

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL071918\
 Data File : VL032299.D
 Acq On : 19 Jul 2018 22:16
 Operator : SY/AP
 Sample : J4063-03
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Manual Integrations
 APPROVED

MMDadoda
 7/20/2018 2:06:23 PM

Quant Time: Jul 20 13:46:58 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL071818AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul 18 2018
 QLast Update : Wed Jul 18 14:38:53 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.84	49	1547673	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.37	114	3256121	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.33	117	3681227	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.67	95	2947779	9.88	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.80%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.13	85	144674	0.55	ppbv	99
3) Chlorodifluoromethane	3.06	51	176157	1.01	ppbv #	90
4) Chloromethane	3.23	50	61077	0.60	ppbv	94
9) Propene	3.10	41	70278m	0.93	ppbv	
11) Trichlorofluoromethane	4.07	101	53420	0.26	ppbv	94
13) Ethanol	3.71	45	203891	9.40	ppbv	98
15) Acetone	3.96	43	942901	5.82	ppbv	99
19) Isopropyl Alcohol	4.10	45	87929m	0.80	ppbv	
20) Methylene Chloride	4.48	84	142774	2.29	ppbv	99
26) Hexane	5.86	57	323946	2.00	ppbv #	44
30) Cyclohexane	7.33	84	18349m	0.13	ppbv	
34) 2-Butanone	5.41	43	106689	0.48	ppbv	100
35) Carbon Tetrachloride	7.22	117	17461m	0.08	ppbv	
36) Benzene	7.08	78	67901	0.21	ppbv	95
44) 2,2,4-Trimethylpentane	8.07	57	87241m	0.16	ppbv	
52) Tetrachloroethene	11.47	164	3861m	0.04	ppbv	
53) Toluene	10.03	91	184216	0.47	ppbv	96
58) Ethyl Benzene	12.95	91	58558	0.11	ppbv	94
59) m/p-Xylene	13.21	91	340209m	0.77	ppbv	
60) o-Xylene	13.94	91	150588	0.34	ppbv	100
74) 1,2,4-Trimethylbenzene	17.02	105	121871m	0.23	ppbv	

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

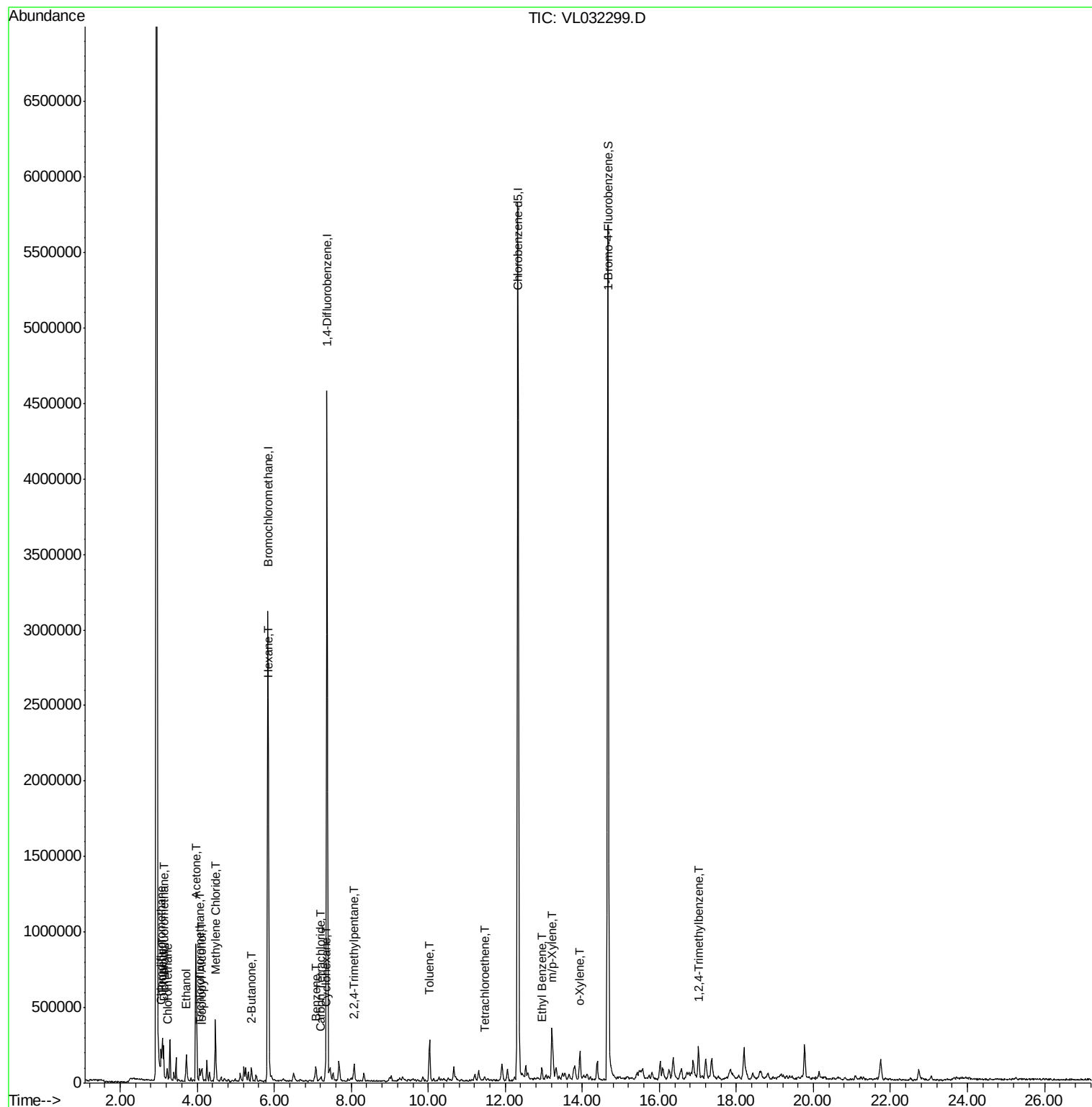
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL071918\
Data File : VL032299.D
Acq On : 19 Jul 2018 22:16
Operator : SY/AP
Sample : J4063-03
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

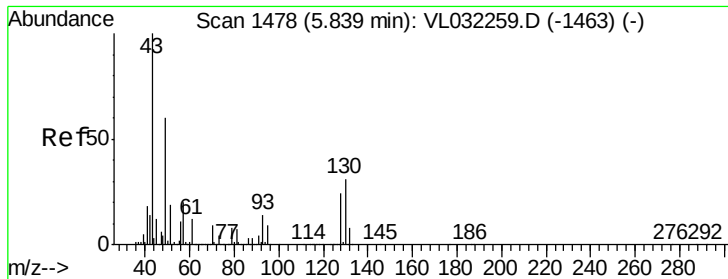
Instrument :
MSVOA_L
ClientSampleId :
OUTSIDE-01-0717-03

Manual Integrations
APPROVED

MMDadoda
7/20/2018 2:06:23 PM

Quant Time: Jul 20 13:46:58 2018
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL071818AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Wed Jul
QLast Update : Wed Jul 18 14:38:53 2018
Response via : Initial Calibration





#1

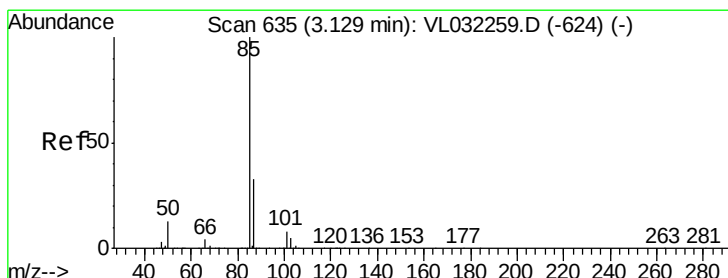
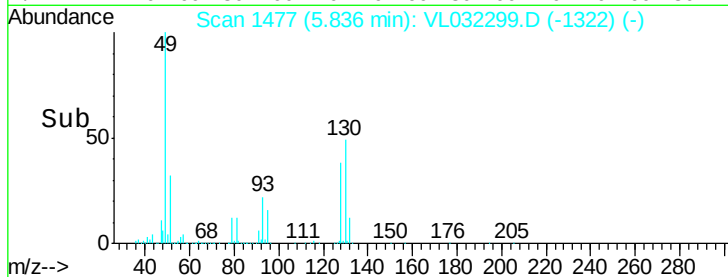
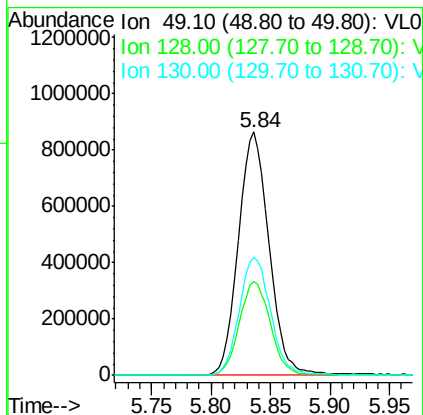
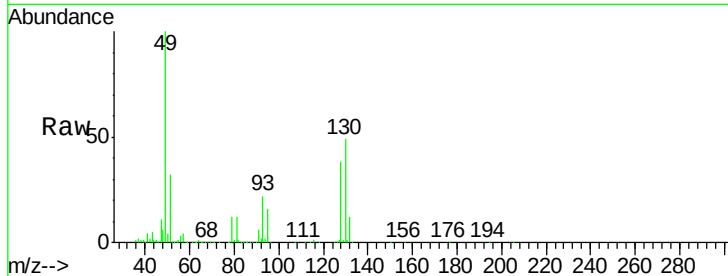
Bromochloromethane
 Concen: 10.00 ppbv
 RT: 5.84 min Scan# 1477
 Delta R.T. -0.00 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Tot Ion	Ratio	Lower	Upper
49	100		
128	39.5	20.1	60.2
130	49.8	25.9	77.6

Manual Integrations
 APPROVED

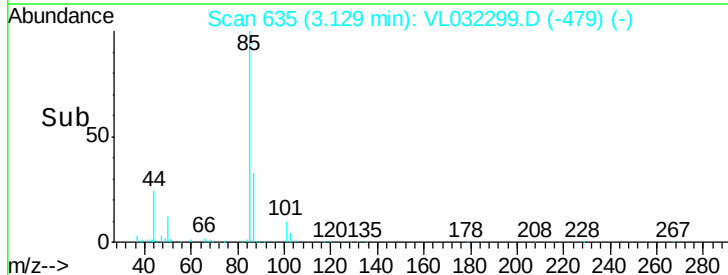
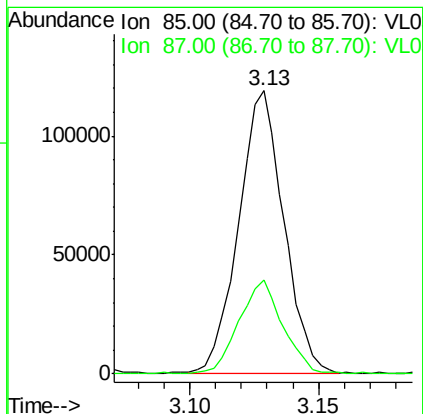
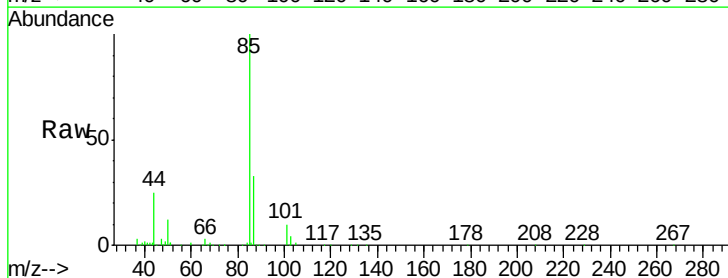
MMDadoda
 7/20/2018 2:06:23 PM

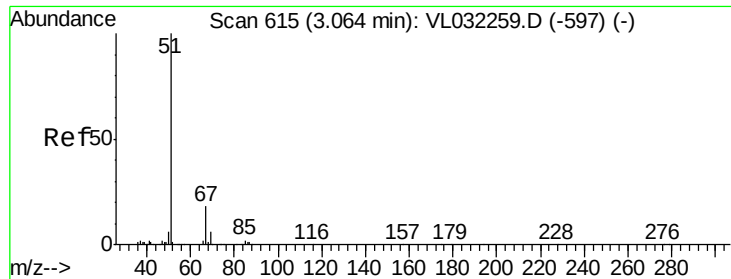


#2

Dichlorodifluoromethane
 Concen: 0.55 ppbv
 RT: 3.13 min Scan# 635
 Delta R.T. -0.00 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Tgt Ion	Ratio	Lower	Upper
85	100		
87	33.2	26.2	39.2





#3

Chlorodifluoromethane

Concen: 1.01 ppbv

RT: 3.06 min Scan# 615

Delta R.T. -0.00 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Instrument :

MSVOA_L

ClientSampleId :

OUTSIDE-01-0717-03

Tot Ion: 51 Resp: 176157

Ion Ratio Lower Upper

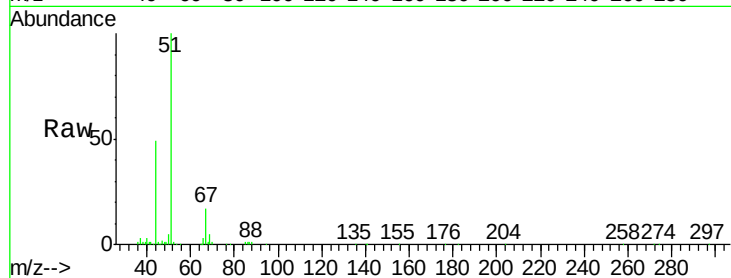
51 100

67 13.5 14.2 21.4#

Manual Integrations
APPROVED

MMDadoda

7/20/2018 2:06:23 PM



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0

3.06

120000

100000

80000

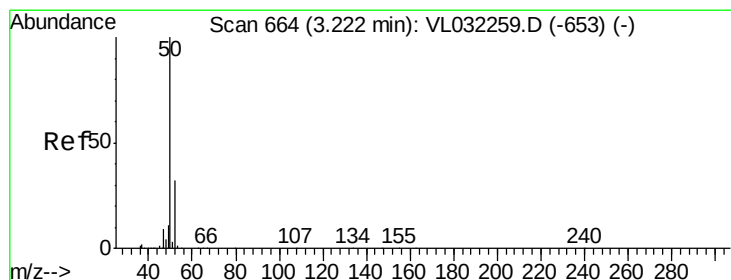
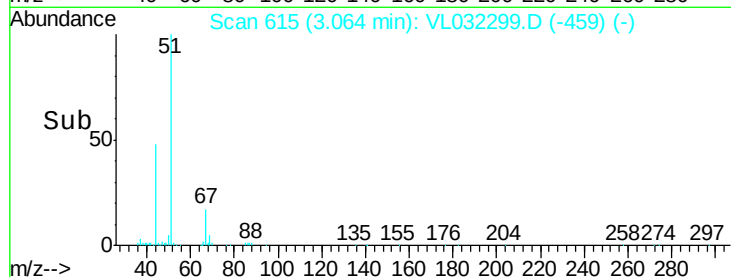
60000

40000

20000

0

Time-->



#4

Chloromethane

Concen: 0.60 ppbv

RT: 3.23 min Scan# 665

Delta R.T. 0.00 min

Lab File: VL032299.D

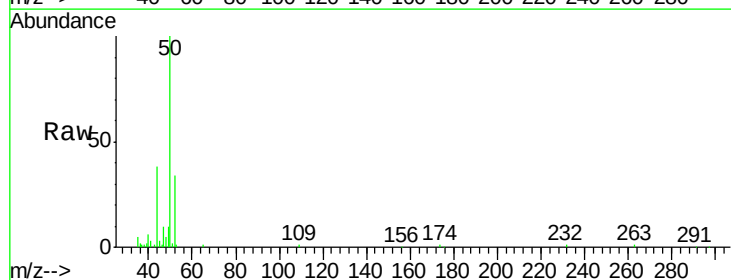
Acq: 19 Jul 2018 22:16

Tgt Ion: 50 Resp: 61077

Ion Ratio Lower Upper

50 100

52 34.8 25.3 37.9



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0

3.23

40000

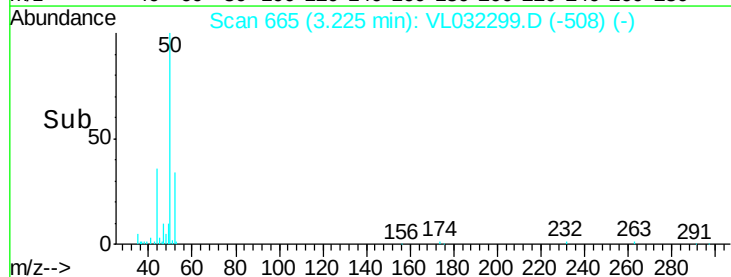
30000

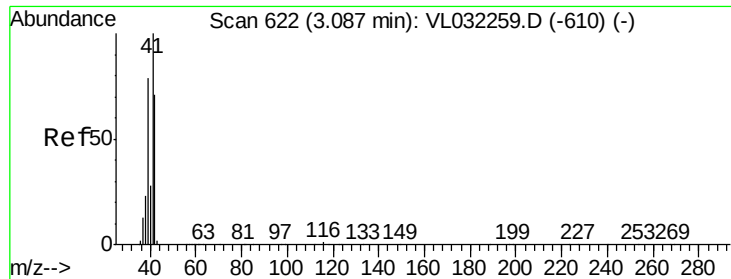
20000

10000

0

Time-->





#9

Propene

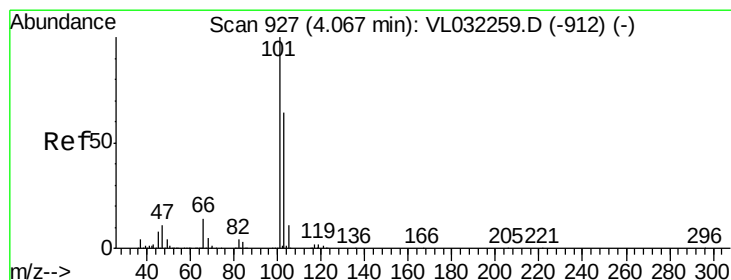
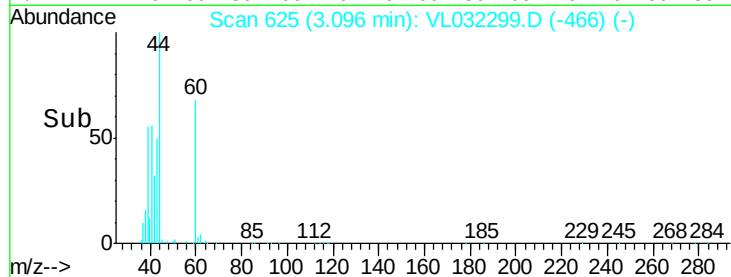
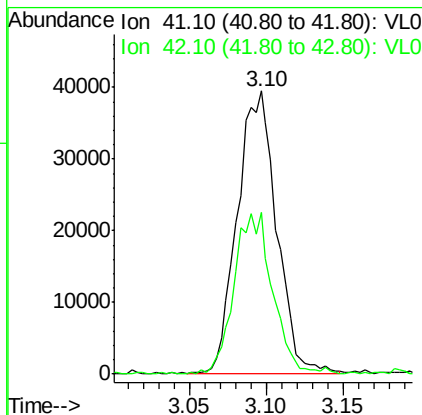
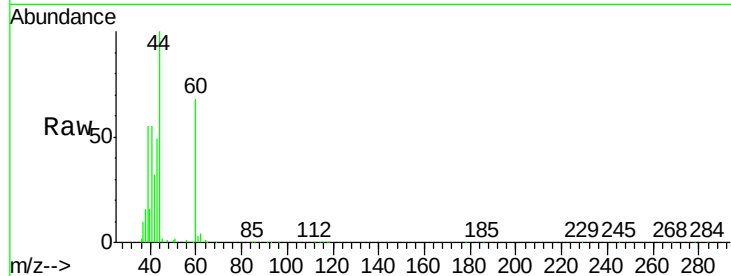
Concen: 0.93 ppbv m
 RT: 3.10 min Scan# 625
 Delta R.T. 0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Tot Ion: 41 Resp: 70278
 Ion Ratio Lower Upper
 41 100
 42 0.0 56.2 84.4#

Manual Integrations
 APPROVED

MMDadoda
 7/20/2018 2:06:23 PM

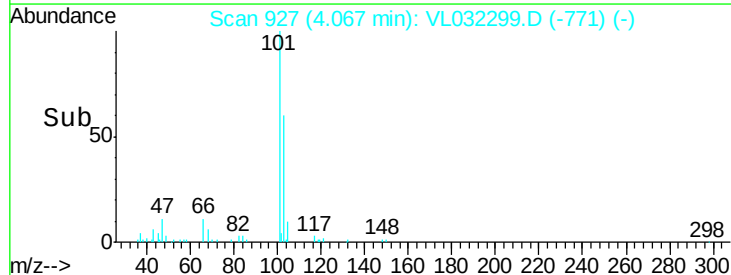
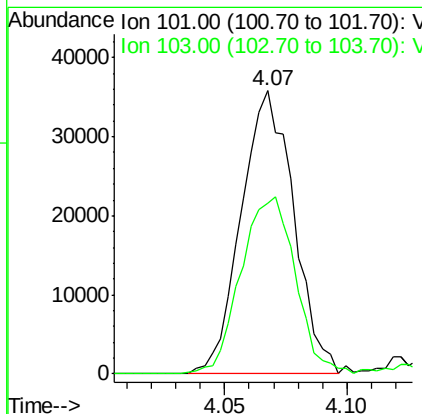
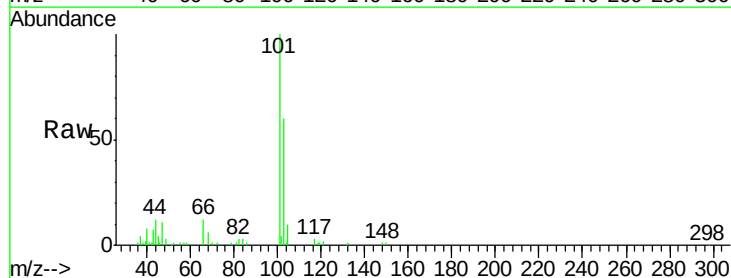


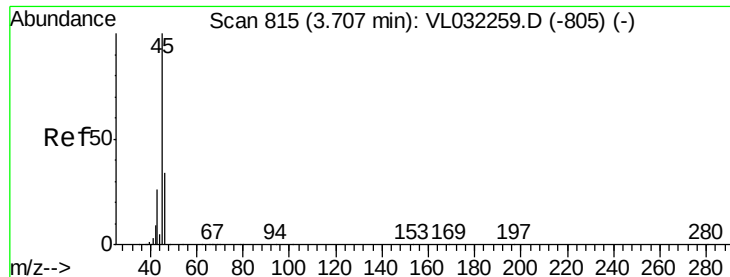
#11

Trichlorofluoromethane

Concen: 0.26 ppbv
 RT: 4.07 min Scan# 927
 Delta R.T. 0.00 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Tgt Ion: 101 Resp: 53420
 Ion Ratio Lower Upper
 101 100
 103 59.8 51.5 77.3





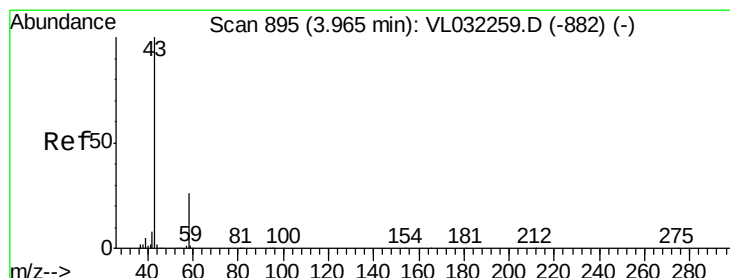
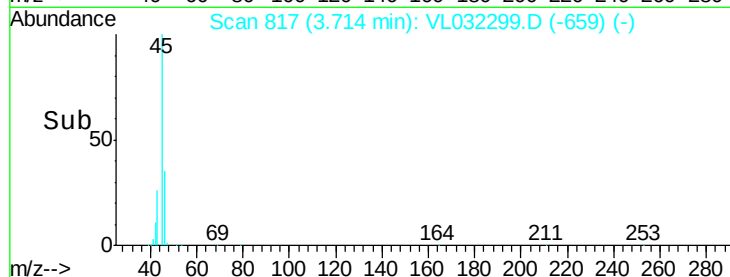
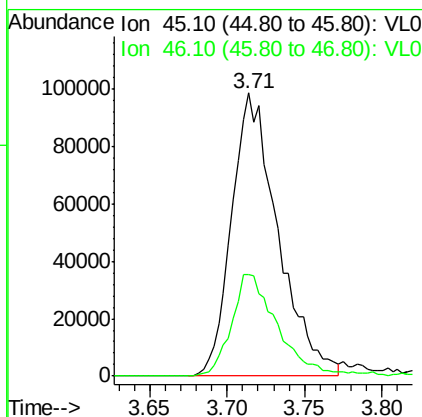
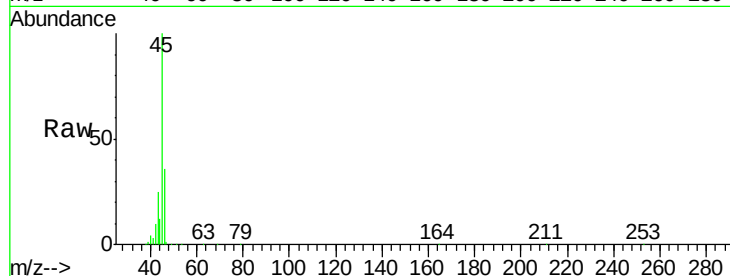
#13
Ethanol
Concen: 9.40 ppbv
RT: 3.71 min Scan# 817
Delta R.T. 0.01 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Instrument :
MSVOA_L
ClientSampleId :
OUTSIDE-01-0717-03

Tot Ion	45	46	Ratio	Lower	Upper
203891	100	36.8		15.2	60.8

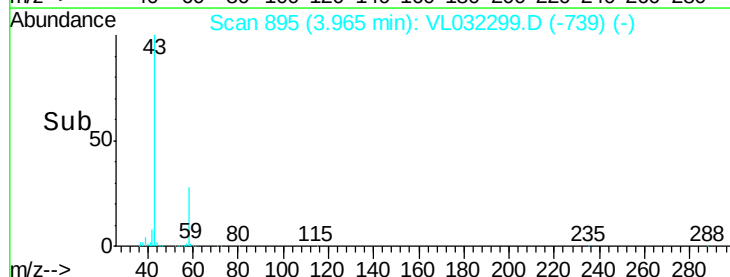
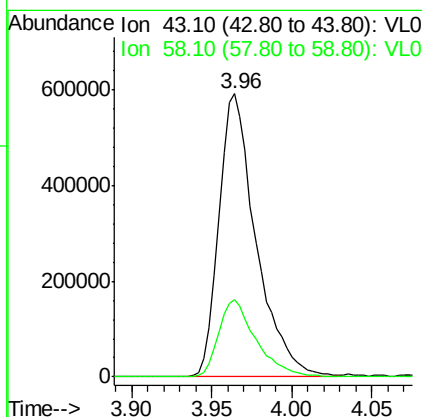
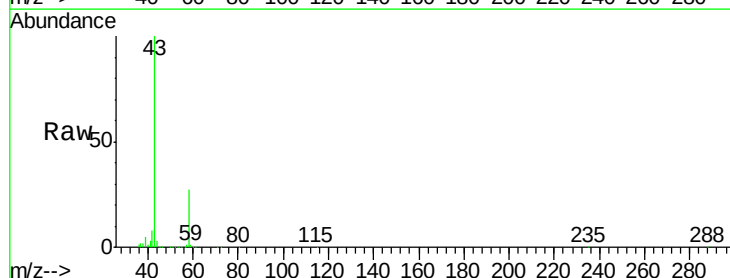
Manual Integrations
APPROVED

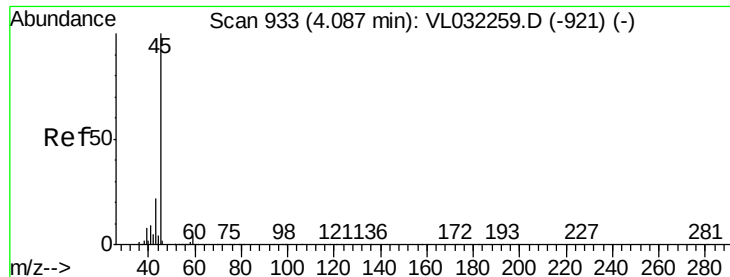
MMDadoda
7/20/2018 2:06:23 PM



#15
Acetone
Concen: 5.82 ppbv
RT: 3.96 min Scan# 895
Delta R.T. -0.00 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Tgt Ion	43	58	Ratio	Lower	Upper
942901	100	27.6		21.8	32.6





#19

Isopropyl Alcohol

Concen: 0.80 ppbv m

RT: 4.10 min Scan# 938

Delta R.T. 0.02 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Instrument :

MSVOA_L

ClientSampleId :

OUTSIDE-01-0717-03

Tot Ion: 45 Resp: 87929

Ion Ratio Lower Upper

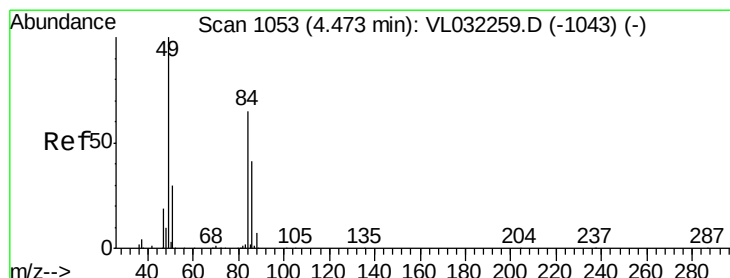
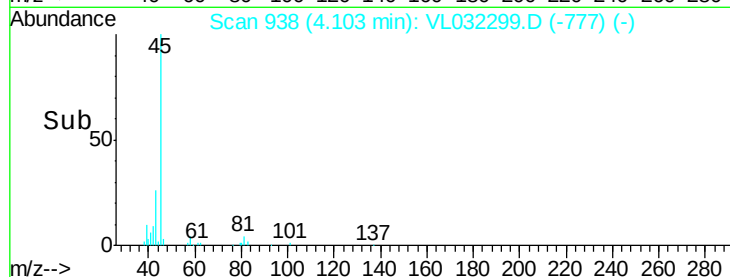
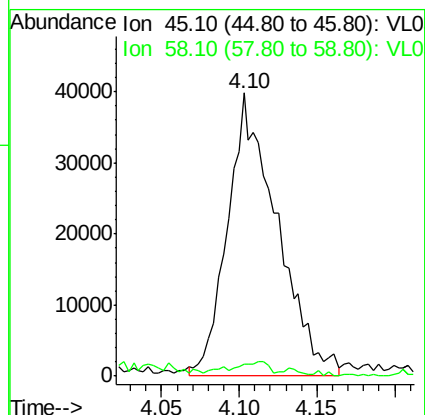
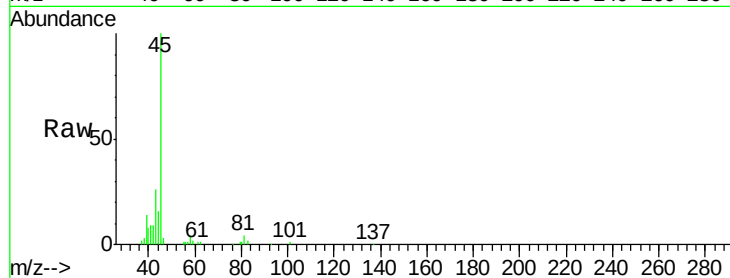
45 100

58 0.0 1.5 2.3#

Manual Integrations
APPROVED

MMDadoda

7/20/2018 2:06:23 PM



#20

Methylene Chloride

Concen: 2.29 ppbv

RT: 4.48 min Scan# 1054

Delta R.T. 0.00 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Tgt Ion: 84 Resp: 142774

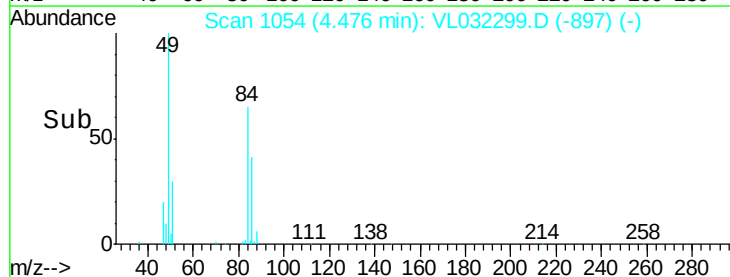
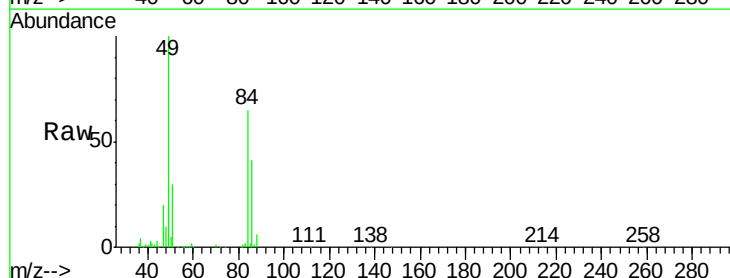
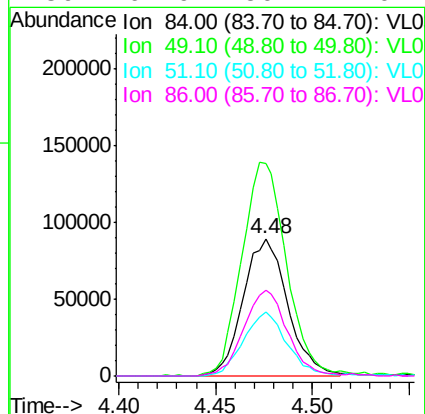
Ion Ratio Lower Upper

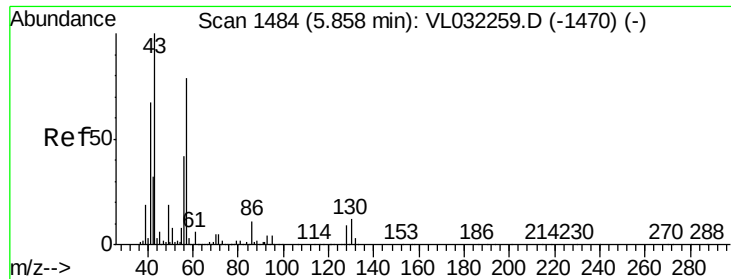
84 100

49 154.9 122.4 183.6

51 46.8 36.8 55.2

86 62.9 50.7 76.1





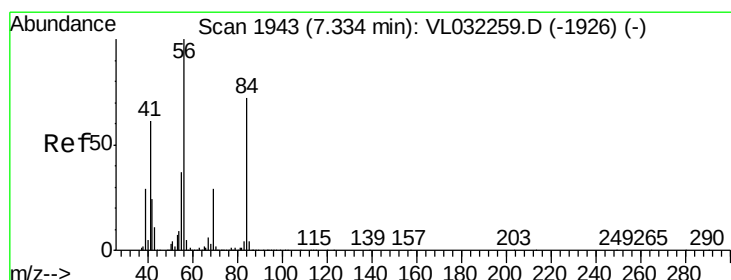
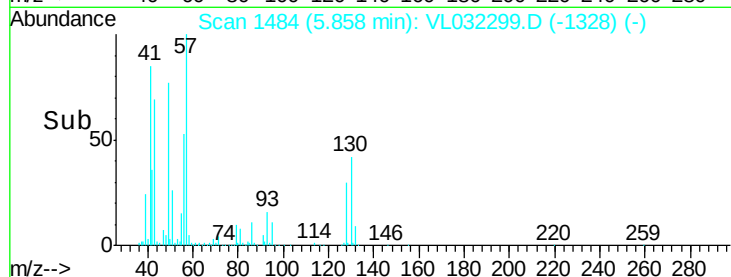
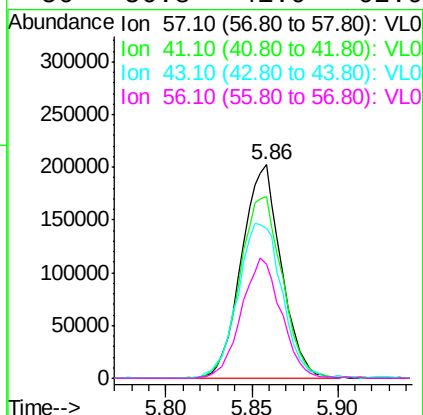
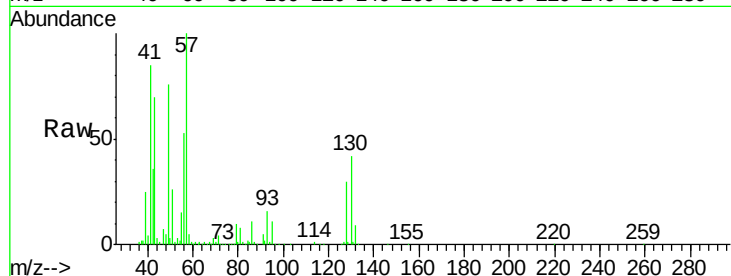
#26
Hexane
Concen: 2.00 ppbv
RT: 5.86 min Scan# 1484
Delta R.T. -0.00 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Instrument :
MSVOA_L
ClientSampleId :
OUTSIDE-01-0717-03

Tot Ion	Ratio	Lower	Upper
57	100		
41	91.6	67.9	101.9
43	81.3	175.9	263.9#
56	56.8	41.9	62.9

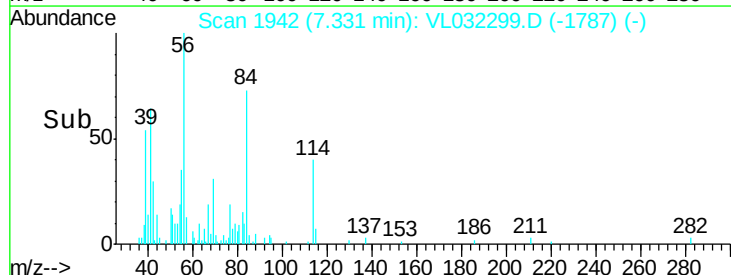
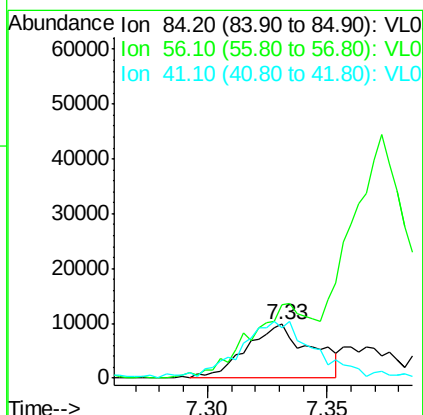
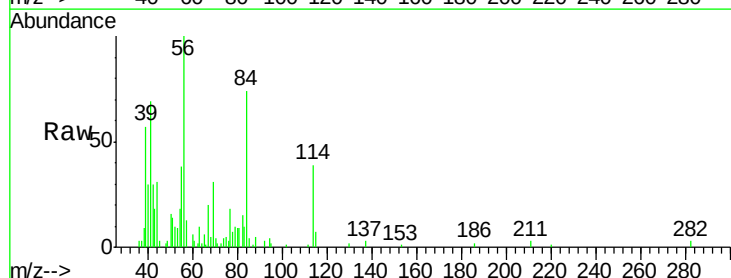
Manual Integrations
APPROVED

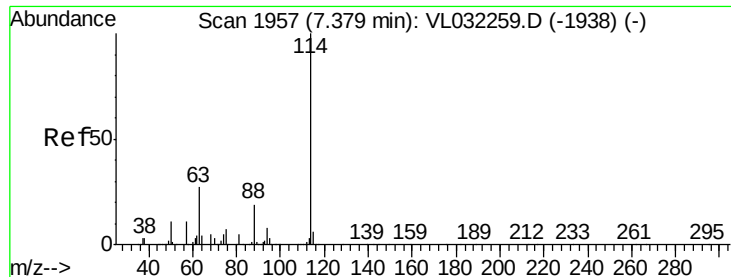
MMDadoda
7/20/2018 2:06:23 PM



#30
Cyclohexane
Concen: 0.13 ppbv m
RT: 7.33 min Scan# 1942
Delta R.T. -0.00 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Tgt Ion	Ratio	Lower	Upper
84	100		
56	0.0	115.6	173.4#
41	121.8	68.7	103.1#





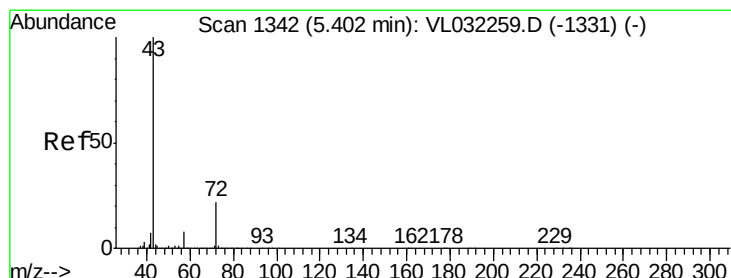
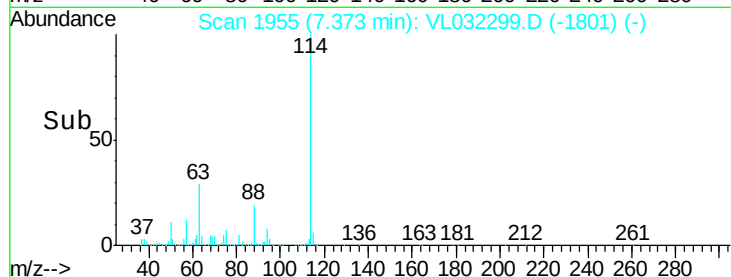
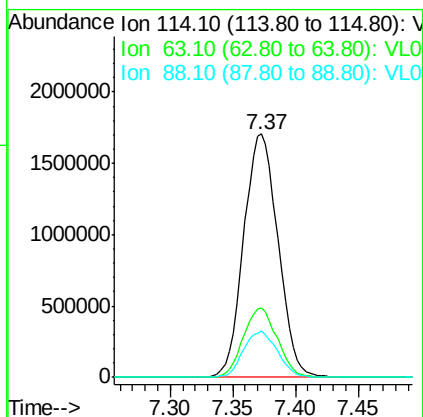
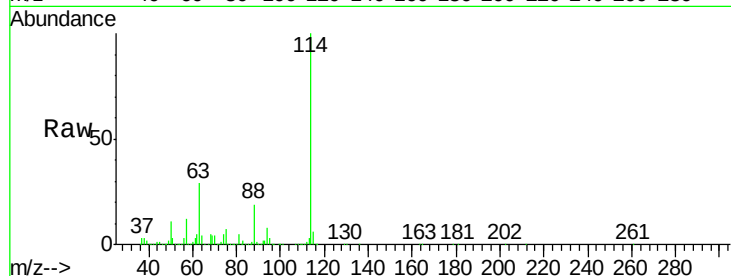
#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.37 min Scan# 1955
 Delta R.T. -0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Tot Ion	Ratio	Lower	Upper
114	100		
63	28.4	22.6	33.8
88	19.0	15.2	22.8

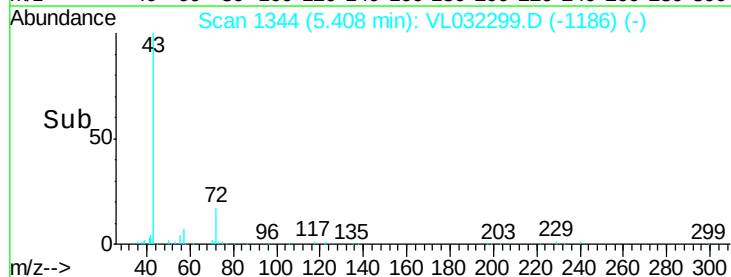
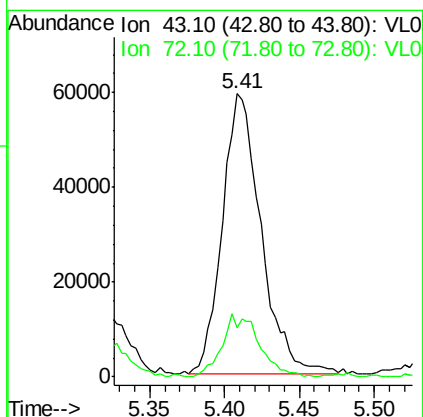
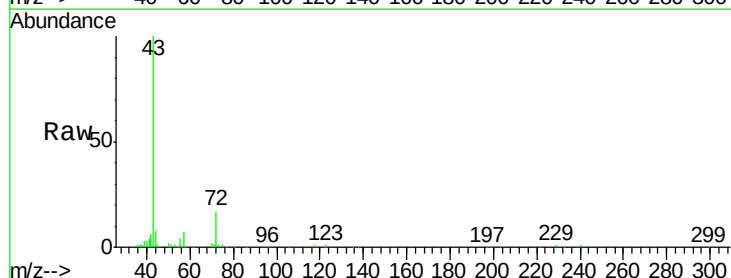
Manual Integrations
 APPROVED

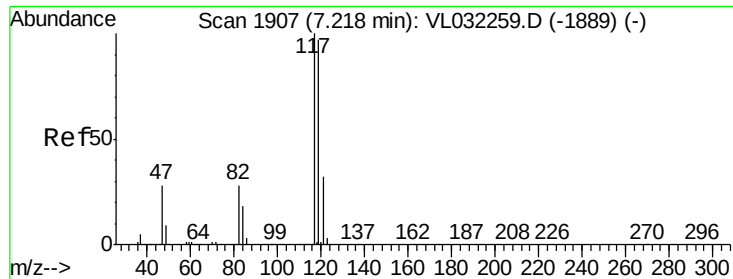
MMDadoda
 7/20/2018 2:06:23 PM



#34
 2-Butanone
 Concen: 0.48 ppbv
 RT: 5.41 min Scan# 1344
 Delta R.T. 0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Tgt Ion	Ratio	Lower	Upper
43	100		
72	22.3	17.7	26.5





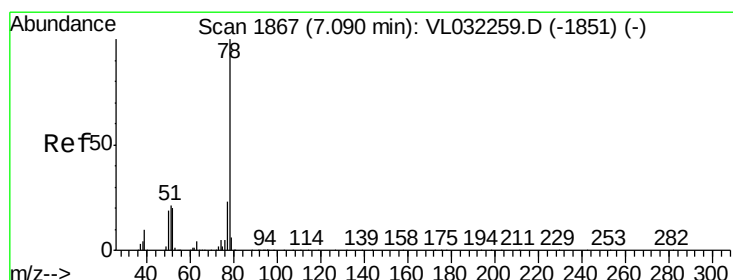
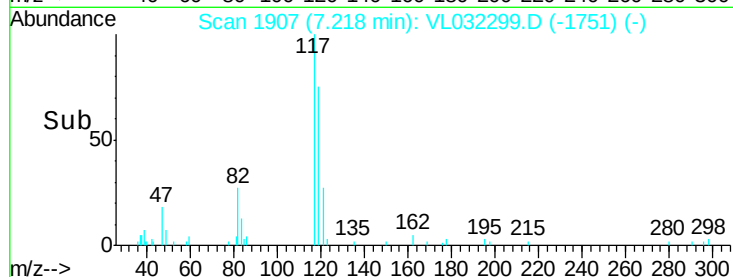
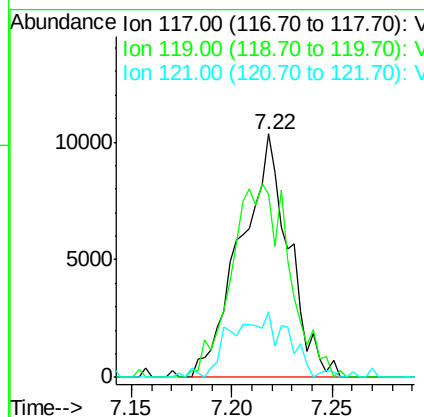
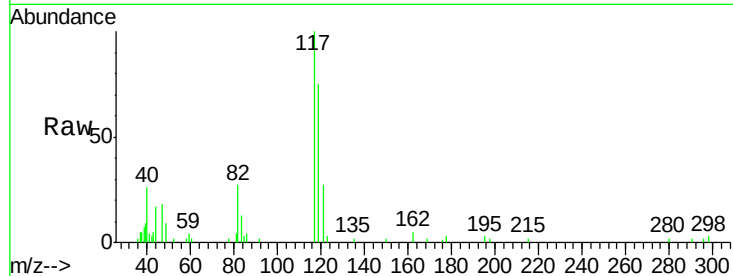
#35
Carbon Tetrachloride
Concen: 0.08 ppbv m
RT: 7.22 min Scan# 1907
Delta R.T. 0.00 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Instrument :
MSVOA_L
ClientSampleId :
OUTSIDE-01-0717-03

Tot Ion	Ion	Ratio	Resp	Lower	Upper
117	100		17461		
119	75.2		77.4	116.0#	
121	27.0		25.4	38.2	

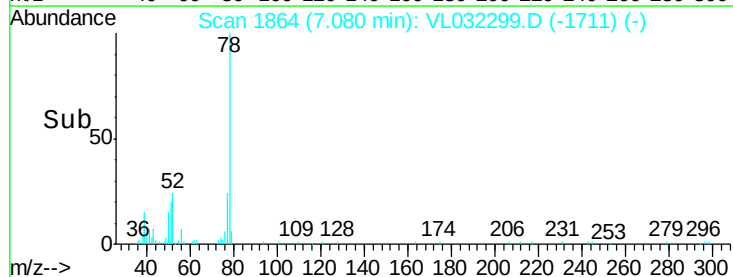
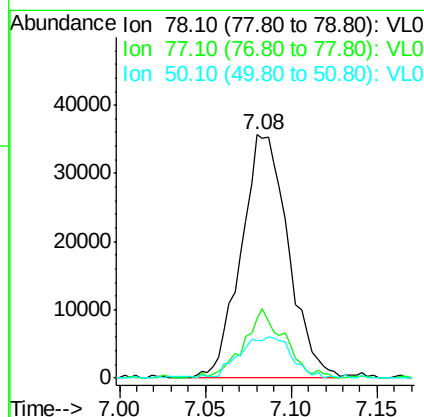
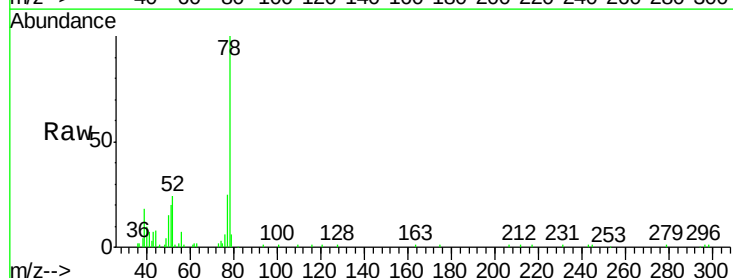
Manual Integrations
APPROVED

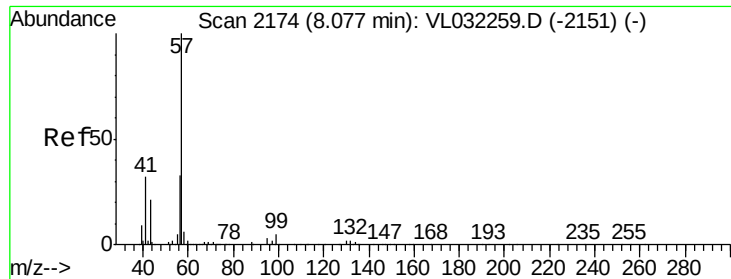
MMDadoda
7/20/2018 2:06:23 PM



#36
Benzene
Concen: 0.21 ppbv
RT: 7.08 min Scan# 1864
Delta R.T. -0.01 min
Lab File: VL032299.D
Acq: 19 Jul 2018 22:16

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
78	100		67901		
77	24.6		18.6	27.8	
50	15.4		15.0	22.6	





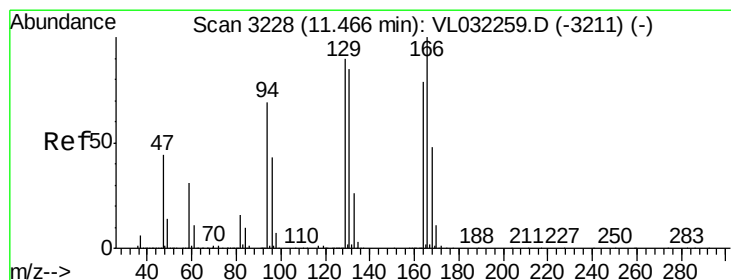
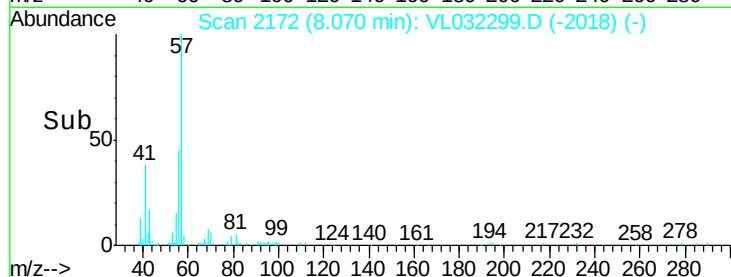
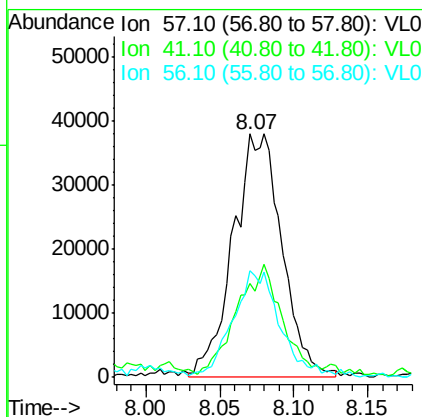
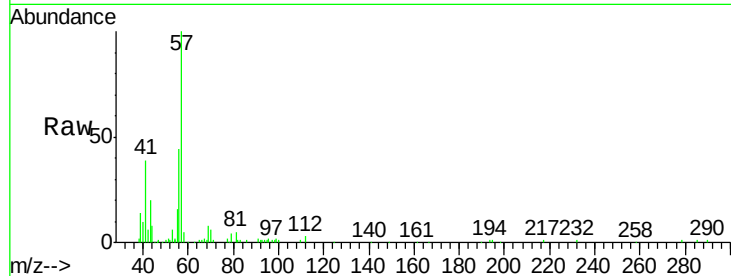
#44
 2,2,4-Trimethylpentane
 Concen: 0.16 ppbv m
 RT: 8.07 min Scan# 2172
 Delta R.T. -0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Tot Ion	Ratio	Lower	Upper
57	100		
41	0.0	24.4	36.6#
56	43.6	25.7	38.5#

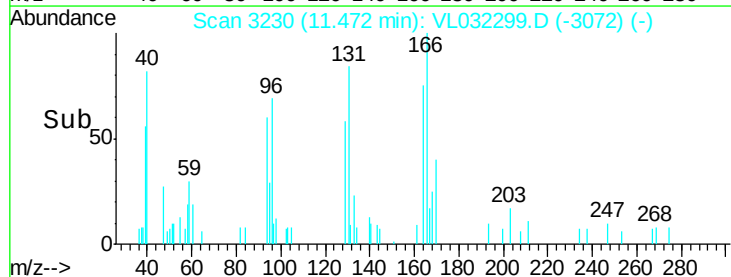
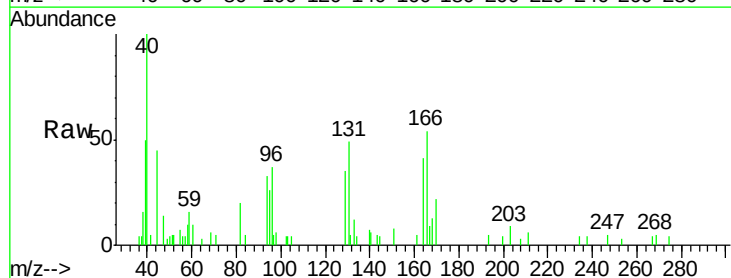
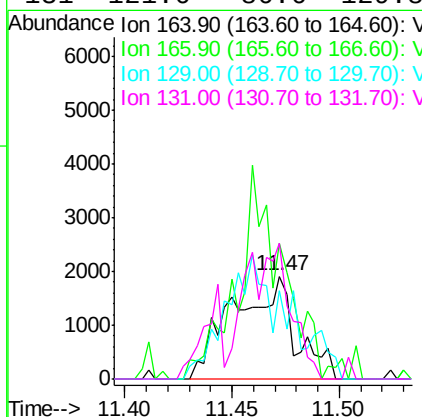
Manual Integrations
 APPROVED

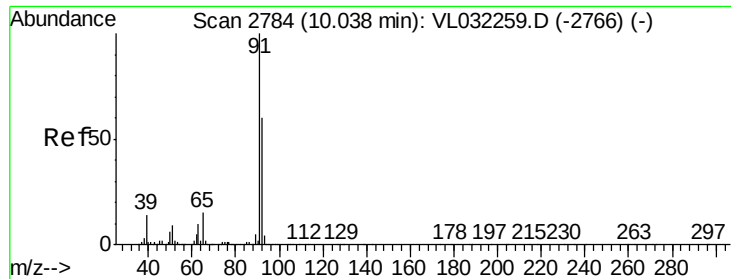
MMDadoda
 7/20/2018 2:06:23 PM



#52
 Tetrachloroethene
 Concen: 0.04 ppbv m
 RT: 11.47 min Scan# 3230
 Delta R.T. 0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Tgt Ion	Ratio	Lower	Upper
164	100		
166	132.7	101.7	152.5
129	86.1	91.5	137.3#
131	121.6	86.6	129.8





#53

Toluene

Concen: 0.47 ppbv

RT: 10.03 min Scan# 2782

Delta R.T. -0.01 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Instrument :

MSVOA_L

ClientSampleId :

OUTSIDE-01-0717-03

Tot Ion: 91 Resp: 184216

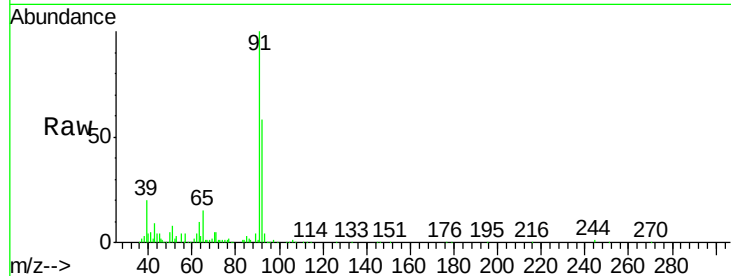
Ion Ratio Lower Upper

91 100

92 57.6 48.6 72.8

Manual Integrations
APPROVED

MMDadoda
7/20/2018 2:06:23 PM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

10.03

100000

80000

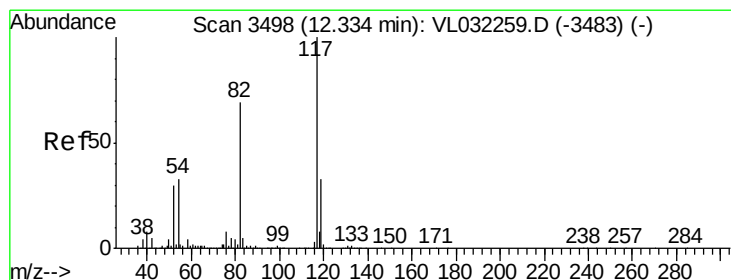
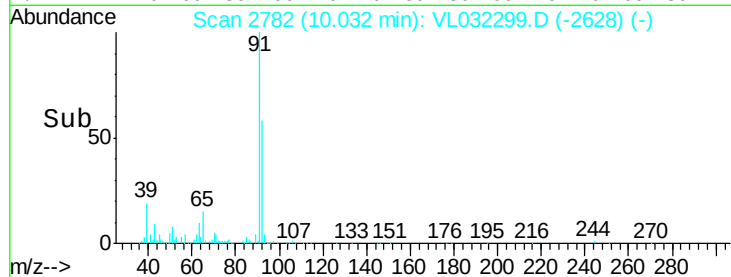
60000

40000

20000

0

Time--> 9.95 10.00 10.05 10.10



#55

Chlorobenzene-d5

Concen: 10.00 ppbv

RT: 12.33 min Scan# 3496

Delta R.T. -0.01 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

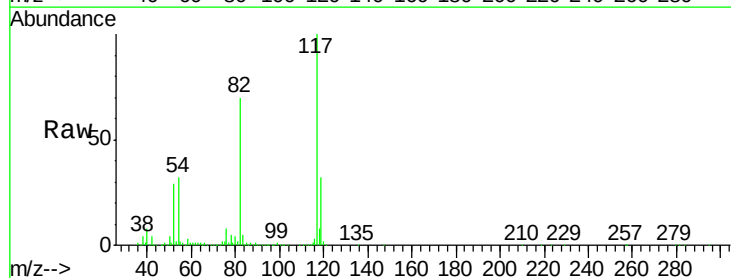
Tgt Ion: 117 Resp: 3681227

Ion Ratio Lower Upper

117 100

82 70.1 53.9 80.9

119 32.8 25.5 38.3



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

2000000

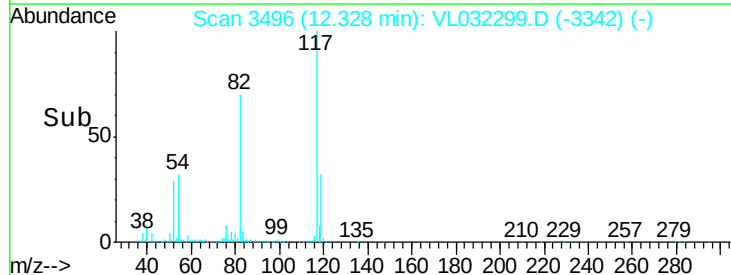
1500000

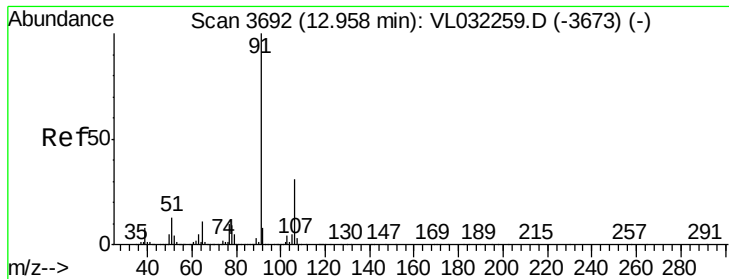
1000000

500000

0

Time--> 12.30 12.33 12.40





#58

Ethyl Benzene

Concen: 0.11 ppbv

RT: 12.95 min Scan# 3691

Delta R.T. -0.00 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Instrument :

MSVOA_L

ClientSampleId :

OUTSIDE-01-0717-03

Tot Ion: 91 Resp: 58558

Ion Ratio Lower Upper

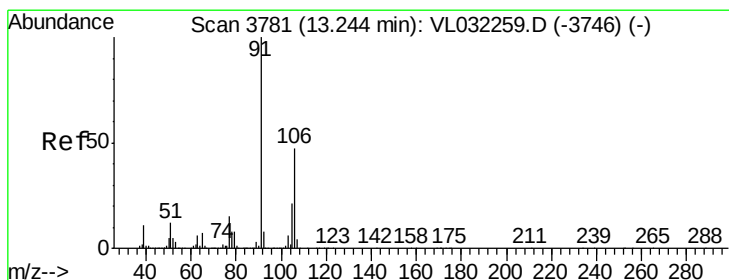
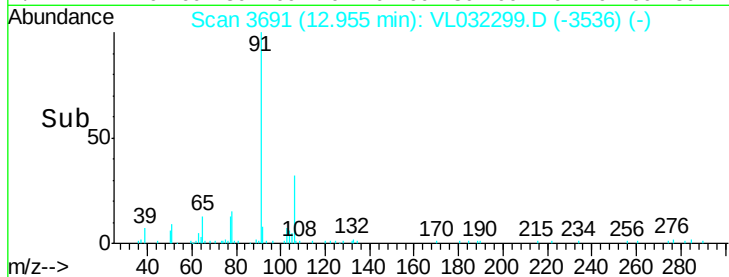
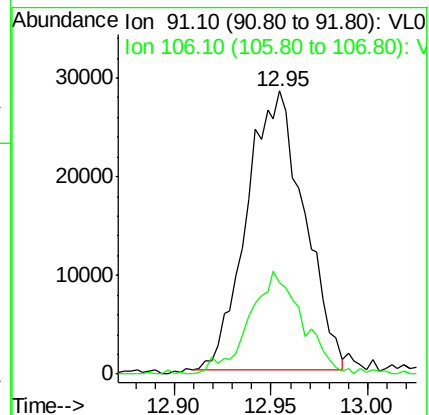
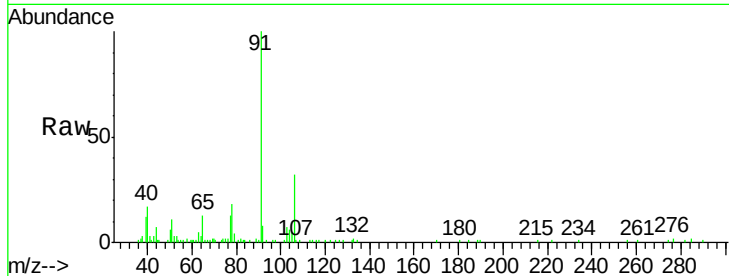
91 100

106 33.8 24.5 36.7

Manual Integrations
APPROVED

MMDadoda

7/20/2018 2:06:23 PM



#59

m/p-Xylene

Concen: 0.77 ppbv m

RT: 13.21 min Scan# 3771

Delta R.T. -0.03 min

Lab File: VL032299.D

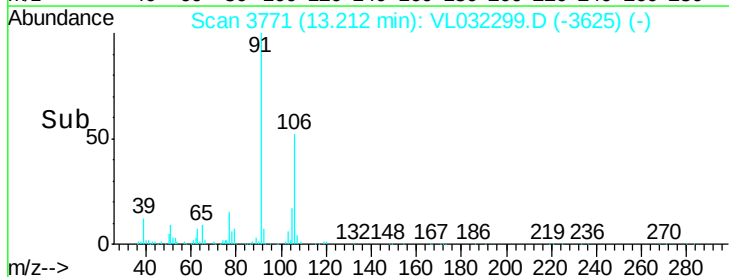
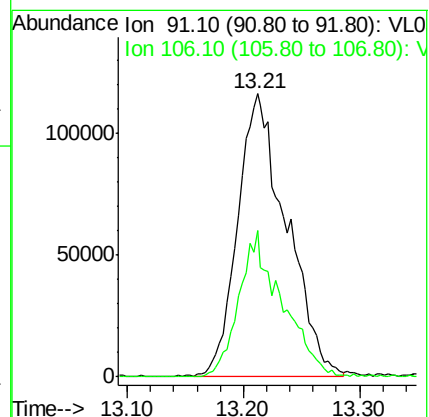
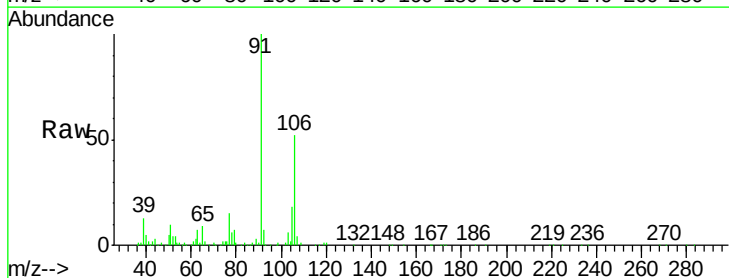
Acq: 19 Jul 2018 22:16

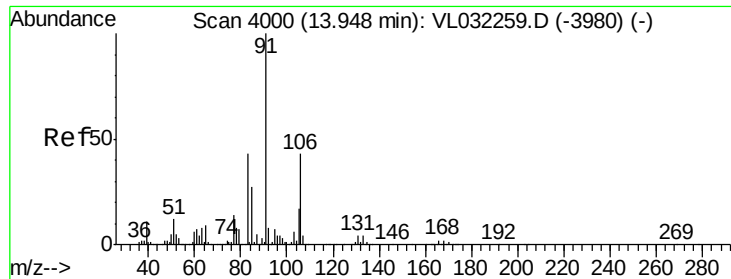
Tgt Ion: 91 Resp: 340209

Ion Ratio Lower Upper

91 100

106 0.0 36.2 54.2#





#60

o-Xylene

Concen: 0.34 ppbv

RT: 13.94 min Scan# 3997

Delta R.T. -0.01 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

Instrument :

MSVOA_L

ClientSampleId :

OUTSIDE-01-0717-03

Tot Ion: 91 Resp: 150588

Ion Ratio Lower Upper

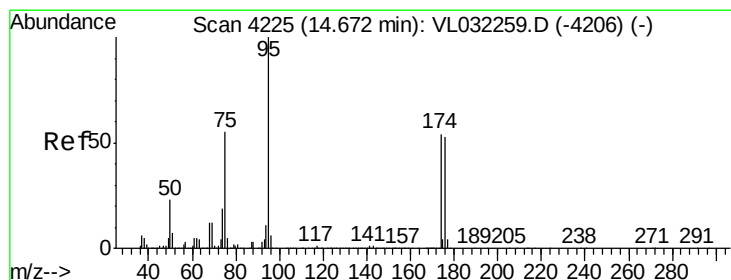
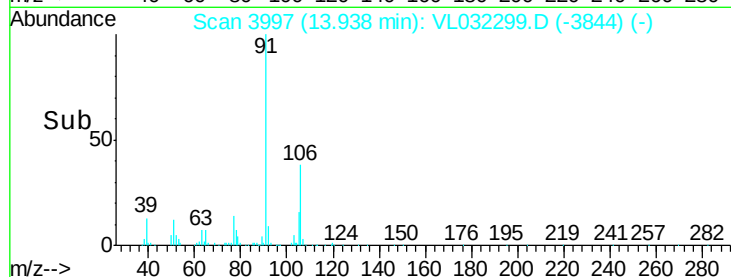
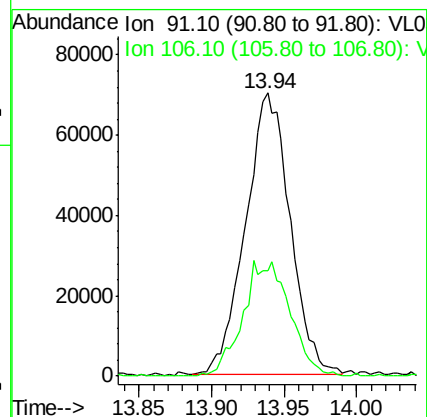
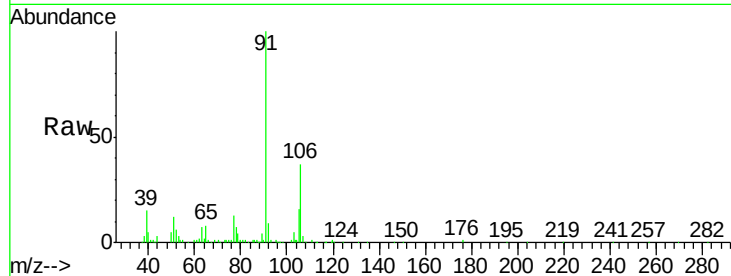
91 100

106 43.3 21.7 65.1

Manual Integrations
APPROVED

MMDadoda

7/20/2018 2:06:23 PM



#68

1-Bromo-4-Fluorobenzene

Concen: 9.88 ppbv

RT: 14.67 min Scan# 4223

Delta R.T. -0.01 min

Lab File: VL032299.D

Acq: 19 Jul 2018 22:16

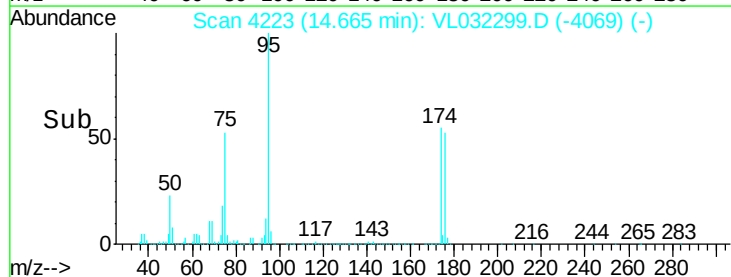
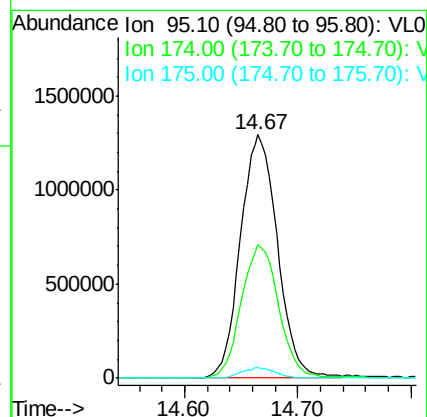
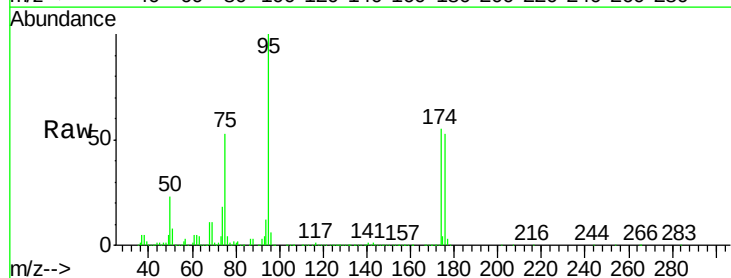
Tgt Ion: 95 Resp: 2947779

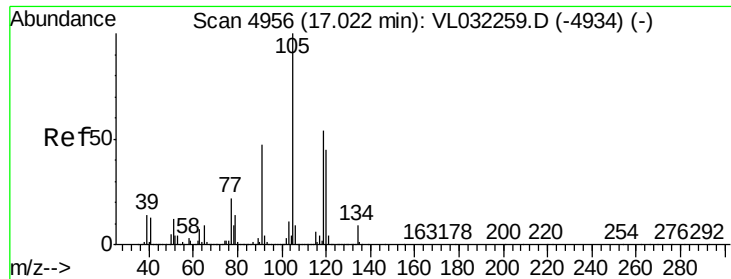
Ion Ratio Lower Upper

95 100

174 56.2 44.3 66.5

175 4.1 3.3 4.9





#74
 1,2,4-Trimethylbenzene
 Concen: 0.23 ppbv m
 RT: 17.02 min Scan# 4954
 Delta R.T. -0.01 min
 Lab File: VL032299.D
 Acq: 19 Jul 2018 22:16

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTSIDE-01-0717-03

Tot Ion	Ratio	Resp Lower	Upper
105	100		
120	42.7	35.8	53.6
91	13.0	38.2	57.4#
77	18.0	17.5	26.3

Manual Integrations
 APPROVED

MMDadoda
 7/20/2018 2:06:23 PM

