

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL070218\
 Data File : VL032183.D
 Acq On : 2 Jul 2018 15:50
 Operator : SY/AP
 Sample : J3601-11DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTDOOR-2DUP

Manual Integrations
 APPROVED

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 7/3/2018 5:17:10 PM

Quant Time: Jul 03 15:14:49 2018
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 29 2018
 QLast Update : Fri Jun 29 22:27:58 2018
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.85	49	1663993	10.00	ppbv	-0.02
33) 1,4-Difluorobenzene	7.38	114	3795940	10.00	ppbv	-0.02
55) Chlorobenzene-d5	12.34	117	3387047	10.00	ppbv	-0.02

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.68	95	2639987	10.20	ppbv	-0.02
Spiked Amount	10.000	Range	65 - 135	Recovery	=	102.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.13	85	44329	0.20	ppbv	91
3) Chlorodifluoromethane	3.06	51	106034m	0.52	ppbv	
4) Chloromethane	3.23	50	46517	0.43	ppbv	96
9) Propene	3.10	41	59223m	0.62	ppbv	
10) Heptane	8.34	43	205886	0.75	ppbv	94
11) Trichlorofluoromethane	4.07	101	51889	0.22	ppbv	98
13) Ethanol	3.72	45	549332	19.12	ppbv	99
15) Acetone	3.96	43	1877756	9.65	ppbv #	86
19) Isopropyl Alcohol	4.10	45	324393m	2.01	ppbv	
20) Methylene Chloride	4.48	84	308074	4.33	ppbv	96
26) Hexane	5.86	57	734671	3.96	ppbv	98
27) Carbon Disulfide	4.70	76	38628m	0.21	ppbv	
30) Cyclohexane	7.34	84	145655	0.83	ppbv	99
34) 2-Butanone	5.41	43	529364	2.20	ppbv	97
35) Carbon Tetrachloride	7.23	117	17954	0.07	ppbv	93
36) Benzene	7.09	78	67037	0.18	ppbv #	93
44) 2,2,4-Trimethylpentane	8.09	57	99592	0.15	ppbv #	9
50) 4-Methyl-2-Pentanone	8.97	43	800035	2.03	ppbv	100
52) Tetrachloroethene	11.47	164	24279m	0.18	ppbv	
53) Toluene	10.04	91	4183684	9.42	ppbv	99
58) Ethyl Benzene	12.96	91	582200	1.07	ppbv	93
59) m/p-Xylene	13.22	91	1328229	3.04	ppbv	97
60) o-Xylene	13.94	91	605860m	1.39	ppbv	
61) Styrene	13.78	104	169176m	0.47	ppbv	
72) 4-Ethyltoluene	16.10	105	121427	0.22	ppbv #	96
73) 1,3,5-Trimethylbenzene	16.26	105	124224	0.23	ppbv	88
74) 1,2,4-Trimethylbenzene	17.03	105	378596	0.71	ppbv #	74

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

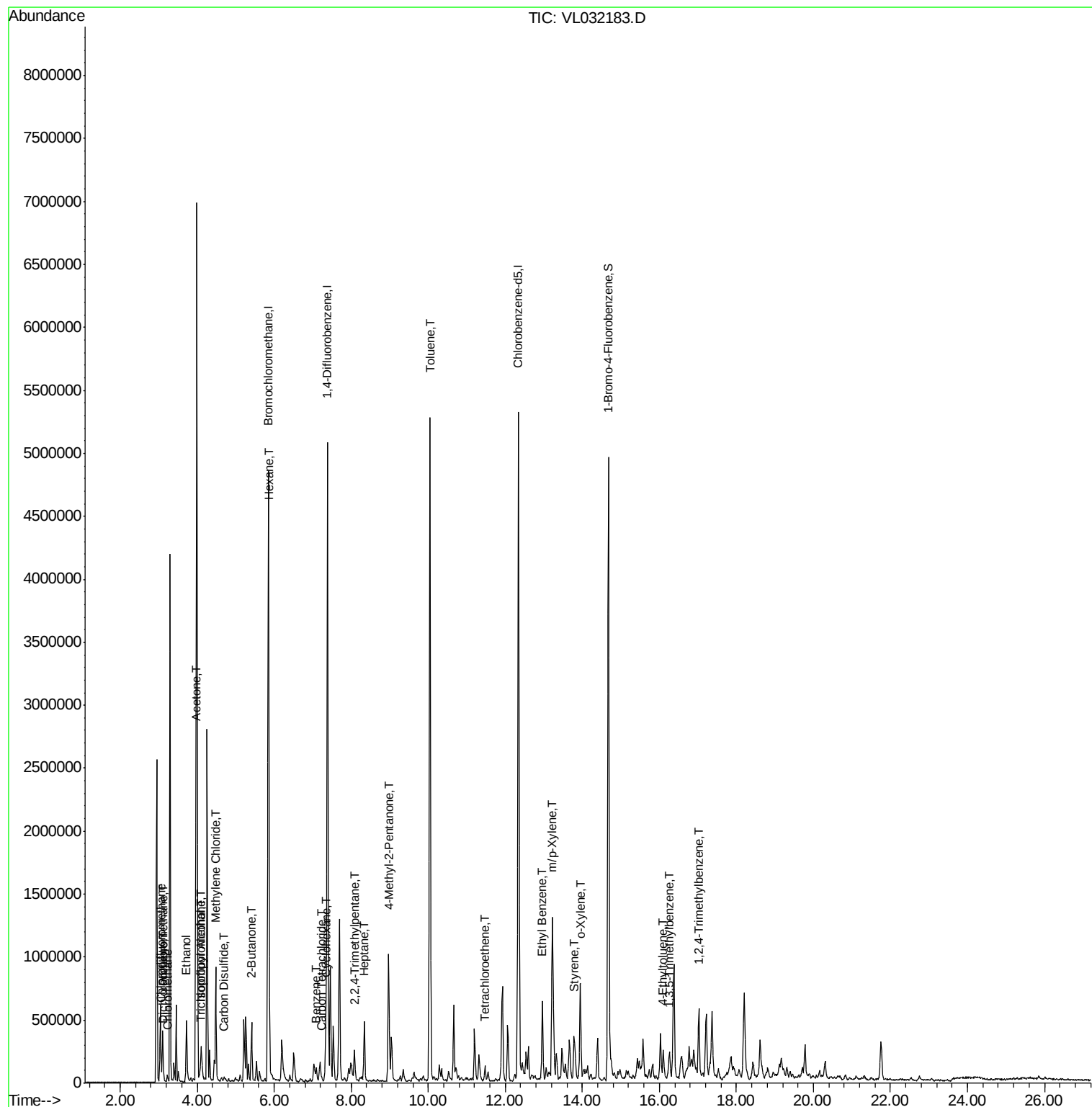
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL070218\
Data File : VL032183.D
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Operator : SY/AP
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ALS Vial : 1 Sample Multiplier: 1

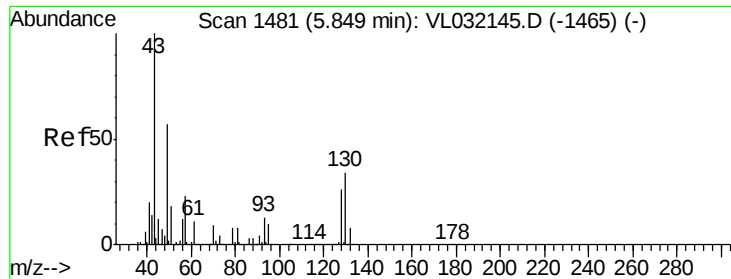
Instrument :
MSVOA_L
ClientSampleId :
OUTDOOR-2DUP

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Quant Time: Jul 03 15:14:49 2018
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL062918AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun
QLast Update : Fri Jun 29 22:27:58 2018
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.00 ppbv

RT: 5.85 min Scan# 1480

Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

ClientSampleId :

OUTDOOR-2DUP

Tot Ion: 49 Resp: 1663993

Ion Ratio Lower Upper

49 100

128 44.8 23.4 70.0

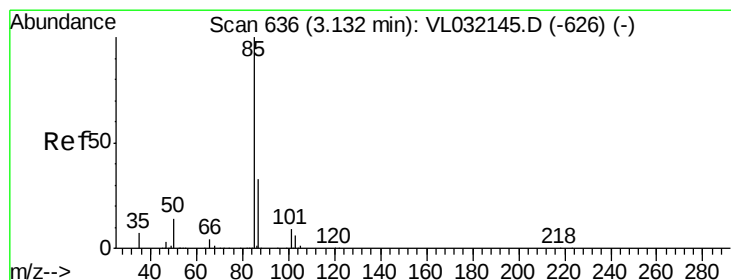
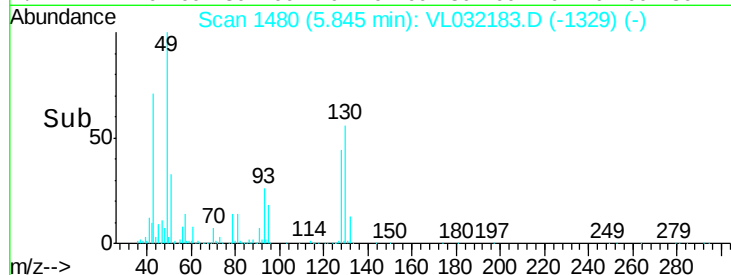
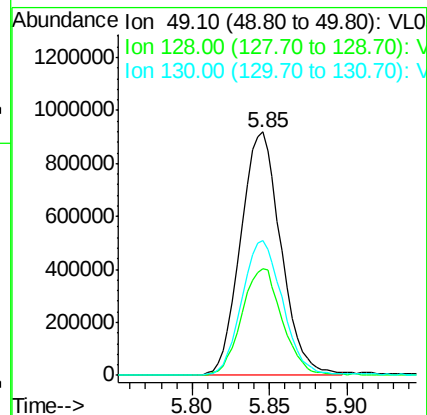
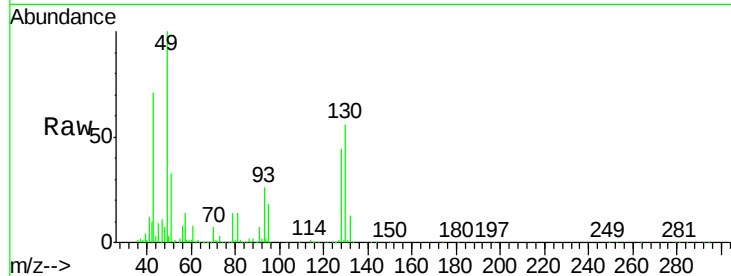
130 56.7 30.3 90.9

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#2

Dichlorodifluoromethane

Concen: 0.20 ppbv

RT: 3.13 min Scan# 636

Delta R.T. -0.01 min

Lab File: VL032183.D

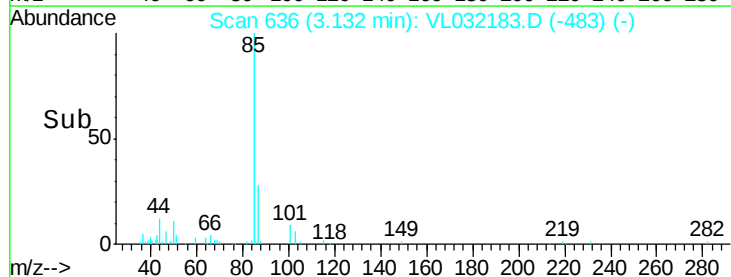
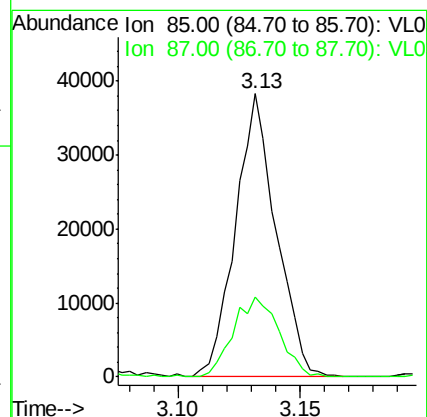
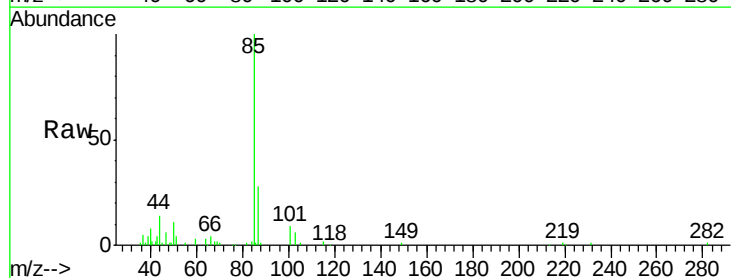
Acq: 2 Jul 2018 15:50

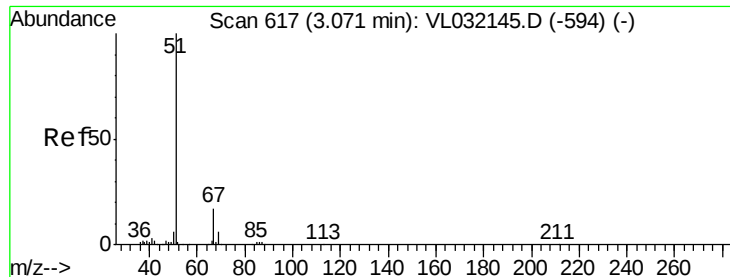
Tgt Ion: 85 Resp: 44329

Ion Ratio Lower Upper

85 100

87 28.4 26.7 40.1





#3

Chlorodifluoromethane

Concen: 0.52 ppbv m

RT: 3.06 min Scan# 615

Delta R.T. -0.01 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

ClientSampleId :

OUTDOOR-2DUP

Tot Ion: 51 Resp: 106034

Ion Ratio Lower Upper

51 100

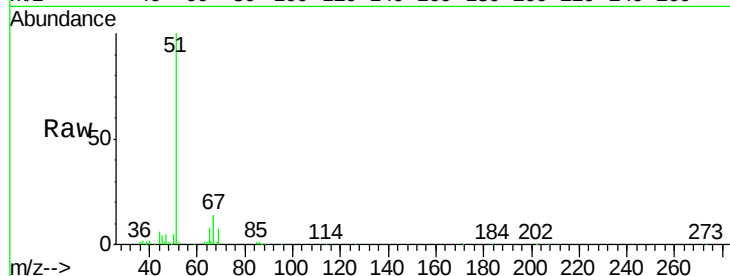
67 23.3 13.2 19.8#

Manual Integrations

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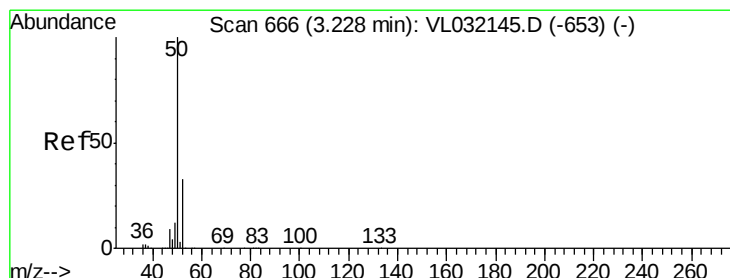
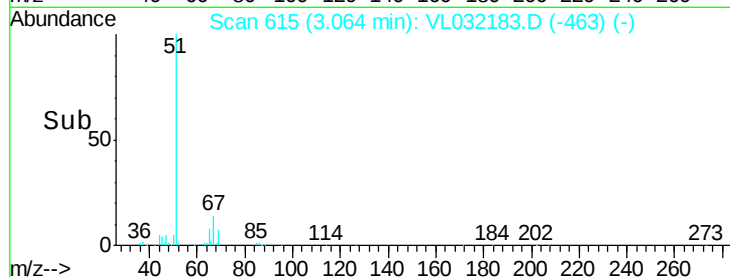
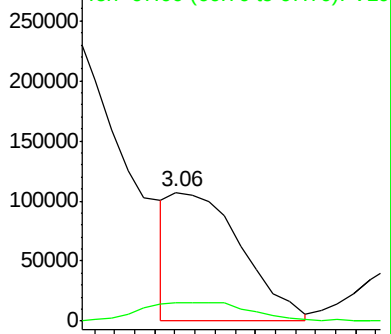
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.43 ppbv

RT: 3.23 min Scan# 666

Delta R.T. -0.01 min

Lab File: VL032183.D

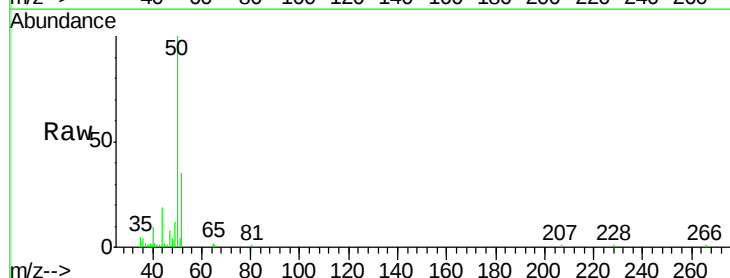
Acq: 2 Jul 2018 15:50

Tgt Ion: 50 Resp: 46517

Ion Ratio Lower Upper

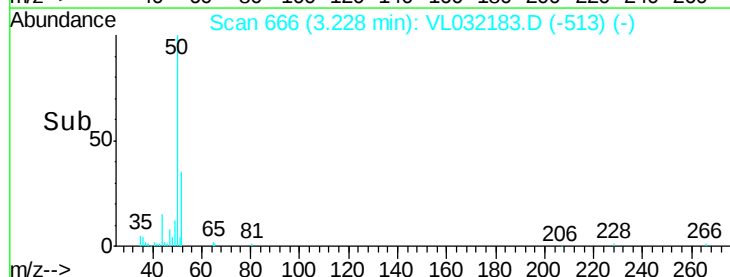
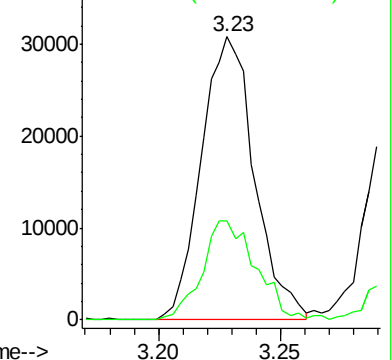
50 100

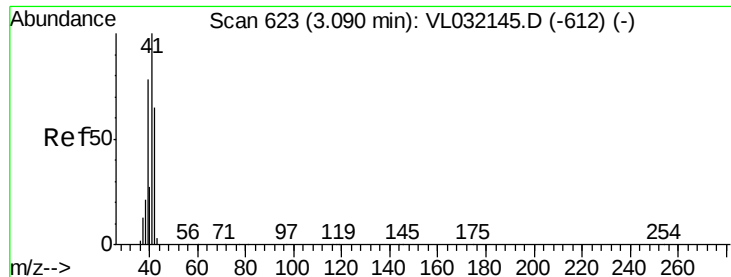
52 34.8 26.0 39.0



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#9

Propene

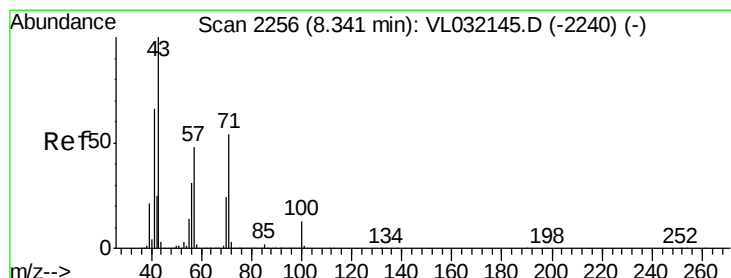
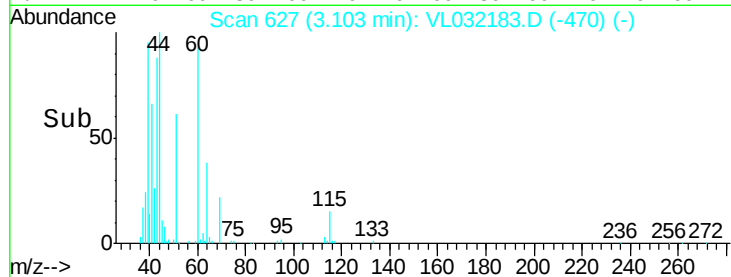
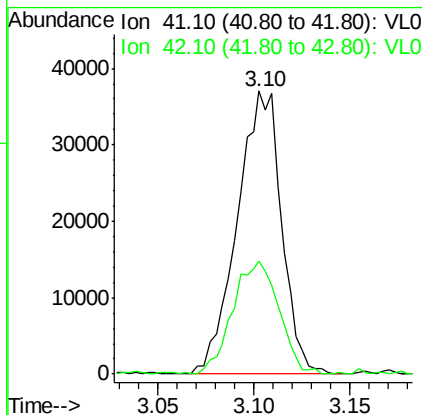
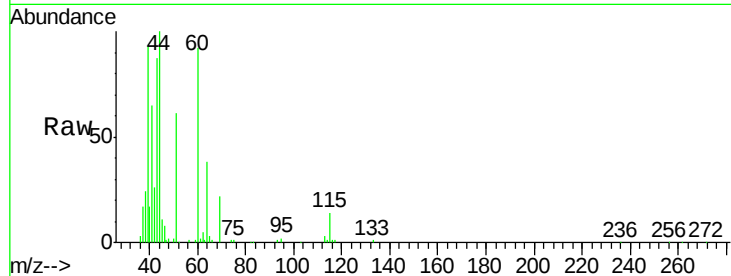
Concen: 0.62 ppbv m
RT: 3.10 min Scan# 627
Delta R.T. 0.00 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Instrument :
MSVOA_L
ClientSampleId :
OUTDOOR-2DUP

Tot Ion: 41 Resp: 59223
Ion Ratio Lower Upper
41 100
42 1297.4 56.2 84.4

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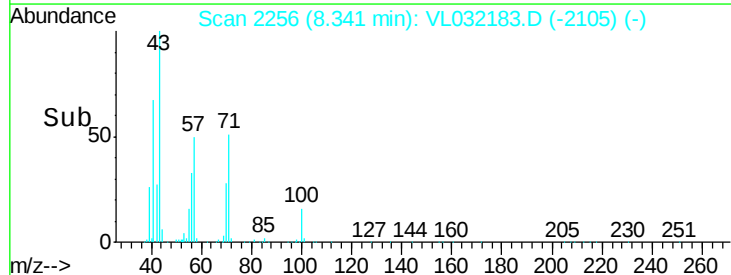
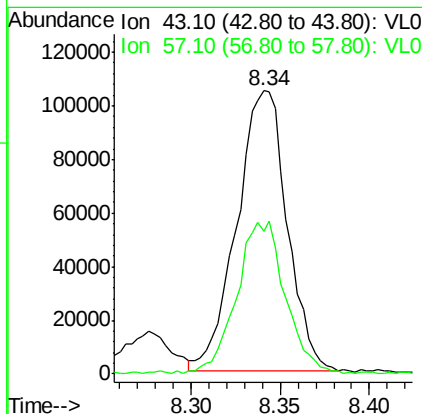
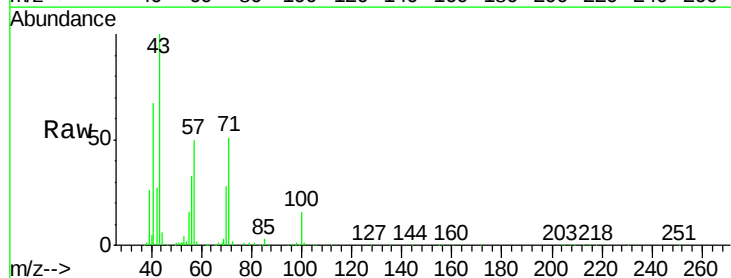


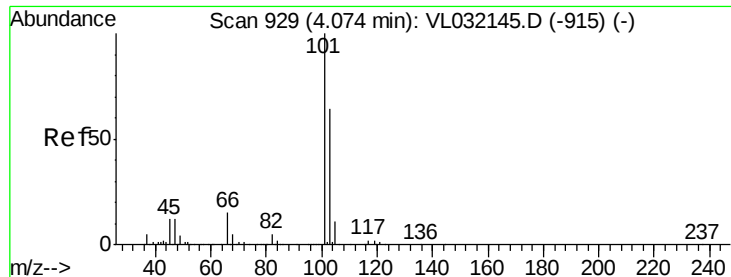
#10

Heptane

Concen: 0.75 ppbv
RT: 8.34 min Scan# 2256
Delta R.T. -0.02 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Tgt Ion: 43 Resp: 205886
Ion Ratio Lower Upper
43 100
57 53.9 39.8 59.8





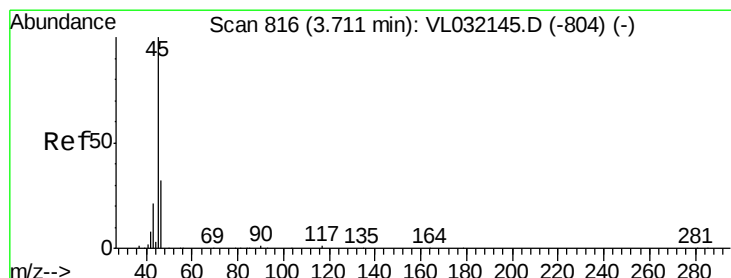
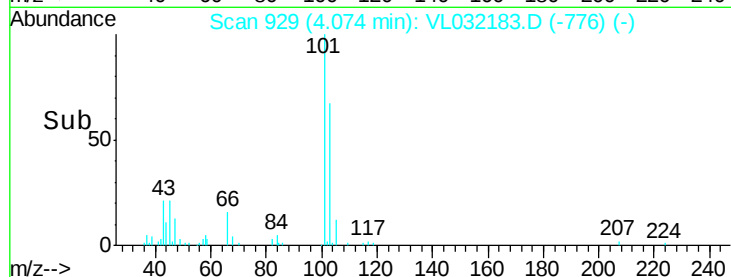
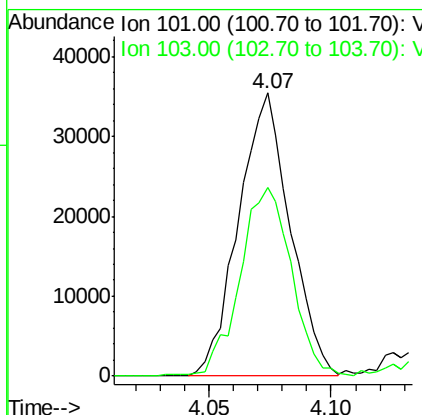
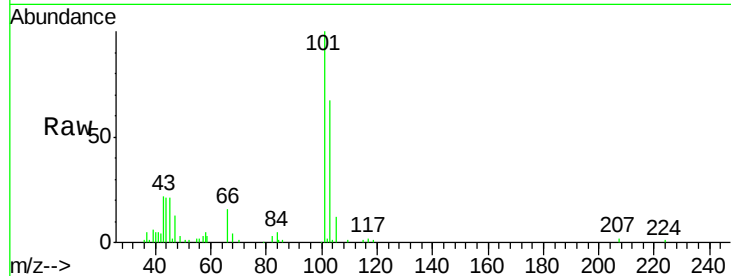
#11
 Trichlorofluoromethane
 Concen: 0.22 ppbv
 RT: 4.07 min Scan# 929
 Delta R.T. -0.01 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTDOOR-2DUP

Tot Ion	Ion	Ratio	Resp	Lower	Upper
101	100		51889		
103	65.9	51.4		77.0	

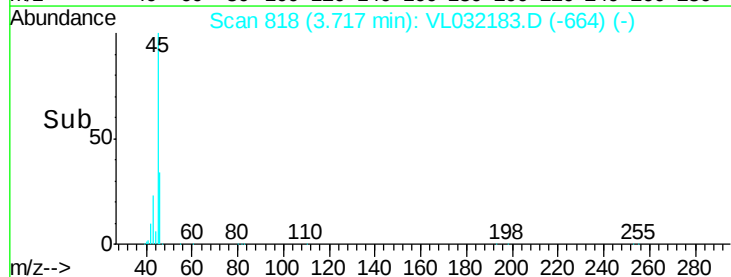
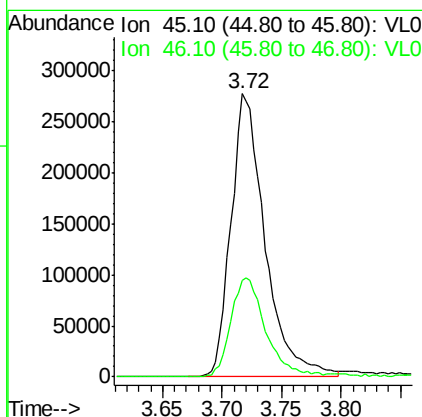
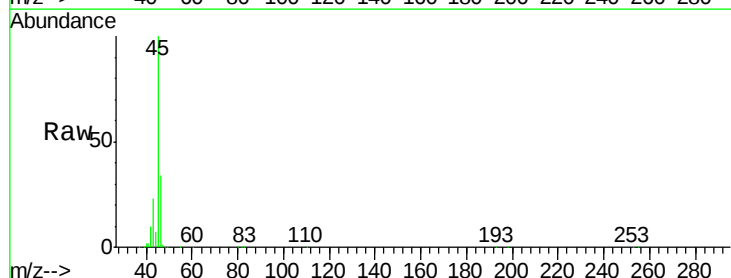
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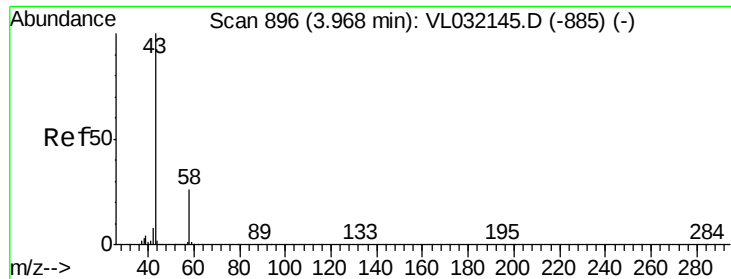
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#13
 Ethanol
 Concen: 19.12 ppbv
 RT: 3.72 min Scan# 818
 Delta R.T. -0.01 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
45	100		549332		
46	37.1	14.6		58.4	





#15

Acetone

Concen: 9.65 ppbv

RT: 3.96 min Scan# 895

Delta R.T. -0.01 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

ClientSampleId :

OUTDOOR-2DUP

Tot Ion: 43 Resp: 1877756

Ion Ratio Lower Upper

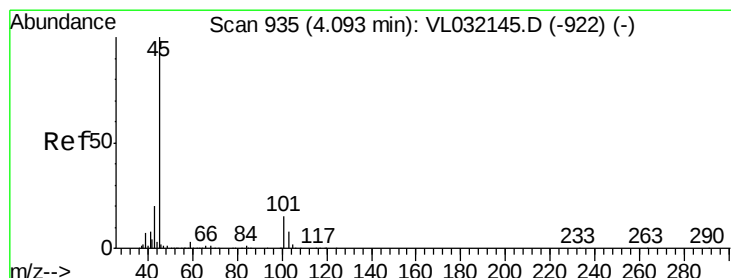
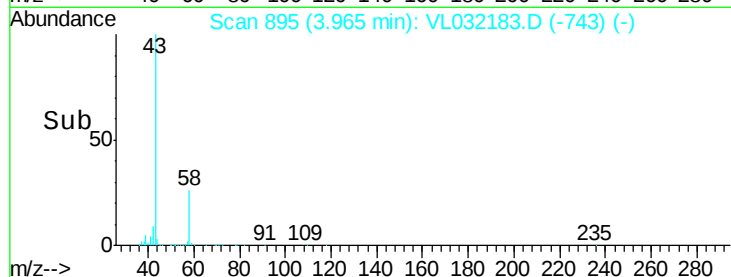
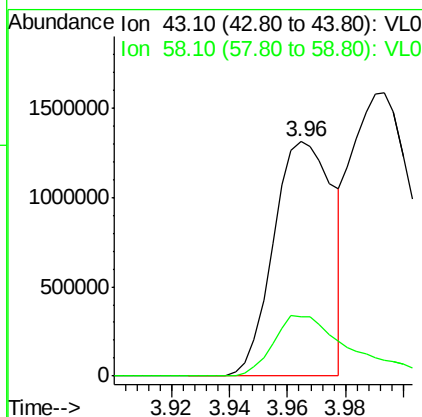
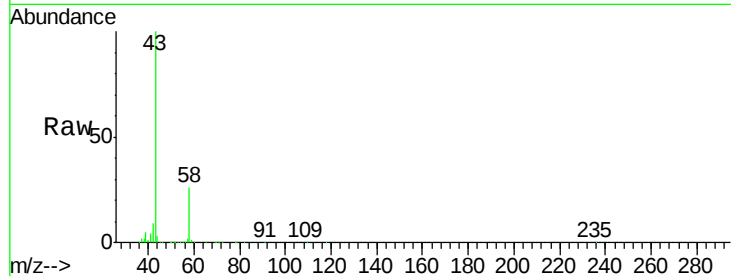
43 100

58 33.7 21.4 32.0#

Manual Integrations
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#19

Isopropyl Alcohol

Concen: 2.01 ppbv m

RT: 4.10 min Scan# 937

Delta R.T. -0.00 min

Lab File: VL032183.D

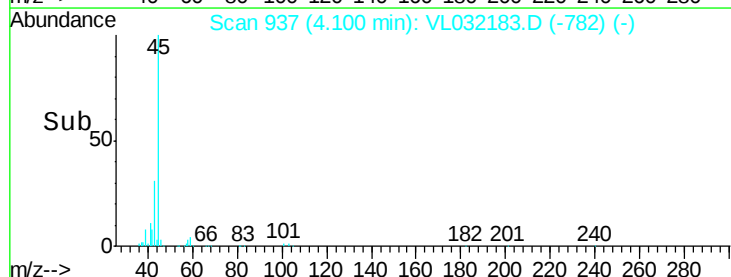
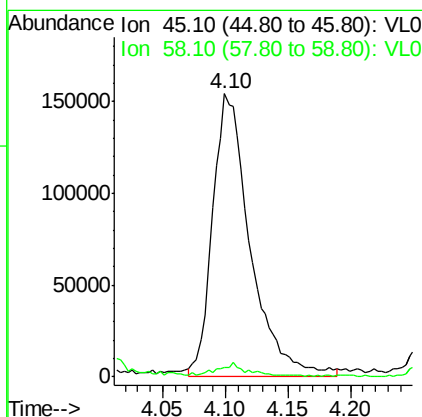
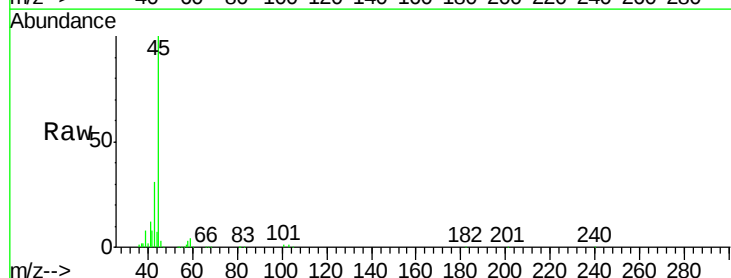
Acq: 2 Jul 2018 15:50

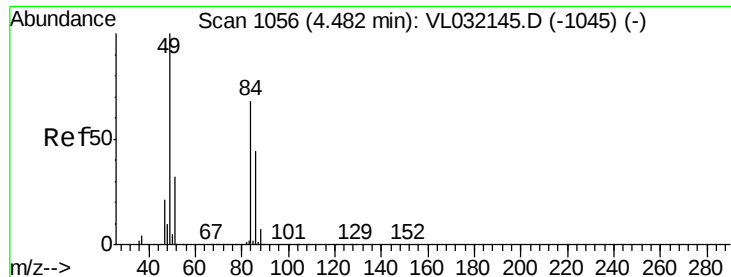
Tgt Ion: 45 Resp: 324393

Ion Ratio Lower Upper

45 100

58 0.0 29.4 44.0#





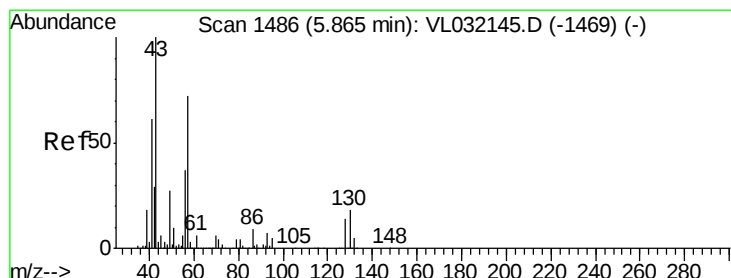
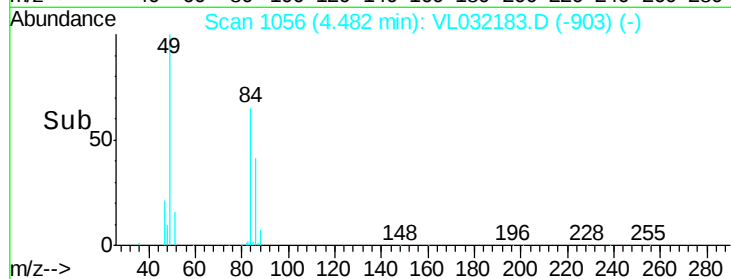
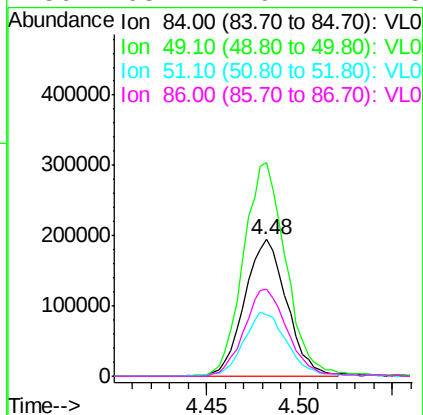
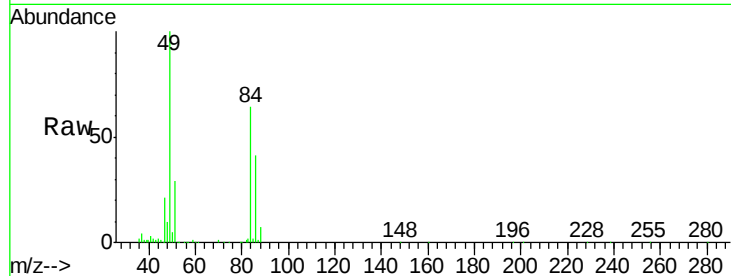
#20
Methvlene Chloride
Concen: 4.33 ppbv
RT: 4.48 min Scan# 1056
Delta R.T. -0.01 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Instrument :
MSVOA_L
ClientSampleId :
OUTDOOR-2DUP

Tot Ion	Ratio	Lower	Upper
84	100		
49	156.2	119.6	179.4
51	44.3	36.3	54.5
86	63.4	49.7	74.5

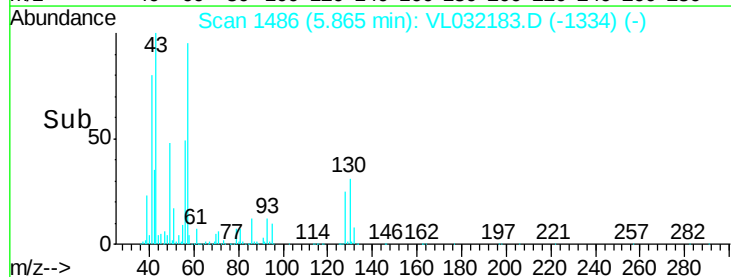
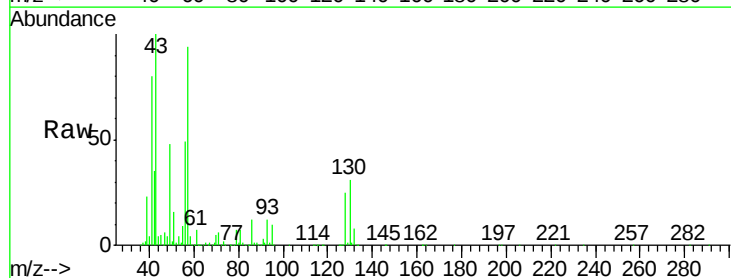
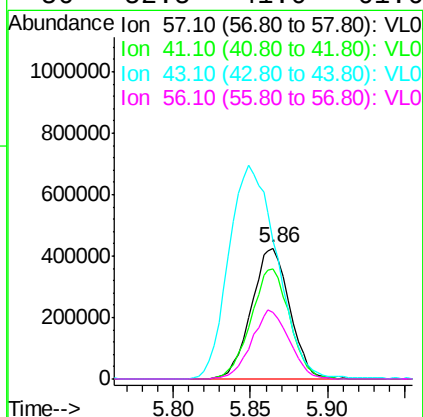
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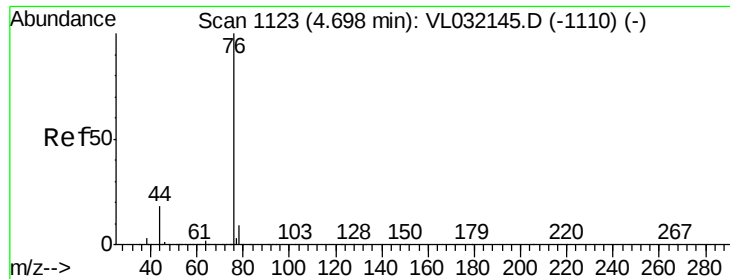
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#26
Hexane
Concen: 3.96 ppbv
RT: 5.86 min Scan# 1486
Delta R.T. -0.01 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Tgt Ion	Ratio	Lower	Upper
57	100		
41	85.3	68.6	103.0
43	206.5	168.6	252.8
56	52.5	41.0	61.6





#27

Carbon Disulfide

Concen: 0.21 ppbv m

RT: 4.70 min Scan# 1124

Delta R.T. -0.01 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

ClientSampleId :

OUTDOOR-2DUP

Tot Ion: 76 Resp: 38628

Ion Ratio Lower Upper

76 100

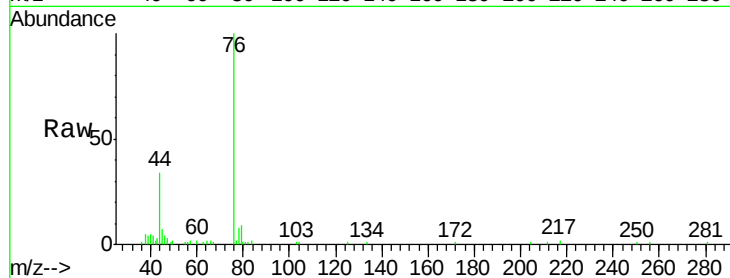
44 32.3 15.1 22.7#

78 12.1 7.2 10.8#

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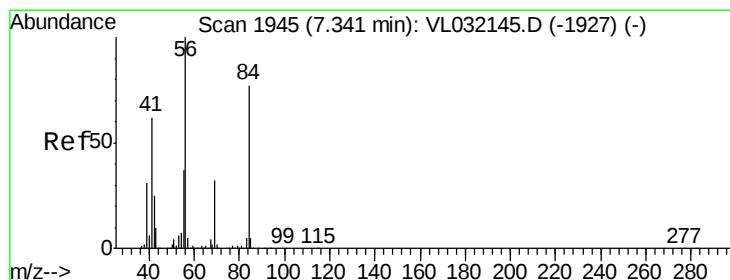
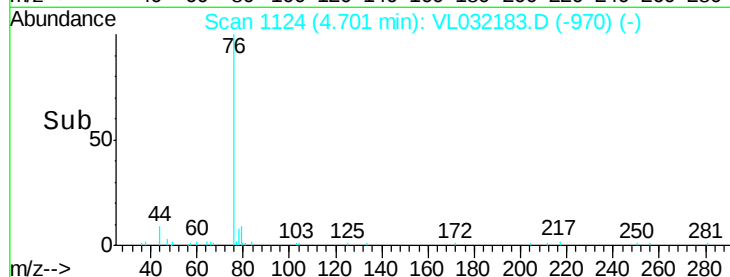
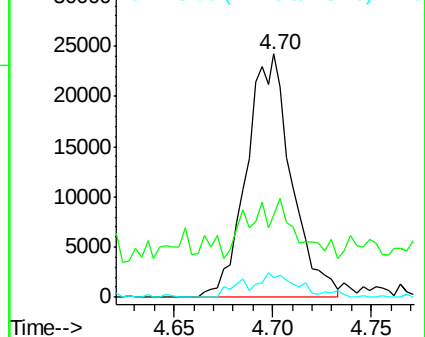
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Abundance Ion 76.00 (75.70 to 76.70): VL0

Ion 44.10 (43.80 to 44.80): VL0

Ion 78.00 (77.70 to 78.70): VL0



#30

Cyclohexane

Concen: 0.83 ppbv

RT: 7.34 min Scan# 1945

Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

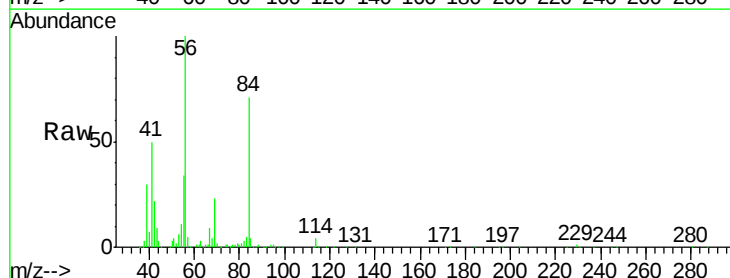
Tgt Ion: 84 Resp: 145655

Ion Ratio Lower Upper

84 100

56 137.8 109.1 163.7

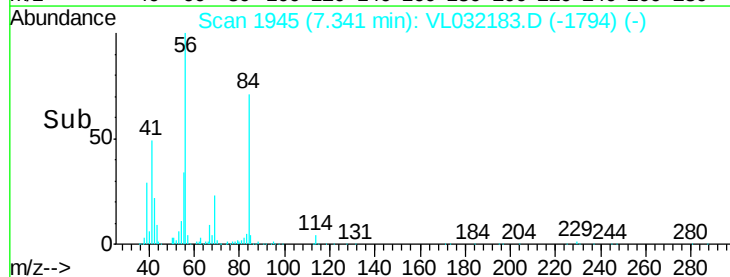
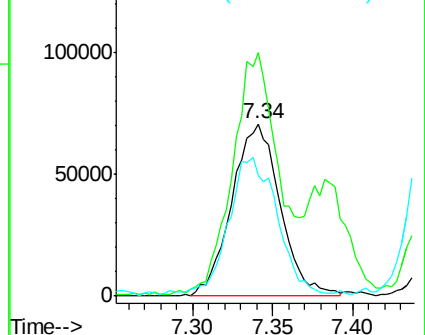
41 79.4 64.6 96.8

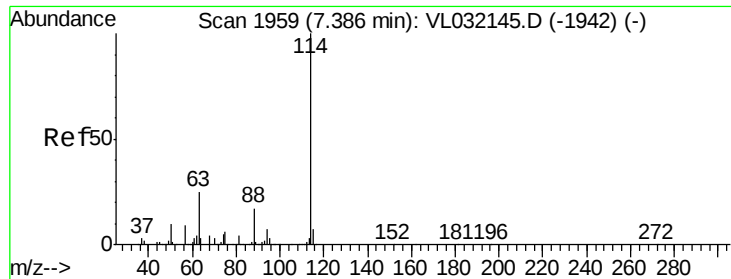


Abundance Ion 84.20 (83.90 to 84.90): VL0

Ion 56.10 (55.80 to 56.80): VL0

Ion 41.10 (40.80 to 41.80): VL0





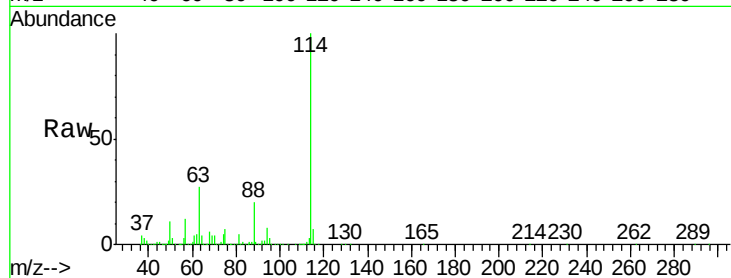
#33
 1,4-Difluorobenzene
 Concen: 10.00 ppbv
 RT: 7.38 min Scan# 1958
 Delta R.T. -0.02 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTDOOR-2DUP

Tot Ion	Ratio	Lower	Upper
114	100		
63	27.0	19.1	28.7
88	19.2	13.9	20.9

Manual Integrations
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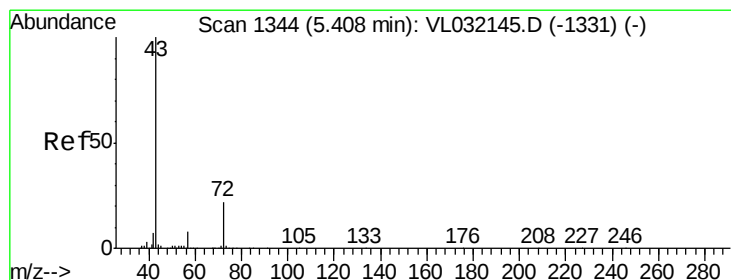
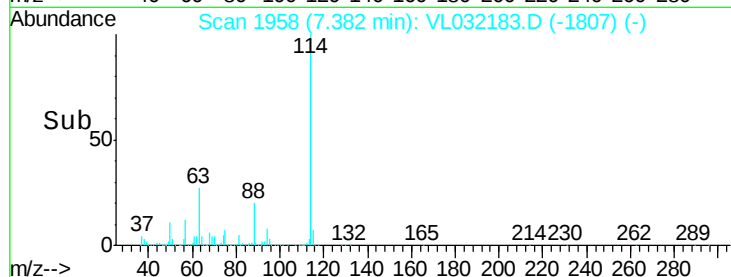
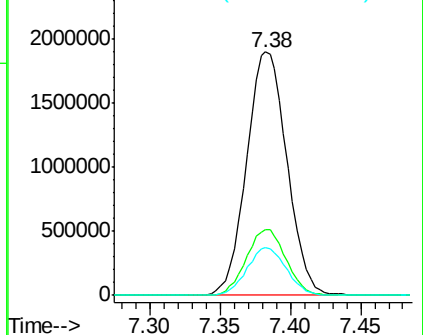
MMDadoda
 7/3/2018 5:17:10 PM



Abundance Ion 114.10 (113.80 to 114.80): V

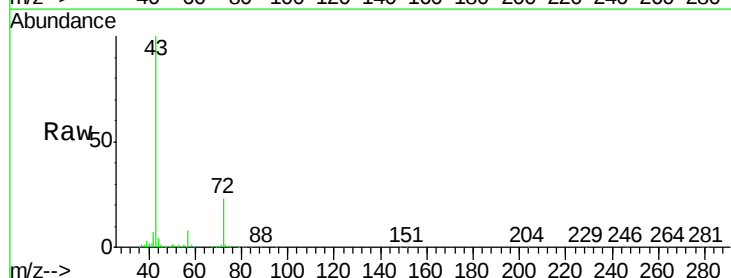
Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0



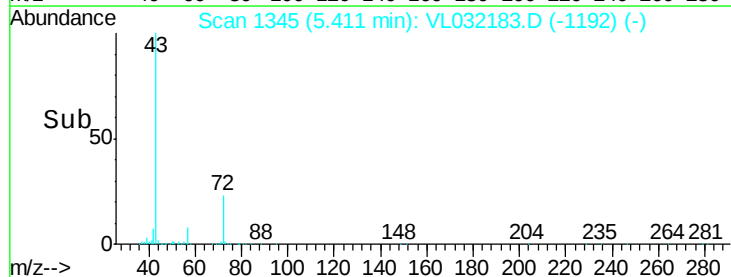
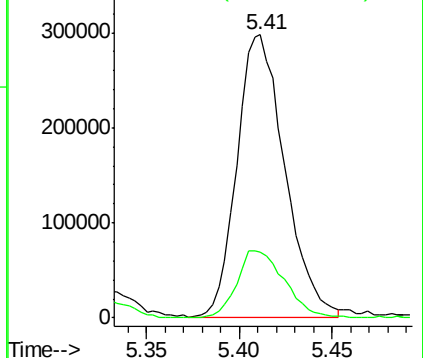
#34
 2-Butanone
 Concen: 2.20 ppbv
 RT: 5.41 min Scan# 1345
 Delta R.T. -0.01 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

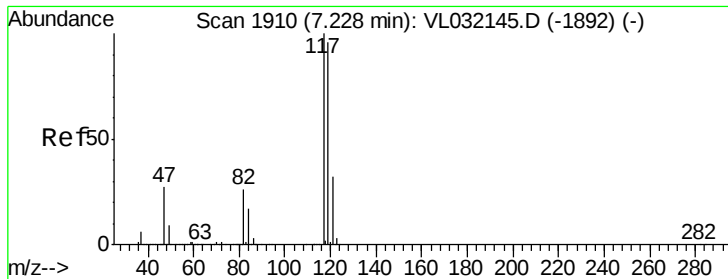
Tgt Ion	Ratio	Lower	Upper
43	100		
72	24.3	18.4	27.6



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 72.10 (71.80 to 72.80): VL0





#35

Carbon Tetrachloride

Concen: 0.07 ppbv

RT: 7.23 min Scan# 1911

Delta R.T. -0.01 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

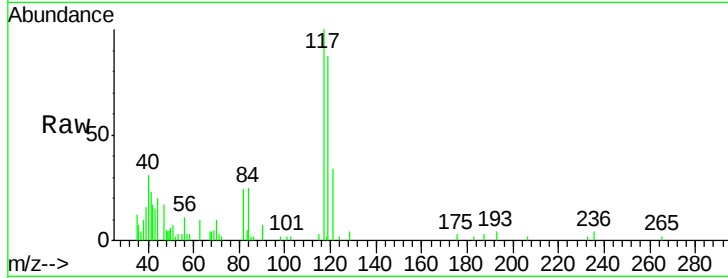
ClientSampleId :

OUTDOOR-2DUP

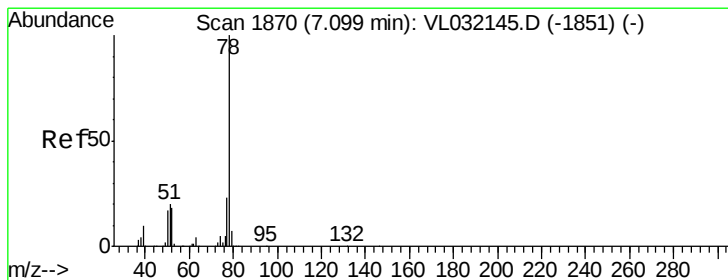
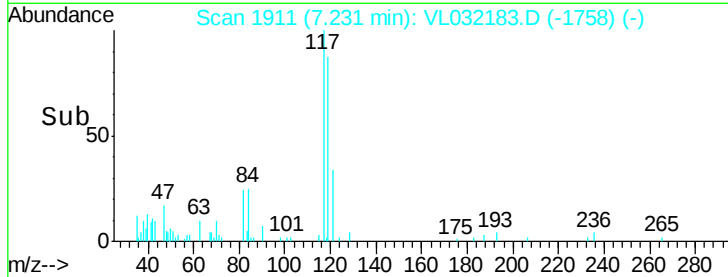
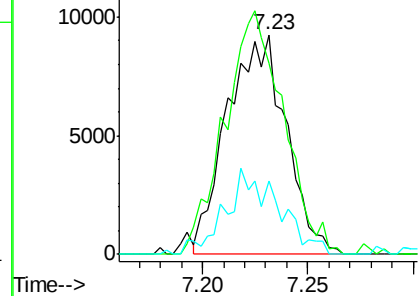
Tot Ion:	117	Resp:	17954
Ion Ratio	Lower	Upper	
117	100		
119	86.8	74.8	112.2
121	33.5	24.0	36.0

Manual Integrations
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Abundance Ion 117.00 (116.70 to 117.70): V
Ion 119.00 (118.70 to 119.70): V
Ion 121.00 (120.70 to 121.70): V



#36

Benzene

Concen: 0.18 ppbv

RT: 7.09 min Scan# 1867

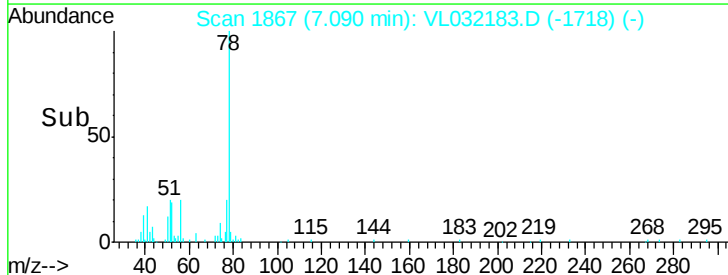
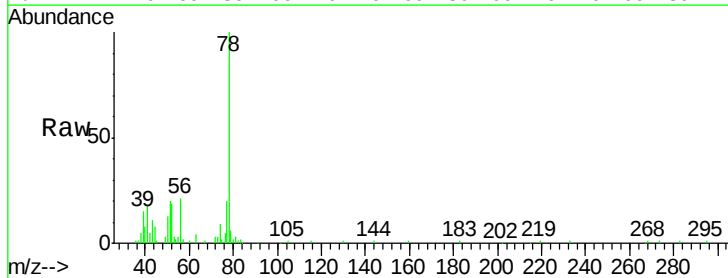
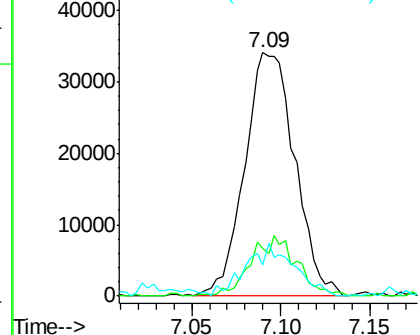
Delta R.T. -0.02 min

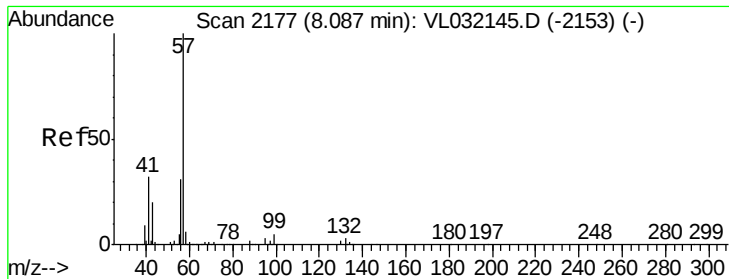
Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Tgt Ion:	78	Resp:	67037
Ion Ratio	Lower	Upper	
78	100		
77	19.8	17.7	26.5
50	12.9	14.0	21.0#

Abundance Ion 78.10 (77.80 to 78.80): VL0
Ion 77.10 (76.80 to 77.80): VL0
Ion 50.10 (49.80 to 50.80): VL0





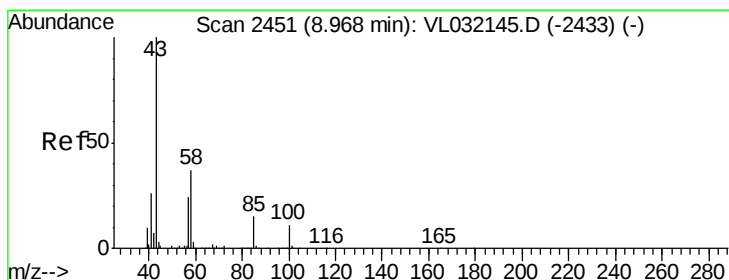
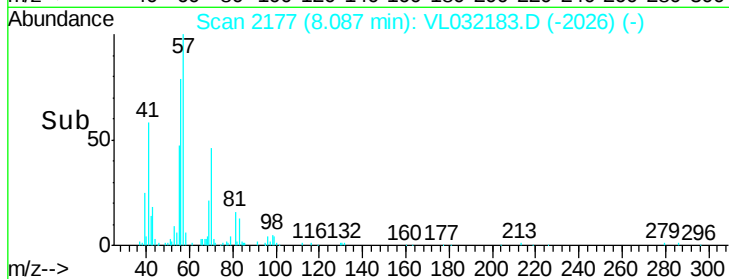
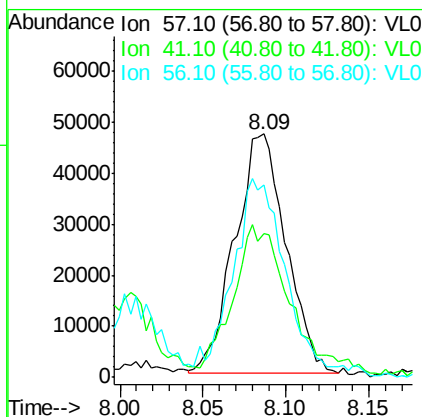
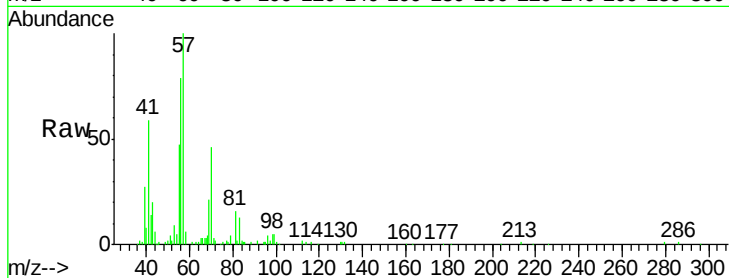
#44
 2,2,4-Trimethylpentane
 Concen: 0.15 ppbv
 RT: 8.09 min Scan# 2177
 Delta R.T. -0.02 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTDOOR-2DUP

Tot Ion	Ratio	Lower	Upper
57	100		
41	71.4	24.3	36.5#
56	89.7	25.1	37.7#

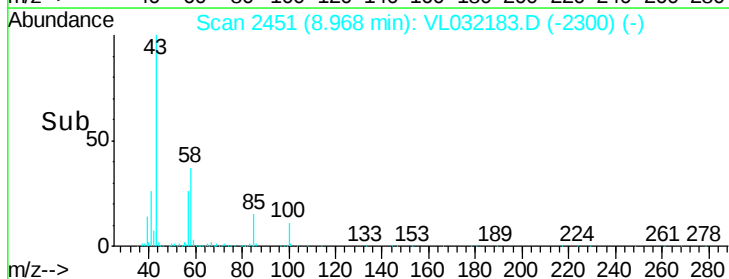
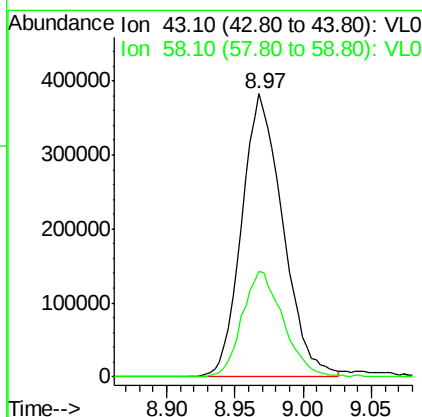
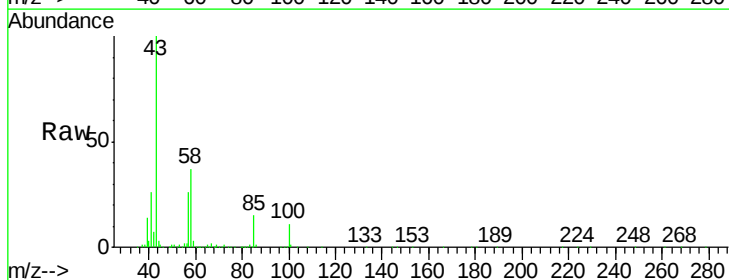
Manual Integrations
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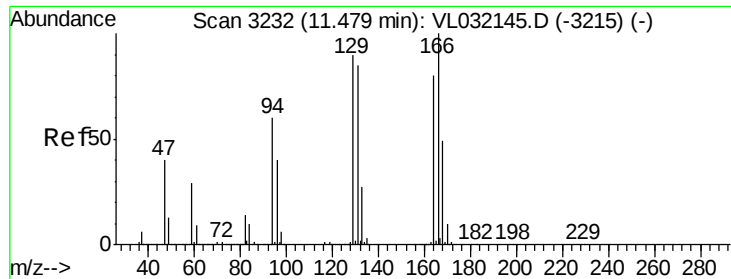
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#50
 4-Methyl-2-Pentanone
 Concen: 2.03 ppbv
 RT: 8.97 min Scan# 2451
 Delta R.T. -0.02 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Tgt Ion	Ratio	Lower	Upper
43	100		
58	37.5	29.8	44.6





#52

Tetrachloroethene

Concen: 0.18 ppbv m

RT: 11.47 min Scan# 3229

Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

ClientSampleId :

OUTDOOR-2DUP

Tot Ion:164 Resp: 24279

Ion Ratio Lower Upper

164 100

166 105.2 100.6 151.0

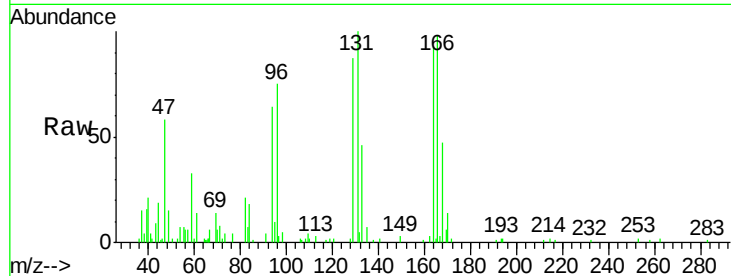
129 94.0 84.0 126.0

131 107.5 82.7 124.1

Manual Integrations
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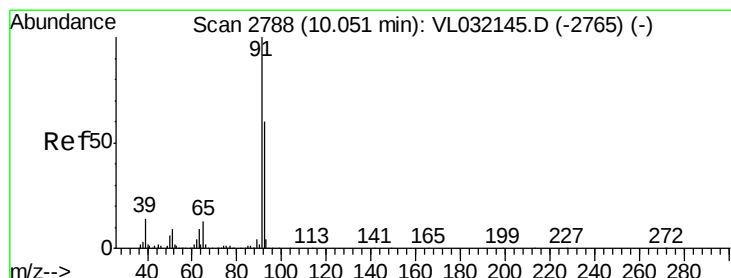
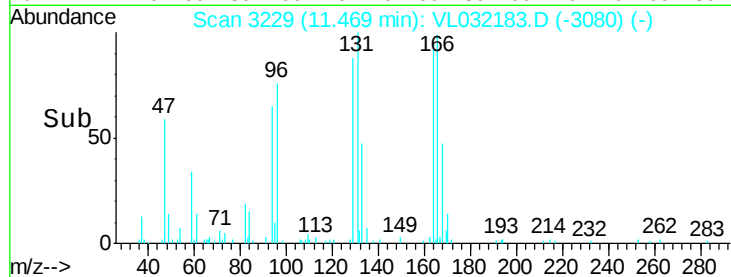
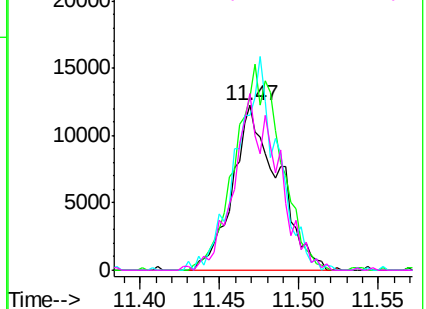


Abundance Ion 163.90 (163.60 to 164.60): V

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: 9.42 ppbv

RT: 10.04 min Scan# 2786

Delta R.T. -0.02 min

Lab File: VL032183.D

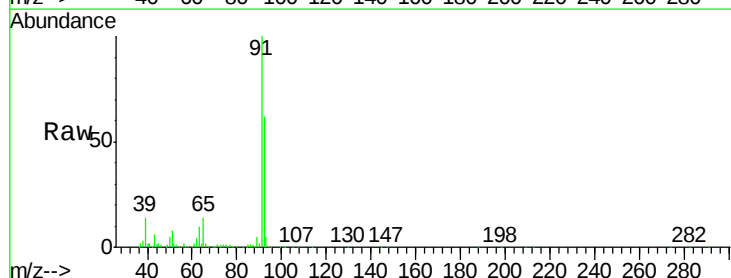
Acq: 2 Jul 2018 15:50

Tgt Ion: 91 Resp: 4183684

Ion Ratio Lower Upper

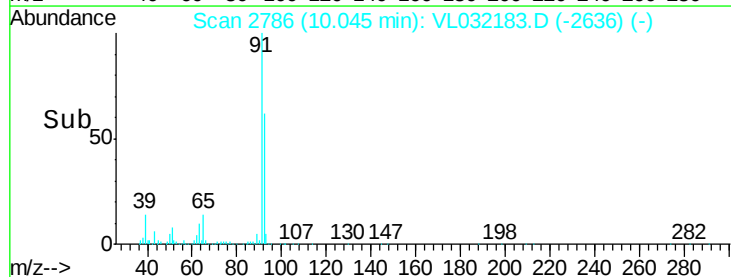
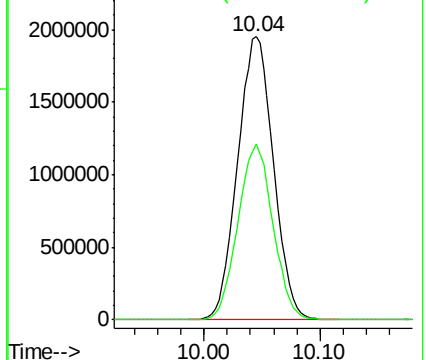
91 100

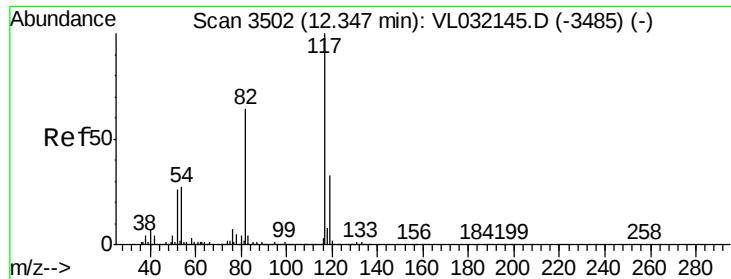
92 60.9 49.2 73.8



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0





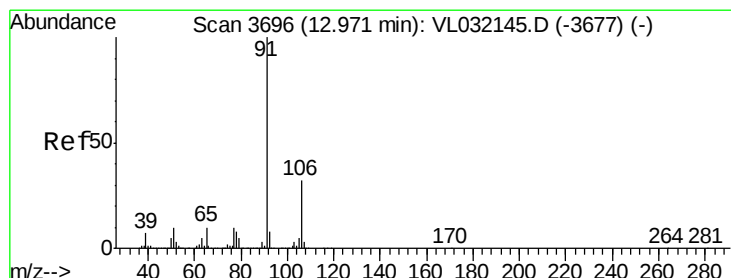
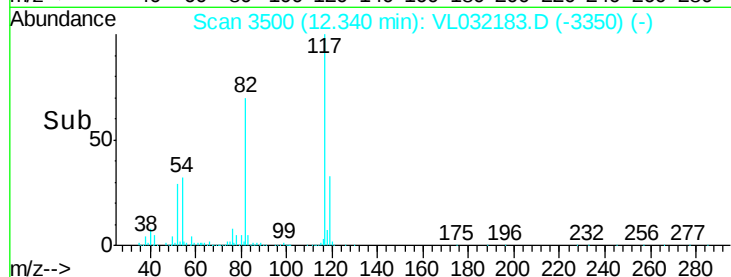
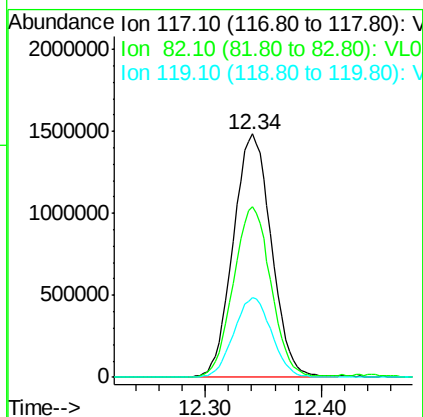
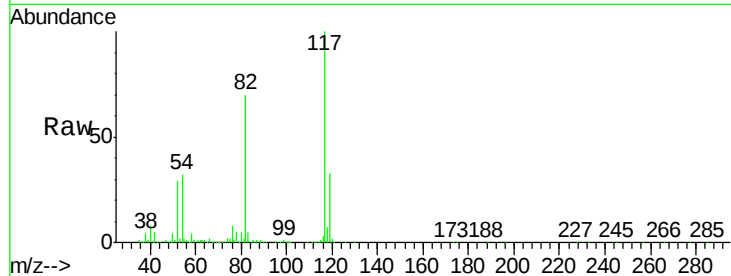
#55
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 12.34 min Scan# 3500
Delta R.T. -0.02 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Instrument :
MSVOA_L
ClientSampleId :
OUTDOOR-2DUP

Tot Ion	Ratio	Lower	Upper
117	100		
82	69.2	47.8	71.8
119	32.6	43.3	64.9

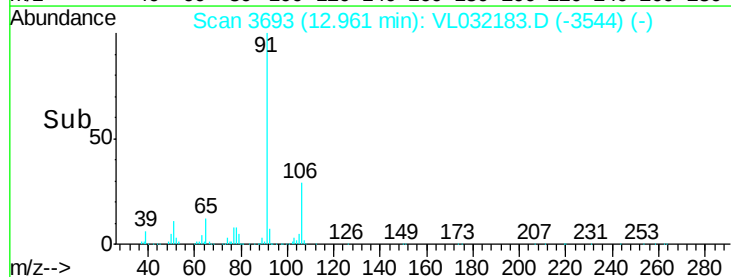
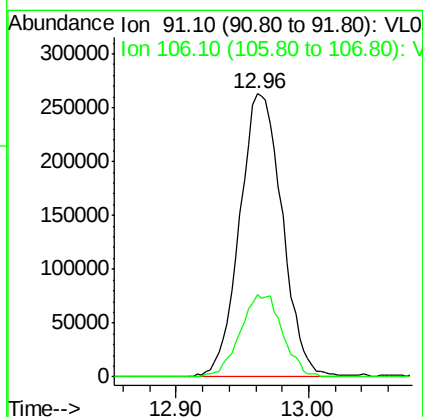
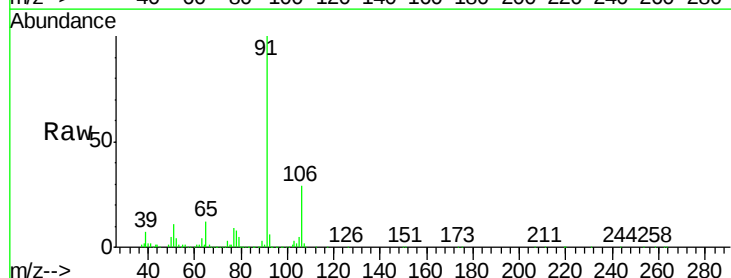
Manual Integrations
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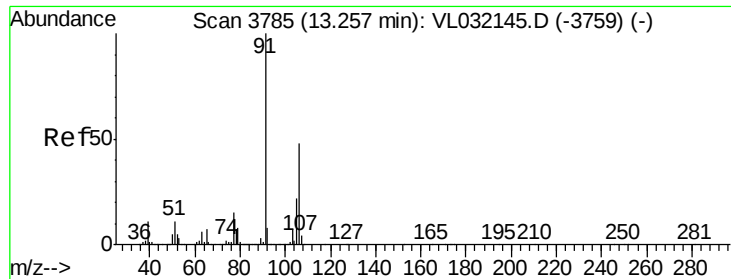
MMDadoda
7/3/2018 5:17:10 PM



#58
Ethyl Benzene
Concen: 1.07 ppbv
RT: 12.96 min Scan# 3693
Delta R.T. -0.02 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Tgt Ion	Ratio	Lower	Upper
91	100		
106	29.1	26.5	39.7





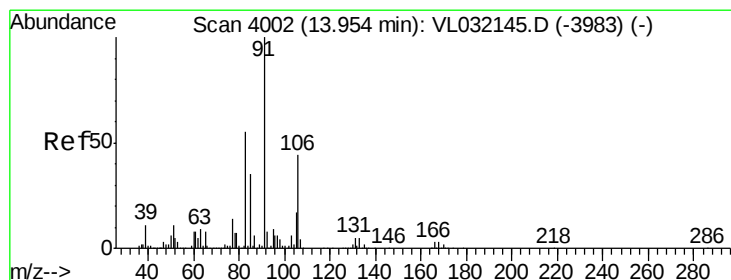
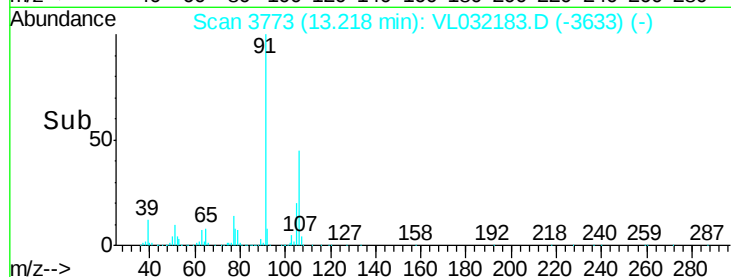
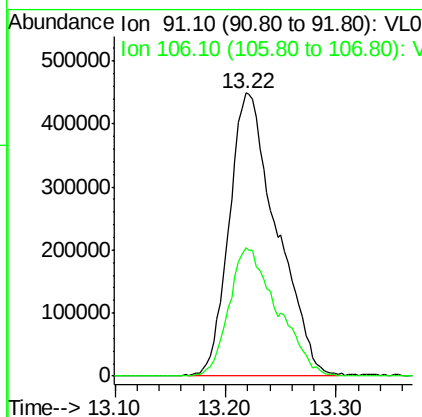
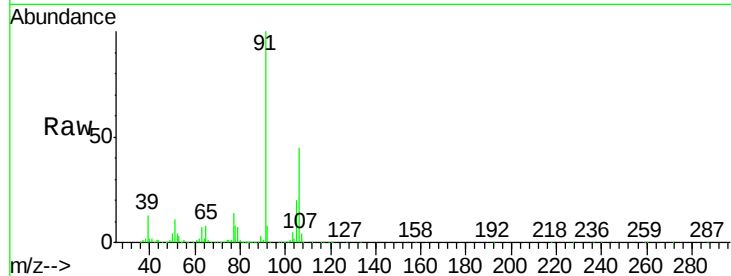
#59
m/p-Xylene
Concen: 3.04 ppbv
RT: 13.22 min Scan# 3773
Delta R.T. -0.05 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Instrument :
MSVOA_L
ClientSampleId :
OUTDOOR-2DUP

Tot Ion: 91 Resp: 1328229
Ion Ratio Lower Upper
91 100
106 46.4 38.6 58.0

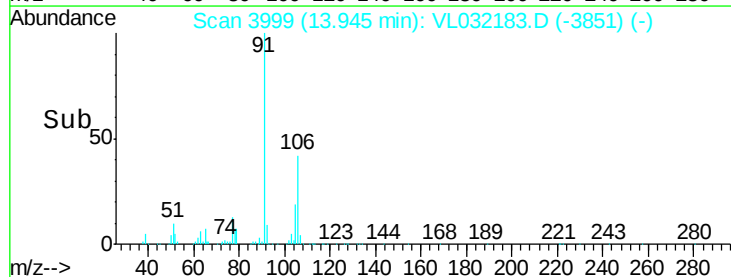
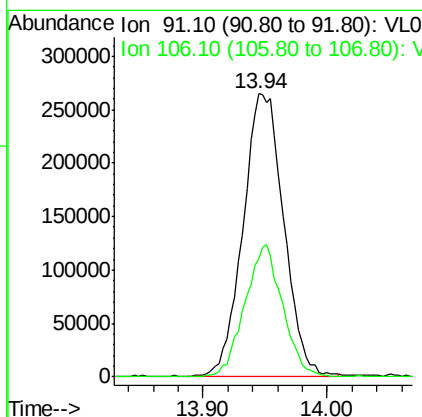
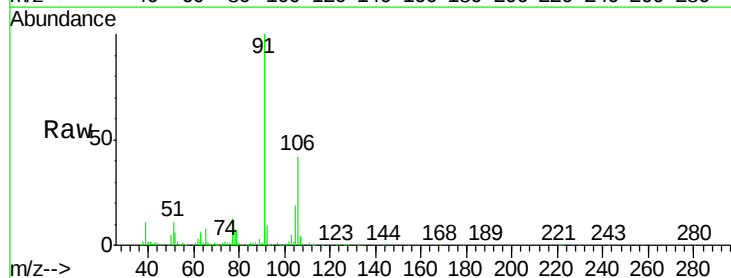
Manual Integrations
APPROVED

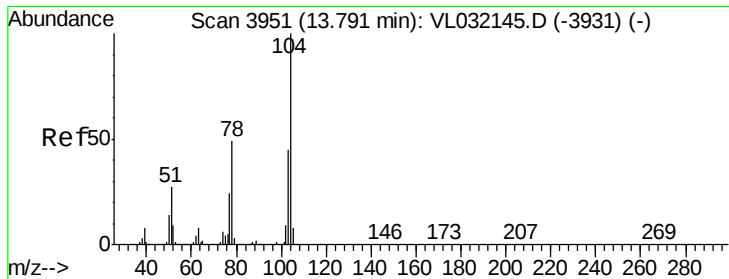
MMDadoda
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#60
o-Xylene
Concen: 1.39 ppbv m
RT: 13.94 min Scan# 3999
Delta R.T. -0.03 min
Lab File: VL032183.D
Acq: 2 Jul 2018 15:50

Tgt Ion: 91 Resp: 605860
Ion Ratio Lower Upper
91 100
106 0.0 23.3 69.8#





#61

Stvrene

Concen: 0.47 ppbv m

RT: 13.78 min Scan# 3947

Delta R.T. -0.03 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

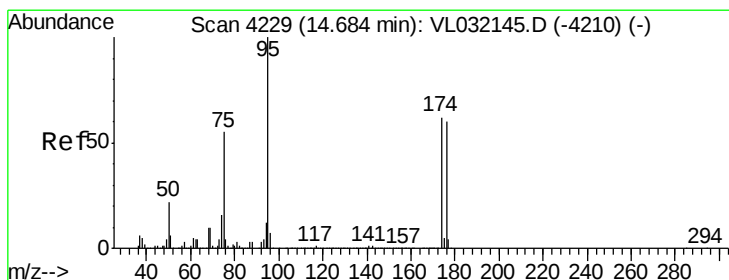
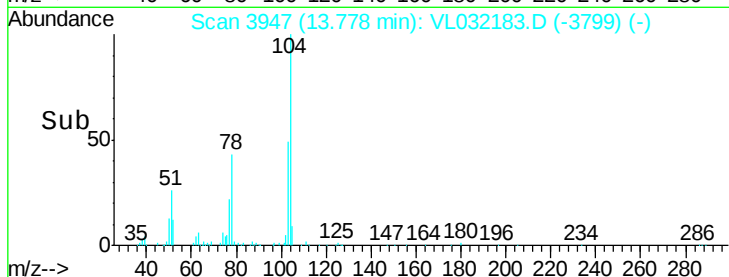
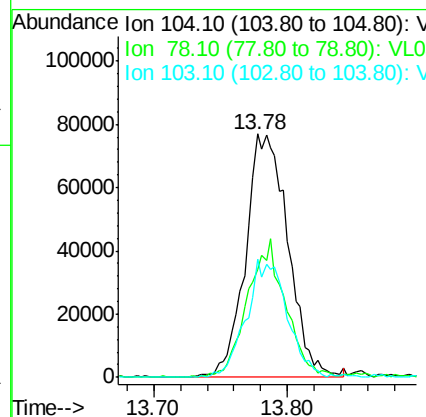
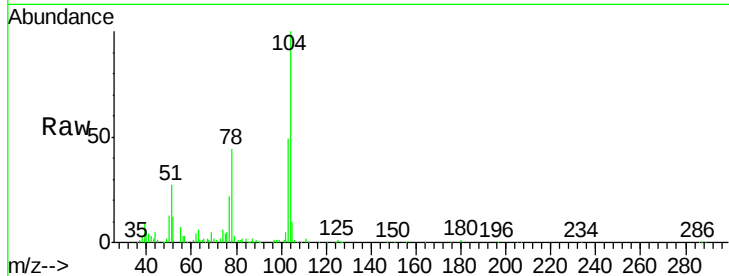
ClientSampleId :

OUTDOOR-2DUP

Tot Ion:	104	Resp:	169176
Ion Ratio	Lower	Upper	
104	100		
78	52.2	37.9	56.9
103	0.0	36.6	55.0#

Manual Integrations
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7/3/2018 5:17:10 PM



#68

1-Bromo-4-Fluorobenzene

Concen: 10.20 ppbv

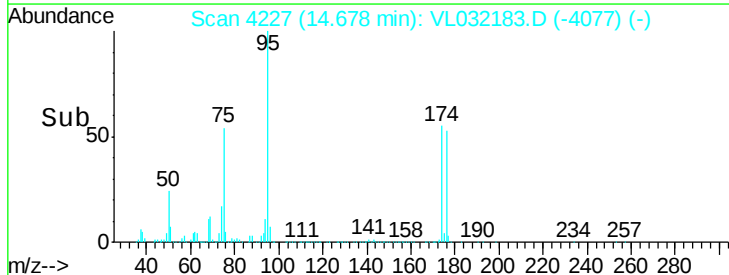
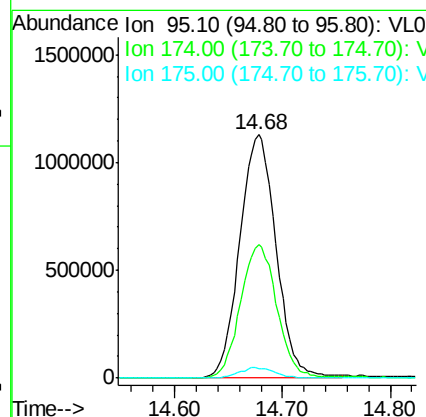
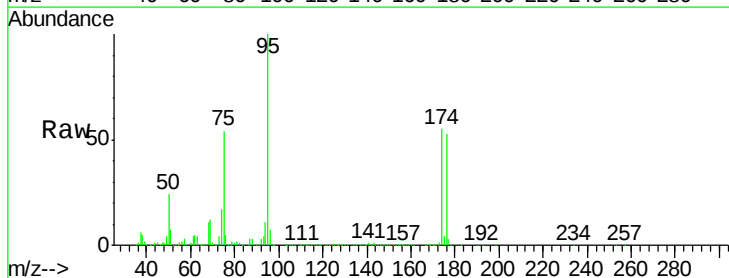
RT: 14.68 min Scan# 4227

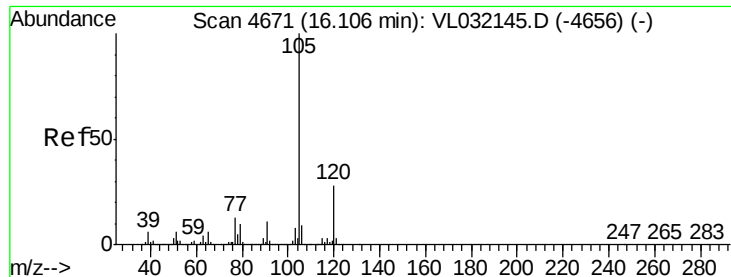
Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Tgt Ion:	95	Resp:	2639987
Ion Ratio	Lower	Upper	
95	100		
174	56.0	52.1	78.1
175	4.3	4.0	6.0





#72

4-Ethyltoluene

Concen: 0.22 ppbv

RT: 16.10 min Scan# 4669

Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Instrument :

MSVOA_L

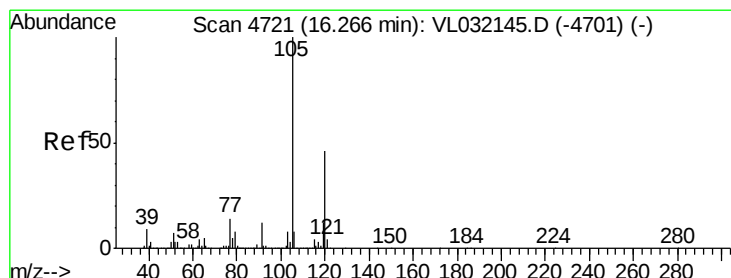
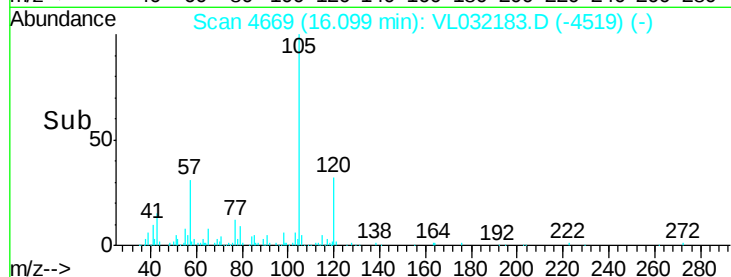
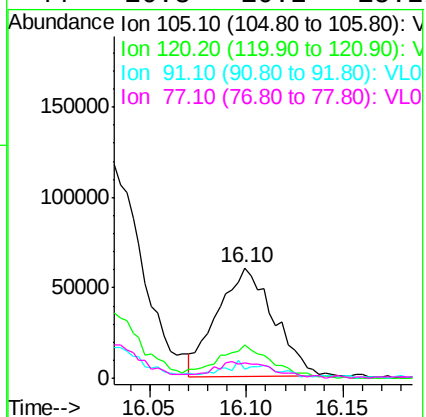
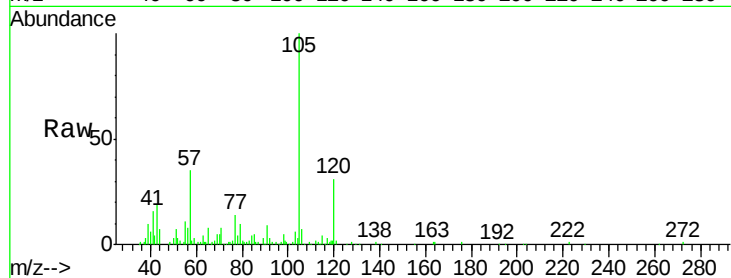
ClientSampleId :

OUTDOOR-2DUP

Tot Ion	Ratio	Lower	Upper
105	100		
120	30.4	24.3	36.5
91	14.4	9.4	14.0
77	16.3	10.2	15.2

Manual Integrations
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#73

1,3,5-Trimethylbenzene

Concen: 0.23 ppbv

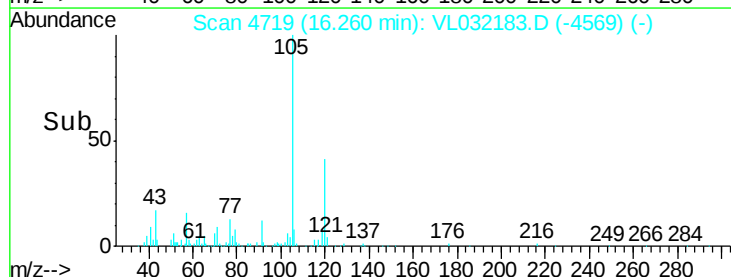
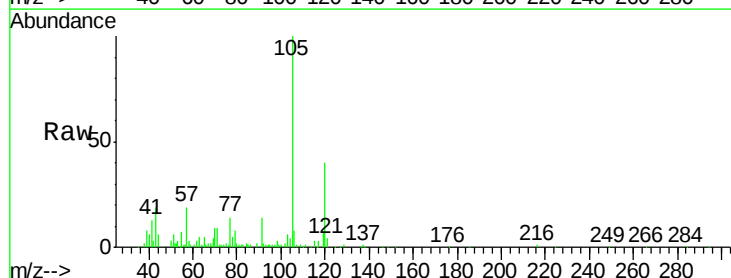
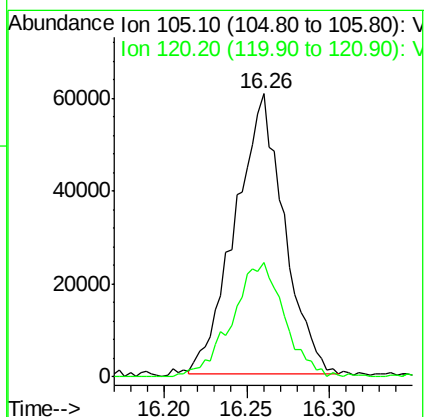
RT: 16.26 min Scan# 4719

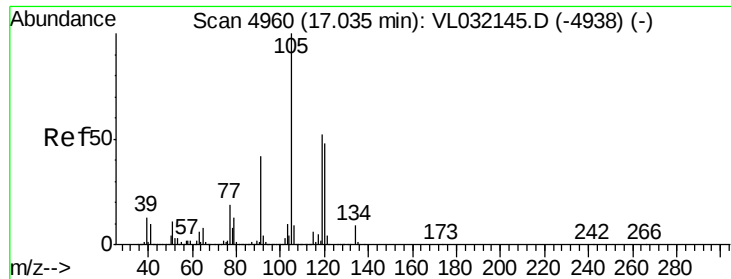
Delta R.T. -0.02 min

Lab File: VL032183.D

Acq: 2 Jul 2018 15:50

Tgt Ion	Ratio	Lower	Upper
105	100		
120	40.1	38.6	57.8





#74
 1,2,4-Trimethylbenzene
 Concen: 0.71 ppbv
 RT: 17.03 min Scan# 4957
 Delta R.T. -0.02 min
 Lab File: VL032183.D
 Acq: 2 Jul 2018 15:50

Instrument :
 MSVOA_L
 ClientSampleId :
 OUTDOOR-2DUP

Tot Ion	Ratio	Resp Lower	Resp Upper
105	100		
120	40.7	38.8	58.2
91	9.9	33.6	50.4
77	16.8	16.0	24.0

Manual Integrations
 APPROVED

MMDadoda
 7/3/2018 5:17:10 PM

