

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL121718\
 Data File : VL033004.D
 Acq On : 17 Dec 2018 20:33
 Operator : SY/AP
 Sample : J6382-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :

Quant Time: Dec 18 01:16:22 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

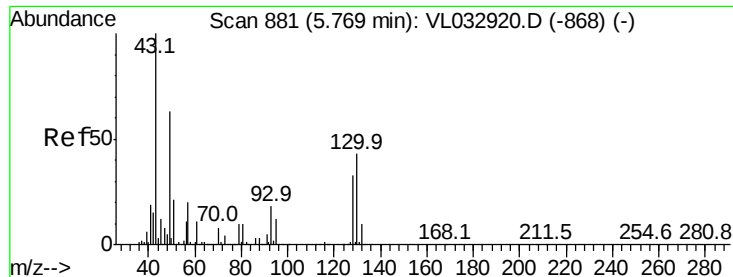
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	1081966	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.30	114	2510938	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.25	117	2548306	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.58	95	2124873	11.29	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	112.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.08	85	83541	0.578	ppbv	99
3) Chlorodifluoromethane	2.99	51	161282	1.968	ppbv #	64
4) Chloromethane	3.18	50	27559	0.578	ppbv	90
9) Propene	3.24	41	33376	1.030	ppbv	84
11) Trichlorofluoromethane	4.01	101	38804	0.285	ppbv	84
12) 1,1,2-Trichlorotrifluoroet	4.56	101	5940	0.051	ppbv #	12
13) Ethanol	3.65	45	145409	13.034	ppbv	93
15) Acetone	3.91	43	315453	3.397	ppbv	99
16) 1,3-Butadiene	3.35	39	6461	0.175	ppbv #	33
19) Isopropyl Alcohol	4.05	45	16610	0.285	ppbv #	95
20) Methylene Chloride	4.41	84	26475	0.583	ppbv #	88
23) Vinyl Acetate	5.15	43	18509	0.118	ppbv #	21
25) Ethyl Acetate	5.78	43	118305	0.539	ppbv #	93
26) Hexane	5.78	57	99114	0.979	ppbv #	62
29) Chloroform	5.85	83	7301	0.040	ppbv	88
34) 2-Butanone	5.34	43	102103	0.934	ppbv	99
36) Benzene	7.01	78	71460	0.387	ppbv	98
37) 1,2-Dichloroethane	6.42	62	4141	0.033	ppbv	99
38) Trichloroethene	7.96	130	5315	0.069	ppbv	95
39) 1,2-Dichloropropane	7.30	63	608421	8.687	ppbv #	22
44) 2,2,4-Trimethylpentane	7.99	57	18502	0.059	ppbv #	18
53) Toluene	9.95	91	2341140	11.952	ppbv	99
58) Ethyl Benzene	12.87	91	19777	0.073	ppbv	97
59) m/p-Xylene	13.16	91	8354	0.034	ppbv #	100
60) o-Xylene	13.85	91	12616	0.051	ppbv #	21
70) n-Butylbenzene	18.72	91	12974	0.037	ppbv #	10
72) 4-Ethyltoluene	16.01	105	13133	0.047	ppbv #	65
73) 1,3,5-Trimethylbenzene	16.16	105	10029	0.037	ppbv	90
74) 1,2,4-Trimethylbenzene	16.94	105	94367	0.308	ppbv #	73
80) Naphthalene,2-methyl-	25.12	142	17697	0.419	ppbv #	33

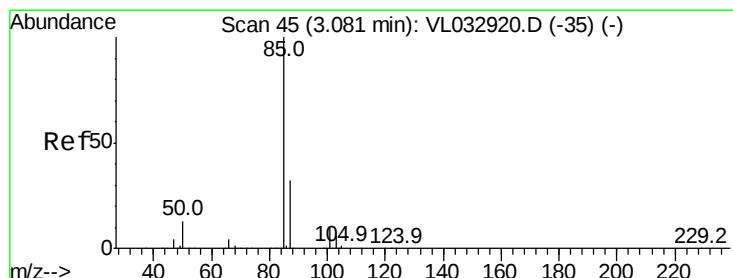
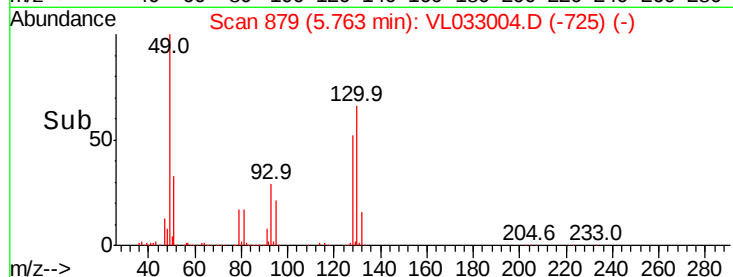
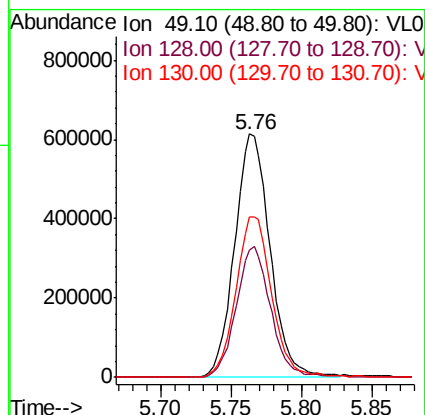
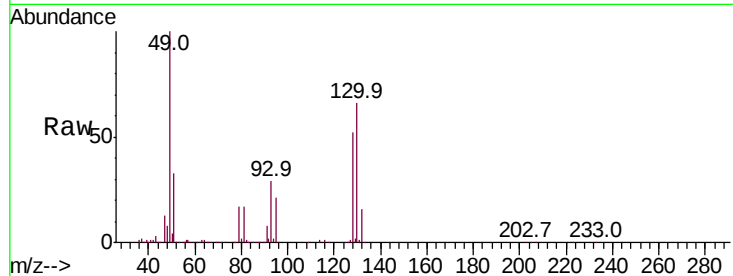
(#) = qualifier out of range (m) = manual integration (+) = signals summed



#1
 Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.76 min Scan# 879
 Delta R.T. -0.01 min
 Lab File: VL033004.D
 Acq: 17 Dec 2018 20:33

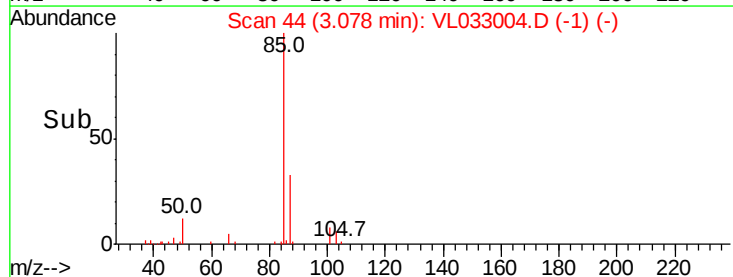
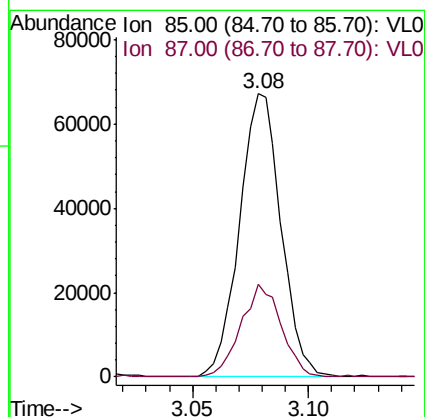
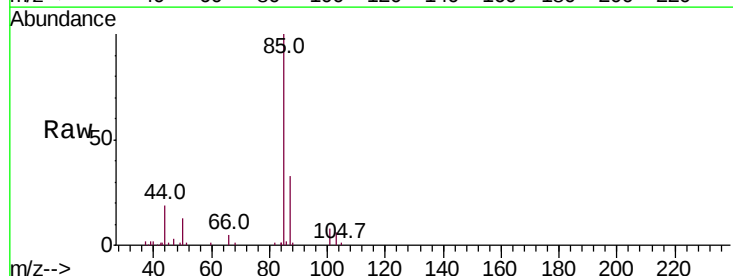
Instrument :
 MSVOA_L
 ClientSampleId :

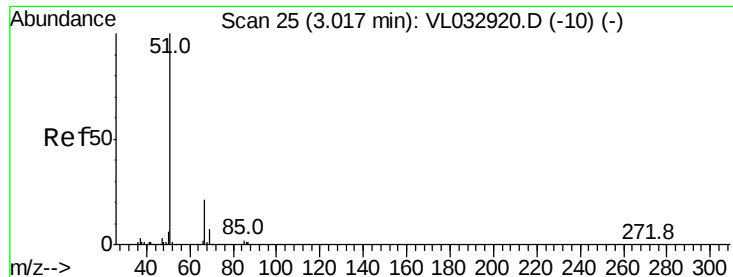
Tot Ion: 49 Resp: 1081966
 Ion Ratio Lower Upper
 49 100
 128 52.7 26.3 78.8
 130 67.4 33.9 101.7



#2
 Dichlorodifluoromethane
 Concen: 0.578 ppbv
 RT: 3.08 min Scan# 44
 Delta R.T. -0.00 min
 Lab File: VL033004.D
 Acq: 17 Dec 2018 20:33

Tgt Ion: 85 Resp: 83541
 Ion Ratio Lower Upper
 85 100
 87 32.4 25.7 38.5





#3

Chlorodifluoromethane

Concen: 1.968 ppbv

RT: 2.99 min Scan# 17

Delta R.T. -0.03 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

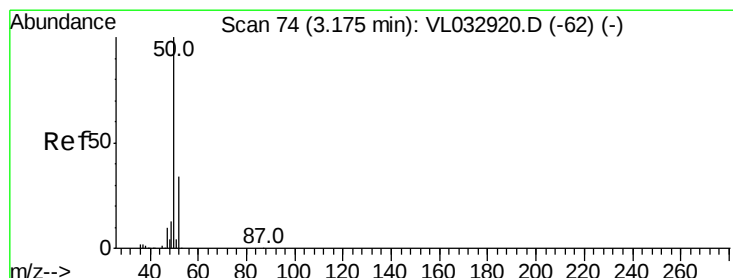
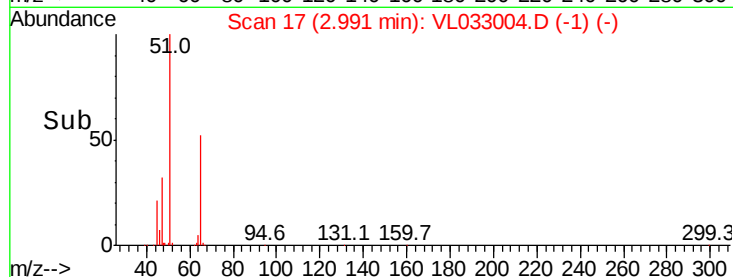
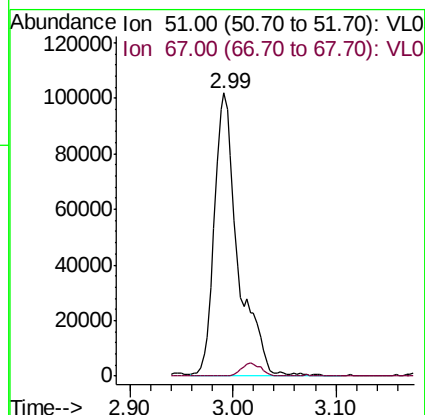
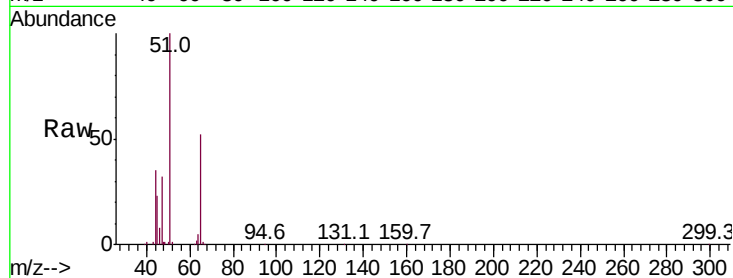
ClientSampleId :

Tot Ion: 51 Resp: 161282

Ion Ratio Lower Upper

51 100

67 3.9 16.8 25.2#



#4

Chloromethane

Concen: 0.578 ppbv

RT: 3.18 min Scan# 75

Delta R.T. 0.00 min

Lab File: VL033004.D

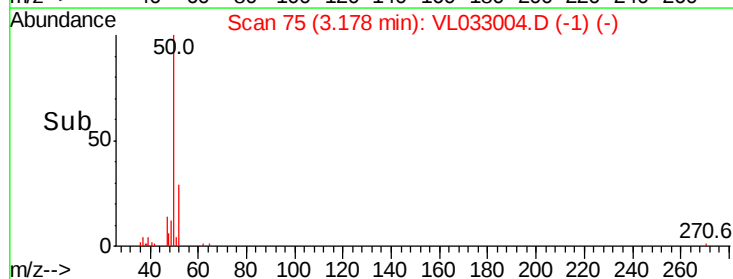
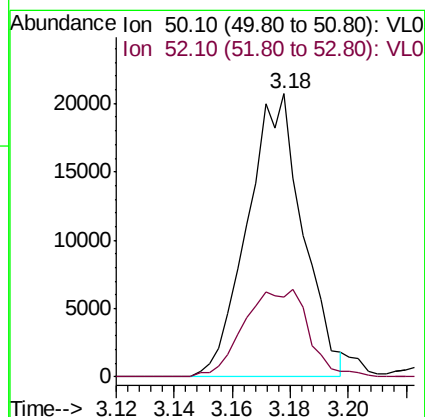
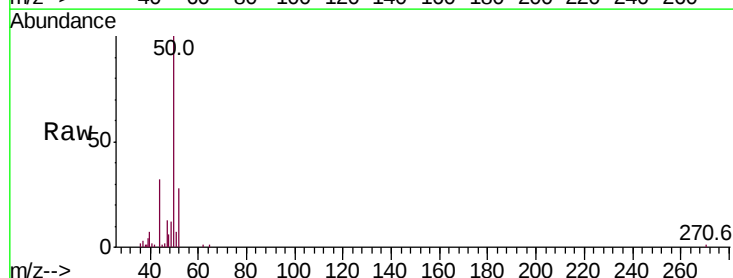
Acq: 17 Dec 2018 20:33

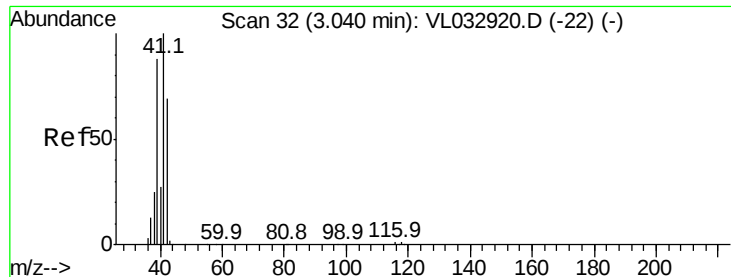
Tgt Ion: 50 Resp: 27559

Ion Ratio Lower Upper

50 100

52 28.4 27.3 40.9





#9

Propene

Concen: 1.030 ppbv

RT: 3.24 min Scan# 94

Delta R.T. 0.20 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

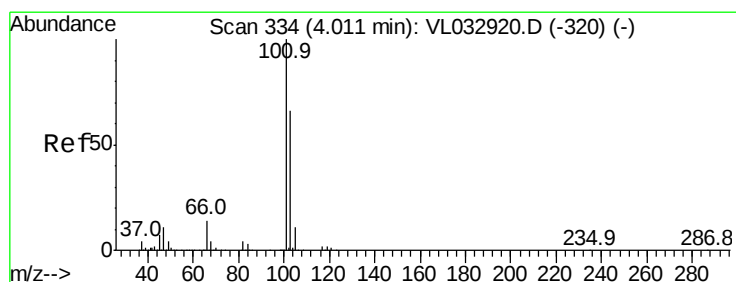
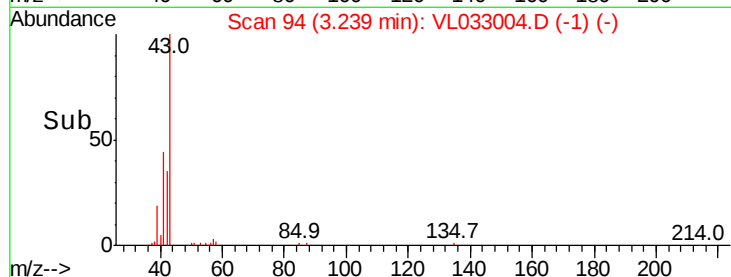
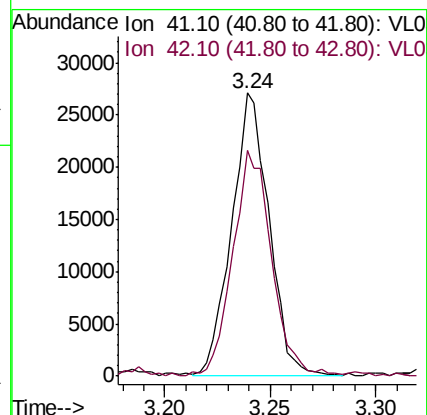
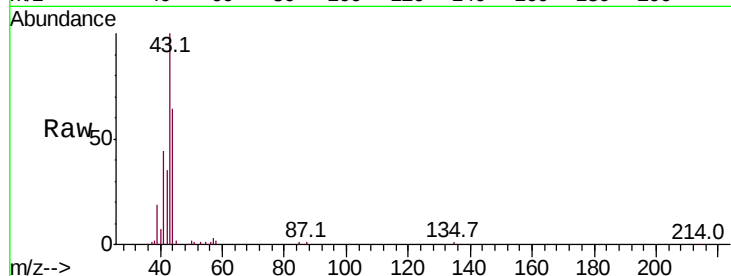
ClientSampleId :

Tot Ion: 41 Resp: 33376

Ion Ratio Lower Upper

41 100

42 83.6 56.2 84.2



#11

Trichlorofluoromethane

Concen: 0.285 ppbv

RT: 4.01 min Scan# 334

Delta R.T. 0.00 min

Lab File: VL033004.D

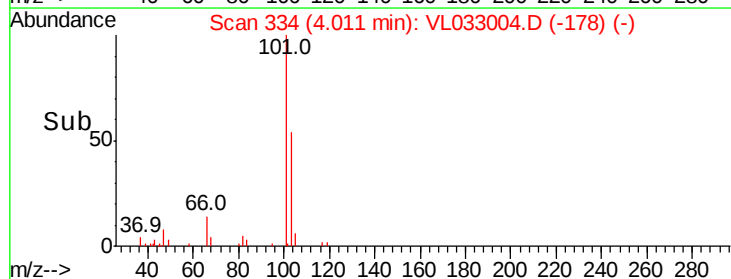
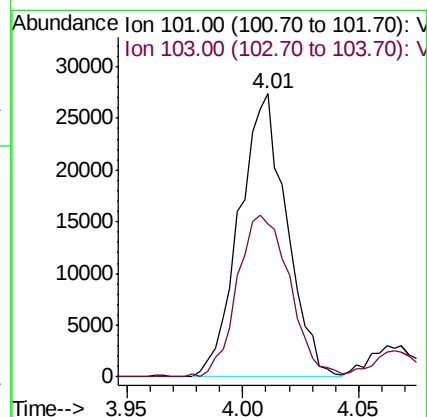
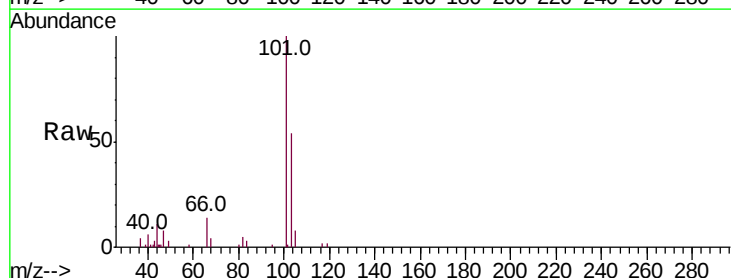
Acq: 17 Dec 2018 20:33

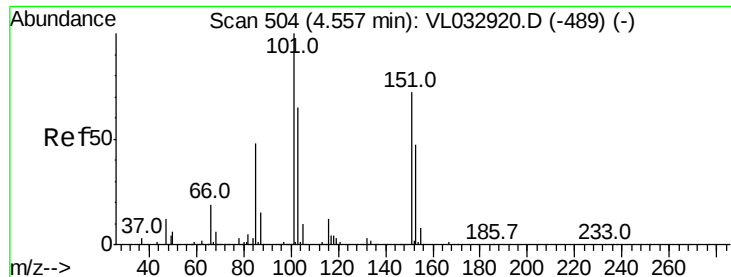
Tgt Ion: 101 Resp: 38804

Ion Ratio Lower Upper

101 100

103 53.1 52.7 79.1





#12

1,1,2-Trichlorotrifluoroethane

Concen: 0.051 ppbv

RT: 4.56 min Scan# 504

Delta R.T. 0.00 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

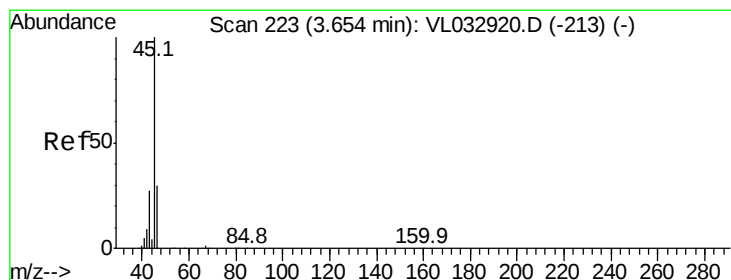
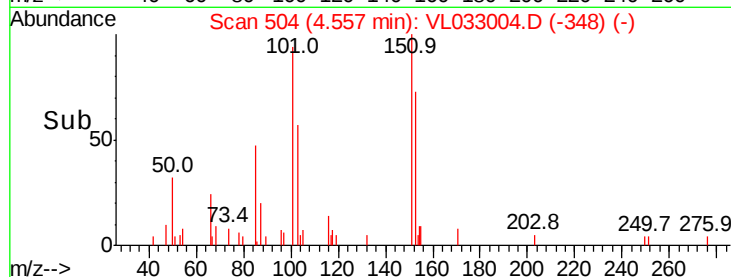
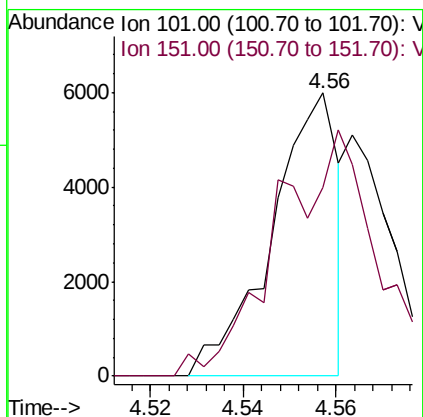
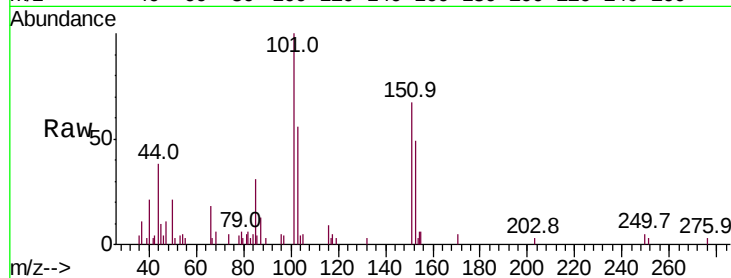
ClientSampleId :

Tot Ion:101 Resp: 5940

Ion Ratio Lower Upper

101 100

151 0.0 59.3 88.9#



#13

Ethanol

Concen: 13.034 ppbv

RT: 3.65 min Scan# 223

Delta R.T. 0.00 min

Lab File: VL033004.D

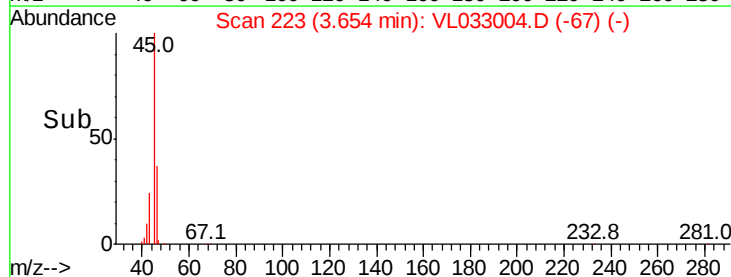
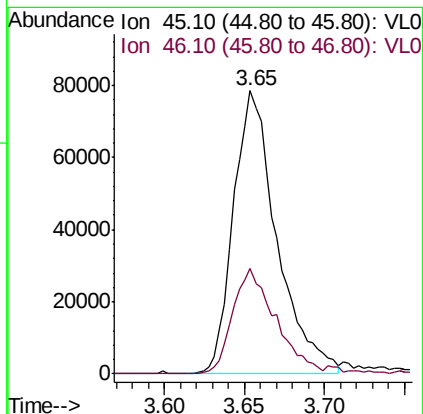
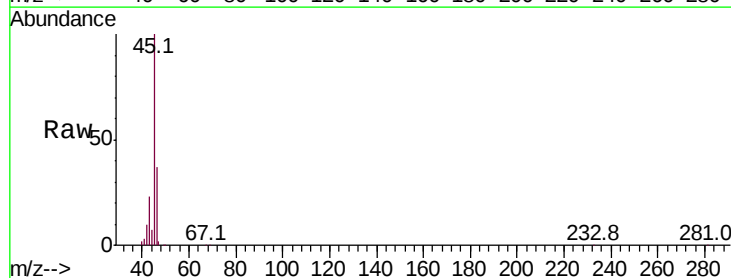
Acq: 17 Dec 2018 20:33

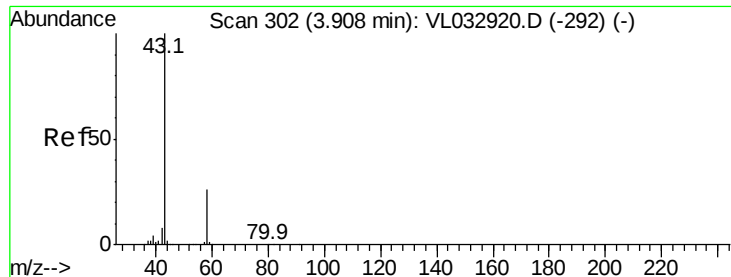
Tgt Ion: 45 Resp: 145409

Ion Ratio Lower Upper

45 100

46 38.5 13.8 55.4





#15

Acetone

Concen: 3.397 ppbv

RT: 3.91 min Scan# 302

Delta R.T. 0.00 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

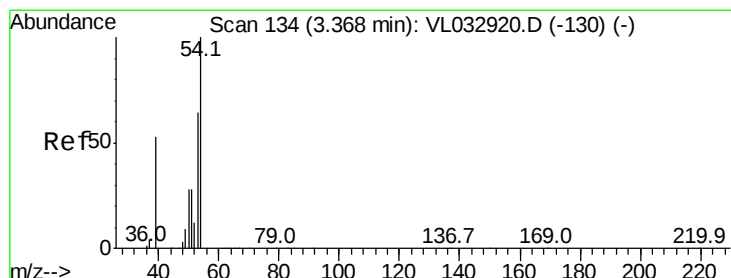
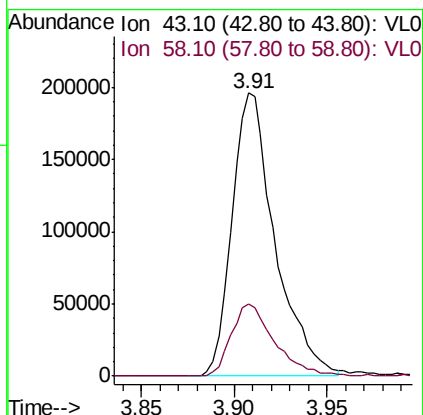
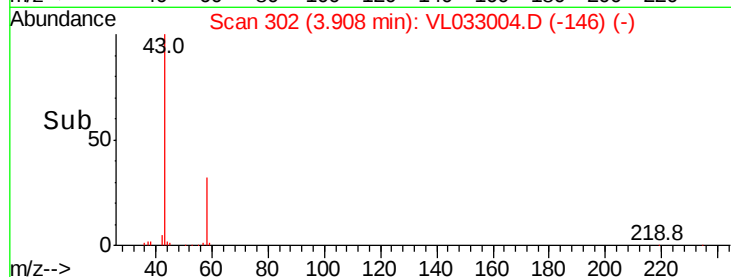
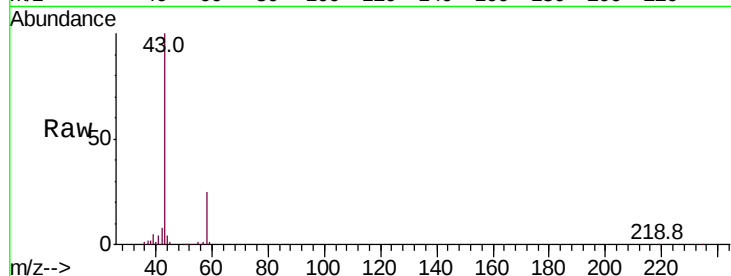
ClientSampled :

Tot Ion: 43 Resp: 315453

Ion Ratio Lower Upper

43 100

58 26.1 20.6 30.8



#16

1,3-Butadiene

Concen: 0.175 ppbv

RT: 3.35 min Scan# 129

Delta R.T. -0.02 min

Lab File: VL033004.D

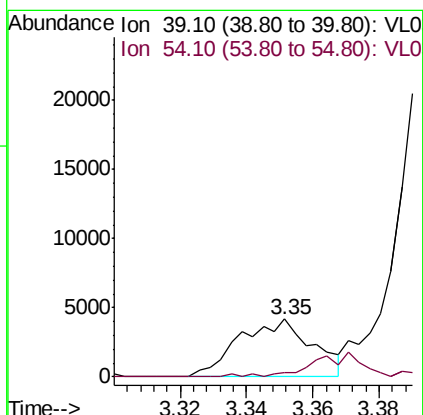
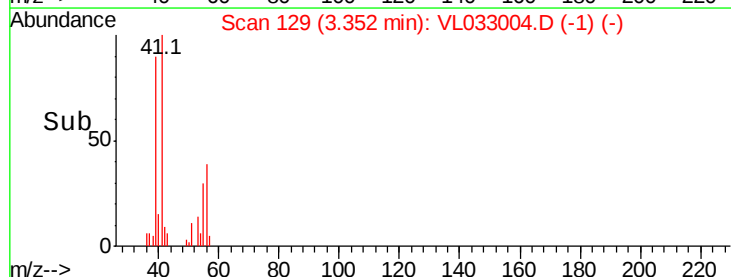
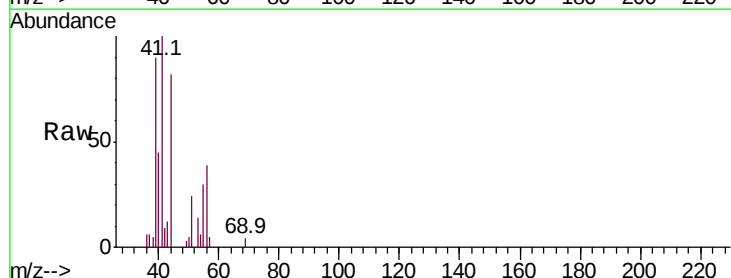
Acq: 17 Dec 2018 20:33

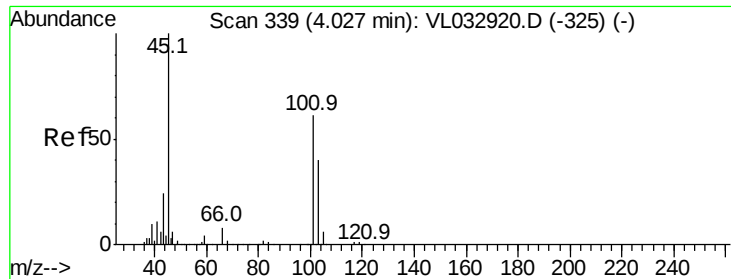
Tgt Ion: 39 Resp: 6461

Ion Ratio Lower Upper

39 100

54 27.5 72.7 109.1#





#19

Isopropyl Alcohol

Concen: 0.285 ppbv

RT: 4.05 min Scan# 345

Delta R.T. 0.02 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

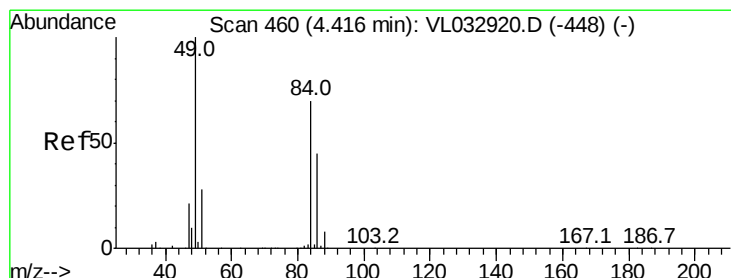
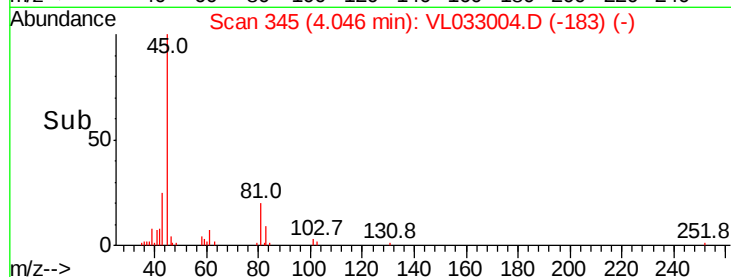
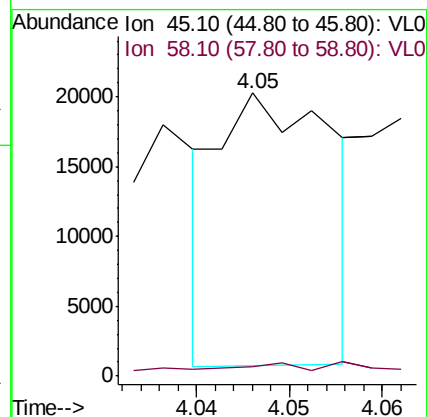
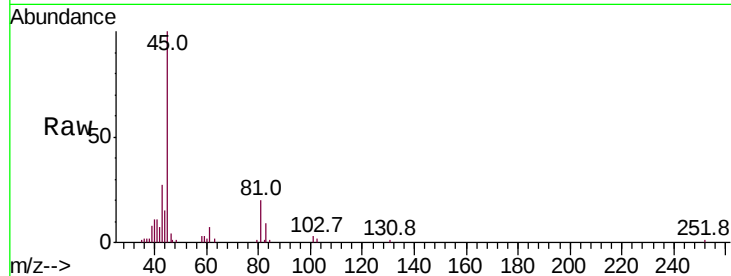
ClientSampleId :

Tot Ion: 45 Resp: 16610

Ion Ratio Lower Upper

45 100

58 0.0 1.4 2.2#



#20

Methylene Chloride

Concen: 0.583 ppbv

RT: 4.41 min Scan# 459

Delta R.T. -0.00 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Tgt Ion: 84 Resp: 26475

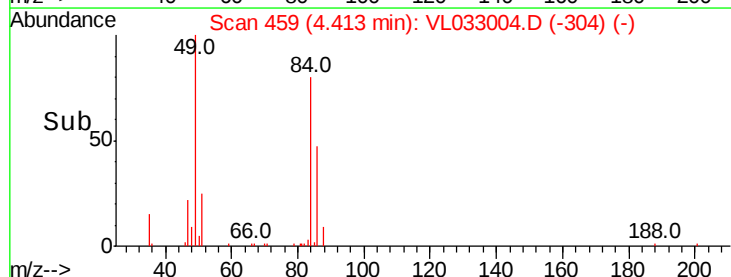
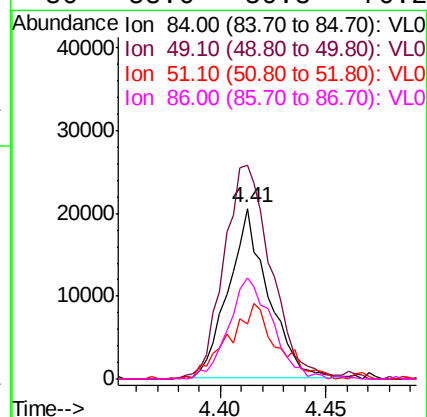
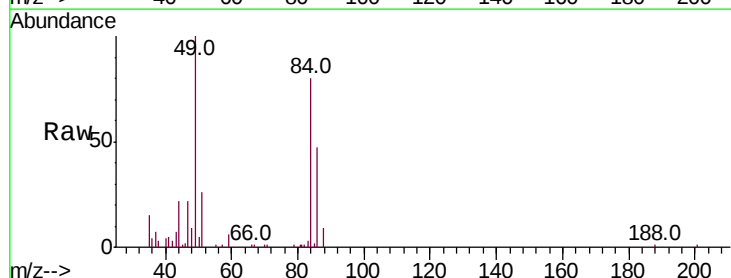
Ion Ratio Lower Upper

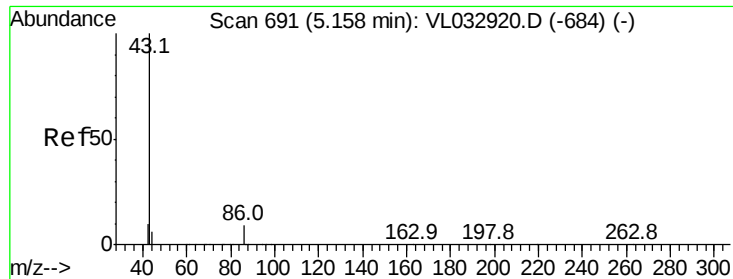
84 100

49 124.0 113.8 170.8

51 31.7 31.8 47.8#

86 58.6 50.8 76.2





#23

Vinyl Acetate

Concen: 0.118 ppbv

RT: 5.15 min Scan# 687

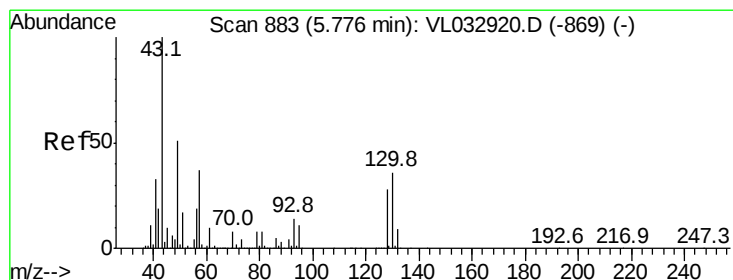
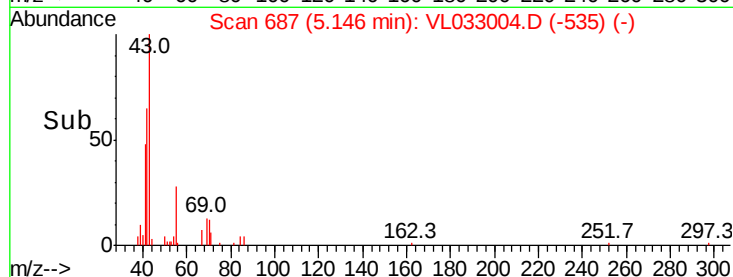
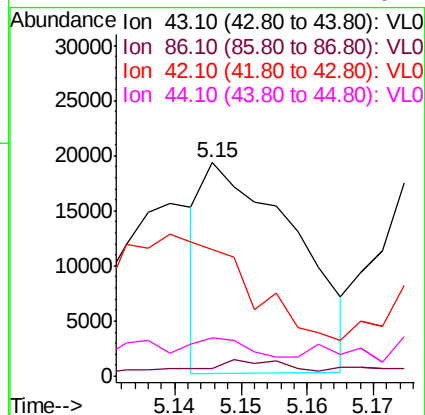
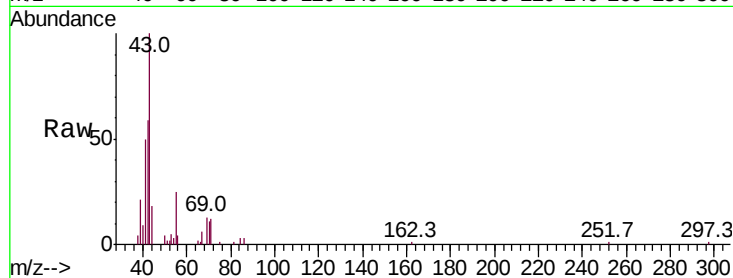
Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :
MSVOA_L
ClientSampled :

Tot Ion:	43	Resp:	18509
Ion	Ratio	Lower	Upper
43	100		
86	0.0	6.6	9.8#
42	67.8	8.3	12.5#
44	12.2	4.2	6.4#



#25

Ethyl Acetate

Concen: 0.539 ppbv

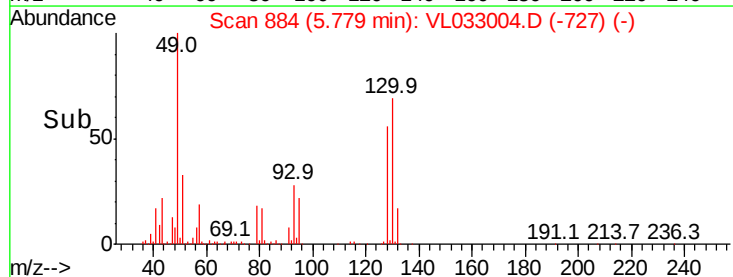
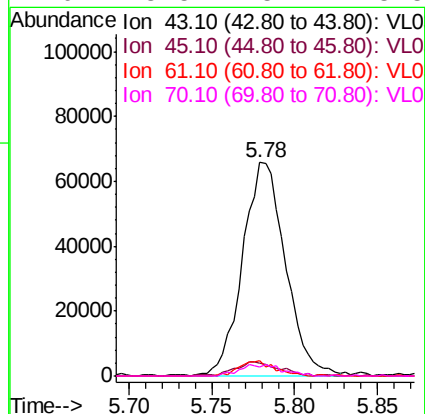
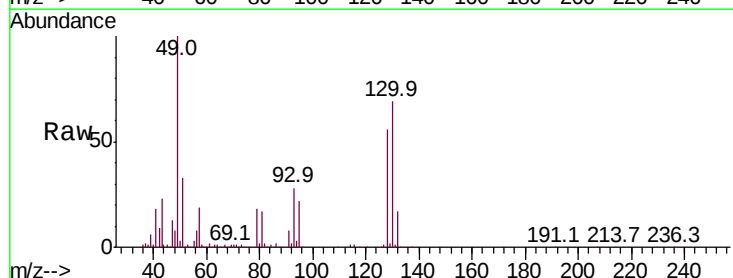
RT: 5.78 min Scan# 884

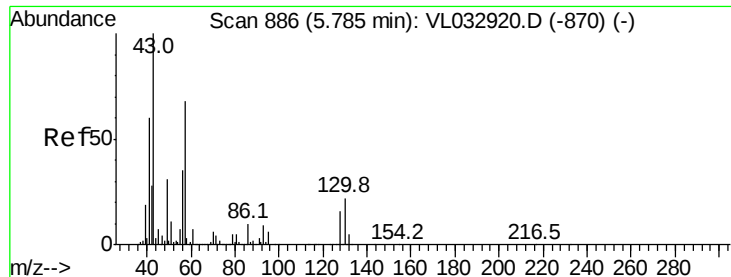
Delta R.T. 0.00 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Tgt Ion:	43	Resp:	118305
Ion	Ratio	Lower	Upper
43	100		
45	7.0	7.8	11.6#
61	6.2	7.4	11.2#
70	5.5	5.7	8.5#





#26

Hexane

Concen: 0.979 ppbv

RT: 5.78 min Scan# 885

Delta R.T. -0.00 min

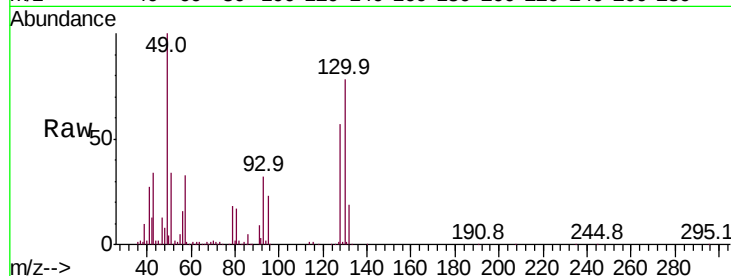
Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :
MSVOA_L
ClientSampled :

Tot Ion: 57 Resp: 99114

Ion	Ratio	Lower	Upper
57	100		
41	96.4	72.2	108.2
43	120.0	171.9	257.9#
56	54.9	42.2	63.2



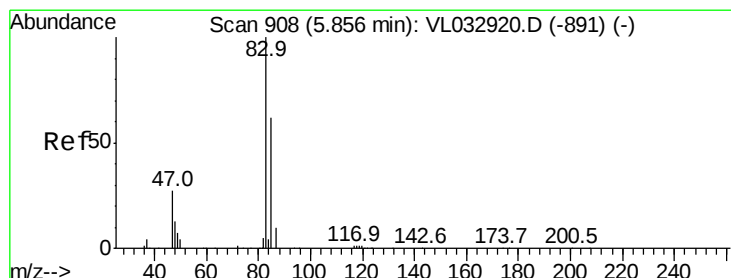
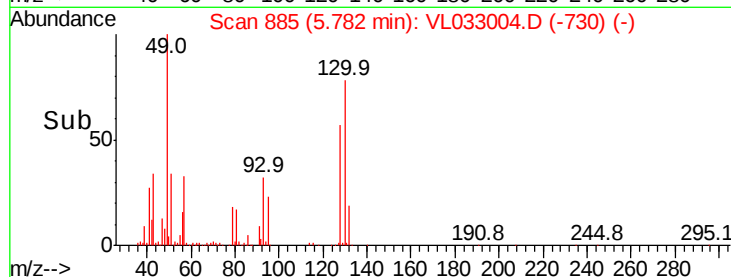
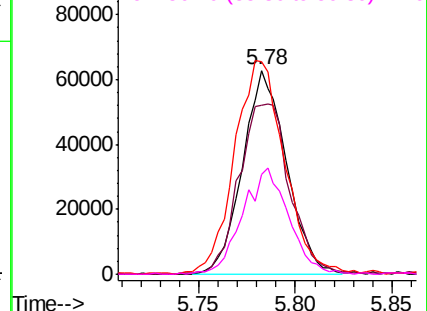
Abundance

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



#29

Chloroform

Concen: 0.040 ppbv

RT: 5.85 min Scan# 906

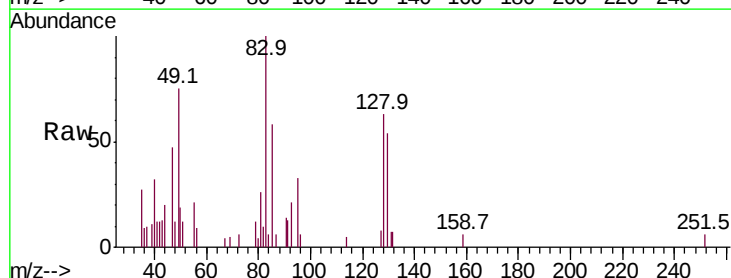
Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Tgt Ion: 83 Resp: 7301

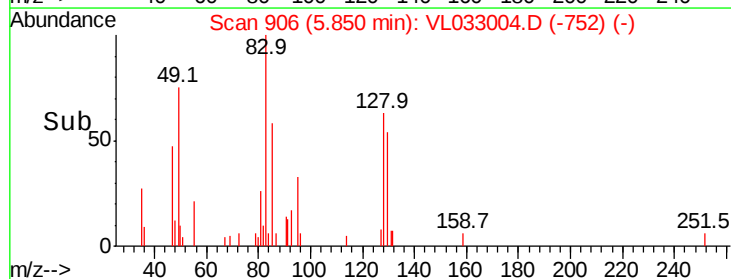
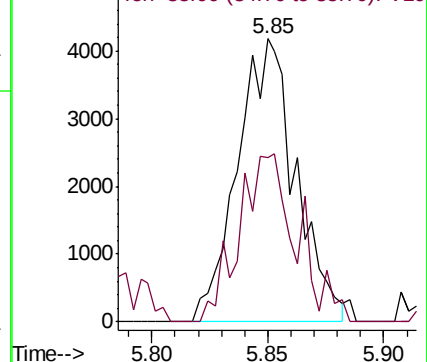
Ion	Ratio	Lower	Upper
83	100		
85	53.0	49.8	74.8

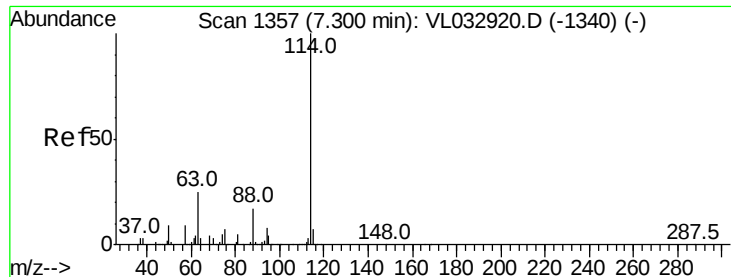


Abundance

Ion 83.00 (82.70 to 83.70): VL0

Ion 85.00 (84.70 to 85.70): VL0

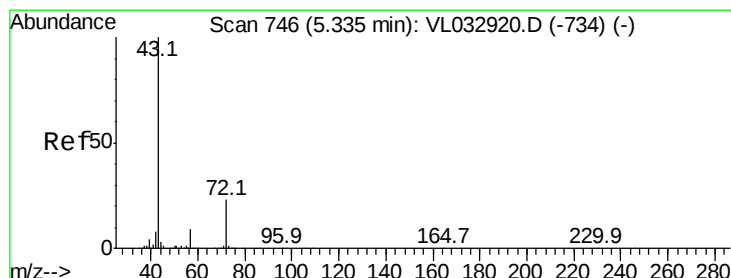
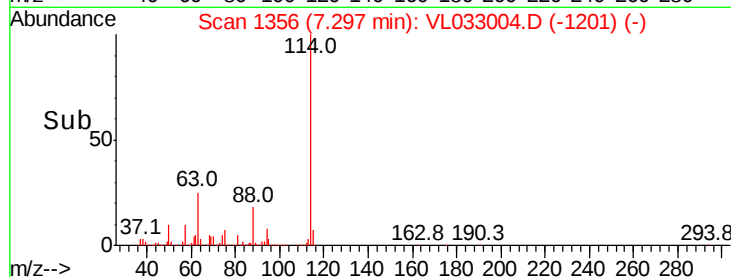
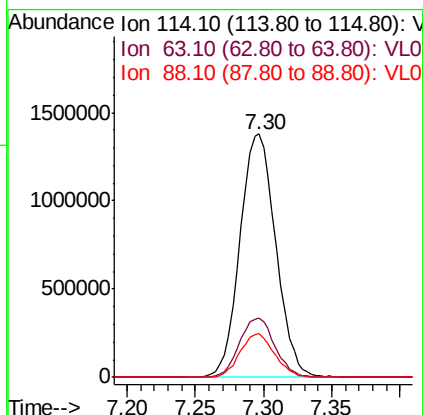
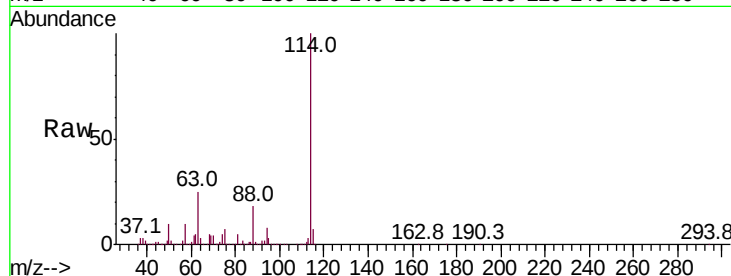




#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.30 min Scan# 1356
 Delta R.T. -0.00 min
 Lab File: VL033004.D
 Acq: 17 Dec 2018 20:33

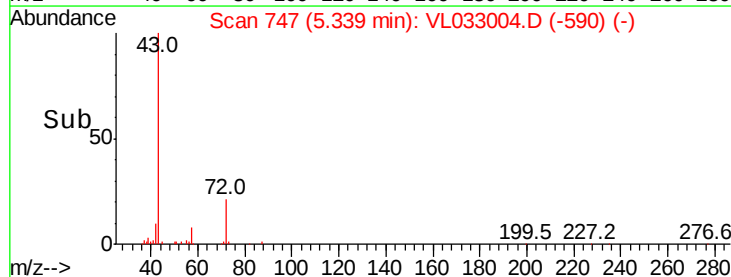
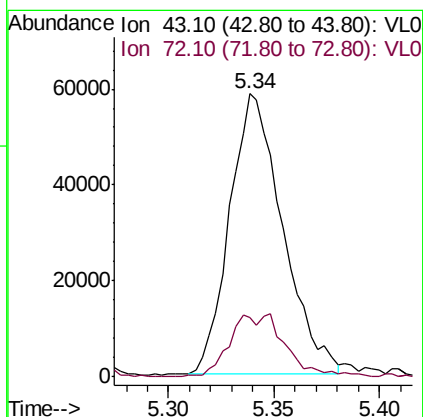
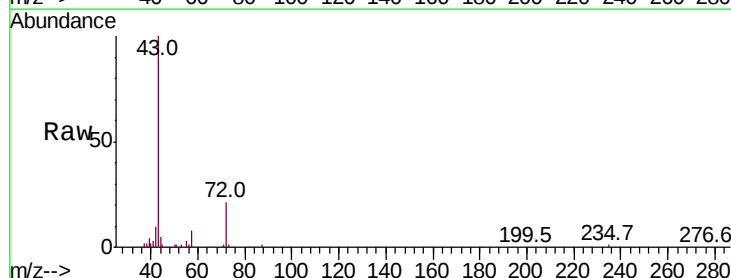
Instrument :
 MSVOA_L
 ClientSampleId :

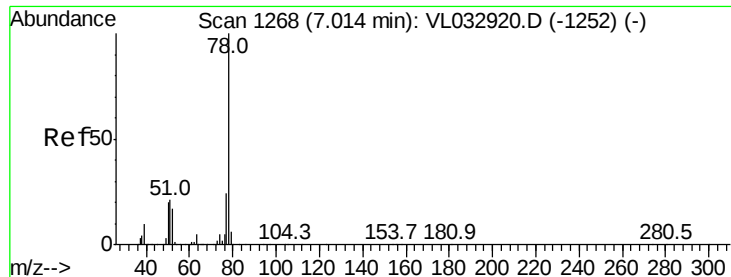
Tot Ion:114 Resp: 2510938
 Ion Ratio Lower Upper
 114 100
 63 24.4 20.1 30.1
 88 17.4 14.2 21.4



#34
 2-Butanone
 Concen: 0.934 ppbv
 RT: 5.34 min Scan# 747
 Delta R.T. 0.00 min
 Lab File: VL033004.D
 Acq: 17 Dec 2018 20:33

Tgt Ion: 43 Resp: 102103
 Ion Ratio Lower Upper
 43 100
 72 24.1 18.8 28.2

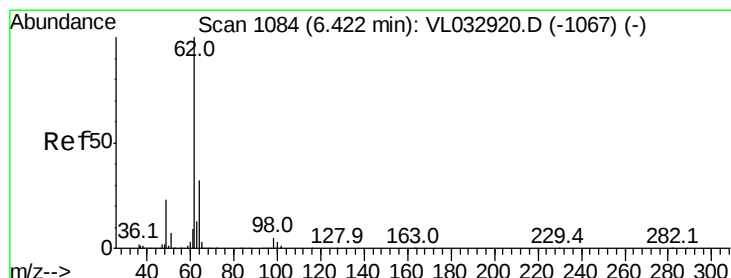
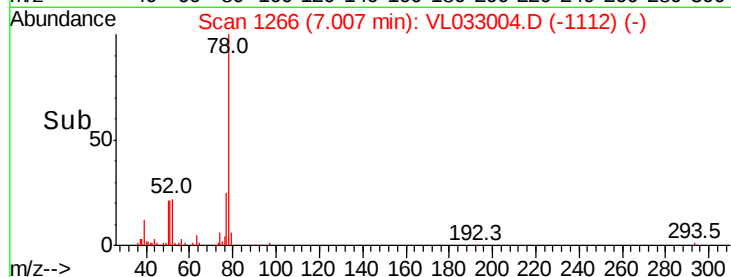
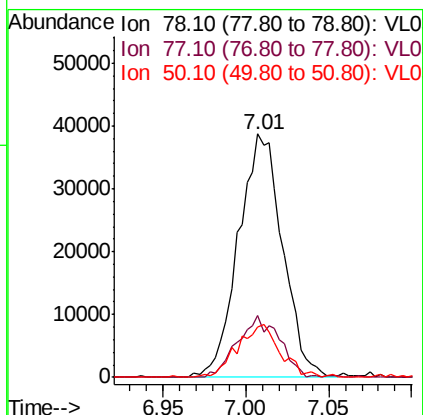
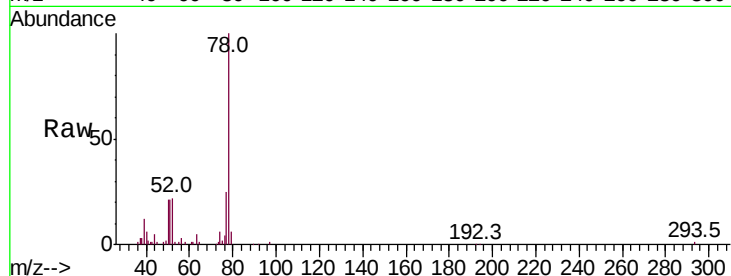




#36
Benzene
Concen: 0.387 ppbv
RT: 7.01 min Scan# 1266
Delta R.T. -0.01 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

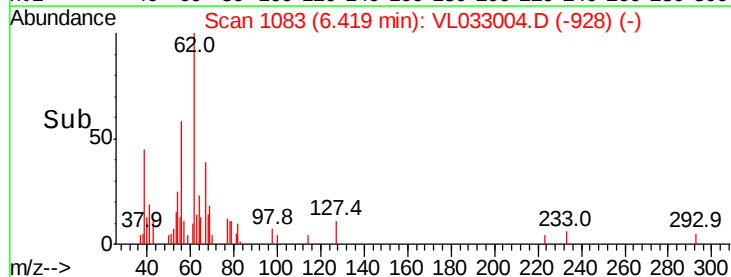
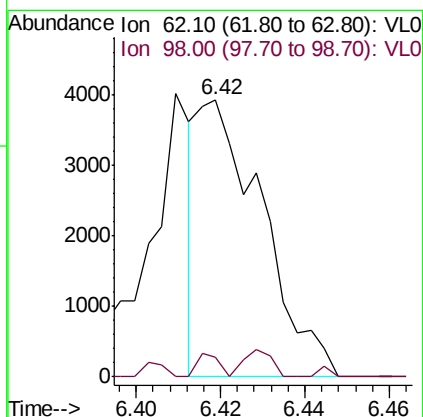
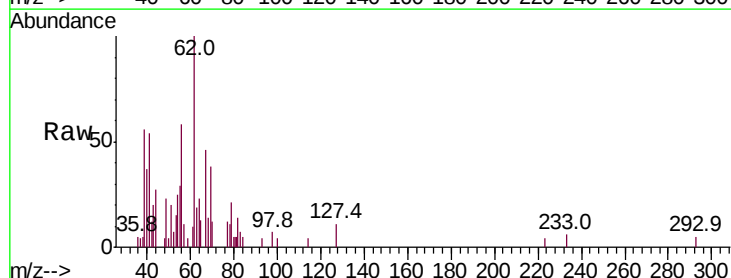
Instrument :
MSVOA_L
ClientSampled :

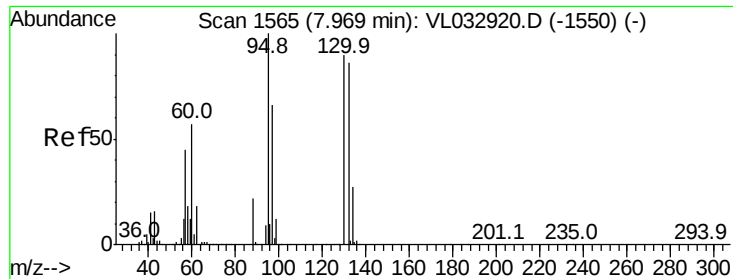
Tot Ion: 78 Resp: 71460
Ion Ratio Lower Upper
78 100
77 25.2 18.9 28.3
50 20.7 16.1 24.1



#37
1,2-Dichloroethane
Concen: 0.033 ppbv
RT: 6.42 min Scan# 1083
Delta R.T. -0.00 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

Tgt Ion: 62 Resp: 4141
Ion Ratio Lower Upper
62 100
98 5.0 4.3 6.5





#38

Trichloroethene

Concen: 0.069 ppbv

RT: 7.96 min Scan# 1563

Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:130 Resp: 5315

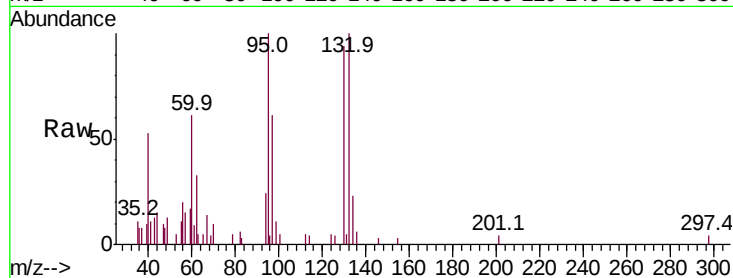
Ion Ratio Lower Upper

130 100

95 106.2 88.6 132.8

132 98.7 76.1 114.1

97 64.7 58.0 87.0

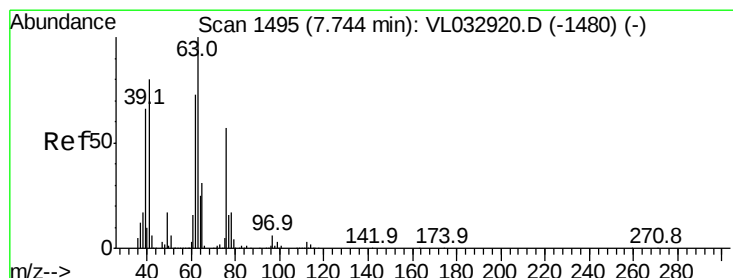
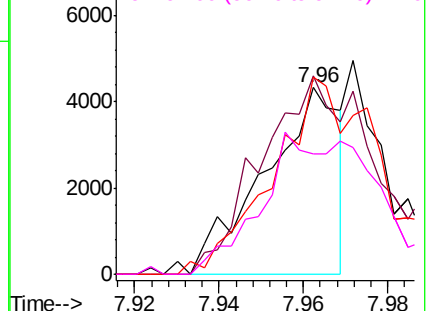
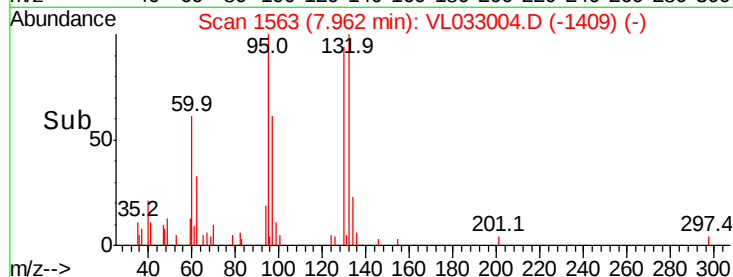


Abundance Ion 130.00 (129.70 to 130.70): V

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: 8.687 ppbv

RT: 7.30 min Scan# 1356

Delta R.T. -0.45 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

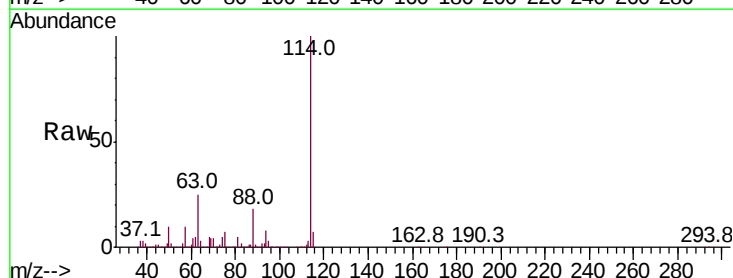
Tgt Ion: 63 Resp: 608421

Ion Ratio Lower Upper

63 100

41 0.0 63.9 95.9#

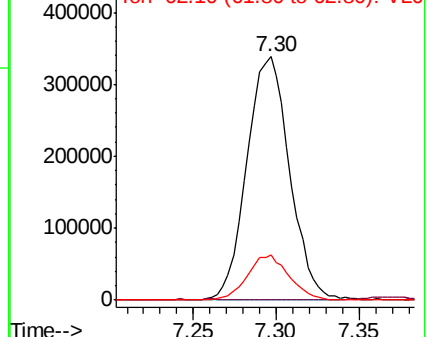
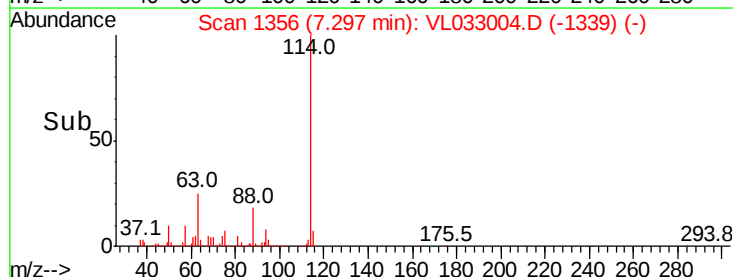
62 18.7 58.8 88.2#

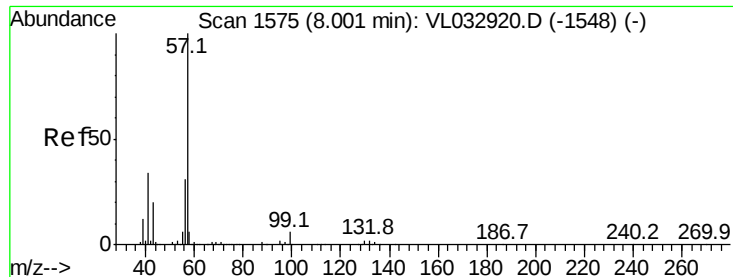


Abundance Ion 63.10 (62.80 to 63.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

Ion 62.10 (61.80 to 62.80): VL0





#44

2,2,4-Trimethylpentane

Concen: 0.059 ppbv

RT: 7.99 min Scan# 1572

Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

ClientSampled :

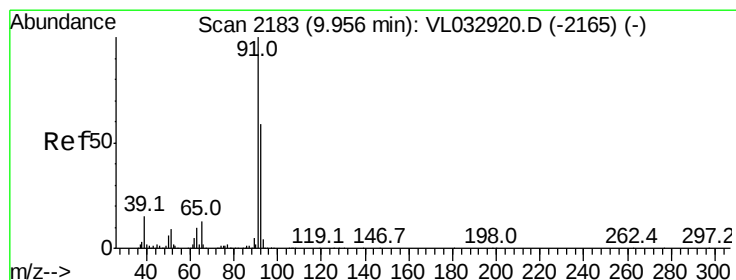
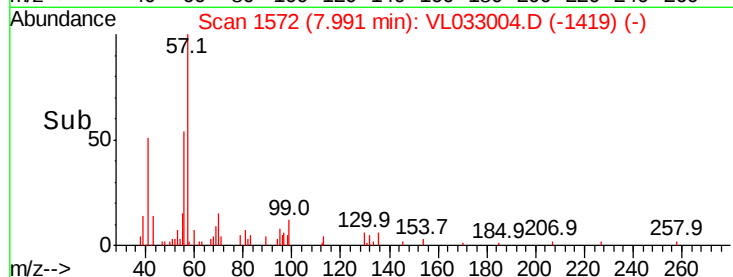
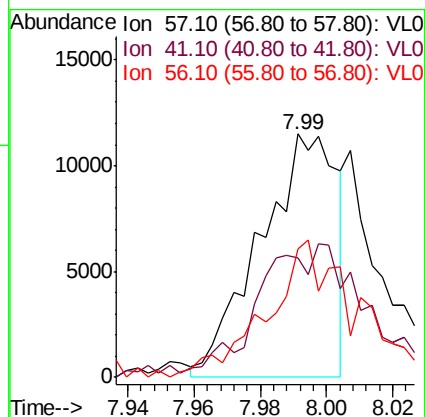
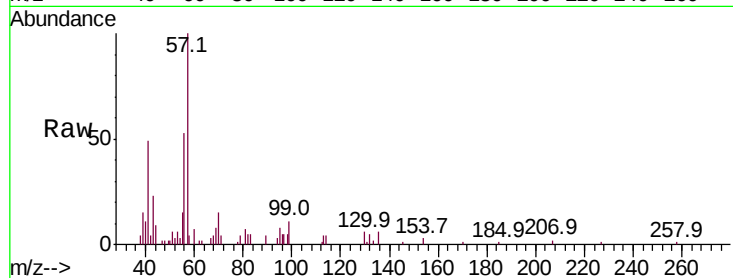
Tot Ion: 57 Resp: 18502

Ion Ratio Lower Upper

57 100

41 84.9 27.0 40.4#

56 71.0 24.6 37.0#



#53

Toluene

Concen: 11.952 ppbv

RT: 9.95 min Scan# 2181

Delta R.T. -0.01 min

Lab File: VL033004.D

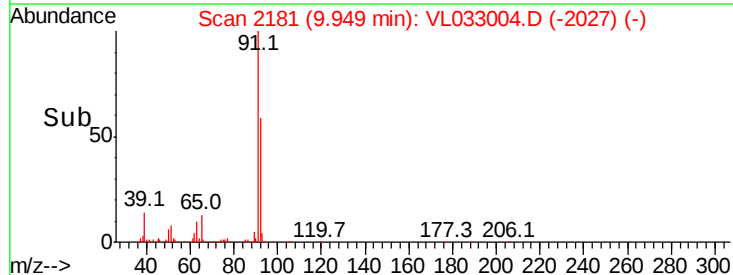
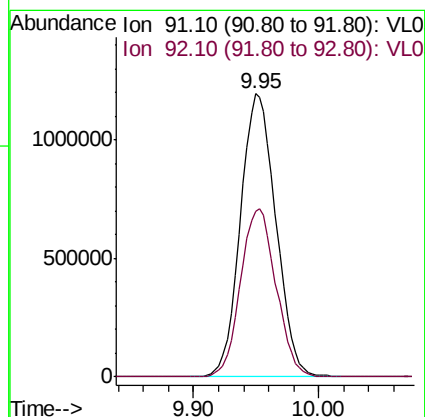
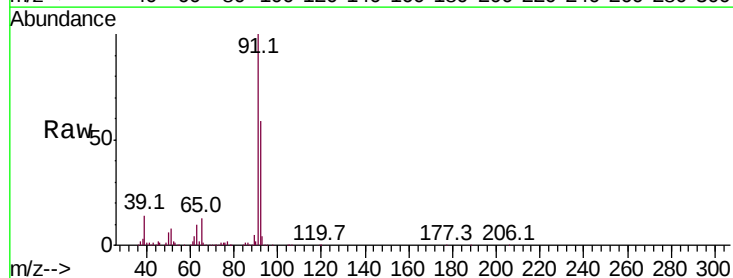
Acq: 17 Dec 2018 20:33

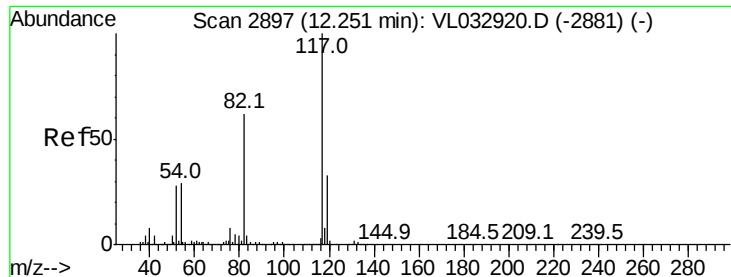
Tgt Ion: 91 Resp: 2341140

Ion Ratio Lower Upper

91 100

92 59.7 47.4 71.0

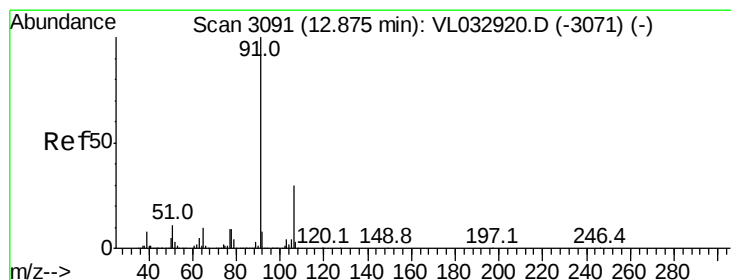
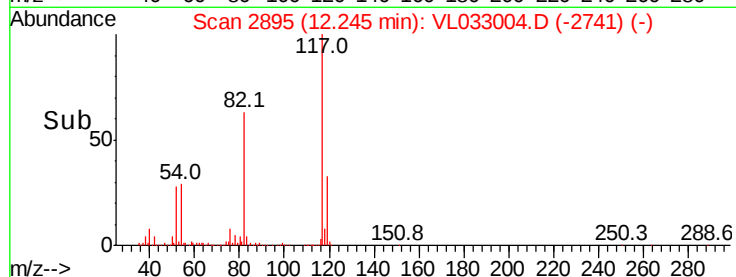
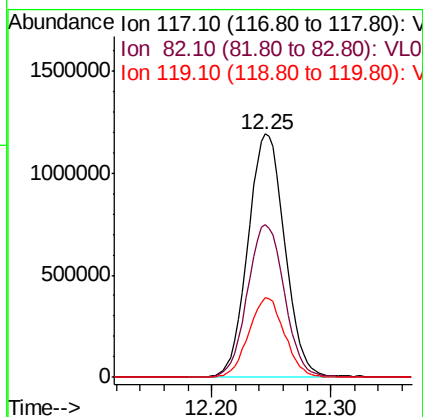
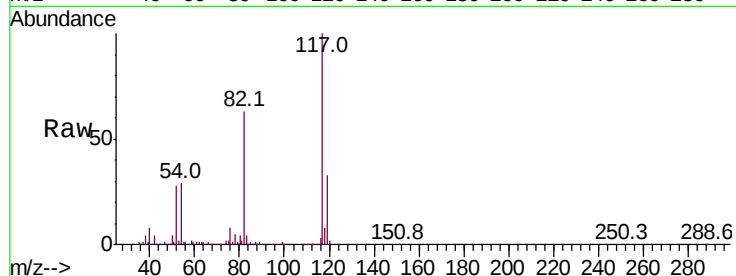




#55
Chlorobenzene-d5
Concen: 10.000 ppbv
RT: 12.25 min Scan# 2895
Delta R.T. -0.01 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

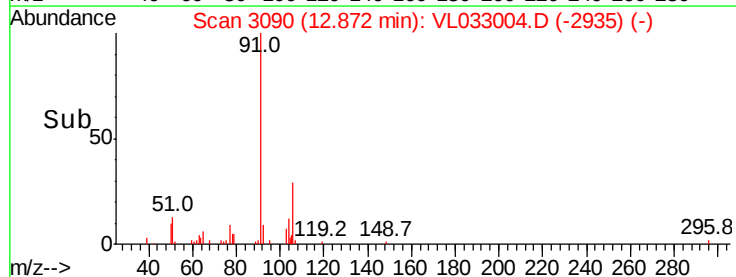
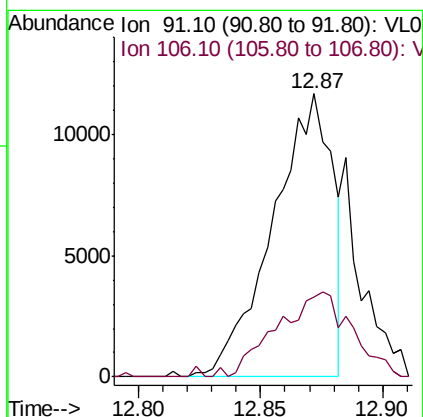
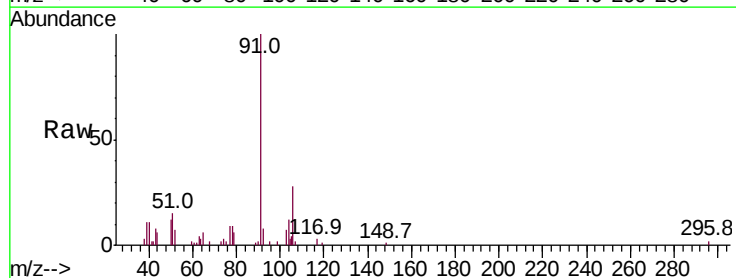
Instrument :
MSVOA_L
ClientSampleId :

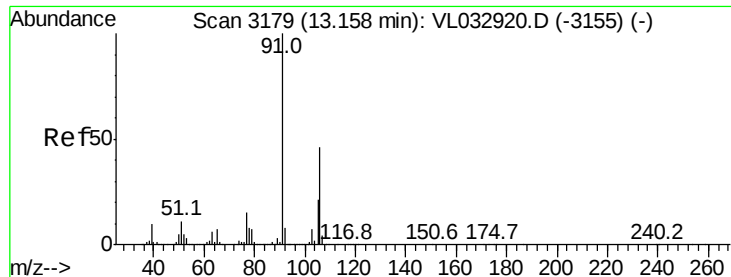
Tot Ion:117 Resp: 2548306
Ion Ratio Lower Upper
117 100
82 63.2 47.8 71.8
119 32.0 43.1 64.7#



#58
Ethyl Benzene
Concen: 0.073 ppbv
RT: 12.87 min Scan# 3090
Delta R.T. -0.00 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

Tgt Ion: 91 Resp: 19777
Ion Ratio Lower Upper
91 100
106 28.2 23.9 35.9

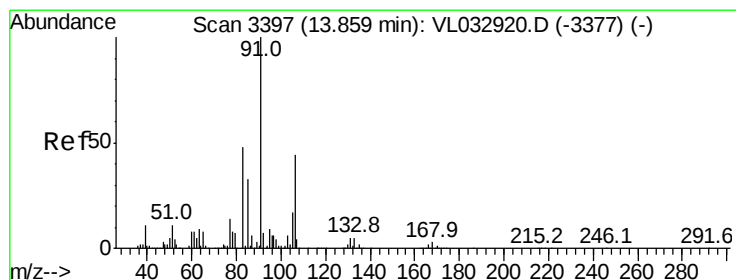
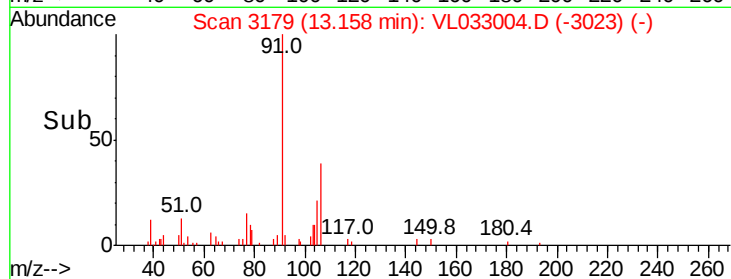
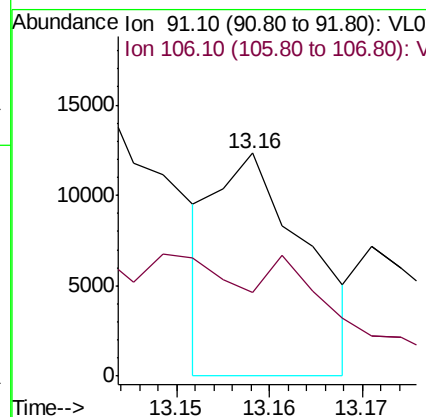
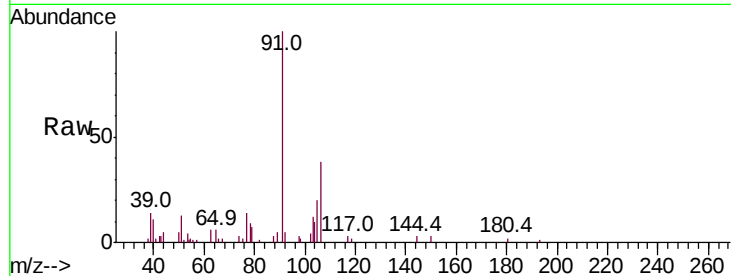




#59
m/p-Xylene
Concen: 0.034 ppbv
RT: 13.16 min Scan# 3179
Delta R.T. 0.00 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

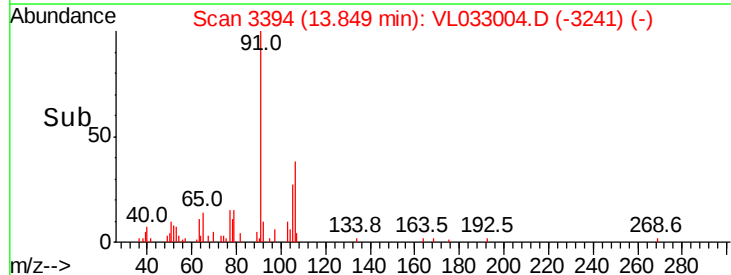
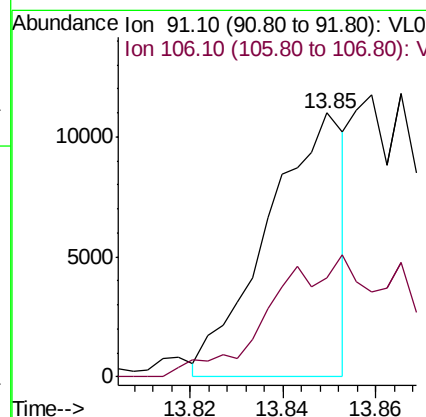
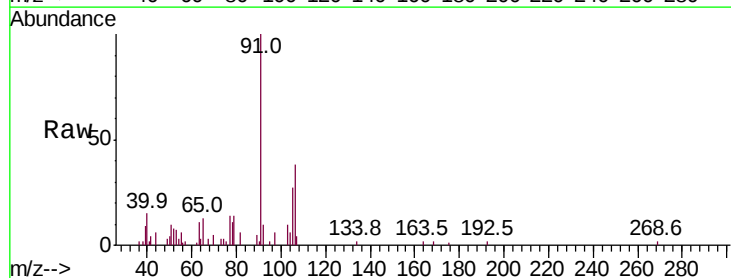
Instrument :
MSVOA_L
ClientSampled :

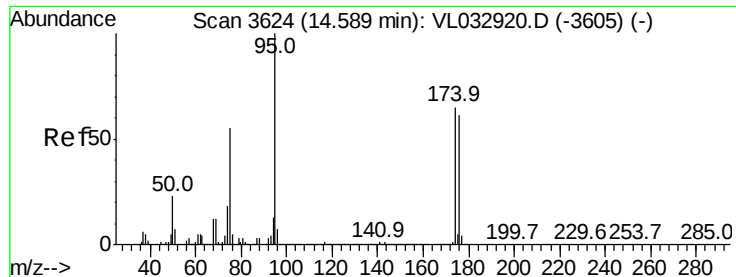
Tot Ion: 91 Resp: 8354
Ion Ratio Lower Upper
91 100
106 0.0 0.0 0.0



#60
o-Xylene
Concen: 0.051 ppbv
RT: 13.85 min Scan# 3394
Delta R.T. -0.01 min
Lab File: VL033004.D
Acq: 17 Dec 2018 20:33

Tgt Ion: 91 Resp: 12616
Ion Ratio Lower Upper
91 100
106 95.1 21.9 65.8#





#68

1-Bromo-4-Fluorobenzene

Concen: 11.287 ppbv

RT: 14.58 min Scan# 3622

Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

ClientSampleId :

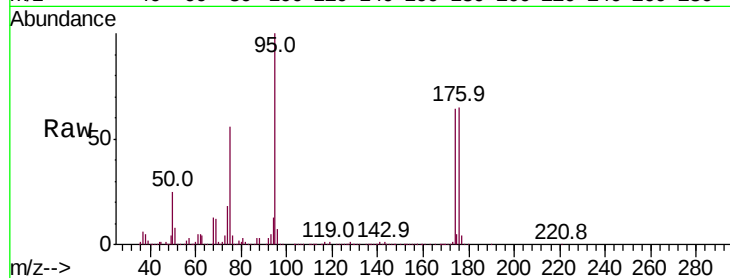
Tot Ion: 95 Resp: 2124873

Ion Ratio Lower Upper

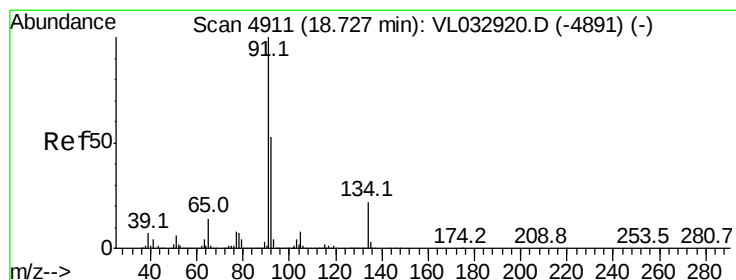
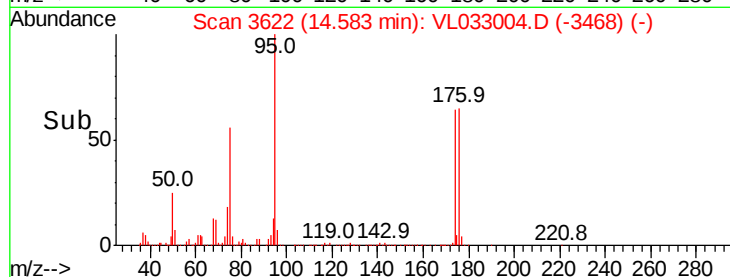
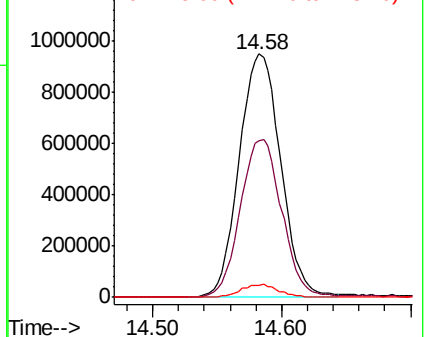
95 100

174 66.0 51.4 77.0

175 4.9 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



#70

n-Butylbenzene

Concen: 0.037 ppbv

RT: 18.72 min Scan# 4908

Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

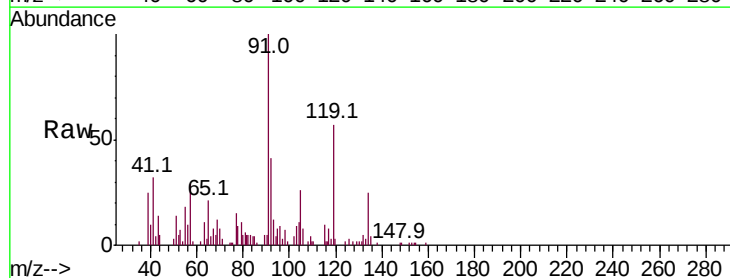
Tgt Ion: 91 Resp: 12974

Ion Ratio Lower Upper

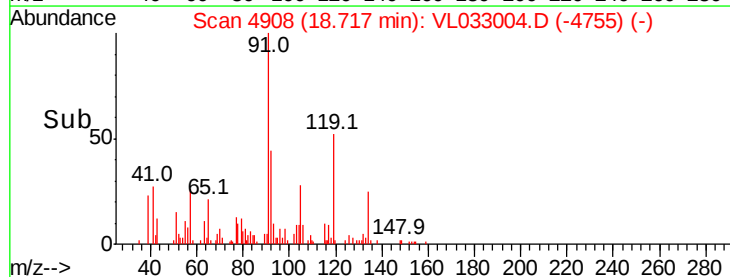
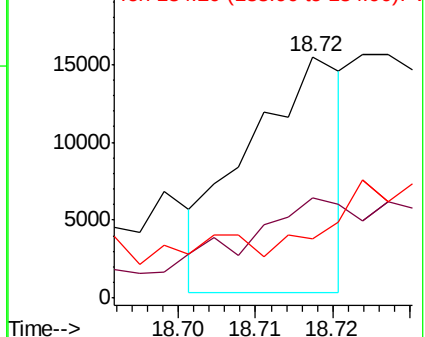
91 100

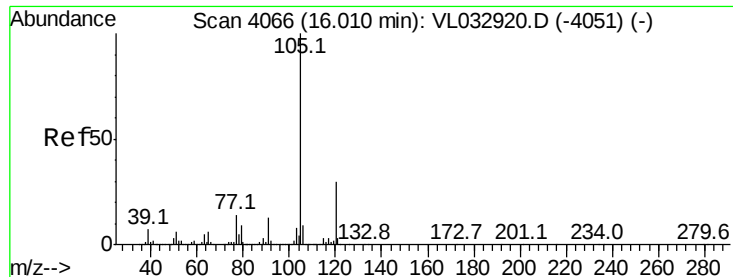
92 130.9 42.7 64.1#

134 0.0 18.0 27.0#



Abundance Ion 91.10 (90.80 to 91.80): VL0
Ion 92.10 (91.80 to 92.80): VL0
Ion 134.20 (133.90 to 134.90): V





#72

4-Ethyltoluene

Concen: 0.047 ppbv

RT: 16.01 min Scan# 4065

Delta R.T. -0.00 min

Lab File: VL033004.D

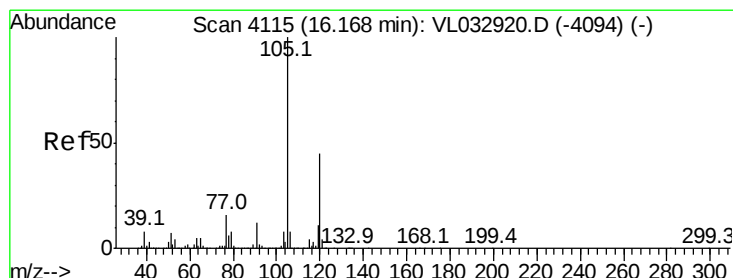
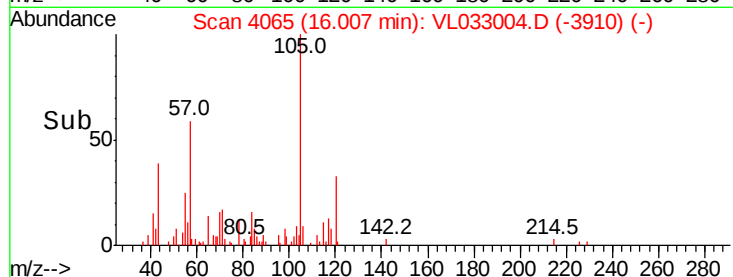
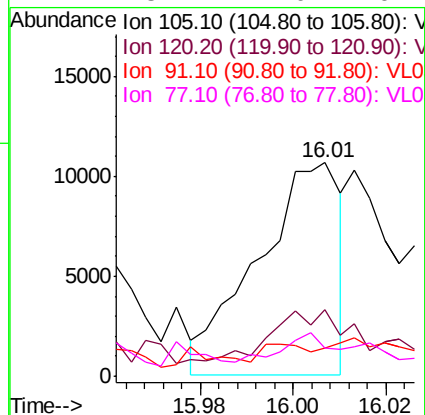
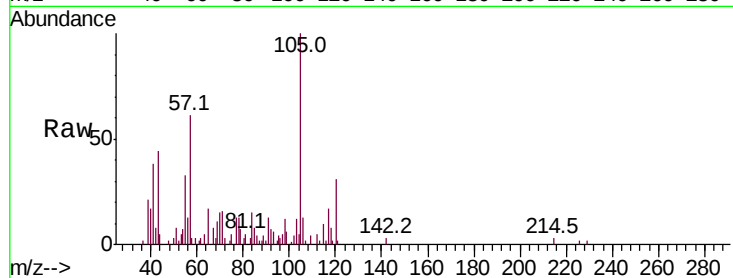
Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

ClientSampleId :

Tot Ion:	105	Resp:	13133
Ion	Ratio	Lower	Upper
105	100		
120	51.1	23.0	34.4#
91	0.0	10.4	15.6#
77	23.4	11.0	16.4#



#73

1,3,5-Trimethylbenzene

Concen: 0.037 ppbv

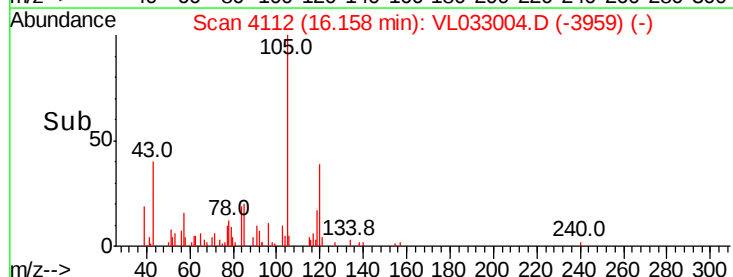
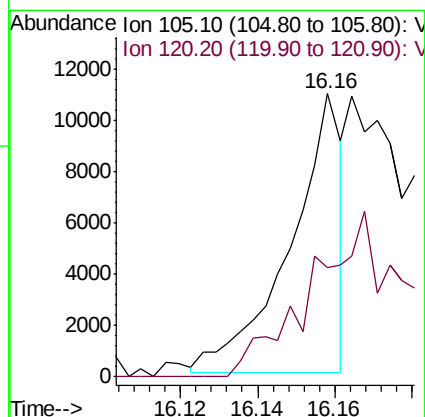
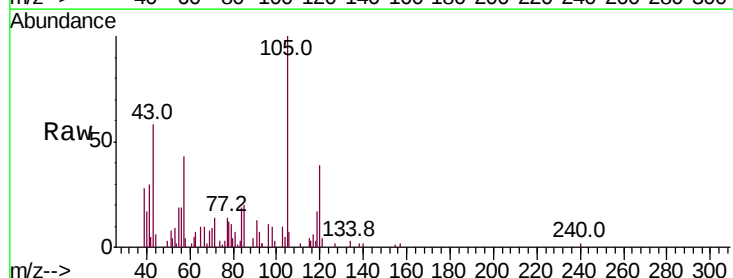
RT: 16.16 min Scan# 4112

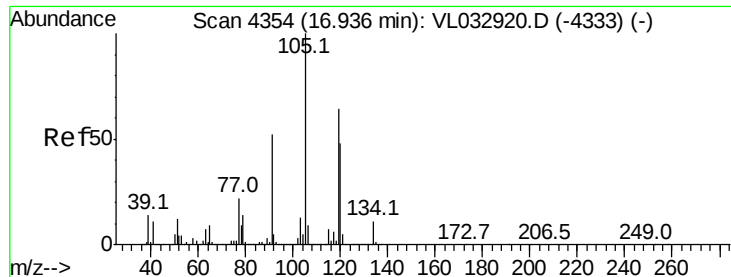
Delta R.T. -0.01 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Tgt Ion:	105	Resp:	10029
Ion	Ratio	Lower	Upper
105	100		
120	38.3	36.0	54.0





#74

1,2,4-Trimethylbenzene

Concen: 0.308 ppbv

RT: 16.94 min Scan# 4355

Delta R.T. 0.00 min

Lab File: VL033004.D

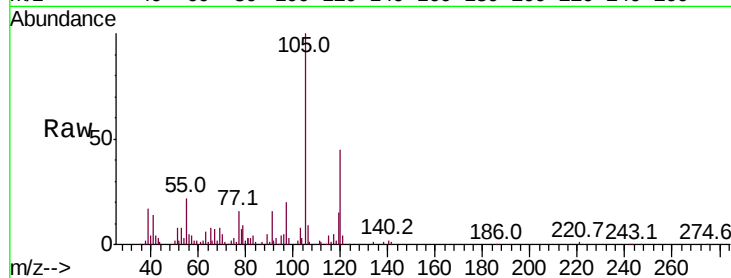
Acq: 17 Dec 2018 20:33

Instrument :

MSVOA_L

ClientSampled :

Tot Ion:	105	Resp:	94367
Ion	Ratio	Lower	Upper
105	100		
120	45.3	38.6	58.0
91	15.4	41.7	62.5#
77	15.0	17.4	26.2#

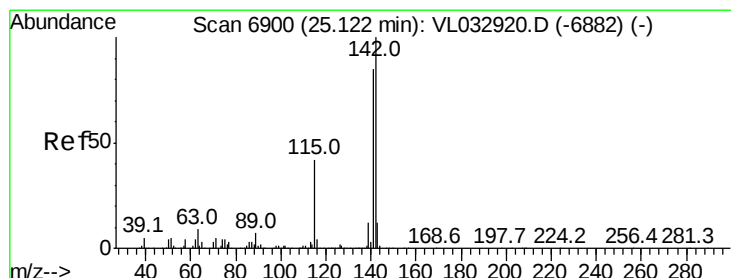
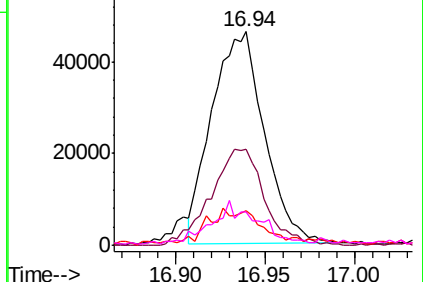
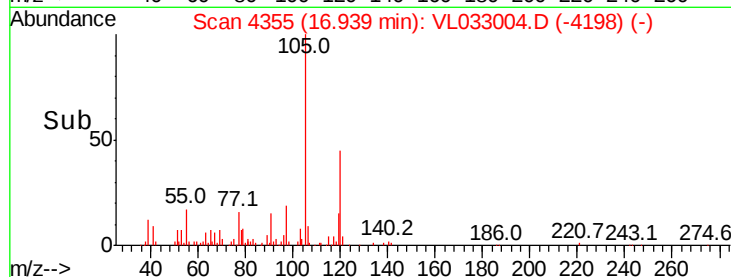


Abundance Ion 105.10 (104.80 to 105.80): V

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



#80

Naphthalene, 2-methyl-

Concen: 0.419 ppbv

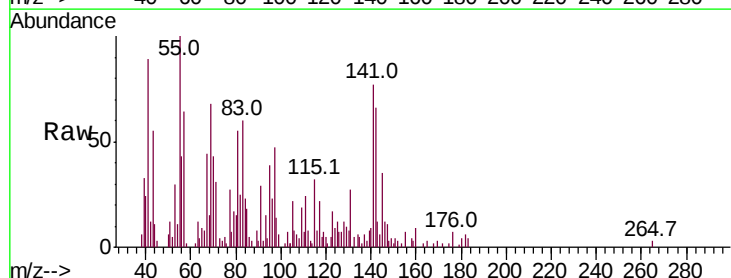
RT: 25.12 min Scan# 6899

Delta R.T. -0.00 min

Lab File: VL033004.D

Acq: 17 Dec 2018 20:33

Tgt Ion:	142	Resp:	17697
Ion	Ratio	Lower	Upper
142	100		
141	92.4	68.2	102.2
115	160.9	35.1	52.7#



Abundance Ion 142.00 (141.70 to 142.70): V

Ion 141.00 (140.70 to 141.70): V

Ion 115.00 (114.70 to 115.70): V

