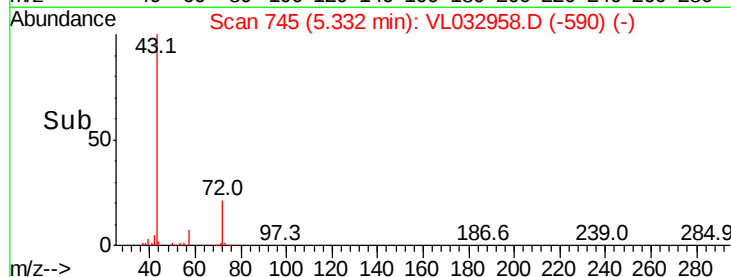
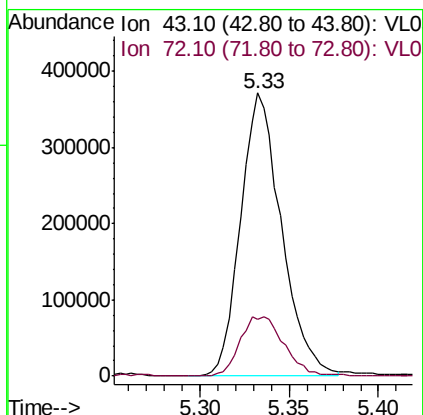
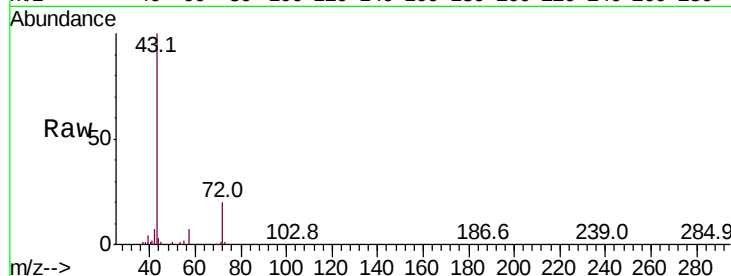




#34
2-Butanone
Concen: 4.261 ppbv
RT: 5.33 min Scan# 745
Delta R.T. -0.00 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

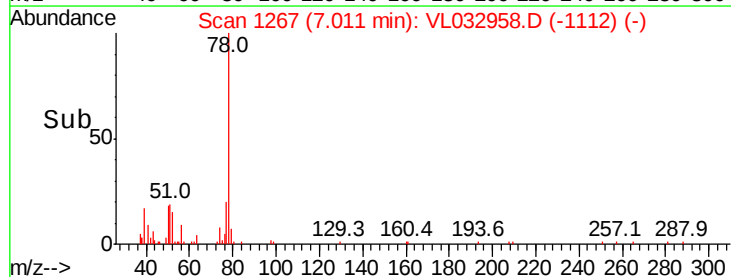
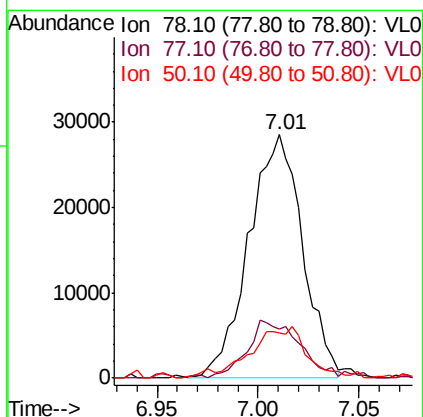
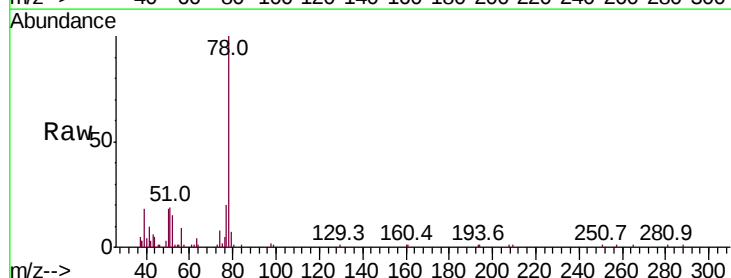
Instrument :
MSVOA_L
ClientSampleId :

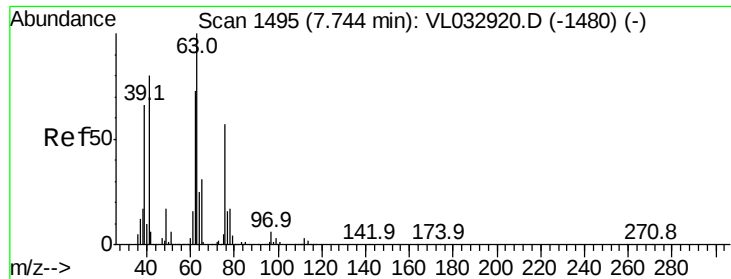
Tot Ion: 43 Resp: 593357
Ion Ratio Lower Upper
43 100
72 23.0 18.8 28.2



#36
Benzene
Concen: 0.225 ppbv
RT: 7.01 min Scan# 1267
Delta R.T. -0.00 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

Tgt Ion: 78 Resp: 52932
Ion Ratio Lower Upper
78 100
77 19.5 18.9 28.3
50 17.9 16.1 24.1





#39

1,2-Dichloropropane

Concen: 8.756 ppbv

RT: 7.30 min Scan# 1357

Delta R.T. -0.44 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

ClientSampleId :

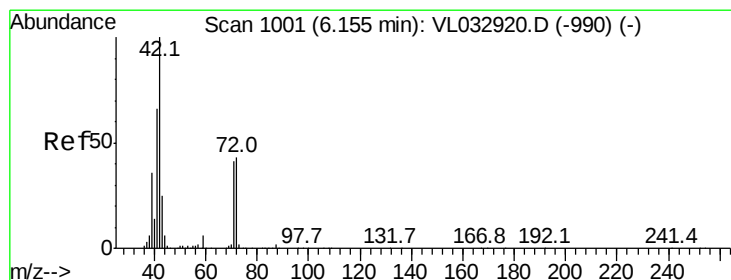
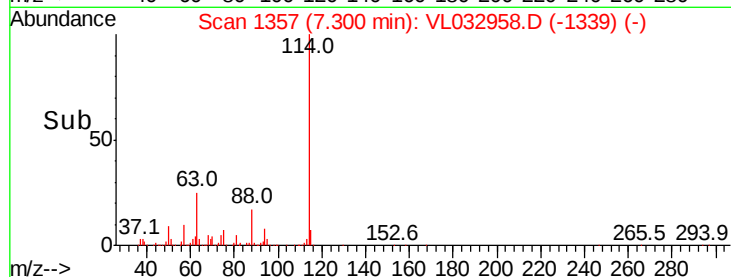
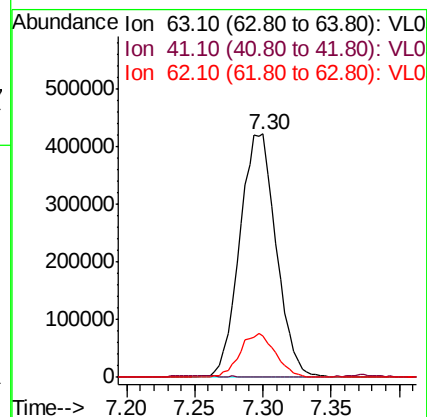
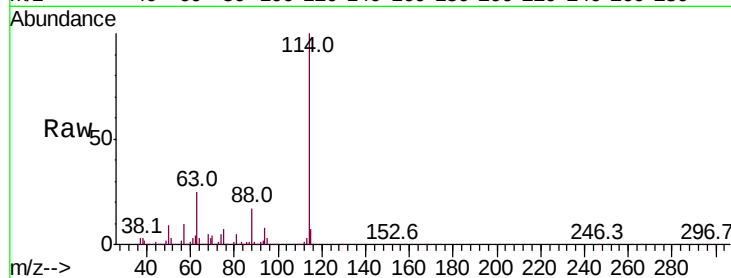
Tot Ion: 63 Resp: 780814

Ion Ratio Lower Upper

63 100

41 0.0 63.9 95.9#

62 17.0 58.8 88.2#



#41

Tetrahydrofuran

Concen: 1.933 ppbv

RT: 6.16 min Scan# 1003

Delta R.T. 0.01 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

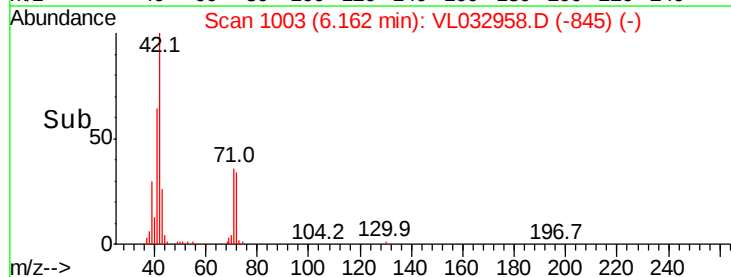
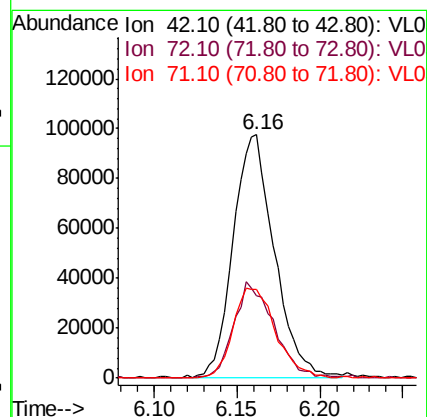
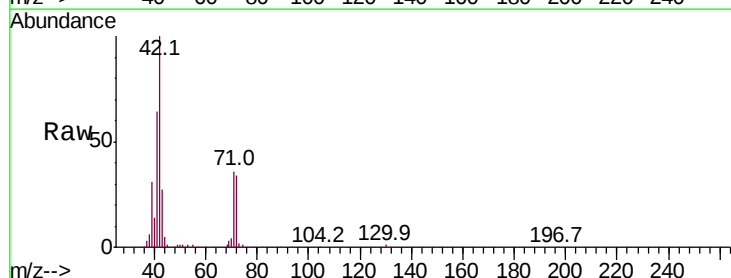
Tgt Ion: 42 Resp: 167409

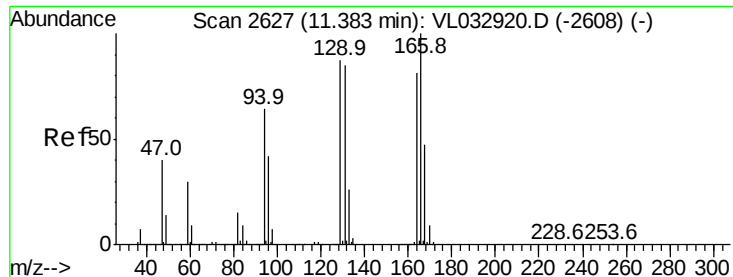
Ion Ratio Lower Upper

42 100

72 39.2 32.9 49.3

71 39.1 32.0 48.0





#52

Tetrachloroethene

Concen: 16.345 ppbv

RT: 11.38 min Scan# 2626

Delta R.T. -0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:164 Resp: 1398003

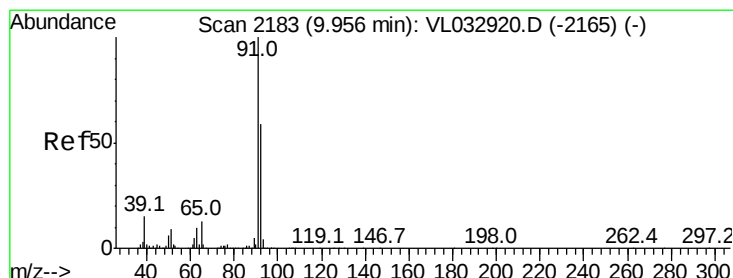
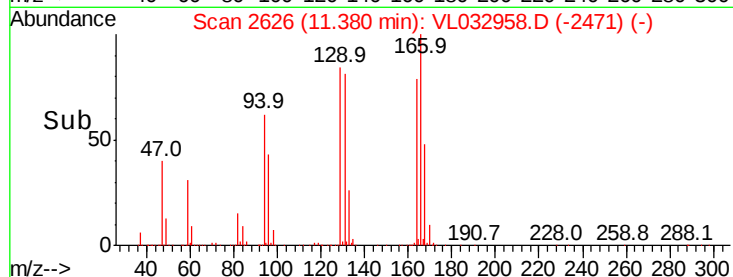
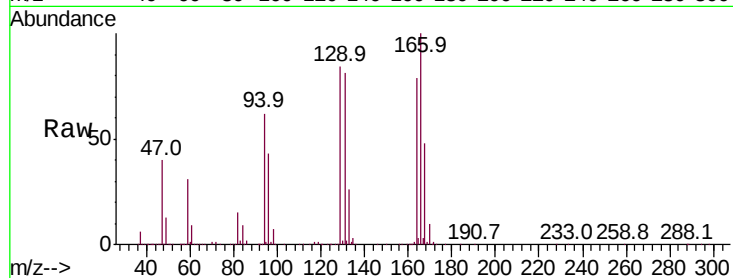
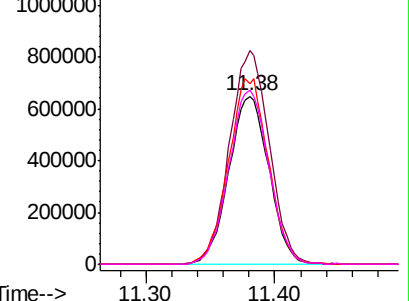
Ion	Ratio	Lower	Upper
164	100		
166	127.2	98.8	148.2
129	107.4	85.5	128.3
131	103.4	84.4	126.6

Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V



#53

Toluene

Concen: 2.656 ppbv

RT: 9.95 min Scan# 2182

Delta R.T. -0.00 min

Lab File: VL032958.D

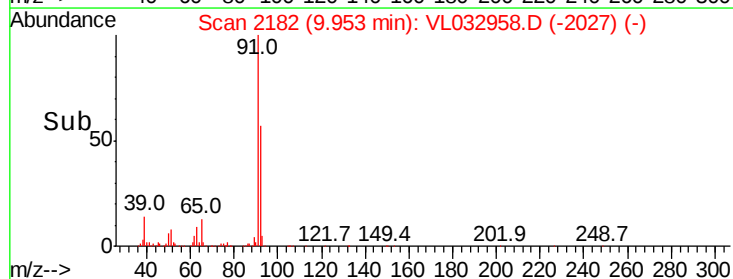
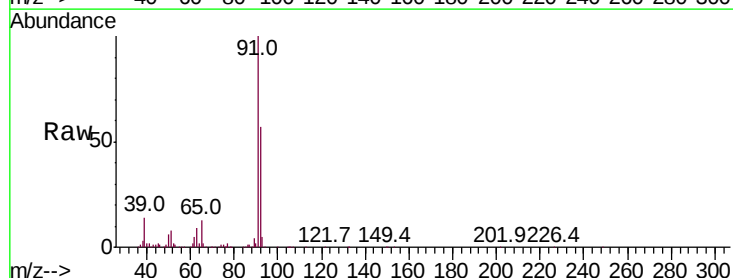
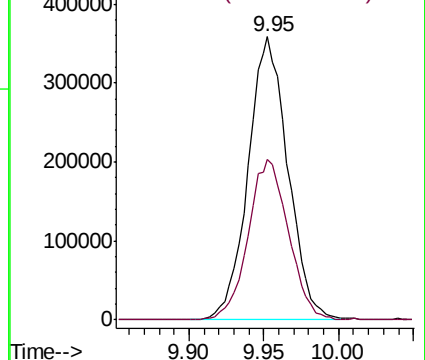
Acq: 11 Dec 2018 17:22

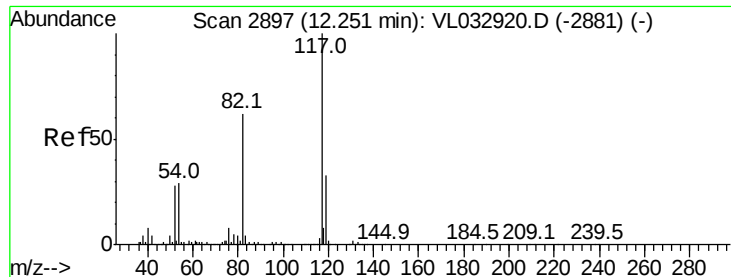
Tgt Ion: 91 Resp: 662461

Ion	Ratio	Lower	Upper
91	100		
92	57.5	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: VL032958.D

Acq: 11 Dec 2018 17:22

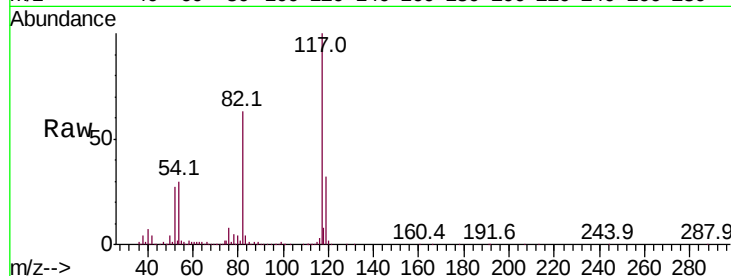
Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:117 Resp: 3159817

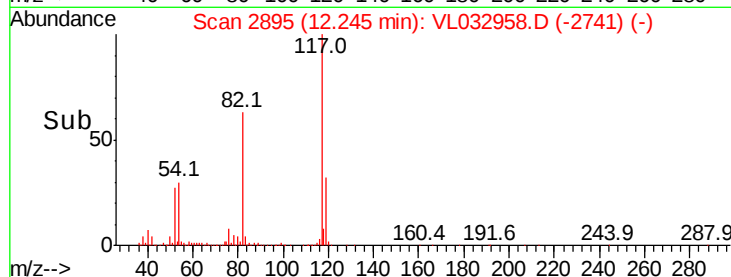
Ion	Ratio	Lower	Upper
117	100		
82	64.5	47.8	71.8
119	32.8	43.1	64.7#



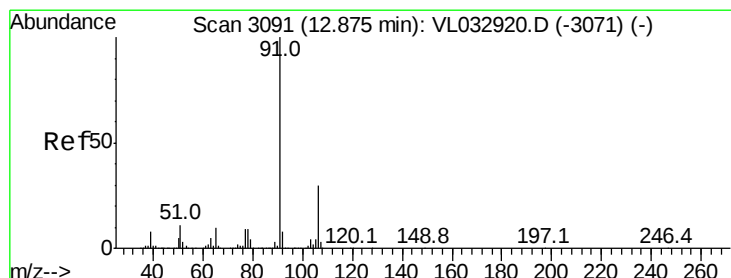
Abundance Ion 117.10 (116.80 to 117.80): V

Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



Time-->



#58

Ethyl Benzene

Concen: 0.042 ppbv

RT: 12.86 min Scan# 3087

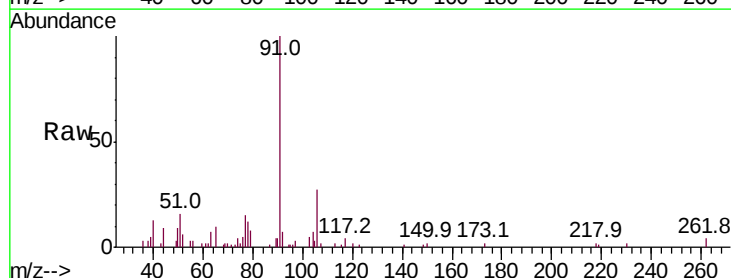
Delta R.T. -0.01 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

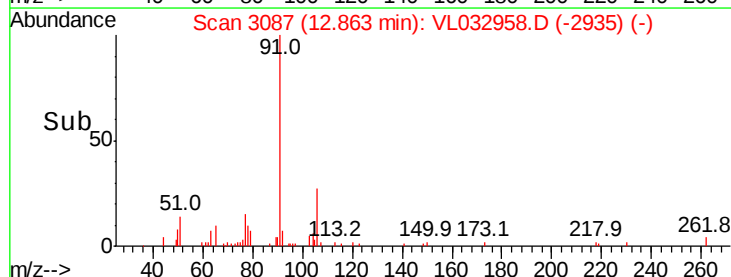
Tgt Ion: 91 Resp: 14322

Ion	Ratio	Lower	Upper
91	100		
106	27.6	23.9	35.9

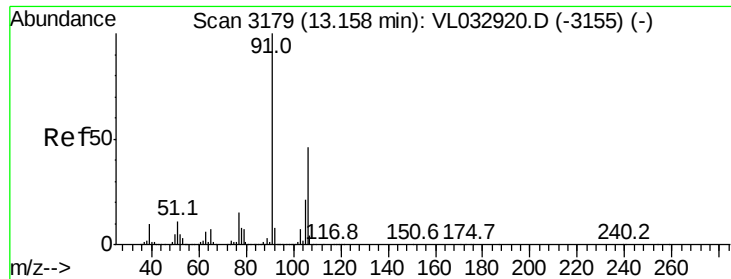


Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V



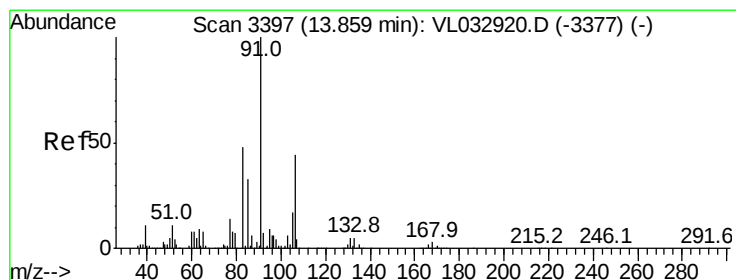
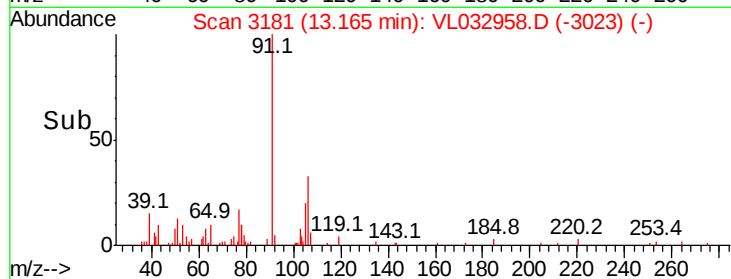
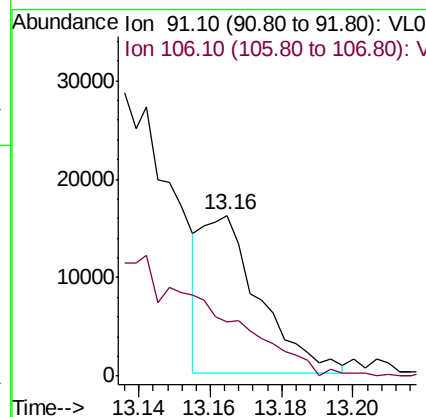
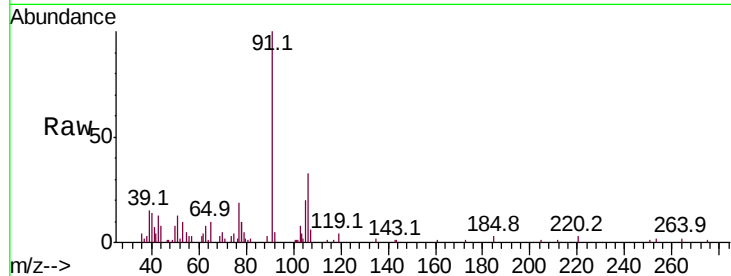
Time-->



#59
m/p-Xylene
Concen: 0.059 ppbv
RT: 13.16 min Scan# 3181
Delta R.T. 0.01 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

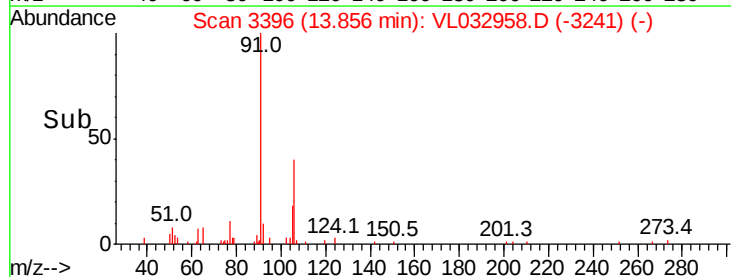
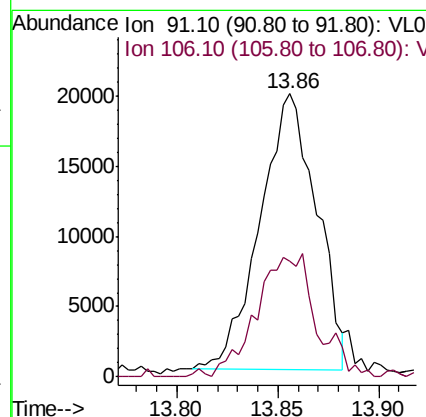
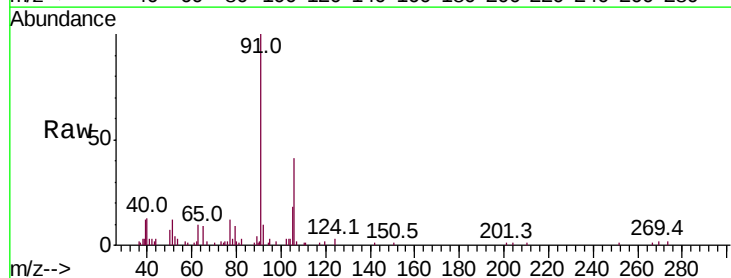
Instrument :
MSVOA_L
ClientSampled :

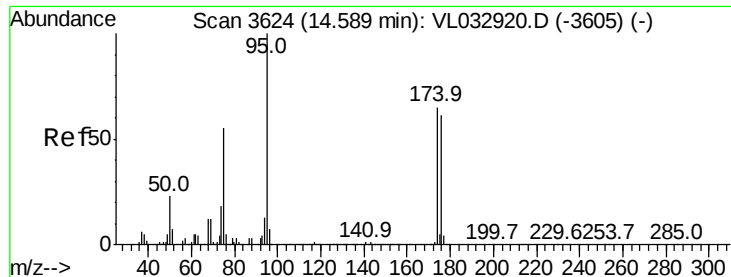
Tot Ion: 91 Resp: 17913
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#60
o-Xylene
Concen: 0.124 ppbv
RT: 13.86 min Scan# 3396
Delta R.T. -0.00 min
Lab File: VL032958.D
Acq: 11 Dec 2018 17:22

Tgt Ion: 91 Resp: 38305
Ion Ratio Lower Upper
91 100
106 47.9 21.9 65.8





#68

1-Bromo-4-Fluorobenzene

Concen: 9.516 ppbv

RT: 14.58 min Scan# 3622

Delta R.T. -0.01 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

ClientSampleId :

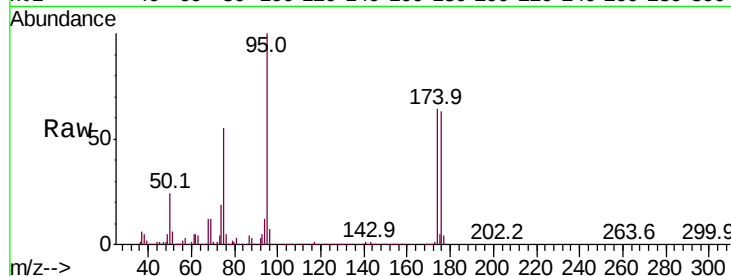
Tot Ion: 95 Resp: 2221511

Ion Ratio Lower Upper

95 100

174 64.7 51.4 77.0

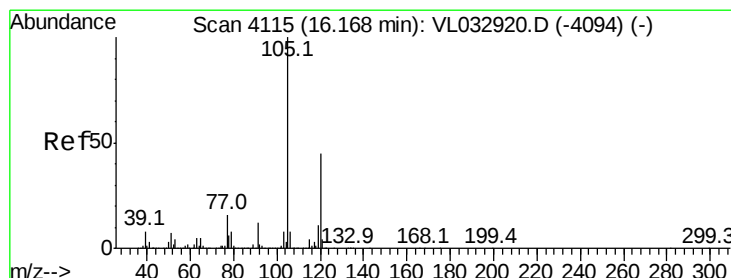
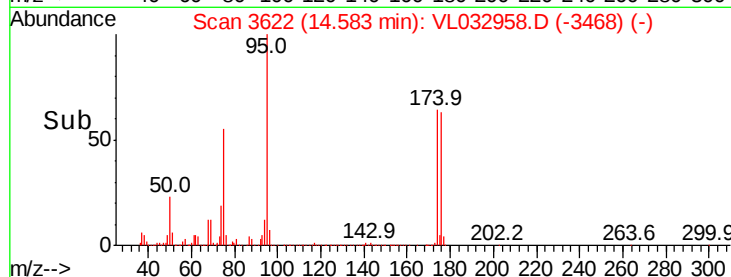
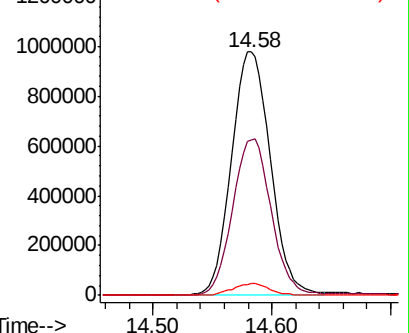
175 4.6 3.8 5.6



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



#73

1,3,5-Trimethylbenzene

Concen: 0.085 ppbv

RT: 16.16 min Scan# 4113

Delta R.T. -0.01 min

Lab File: VL032958.D

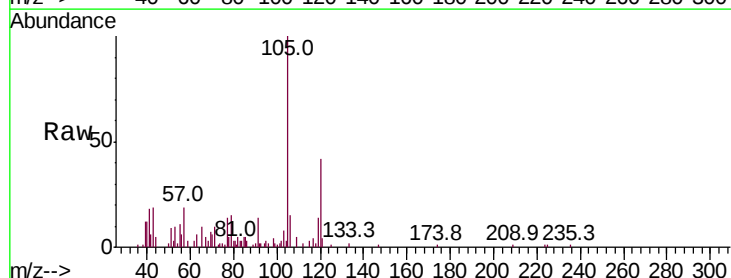
Acq: 11 Dec 2018 17:22

Tgt Ion:105 Resp: 28427

Ion Ratio Lower Upper

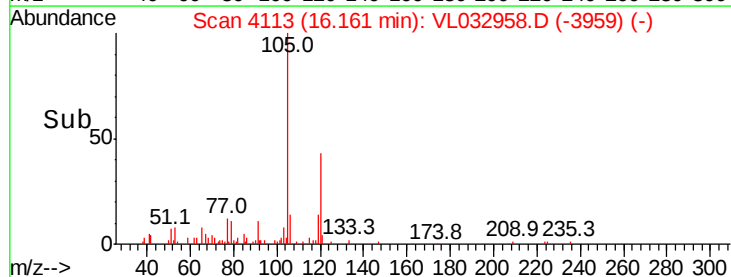
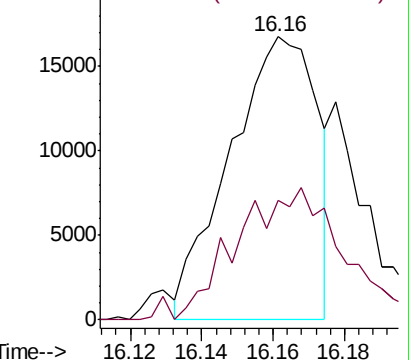
105 100

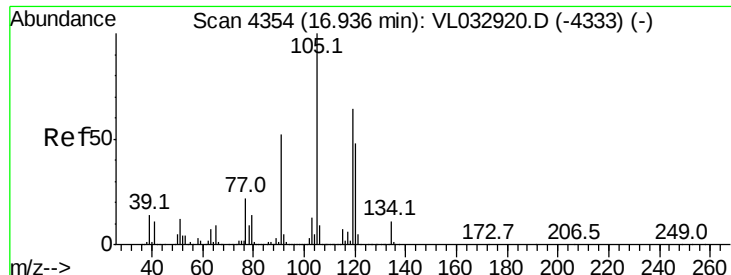
120 45.3 36.0 54.0



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V





#74

1,2,4-Trimethylbenzene

Concen: 0.373 ppbv

RT: 16.94 min Scan# 4354

Delta R.T. 0.00 min

Lab File: VL032958.D

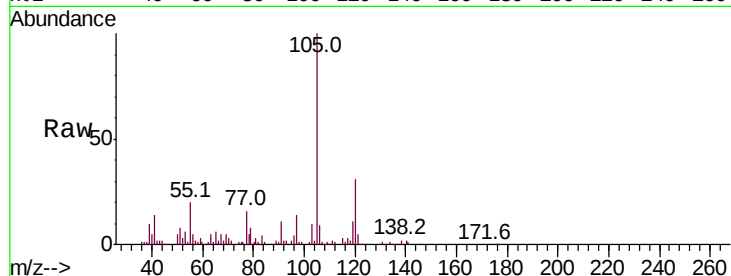
Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	141777
Ion	Ratio	Lower	Upper
105	100		
120	31.6	38.6	58.0#
91	10.2	41.7	62.5#
77	15.7	17.4	26.2#



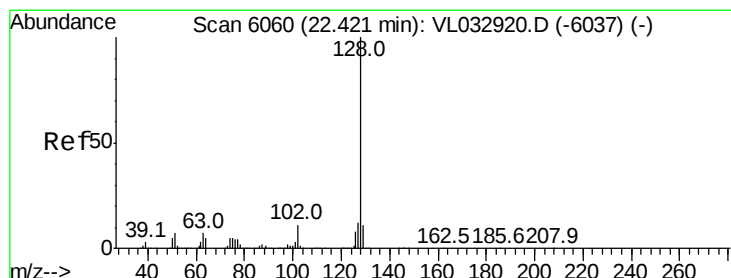
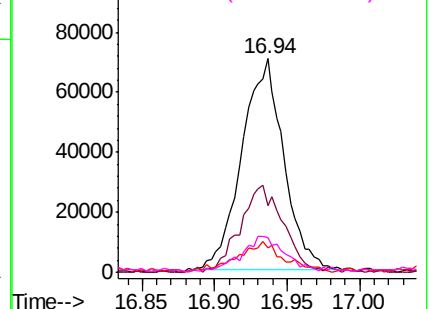
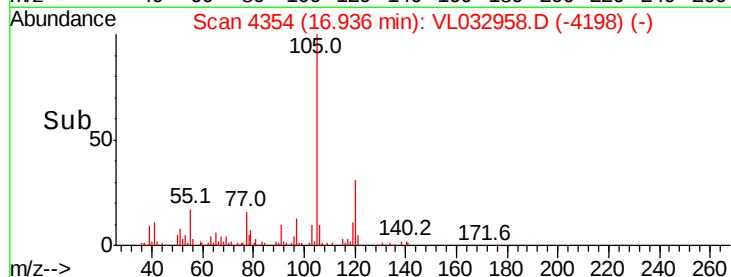
Abundance

Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

Ion 91.10 (90.80 to 91.80): VL0

Ion 77.10 (76.80 to 77.80): VL0



#79

Naphthalene

Concen: 0.093 ppbv

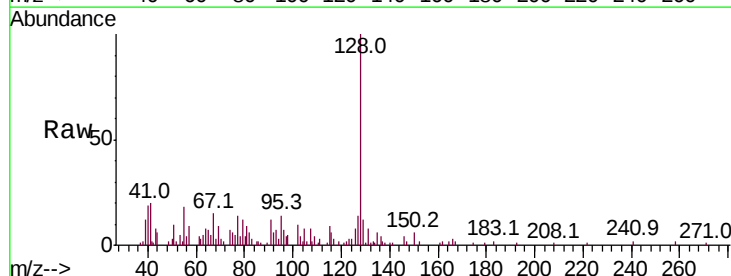
RT: 22.42 min Scan# 6060

Delta R.T. 0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Tgt Ion:	128	Resp:	22852
Ion	Ratio	Lower	Upper
128	100		
127	12.1	9.9	14.9
129	11.2	8.6	13.0

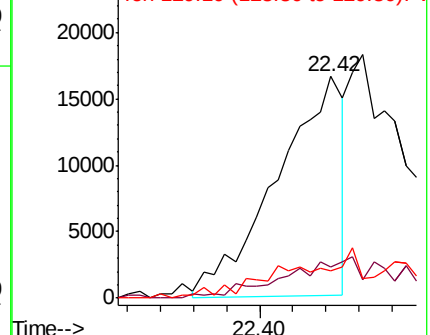
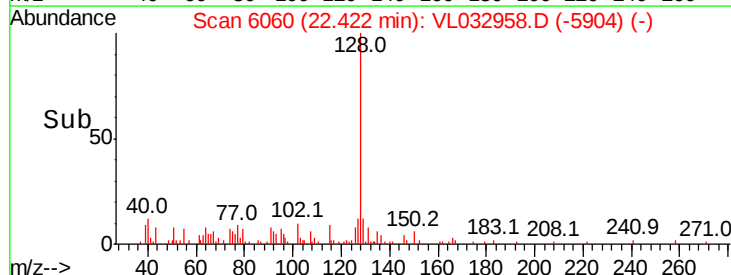


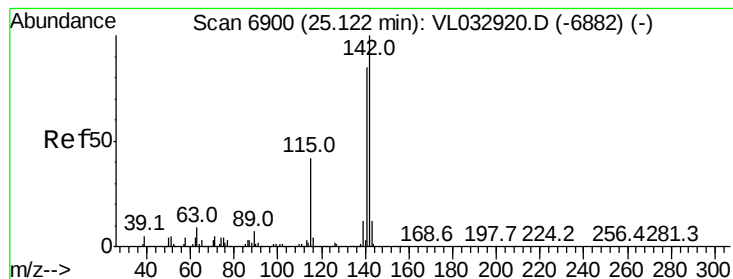
Abundance

Ion 128.10 (127.80 to 128.80): V

Ion 127.10 (126.80 to 127.80): V

Ion 129.10 (128.80 to 129.80): V





#80

Naphthalene,2-methyl-

Concen: 0.175 ppbv

RT: 25.13 min Scan# 6901

Delta R.T. 0.00 min

Lab File: VL032958.D

Acq: 11 Dec 2018 17:22

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:142 Resp: 9184

Ion Ratio Lower Upper

142 100

141 101.0 68.2 102.2

115 113.7 35.1 52.7#

