

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL052919\
 Data File : VL033852.D
 Acq On : 30 May 2019 2:15
 Operator : SY/AP
 Sample : K3067-05
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-7-20190523-0

Manual Integrations
 APPROVED

apatel
 5/31/2019 12:45:48 PM

Quant Time: May 30 03:00:35 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL051719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri May 1
 QLast Update : Fri May 17 08:15:41 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.75	49	741737	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.28	114	1685921	10.00	ppbv	0.00
55) Chlorobenzene-d5	12.23	117	1704507	10.00	ppbv	0.00

System Monitoring Compounds						
68) 1-Bromo-4-Fluorobenzene	14.57	95	1383423	10.01	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	100.10%

Target Compounds						Ovalue
2) Dichlorodifluoromethane	3.07	85	20824	0.133	ppbv #	84
3) Chlorodifluoromethane	3.01	51	33106m	0.390	ppbv	
4) Chloromethane	3.17	50	9793	0.202	ppbv #	78
11) Trichlorofluoromethane	4.00	101	53597	0.359	ppbv	93
13) Ethanol	3.66	45	171246	14.661	ppbv	98
15) Acetone	3.89	43	790594	7.682	ppbv	100
17) tert-Butyl alcohol	4.38	59	20448m	0.246	ppbv	
19) Isopropyl Alcohol	4.04	45	166912	2.515	ppbv #	93
20) Methylene Chloride	4.40	84	72623	1.833	ppbv	93
26) Hexane	5.78	57	121478	1.563	ppbv #	43
27) Carbon Disulfide	4.62	76	34199	0.321	ppbv #	85
29) Chloroform	5.84	83	166078	1.160	ppbv	98
32) 1,1,1-Trichloroethane	6.61	97	28559	0.200	ppbv	99
34) 2-Butanone	5.33	43	153275	1.467	ppbv	97
35) Carbon Tetrachloride	7.13	117	7937m	0.059	ppbv	
36) Benzene	7.00	78	24676	0.161	ppbv	93
38) Trichloroethene	7.95	130	41192	0.724	ppbv	97
44) 2,2,4-Trimethylpentane	7.99	57	26301	0.101	ppbv #	65
50) 4-Methyl-2-Pentanone	8.88	43	25736m	0.160	ppbv	
52) Tetrachloroethene	11.37	164	520046	9.647	ppbv	98
53) Toluene	9.94	91	453191	2.740	ppbv	98
59) m/p-Xylene	13.12	91	26514m	0.134	ppbv	
74) 1,2,4-Trimethylbenzene	16.92	105	18729	0.078	ppbv #	77

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

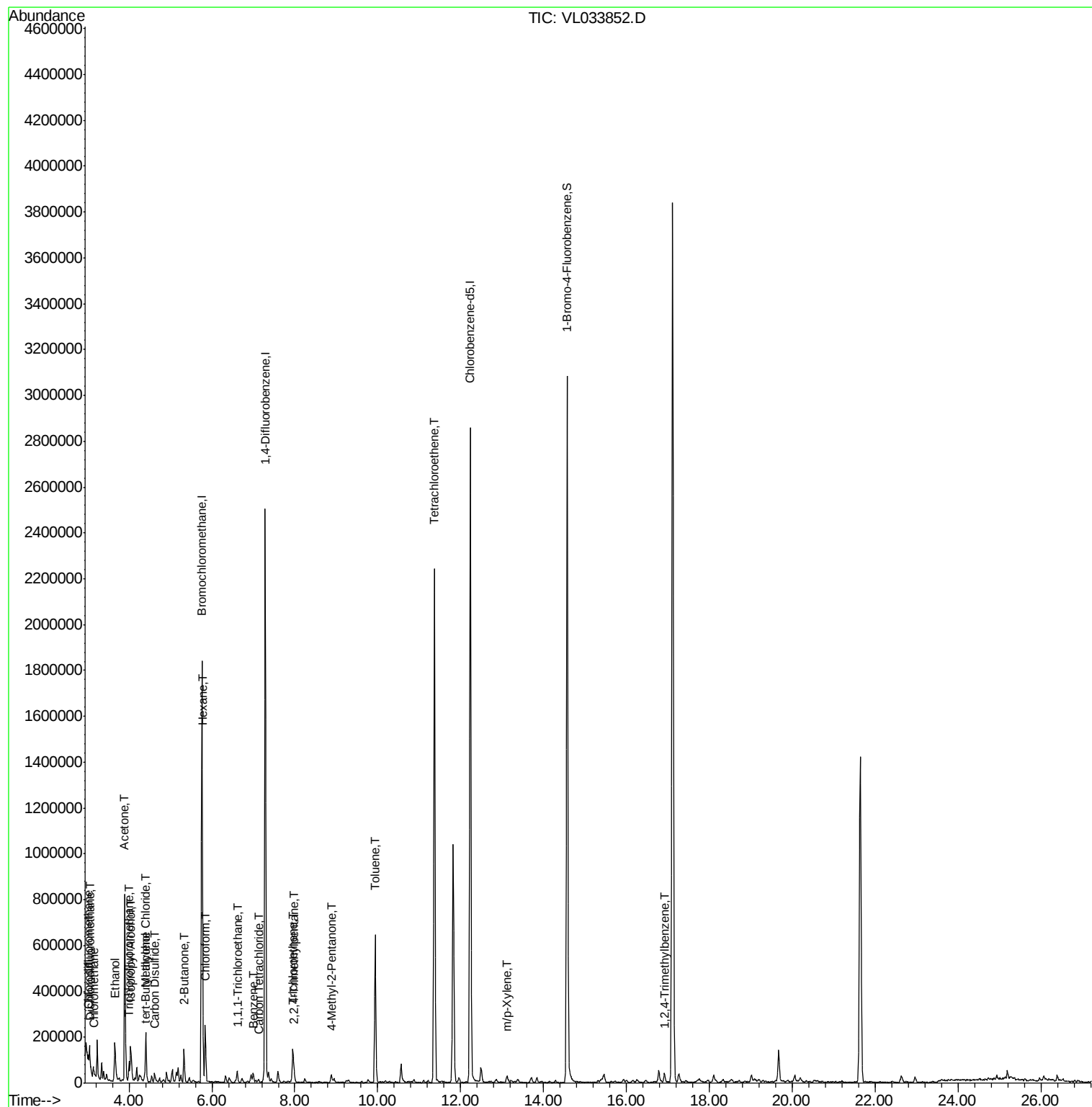
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL052919\
Data File : VL033852.D
Acq On : 30 May 2019 2:15
Operator : SY/AP
Sample : K3067-05
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

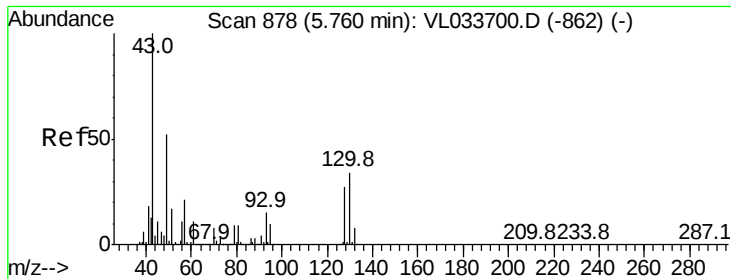
Instrument :
MSVOA_L
ClientSampleId :
SG-7-20190523-0

Manual Integrations
APPROVED

apatel
5/31/2019 12:45:48 PM

Quant Time: May 30 03:00:35 2019
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL051719AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri May
QLast Update : Fri May 17 08:15:41 2019
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.75 min Scan# 876

Delta R.T. -0.01 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

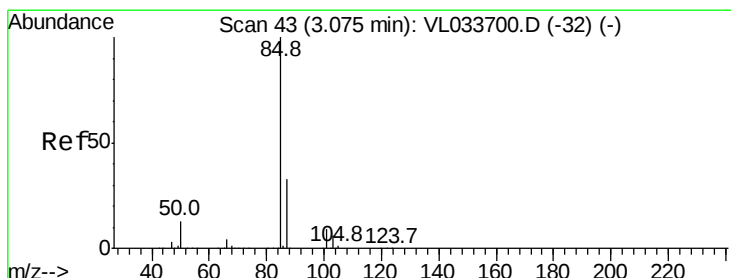
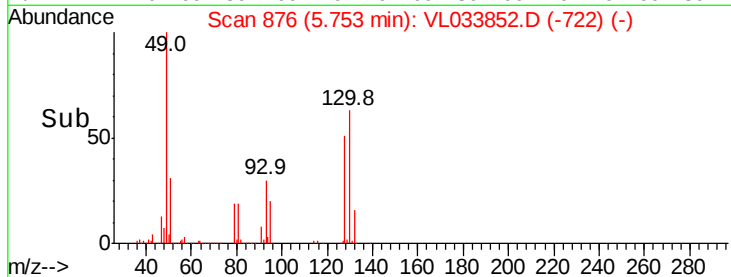
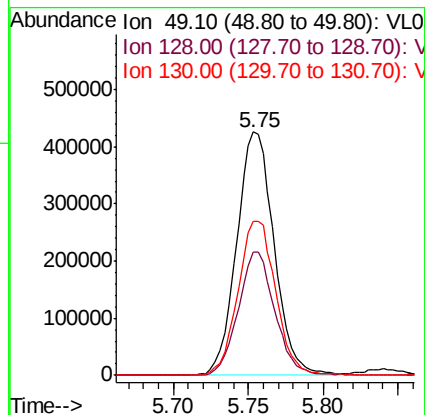
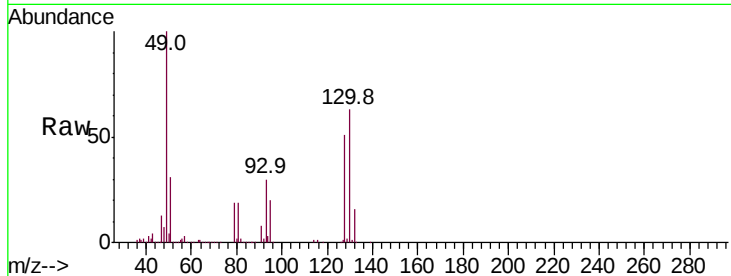
SG-7-20190523-0

Tot Ion:	49	Resp:	741737
Ion Ratio	Lower	Upper	
49	100		
128	49.5	25.2	75.6
130	64.5	32.5	97.5

Manual Integrations
APPROVED

apatel

5/31/2019 12:45:48 PM



#2

Dichlorodifluoromethane

Concen: 0.133 ppbv

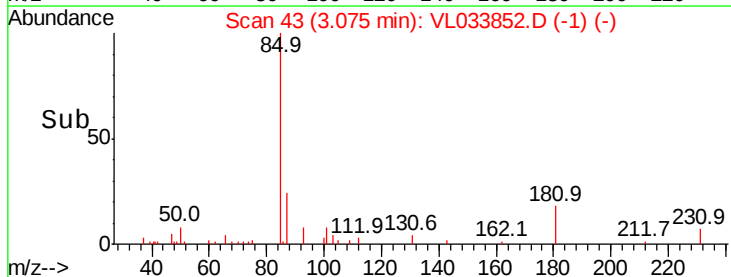
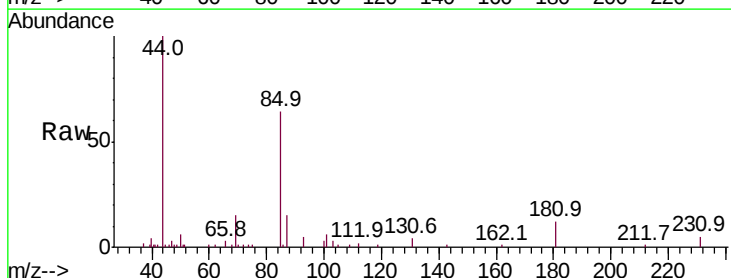
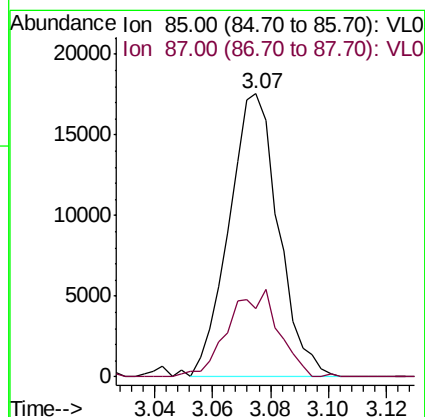
RT: 3.07 min Scan# 43

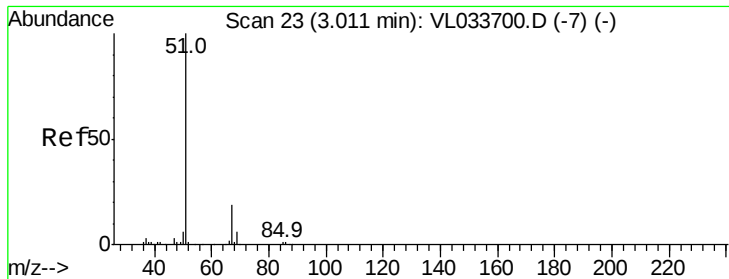
Delta R.T. 0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Tgt Ion:	85	Resp:	20824
Ion Ratio	Lower	Upper	
85	100		
87	24.0	26.3	39.5#





#3

Chlorodifluoromethane

Concen: 0.390 ppbv

RT: 3.01 min Scan# 23

Delta R.T. 0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 51 Resp: 33106

Ion Ratio Lower Upper

51 100

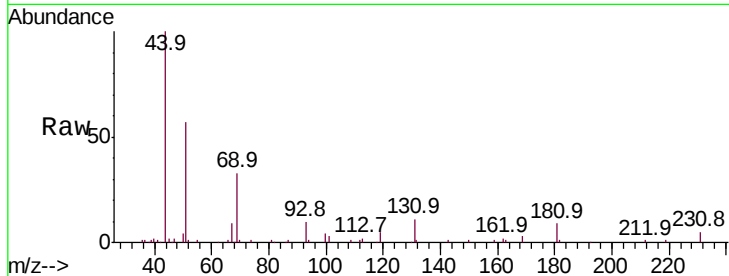
67 17.8 15.6 23.4

Manual Integrations

APPROVED

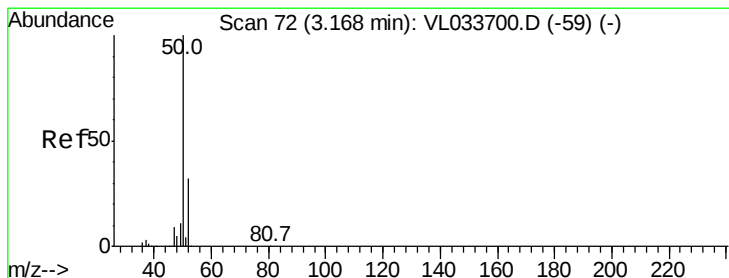
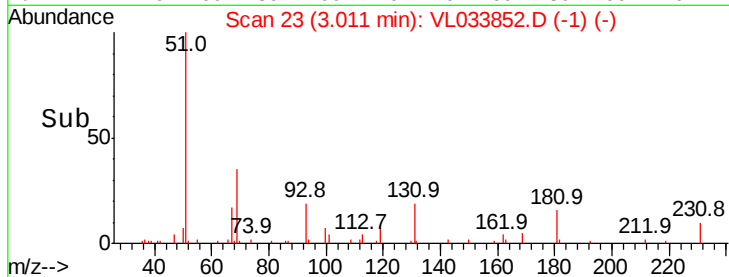
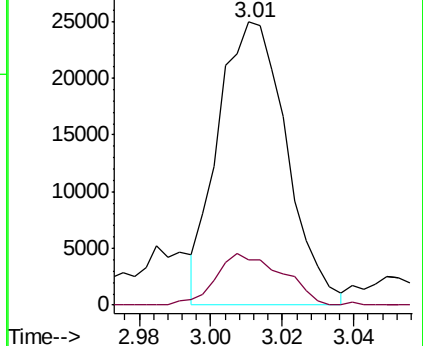
apatel

5/31/2019 12:45:48 PM



Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.202 ppbv

RT: 3.17 min Scan# 73

Delta R.T. 0.00 min

Lab File: VL033852.D

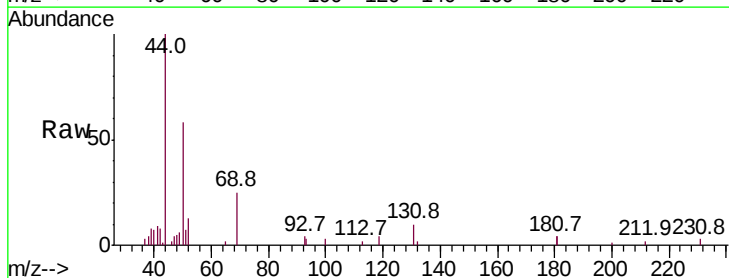
Acq: 30 May 2019 2:15

Tgt Ion: 50 Resp: 9793

Ion Ratio Lower Upper

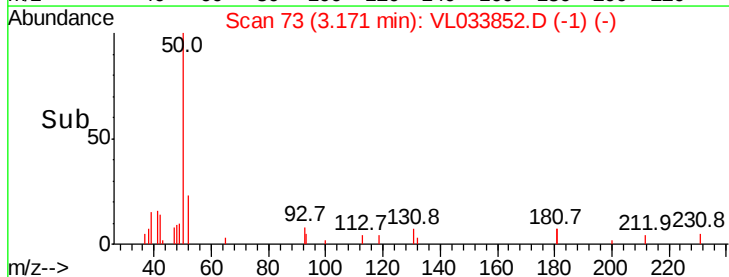
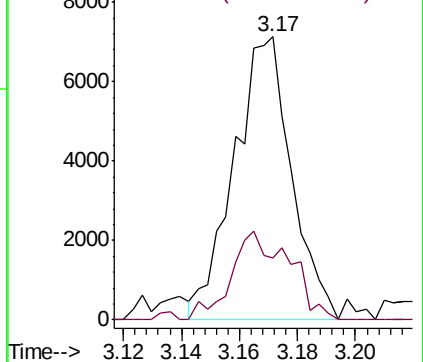
50 100

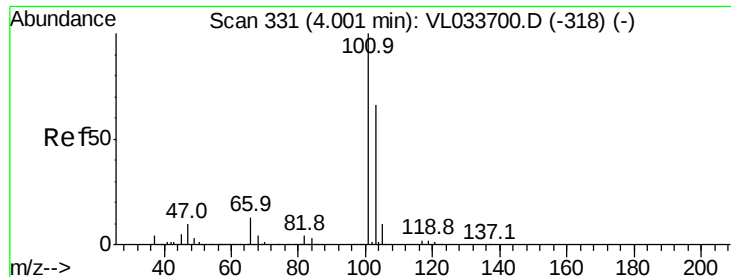
52 19.6 25.7 38.5#



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





#11

Trichlorofluoromethane

Concen: 0.359 ppbv

RT: 4.00 min Scan# 332

Delta R.T. 0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion:101 Resp: 53597

Ion Ratio Lower Upper

101 100

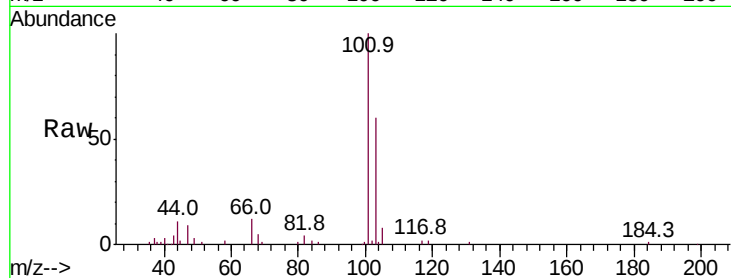
103 60.3 52.6 78.8

Manual Integrations

APPROVED

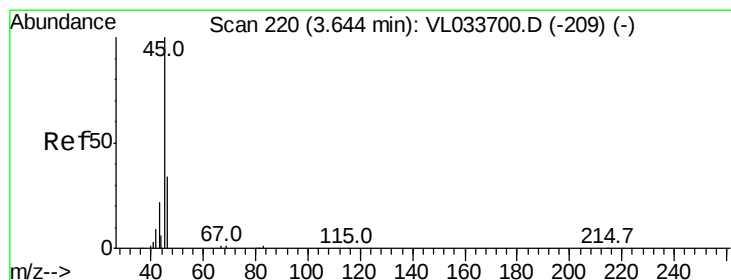
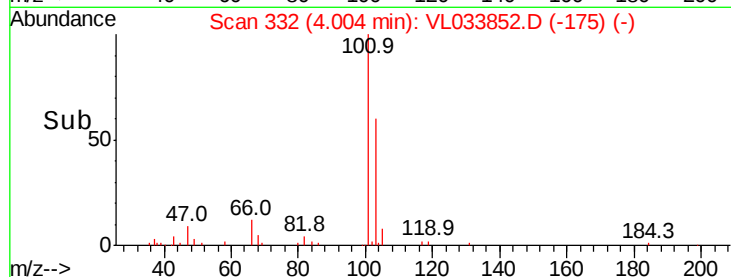
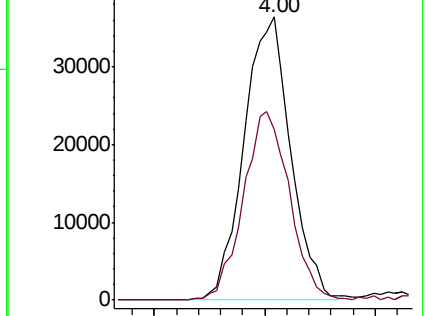
apatel

5/31/2019 12:45:48 PM



Abundance Ion 101.00 (100.70 to 101.70): V

Ion 103.00 (102.70 to 103.70): V



#13

Ethanol

Concen: 14.661 ppbv

RT: 3.66 min Scan# 225

Delta R.T. 0.02 min

Lab File: VL033852.D

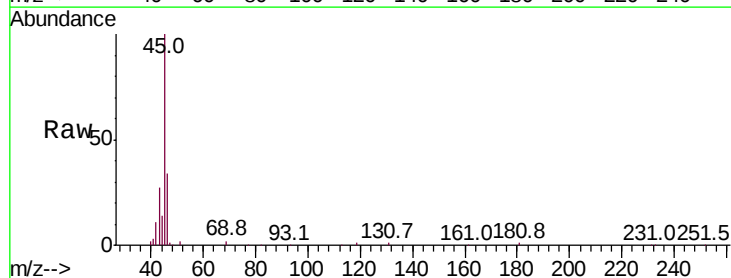
Acq: 30 May 2019 2:15

Tgt Ion: 45 Resp: 171246

Ion Ratio Lower Upper

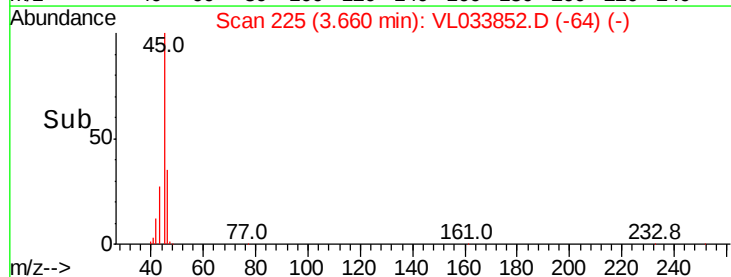
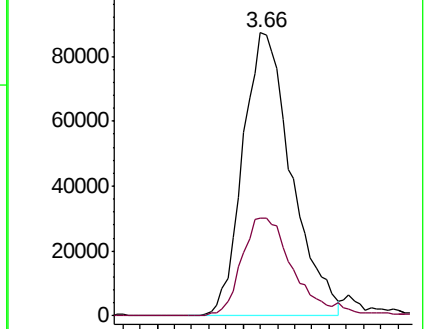
45 100

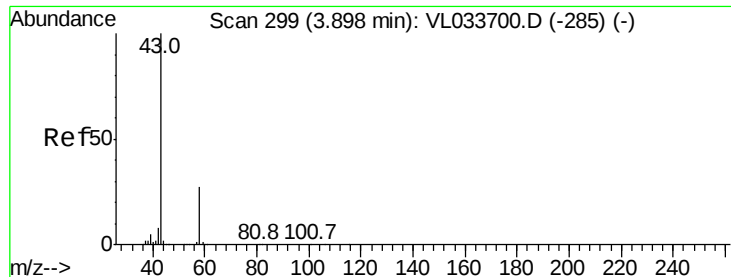
46 37.8 14.8 59.0



Abundance Ion 45.10 (44.80 to 45.80): VL0

Ion 46.10 (45.80 to 46.80): VL0





#15

Acetone

Concen: 7.682 ppbv

RT: 3.89 min Scan# 298

Delta R.T. -0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 43 Resp: 790594

Ion Ratio Lower Upper

43 100

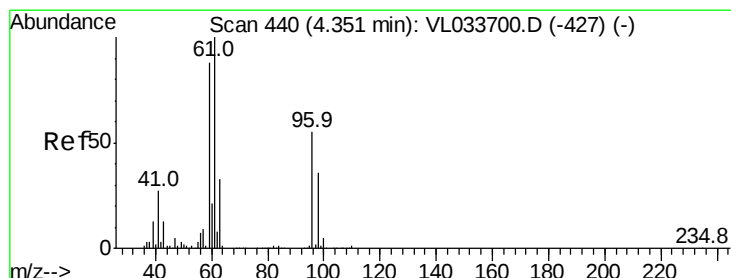
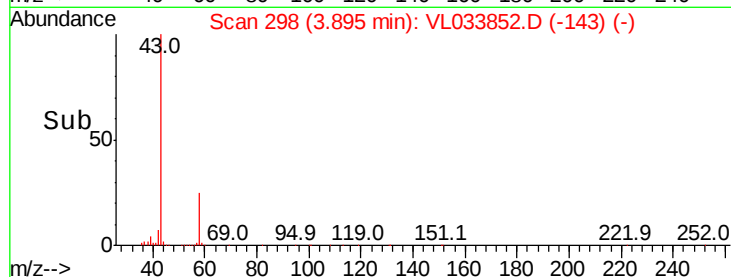
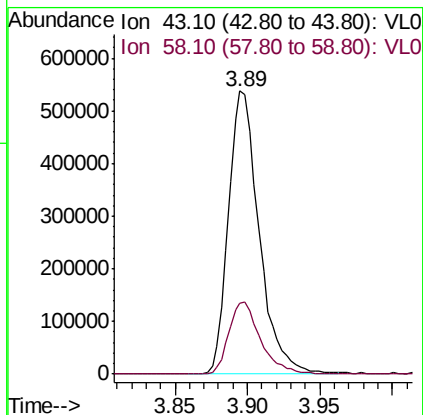
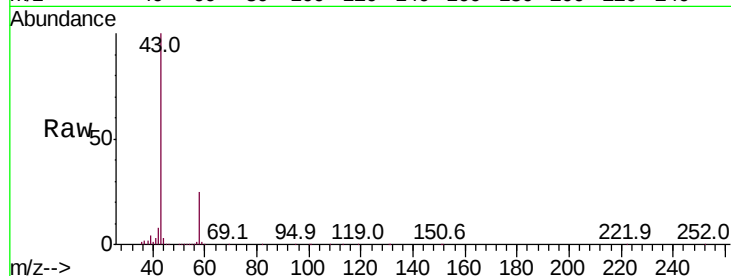
58 26.4 21.3 31.9

Manual Integrations

APPROVED

apatel

5/31/2019 12:45:48 PM



#17

tert-Butyl alcohol

Concen: 0.246 ppbv m

RT: 4.38 min Scan# 448

Delta R.T. 0.03 min

Lab File: VL033852.D

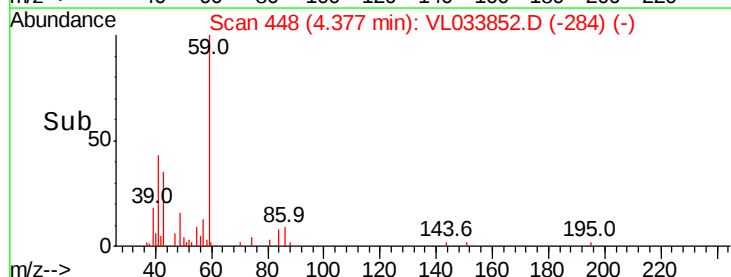
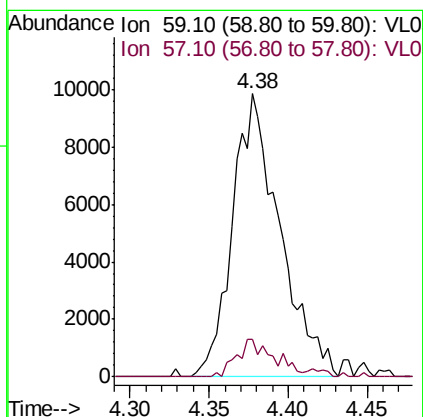
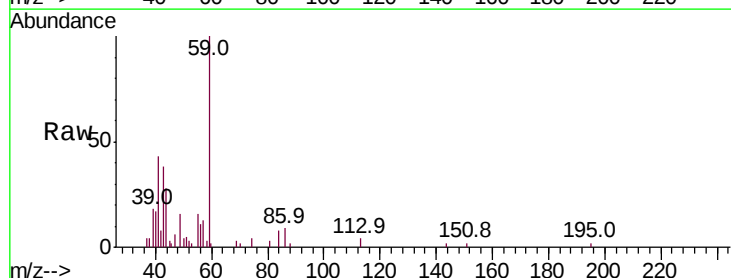
Acq: 30 May 2019 2:15

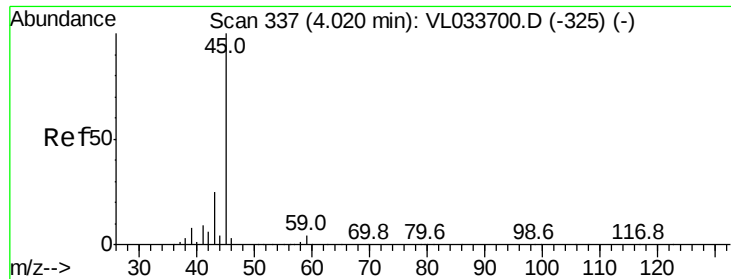
Tgt Ion: 59 Resp: 20448

Ion Ratio Lower Upper

59 100

57 0.0 8.4 12.6#





#19

Isopropyl Alcohol

Concen: 2.515 ppbv

RT: 4.04 min Scan# 343

Delta R.T. 0.02 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 45 Resp: 166912

Ion Ratio Lower Upper

45 100

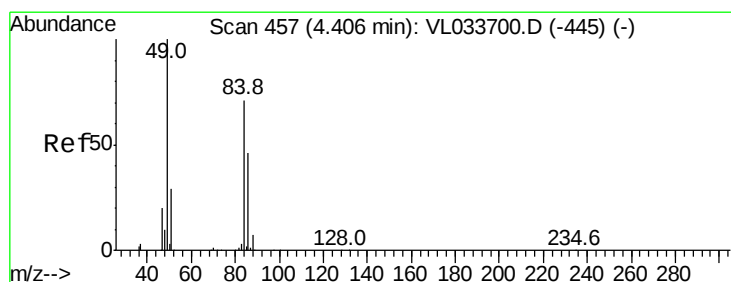
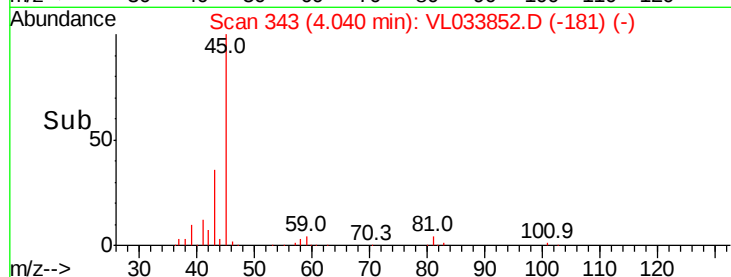
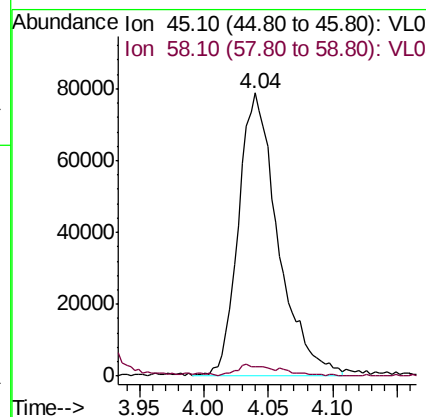
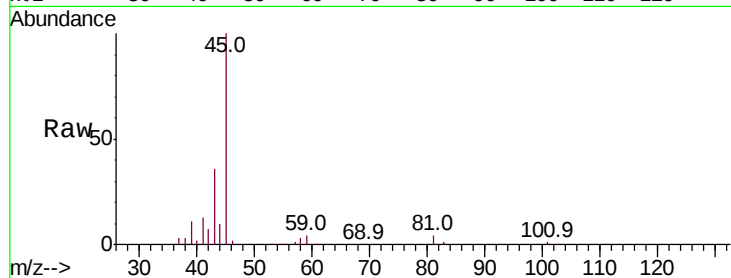
58 4.6 1.6 2.4#

Manual Integrations

APPROVED

apatel

5/31/2019 12:45:48 PM



#20

Methylene Chloride

Concen: 1.833 ppbv

RT: 4.40 min Scan# 456

Delta R.T. -0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Tgt Ion: 84 Resp: 72623

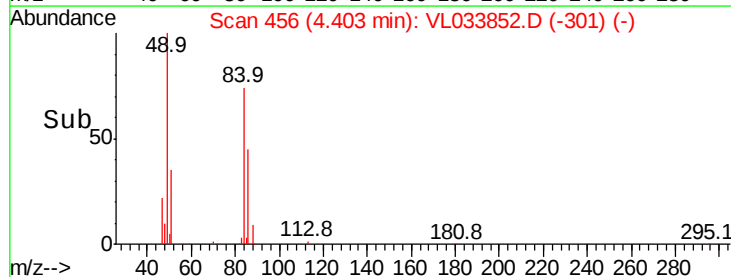
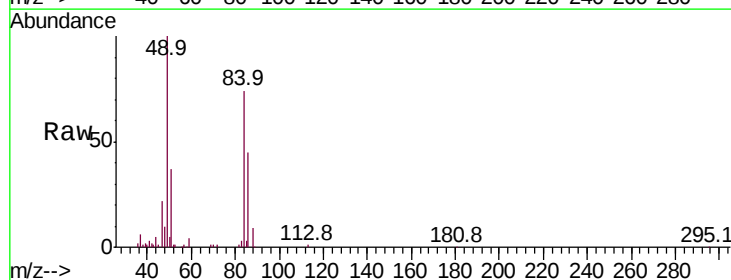
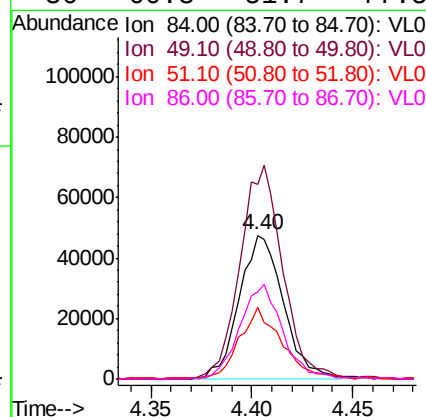
Ion Ratio Lower Upper

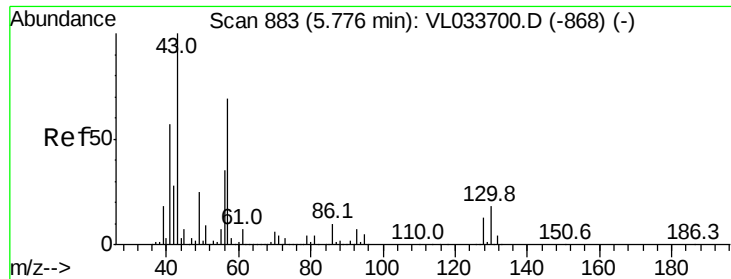
84 100

49 134.7 112.8 169.2

51 49.8 33.4 50.0

86 60.3 51.7 77.5





#26

Hexane

Concen: 1.563 ppbv

RT: 5.78 min Scan# 883

Delta R.T. 0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

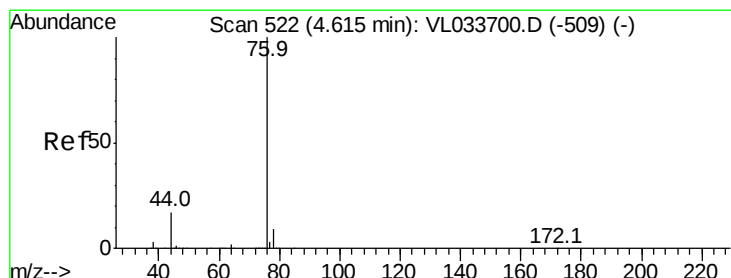
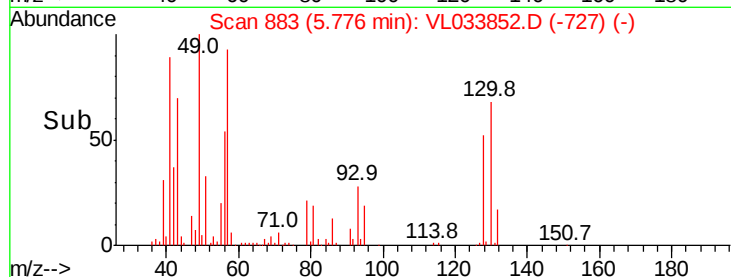
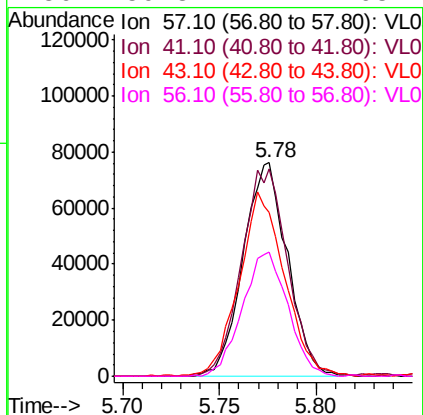
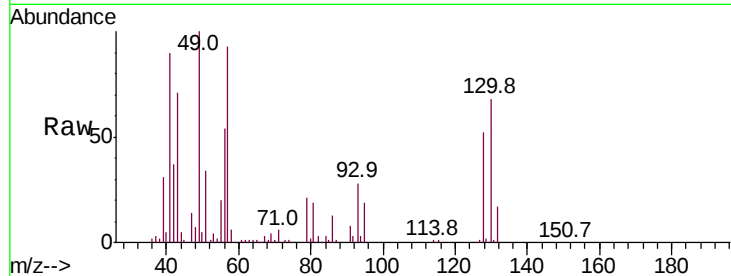
ClientSampleId :

SG-7-20190523-0

Tot Ion	57	Resp	121478
Ion Ratio	Lower	Upper	
57	100		
41	101.7	69.8	104.6
43	89.3	181.8	272.6#
56	59.8	42.1	63.1

Manual Integrations
APPROVED

apatel
5/31/2019 12:45:48 PM



#27

Carbon Disulfide

Concen: 0.321 ppbv

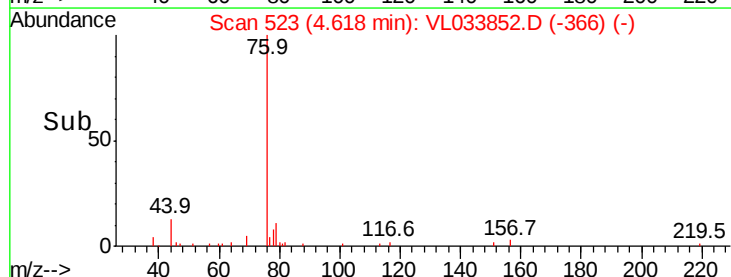
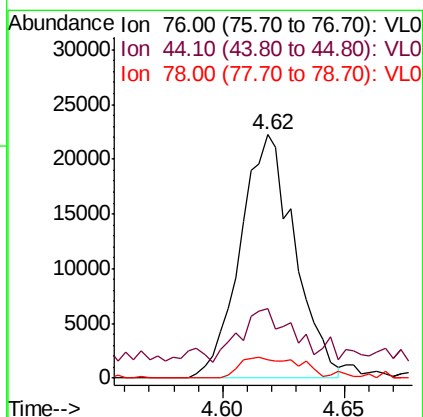
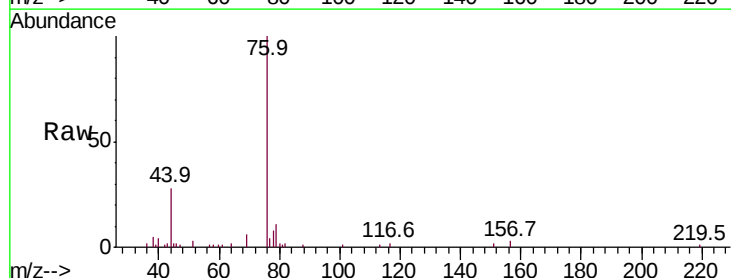
RT: 4.62 min Scan# 523

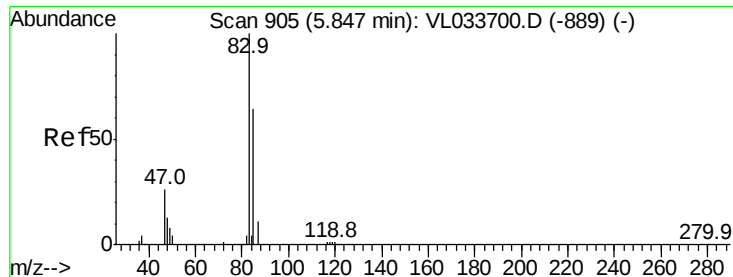
Delta R.T. 0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Tgt Ion	76	Resp	34199
Ion Ratio	Lower	Upper	
76	100		
44	26.2	13.8	20.8#
78	11.0	7.4	11.0





#29

Chloroform

Concen: 1.160 ppbv

RT: 5.84 min Scan# 903

Delta R.T. -0.01 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 83 Resp: 166078

Ion Ratio Lower Upper

83 100

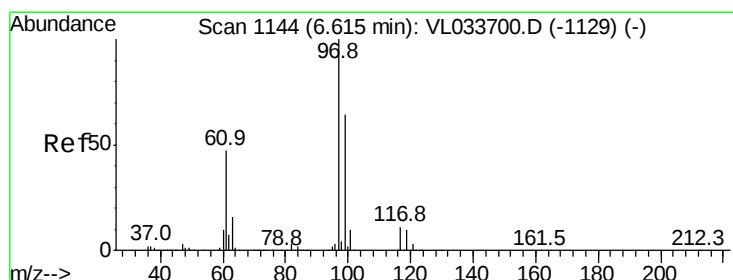
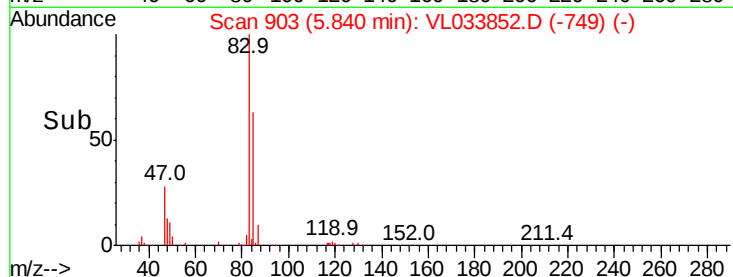
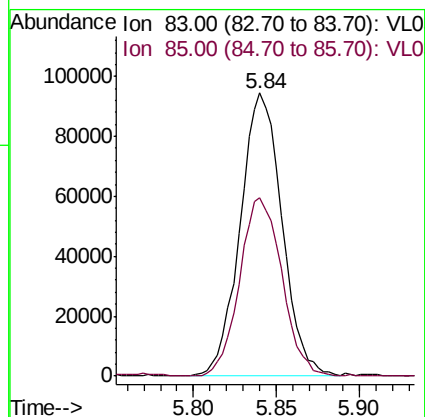
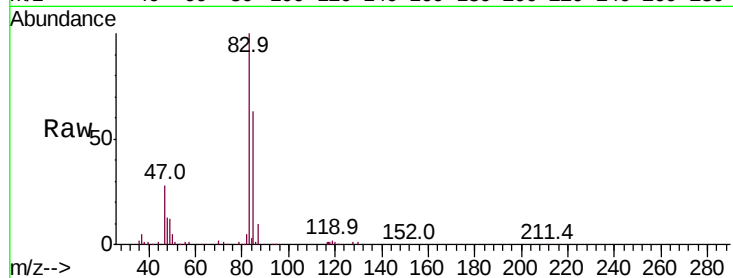
85 62.9 51.5 77.3

Manual Integrations

APPROVED

apatel

5/31/2019 12:45:48 PM



#32

1,1,1-Trichloroethane

Concen: 0.200 ppbv

RT: 6.61 min Scan# 1143

Delta R.T. -0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

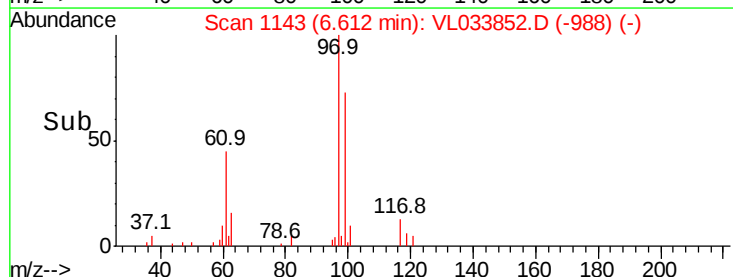
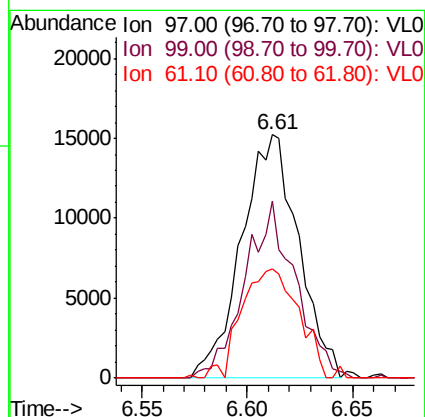
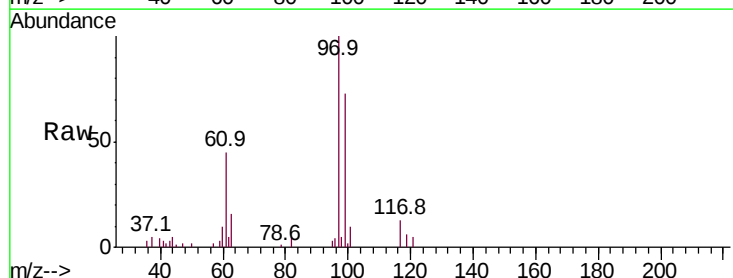
Tgt Ion: 97 Resp: 28559

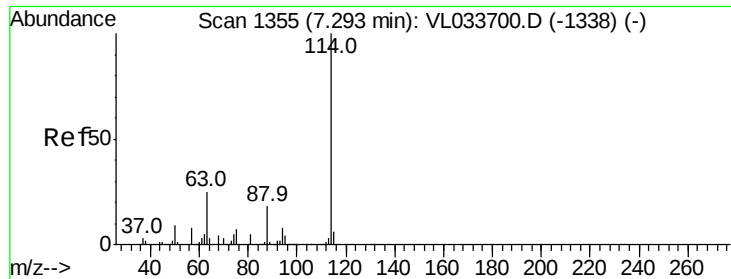
Ion Ratio Lower Upper

97 100

99 64.8 51.5 77.3

61 45.7 37.8 56.8





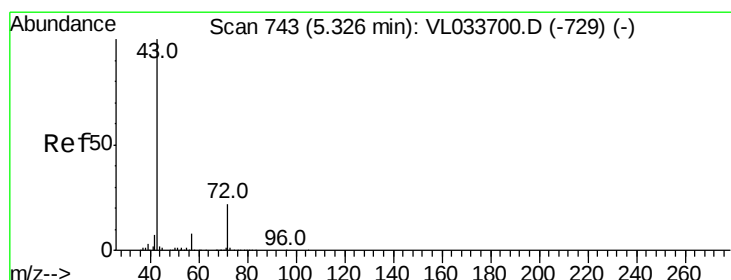
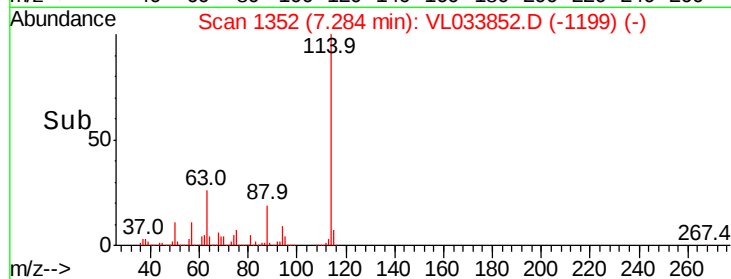
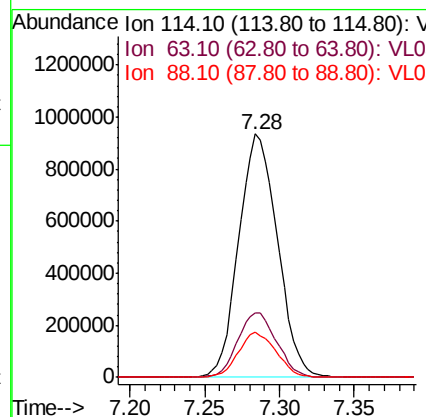
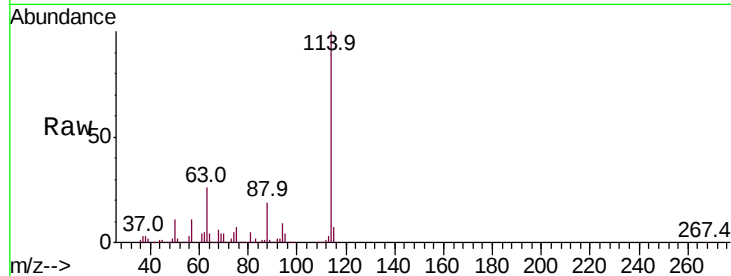
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.28 min Scan# 1352
 Delta R.T. -0.01 min
 Lab File: VL033852.D
 Acq: 30 May 2019 2:15

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-7-20190523-0

Tot Ion	Ratio	Lower	Upper
114	100		
63	26.6	20.9	31.3
88	18.2	14.3	21.5

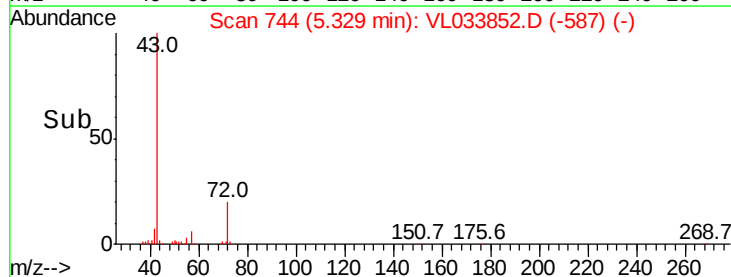
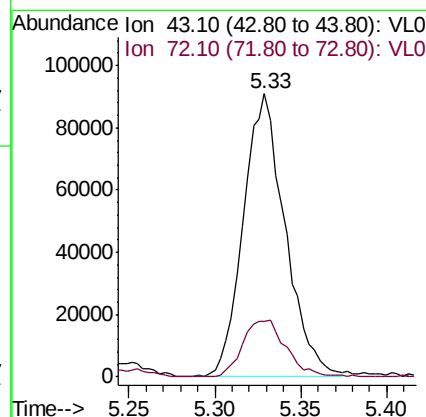
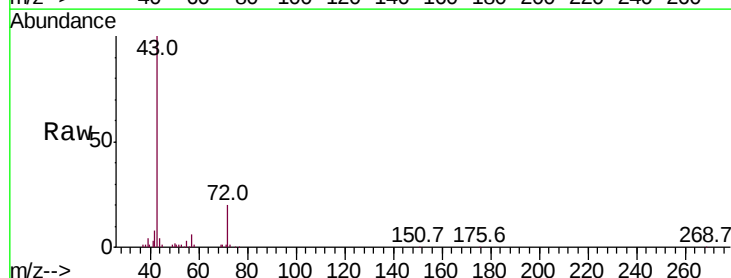
Manual Integrations
 APPROVED

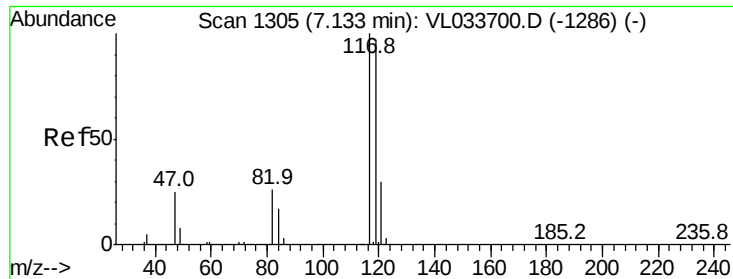
apatel
 5/31/2019 12:45:48 PM



#34
 2-Butanone
 Concen: 1.467 ppbv
 RT: 5.33 min Scan# 744
 Delta R.T. 0.00 min
 Lab File: VL033852.D
 Acq: 30 May 2019 2:15

Tgt Ion	Ratio	Lower	Upper
43	100		
72	20.9	17.8	26.6





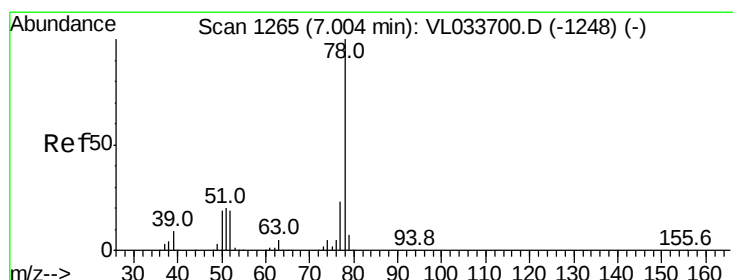
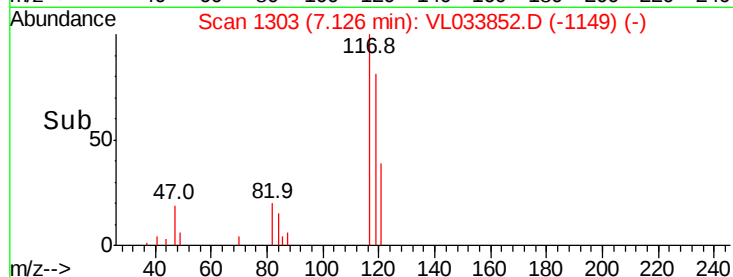
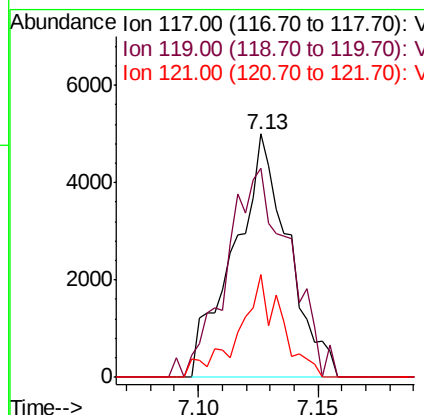
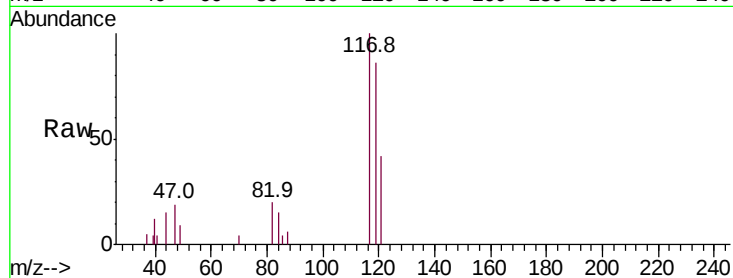
#35
Carbon Tetrachloride
Concen: 0.059 ppbv m
RT: 7.13 min Scan# 1303
Delta R.T. -0.01 min
Lab File: VL033852.D
Acq: 30 May 2019 2:15

Instrument :
MSVOA_L
ClientSampled :
SG-7-20190523-0

Tot Ion	Ratio	Lower	Upper
117	100		
119	86.1	77.2	115.8
121	42.0	24.1	36.1#

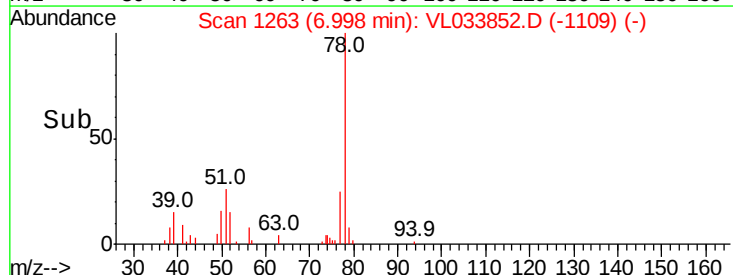
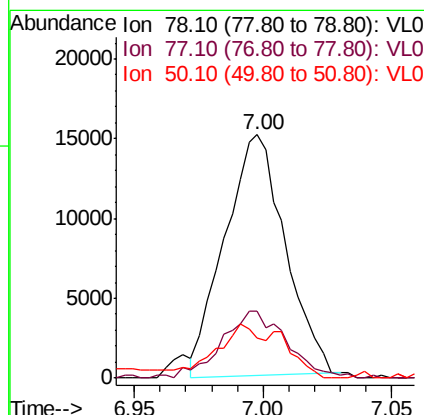
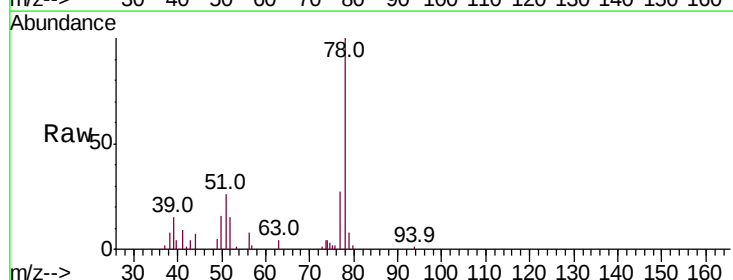
Manual Integrations
APPROVED

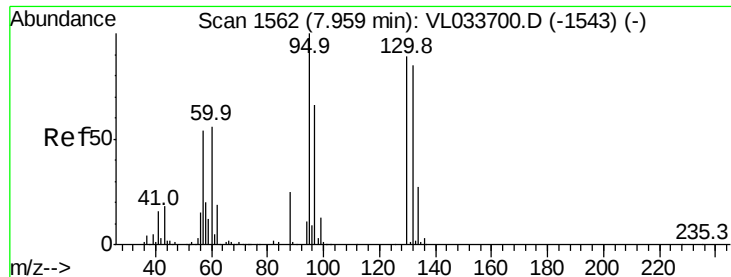
apatel
5/31/2019 12:45:48 PM



#36
Benzene
Concen: 0.161 ppbv
RT: 7.00 min Scan# 1263
Delta R.T. -0.01 min
Lab File: VL033852.D
Acq: 30 May 2019 2:15

Tgt Ion	Ratio	Lower	Upper
78	100		
77	26.5	18.4	27.6
50	16.7	15.5	23.3





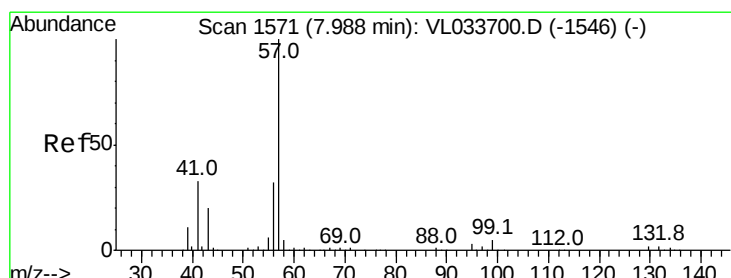
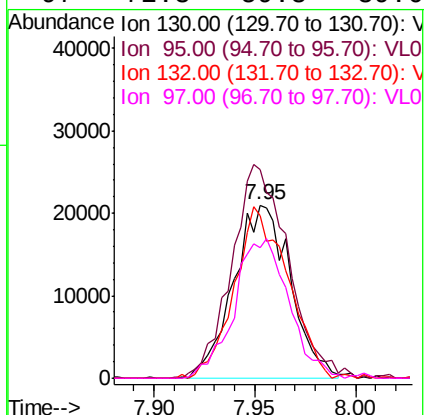
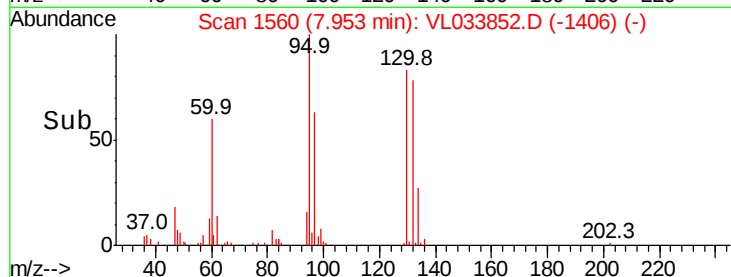
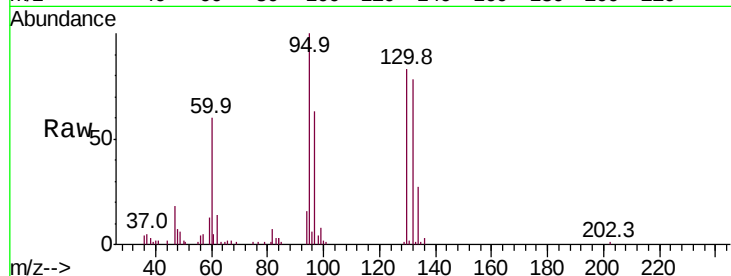
#38
 Trichloroethene
 Concen: 0.724 ppbv
 RT: 7.95 min Scan# 1560
 Delta R.T. -0.01 min
 Lab File: VL033852.D
 Acq: 30 May 2019 2:15

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-7-20190523-0

Tot Ion	130	Resp	41192
Ion	Ratio	Lower	Upper
130	100		
95	115.0	90.2	135.4
132	91.6	76.4	114.6
97	72.8	59.8	89.6

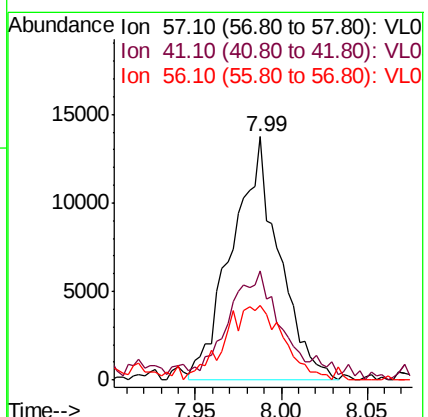
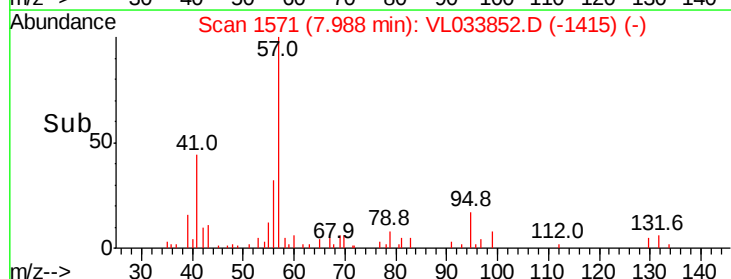
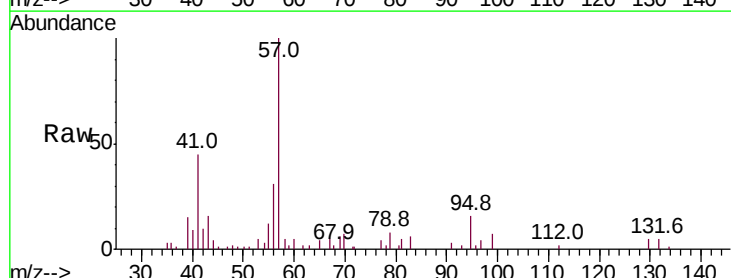
Manual Integrations
 APPROVED

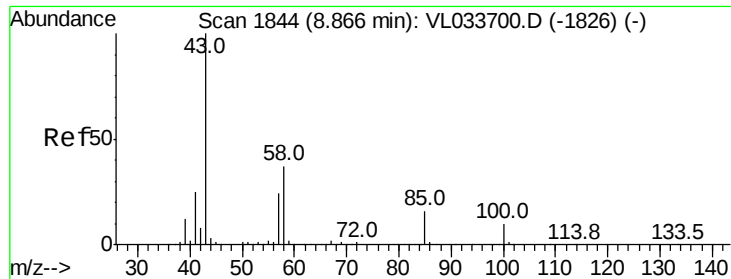
apatel
 5/31/2019 12:45:48 PM



#44
 2,2,4-Trimethylpentane
 Concen: 0.101 ppbv
 RT: 7.99 min Scan# 1571
 Delta R.T. 0.00 min
 Lab File: VL033852.D
 Acq: 30 May 2019 2:15

Tgt Ion	57	Resp	26301
Ion	Ratio	Lower	Upper
57	100		
41	58.6	25.4	38.0#
56	42.4	24.7	37.1#





#50

4-Methyl-2-Pentanone

Concen: 0.160 ppbv m

RT: 8.88 min Scan# 1847

Delta R.T. 0.01 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 43 Resp: 25736

Ion Ratio Lower Upper

43 100

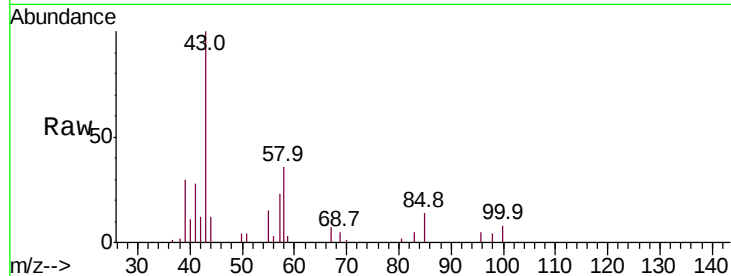
58 0.0 28.6 43.0#

Manual Integrations

APPROVED

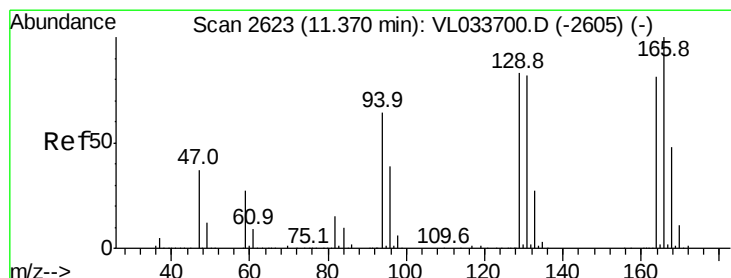
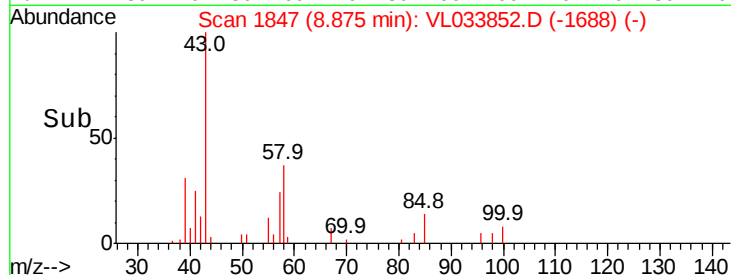
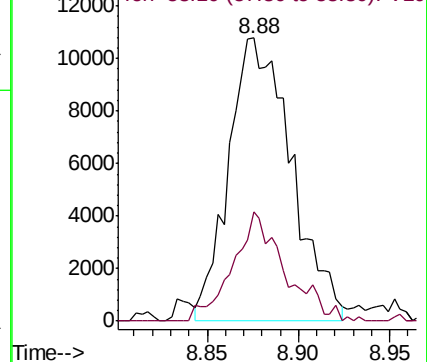
apatel

5/31/2019 12:45:48 PM



Abundance Ion 43.10 (42.80 to 43.80): VL0

Ion 58.10 (57.80 to 58.80): VL0



#52

Tetrachloroethene

Concen: 9.647 ppbv

RT: 11.37 min Scan# 2622

Delta R.T. -0.00 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Tgt Ion:164 Resp: 520046

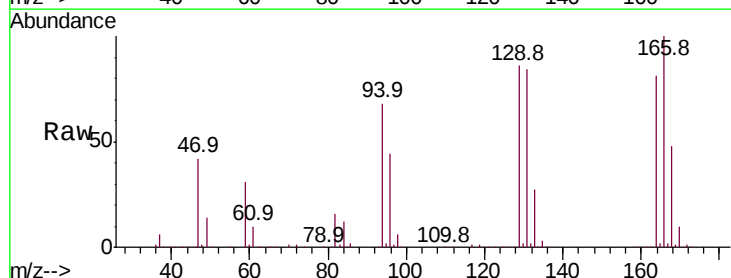
Ion Ratio Lower Upper

164 100

166 123.2 98.9 148.3

129 106.5 81.8 122.6

131 103.9 81.1 121.7

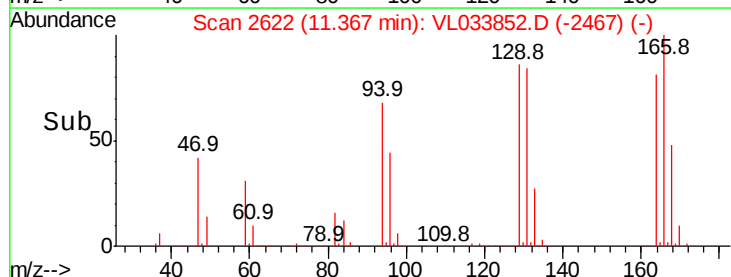
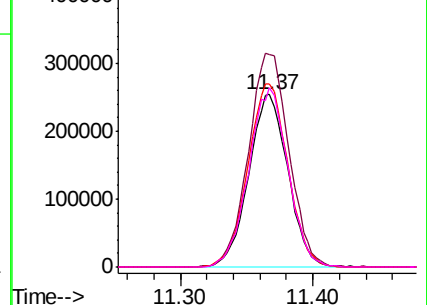


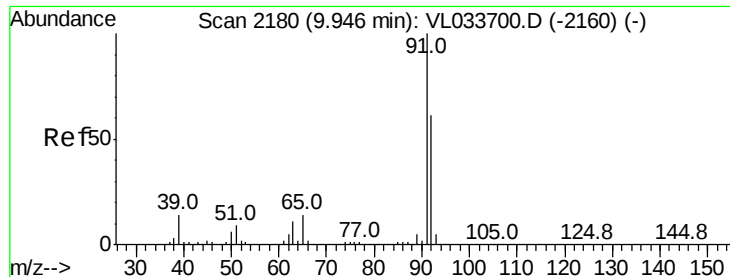
Abundance Ion 163.90 (163.60 to 164.60): V

Ion 165.90 (165.60 to 166.60): V

Ion 129.00 (128.70 to 129.70): V

Ion 131.00 (130.70 to 131.70): V





#53

Toluene

Concen: 2.740 ppbv

RT: 9.94 min Scan# 2178

Delta R.T. -0.01 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

Instrument :

MSVOA_L

ClientSampleId :

SG-7-20190523-0

Tot Ion: 91 Resp: 453191

Ion Ratio Lower Upper

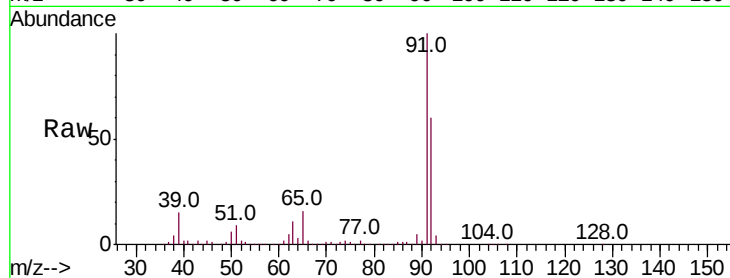
91 100

92 57.9 47.6 71.4

Manual Integrations
APPROVED

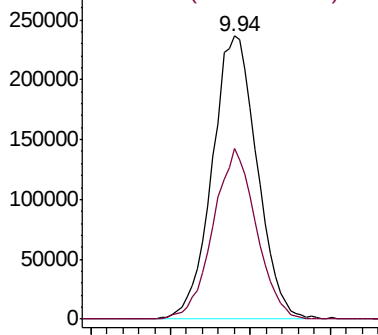
apatel

5/31/2019 12:45:48 PM

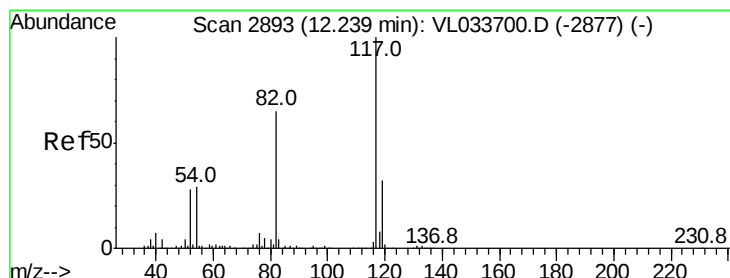
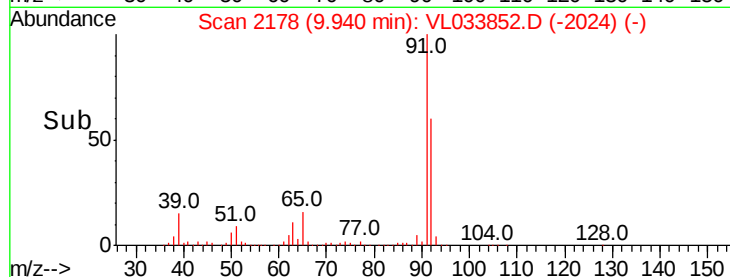


Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0



Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.23 min Scan# 2891

Delta R.T. -0.01 min

Lab File: VL033852.D

Acq: 30 May 2019 2:15

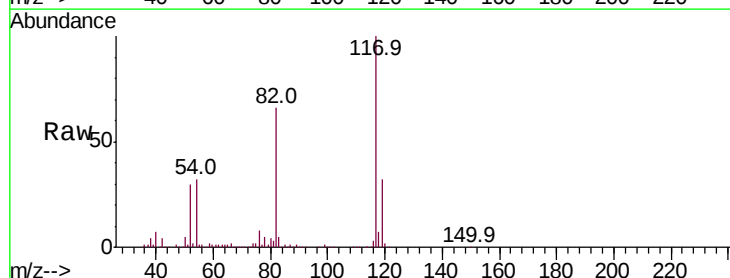
Tgt Ion: 117 Resp: 1704507

Ion Ratio Lower Upper

117 100

82 67.7 49.4 74.0

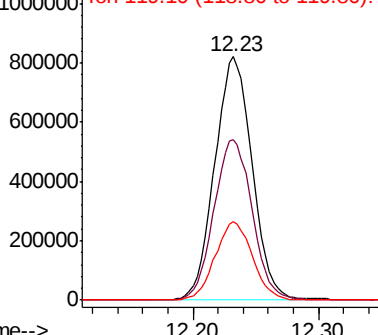
119 32.3 24.9 37.3



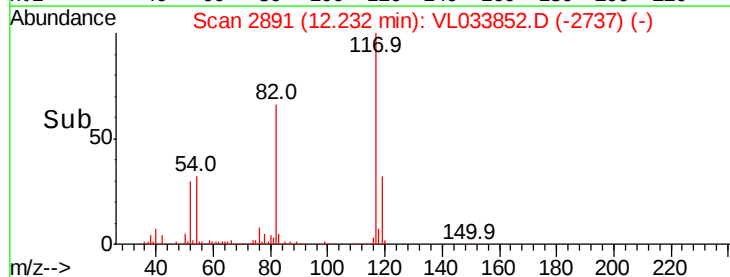
Abundance Ion 117.10 (116.80 to 117.80): V

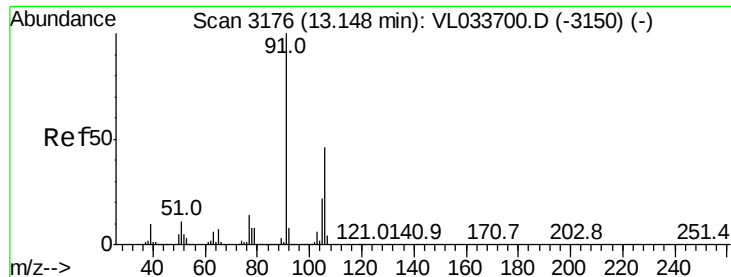
Ion 82.10 (81.80 to 82.80): VL0

Ion 119.10 (118.80 to 119.80): V



Time-->





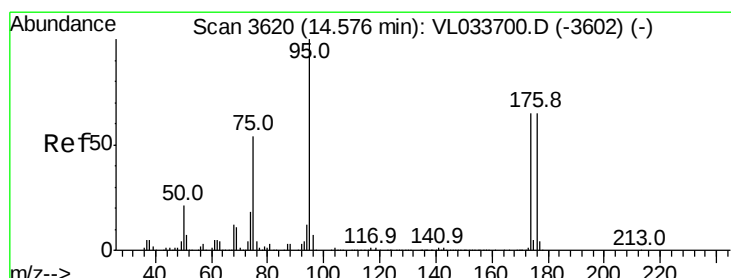
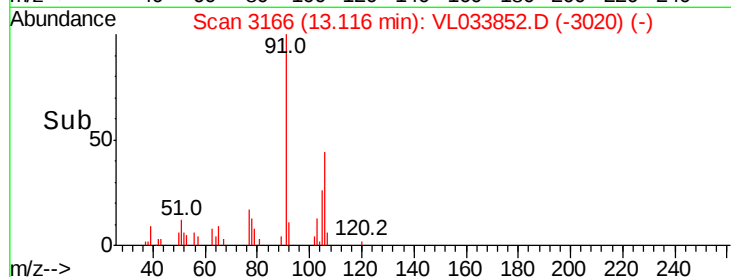
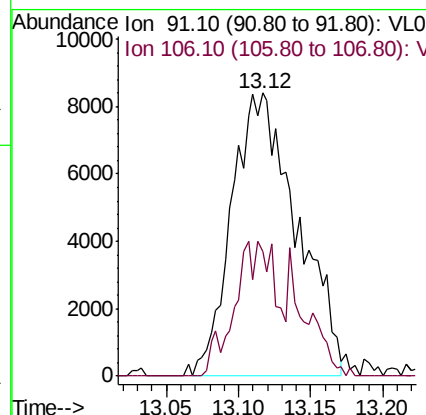
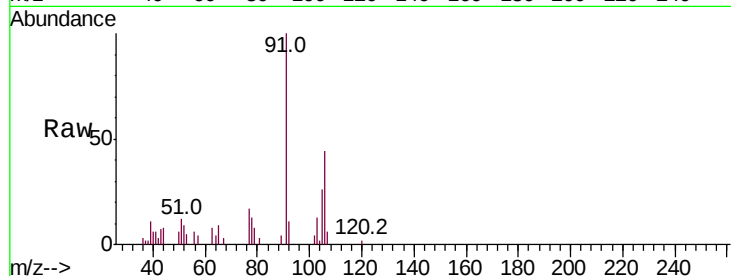
#59
m/p-Xylene
Concen: 0.134 ppbv m
RT: 13.12 min Scan# 3166
Delta R.T. -0.03 min
Lab File: VL033852.D
Acq: 30 May 2019 2:15

Instrument :
MSVOA_L
ClientSampleId :
SG-7-20190523-0

Tot Ion: 91 Resp: 26514
Ion Ratio Lower Upper
91 100
106 0.0 35.8 53.6#

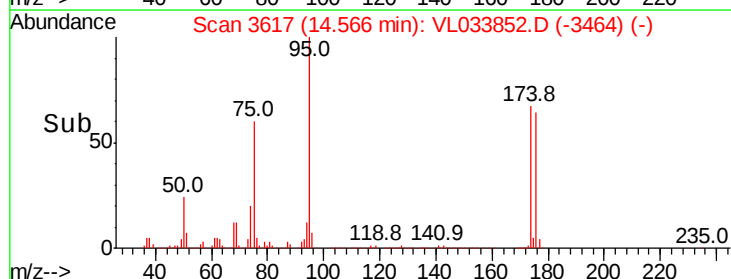
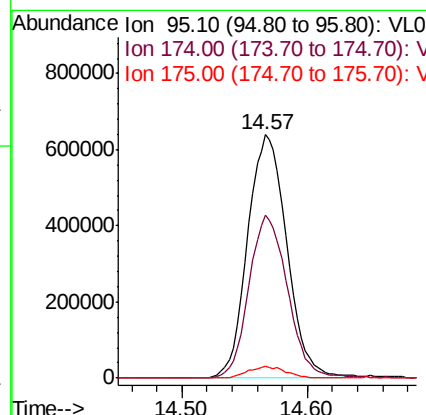
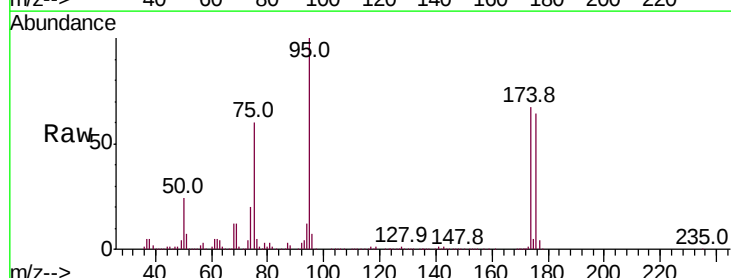
Manual Integrations
APPROVED

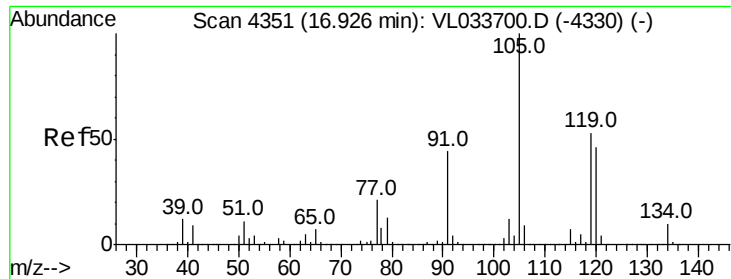
apatel
5/31/2019 12:45:48 PM



#68
1-Bromo-4-Fluorobenzene
Concen: 10.012 ppbv
RT: 14.57 min Scan# 3617
Delta R.T. -0.01 min
Lab File: VL033852.D
Acq: 30 May 2019 2:15

Tgt Ion: 95 Resp: 1383423
Ion Ratio Lower Upper
95 100
174 66.8 53.9 80.9
175 4.7 3.8 5.8





#74
 1,2,4-Trimethylbenzene
 Concen: 0.078 ppbv
 RT: 16.92 min Scan# 4348
 Delta R.T. -0.01 min
 Lab File: VL033852.D
 Acq: 30 May 2019 2:15

Instrument :
 MSVOA_L
 ClientSampleId :
 SG-7-20190523-0

Tot Ion	Ratio	Resp Lower	Resp Upper
105	100		
120	50.8	36.8	55.2
91	15.4	35.4	53.0
77	15.3	16.8	25.2

Manual Integrations
 APPROVED

apatel
 5/31/2019 12:45:48 PM

