

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
 Data File : VL033938.D
 Acq On : 24 Jun 2019 15:59
 Operator : SY/AP
 Sample : K3481-04DUP
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-2DUP

Manual Integrations
 APPROVED

MMDadoda
 6/26/2019 8:15:37 AM

Quant Time: Jun 25 04:13:41 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun 0
 QLast Update : Fri Jun 07 08:53:27 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.74	49	892169	10.00	ppbv	-0.01
33) 1,4-Difluorobenzene	7.27	114	2503824	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.21	117	2606059	10.00	ppbv	-0.01

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.55	95	2100479	9.81	ppbv	-0.02	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	98.10%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	45460	0.314	ppbv	94
3) Chlorodifluoromethane	3.01	51	158043m	1.505	ppbv	
4) Chloromethane	3.17	50	38443	0.642	ppbv	100
9) Propene	3.04	41	69989	1.781	ppbv #	70
10) Heptane	8.22	43	25293	0.255	ppbv	99
11) Trichlorofluoromethane	3.99	101	45470m	0.243	ppbv	
12) 1,1,2-Trichlorotrifluoroet	4.53	101	9697m	0.077	ppbv	
13) Ethanol	3.64	45	263844	20.635	ppbv	97
15) Acetone	3.89	43	780506	5.998	ppbv	95
17) tert-Butyl alcohol	4.36	59	74125	0.729	ppbv	96
19) Isopropyl Alcohol	4.02	45	97217	1.308	ppbv #	1
20) Methylene Chloride	4.39	84	98558	1.942	ppbv	97
26) Hexane	5.76	57	206008	2.283	ppbv #	42
34) 2-Butanone	5.31	43	275477	1.950	ppbv	98
35) Carbon Tetrachloride	7.11	117	12498	0.065	ppbv	91
36) Benzene	6.98	78	38956m	0.204	ppbv	
41) Tetrahydrofuran	6.15	42	19712m	0.275	ppbv	
44) 2,2,4-Trimethylpentane	7.97	57	40789m	0.120	ppbv	
52) Tetrachloroethene	11.34	164	7789m	0.116	ppbv	
53) Toluene	9.92	91	2229455	10.533	ppbv	99
58) Ethyl Benzene	12.83	91	1142804	3.890	ppbv	96
59) m/p-Xylene	13.09	91	4367734	16.347	ppbv	96
60) o-Xylene	13.82	91	1507260	5.464	ppbv	99
72) 4-Ethyltoluene	15.97	105	60328	0.192	ppbv #	93
73) 1,3,5-Trimethylbenzene	16.13	105	64465	0.208	ppbv	99
74) 1,2,4-Trimethylbenzene	16.90	105	200284	0.562	ppbv #	75

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

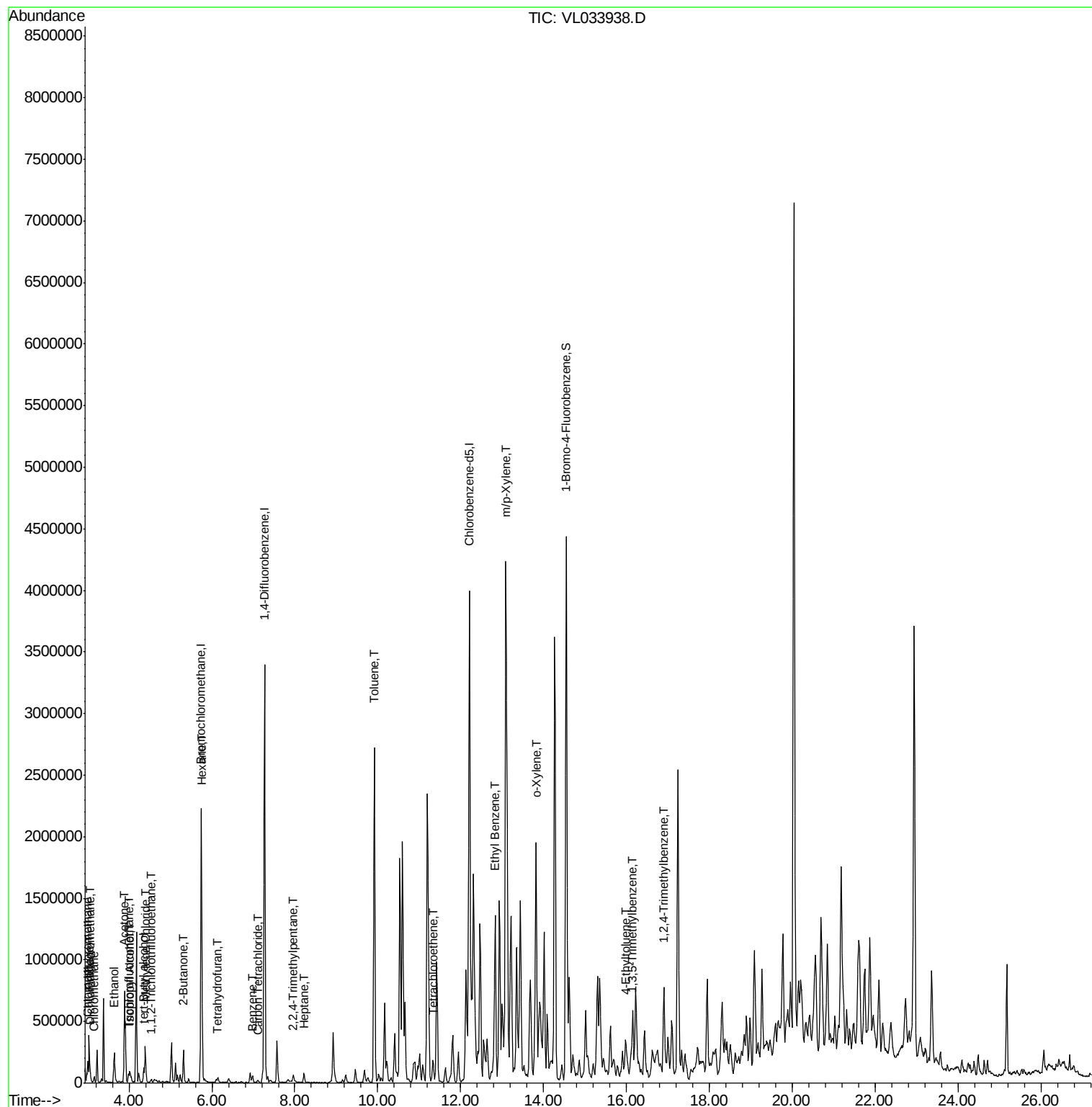
Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL062419\
Data File : VL033938.D
Acq On : 24 Jun 2019 15:59
Operator : SY/AP
Sample : K3481-04DUP
Misc : 400ml/MSVOA L
ALS Vial : 1 Sample Multiplier: 1

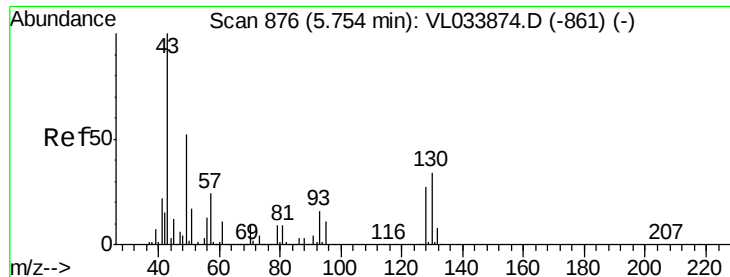
Instrument :
MSVOA_L
ClientSampleId :
TZX-SSDS-AREA-B-2DUP

Manual Integrations
APPROVED

MMDadoda
6/26/2019 8:15:37 AM

Quant Time: Jun 25 04:13:41 2019
Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL060719AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Jun
QLast Update : Fri Jun 07 08:53:27 2019
Response via : Initial Calibration





#1

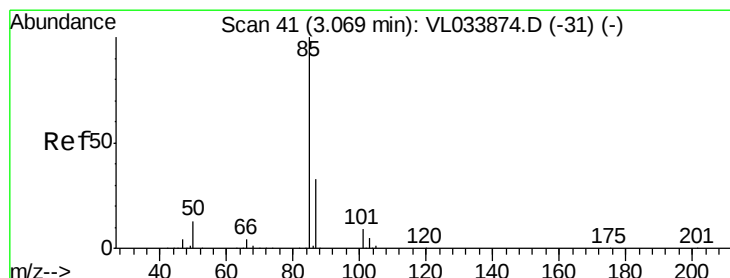
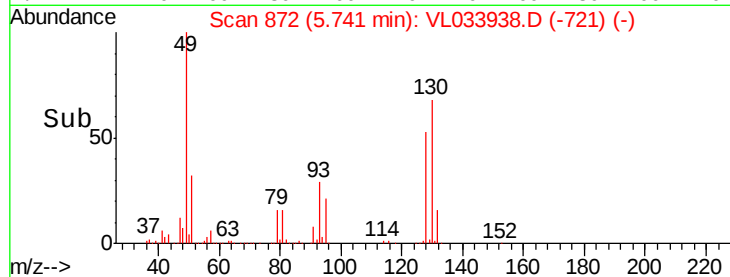
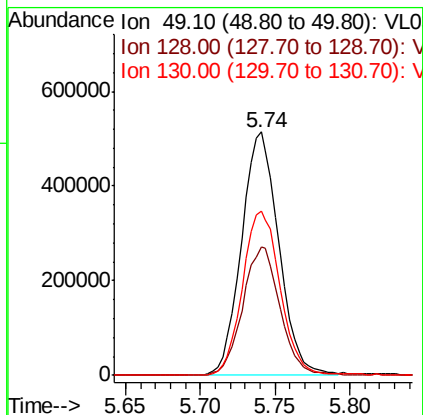
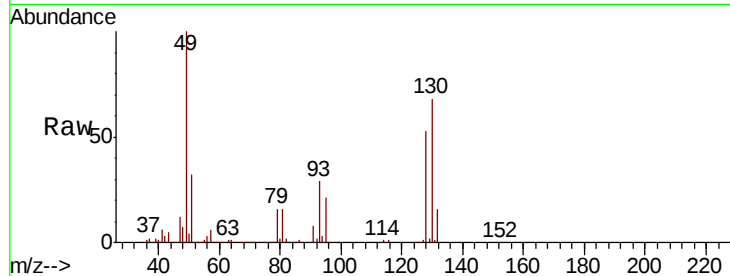
Bromochloromethane
 Concen: 10.000 ppbv
 RT: 5.74 min Scan# 872
 Delta R.T. -0.01 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
49	100		
128	53.2	25.5	76.5
130	68.7	32.5	97.4

Manual Integrations
 APPROVED

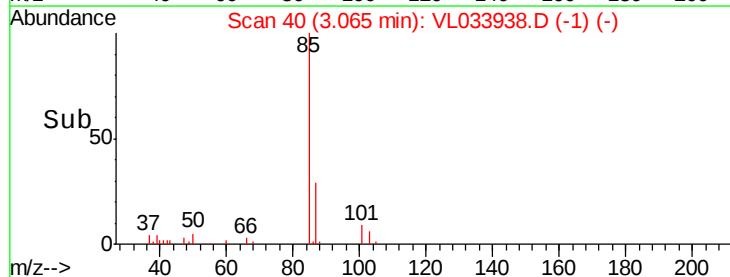
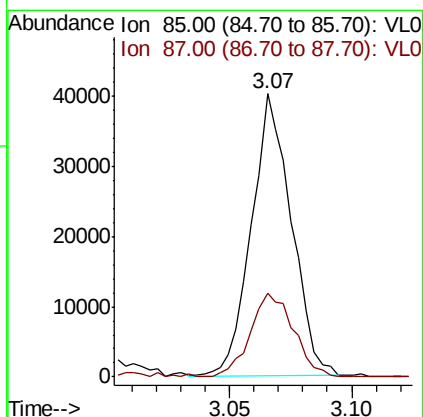
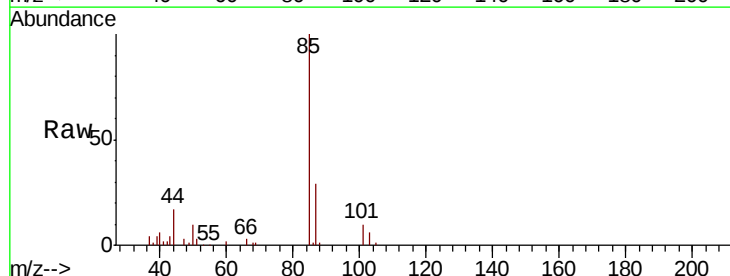
MMDadoda
 6/26/2019 8:15:37 AM

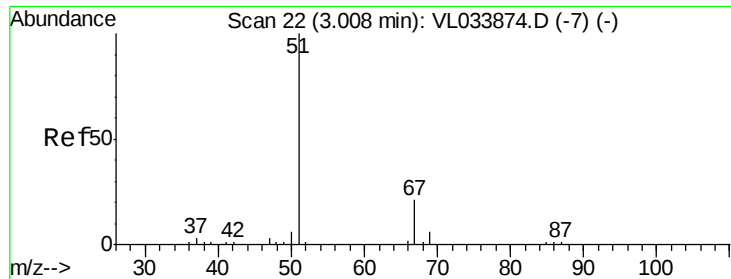


#2

Dichlorodifluoromethane
 Concen: 0.314 ppbv
 RT: 3.07 min Scan# 40
 Delta R.T. -0.00 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
85	100		
87	29.6	26.6	40.0





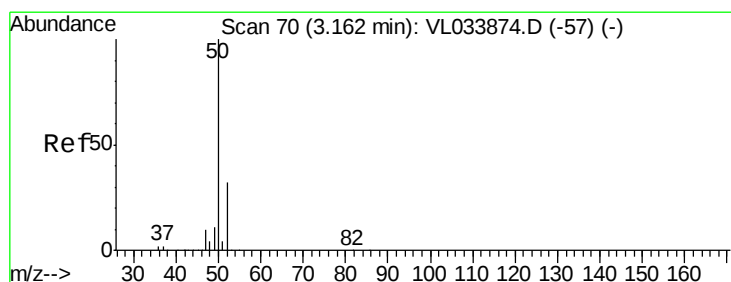
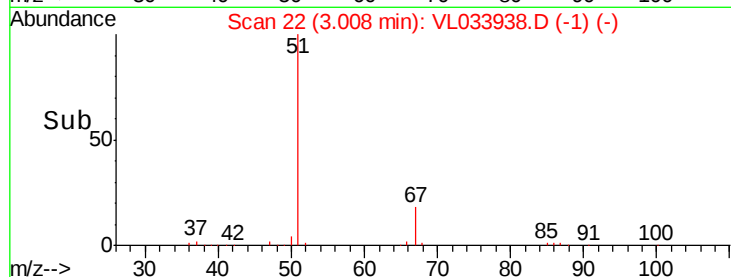
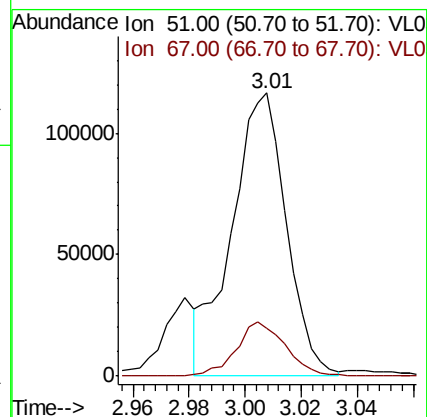
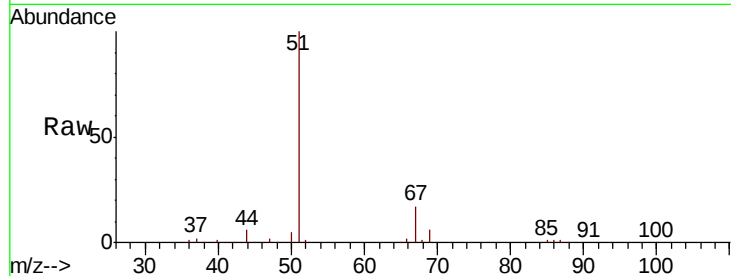
#3
Chlorodifluoromethane
Concen: 1.505 ppbv
RT: 3.01 min Scan# 22
Delta R.T. -0.00 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
51	100		
67	17.3	16.4	24.6

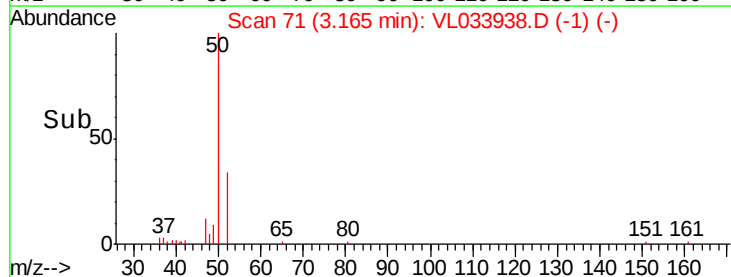
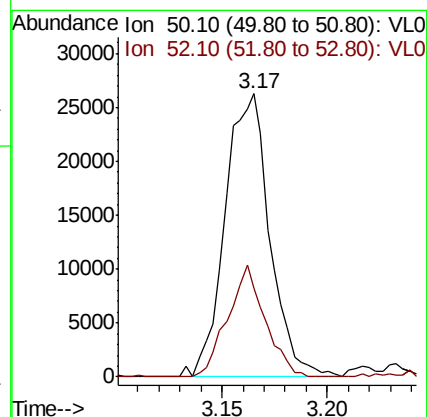
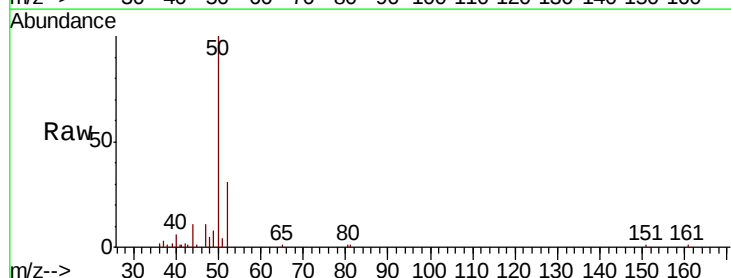
Manual Integrations
APPROVED

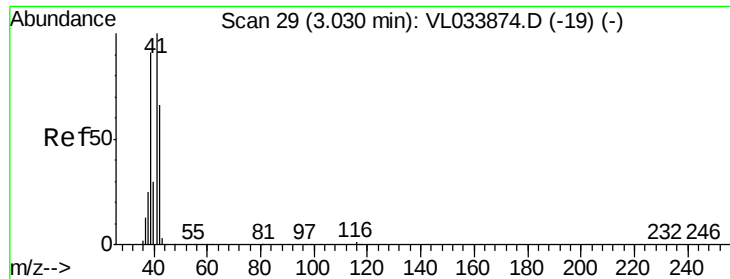
MMDadoda
6/26/2019 8:15:37 AM



#4
Chloromethane
Concen: 0.642 ppbv
RT: 3.17 min Scan# 71
Delta R.T. 0.00 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
50	100		
52	31.4	25.4	38.0





#9

Propene

Concen: 1.781 ppbv

RT: 3.04 min Scan# 33

Delta R.T. 0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-2DUP

Tot Ion: 41 Resp: 69989

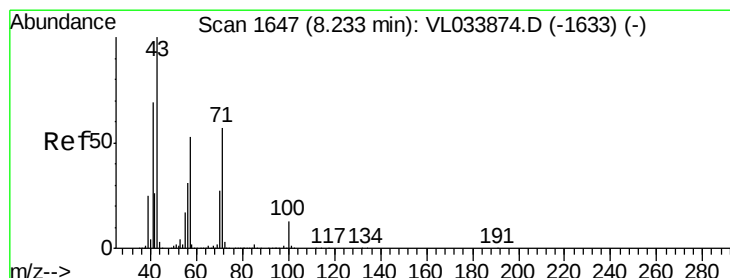
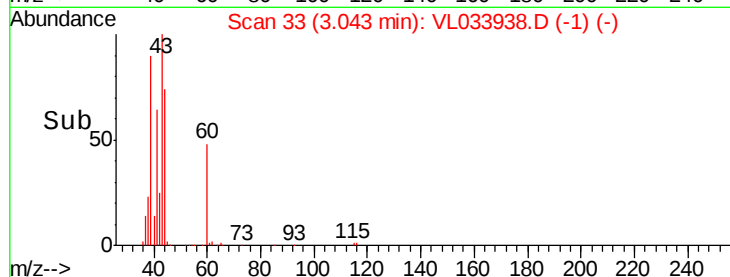
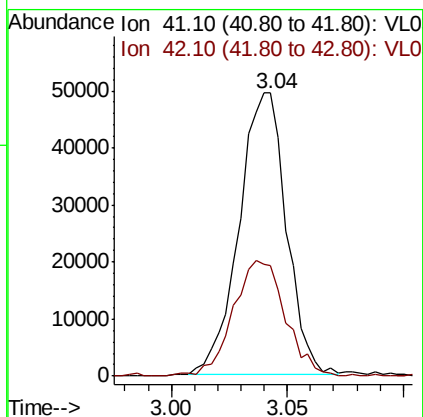
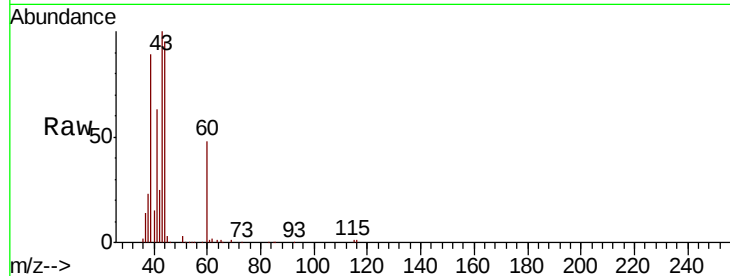
Ion Ratio Lower Upper

41 100

42 45.4 56.3 84.5#

Manual Integrations
APPROVED

MMDadoda
6/26/2019 8:15:37 AM



#10

Heptane

Concen: 0.255 ppbv

RT: 8.22 min Scan# 1643

Delta R.T. -0.01 min

Lab File: VL033938.D

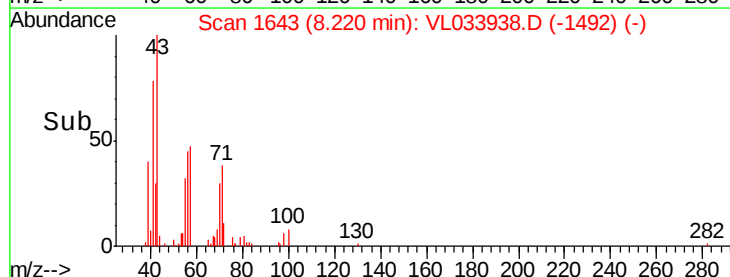
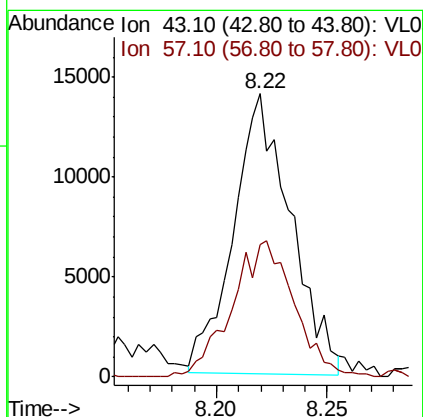
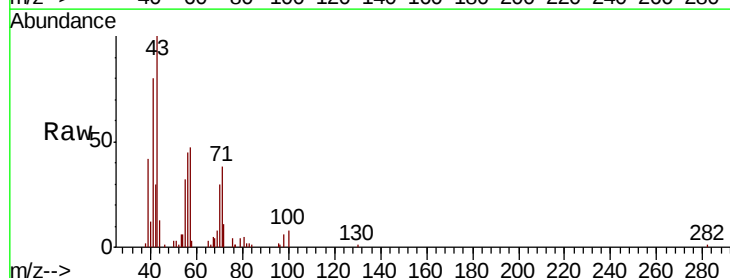
Acq: 24 Jun 2019 15:59

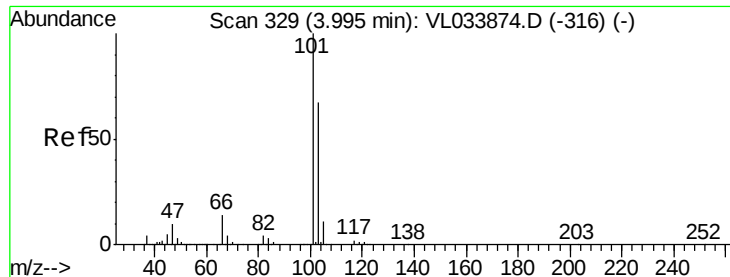
Tgt Ion: 43 Resp: 25293

Ion Ratio Lower Upper

43 100

57 52.9 41.7 62.5





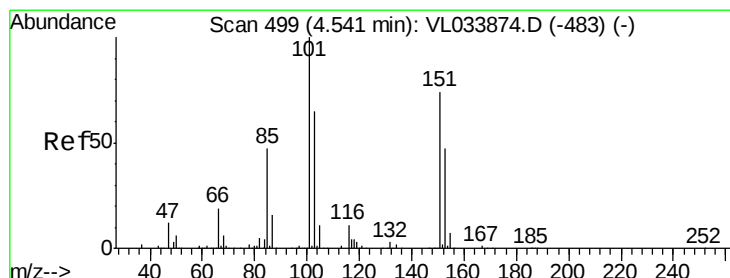
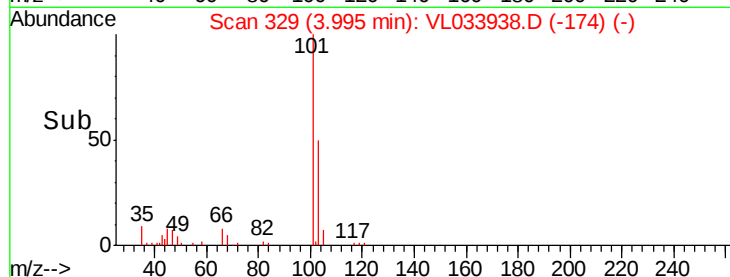
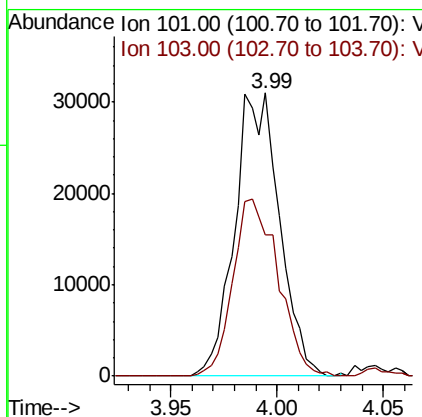
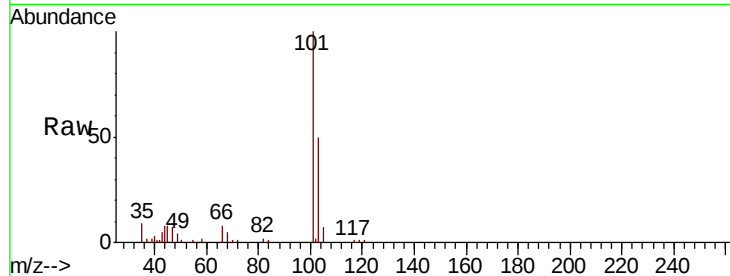
#11
 Trichlorofluoromethane
 Concen: 0.243 ppbv m
 RT: 3.99 min Scan# 329
 Delta R.T. -0.00 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
101	100		
103	49.9	53.6	80.4#

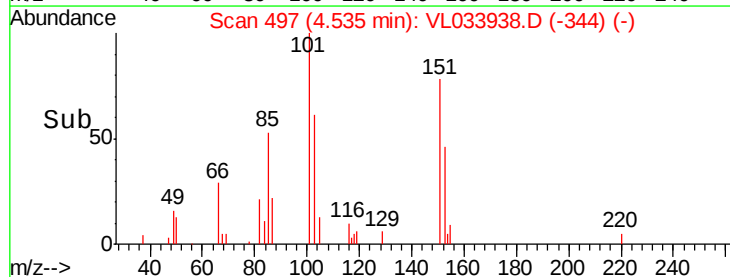
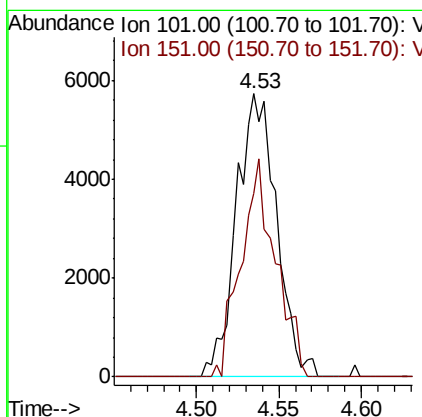
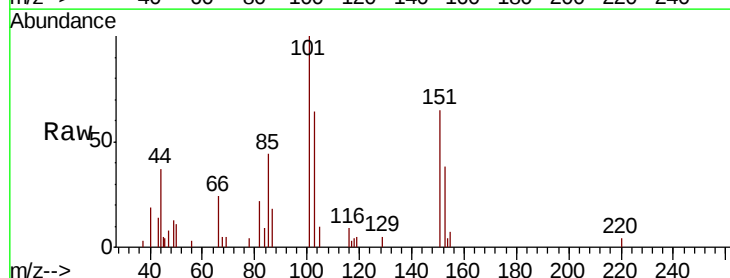
Manual Integrations
 APPROVED

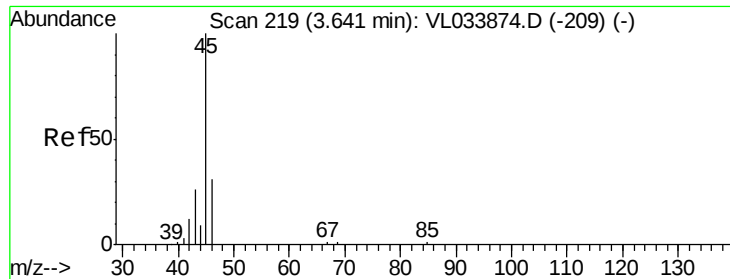
MMDadoda
 6/26/2019 8:15:37 AM



#12
 1,1,2-Trichlorotrifluoroethane
 Concen: 0.077 ppbv m
 RT: 4.53 min Scan# 497
 Delta R.T. -0.01 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
101	100		
151	66.8	58.6	87.8





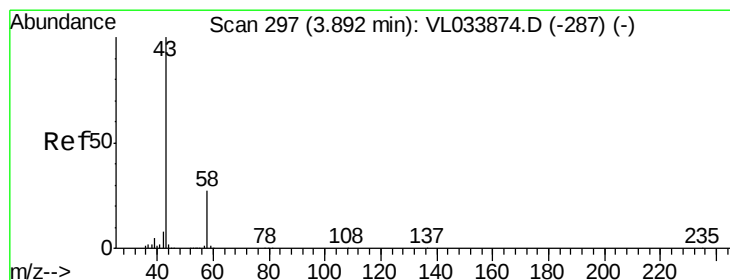
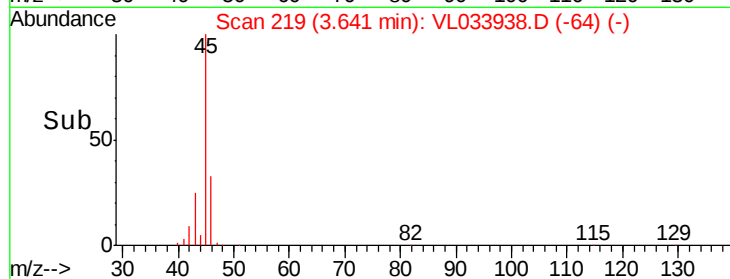
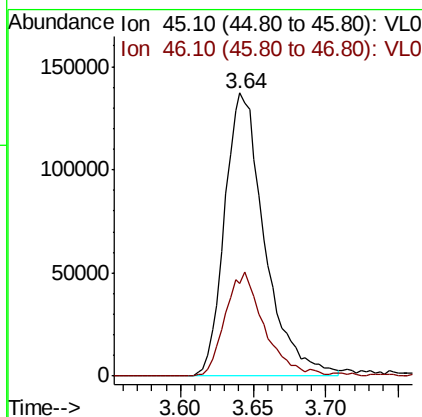
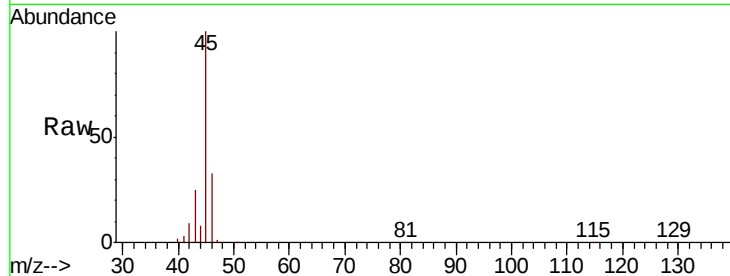
#13
Ethanol
Concen: 20.635 ppbv
RT: 3.64 min Scan# 219
Delta R.T. -0.00 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
45	100		
46	36.3	15.3	61.1

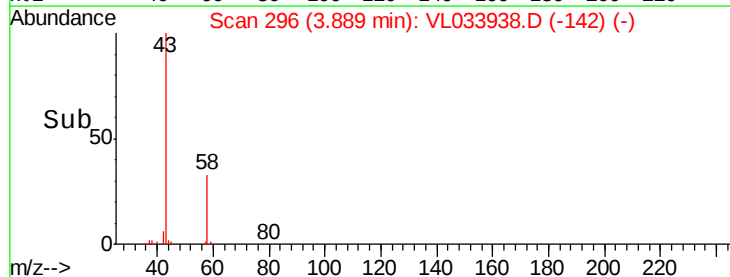
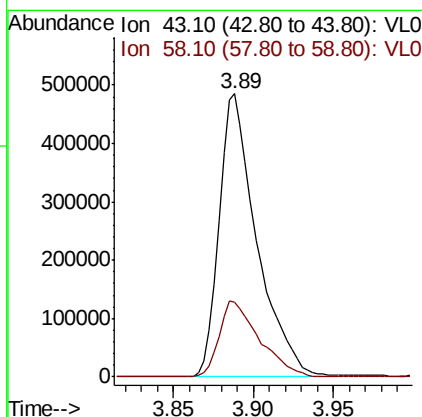
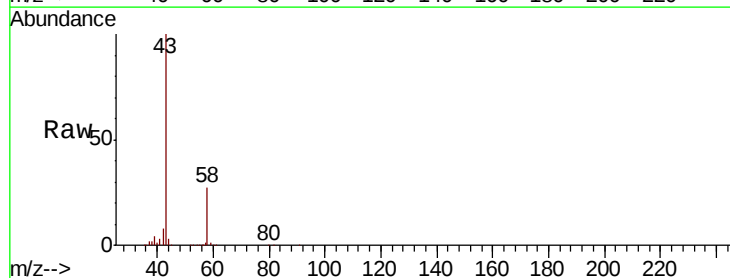
Manual Integrations
APPROVED

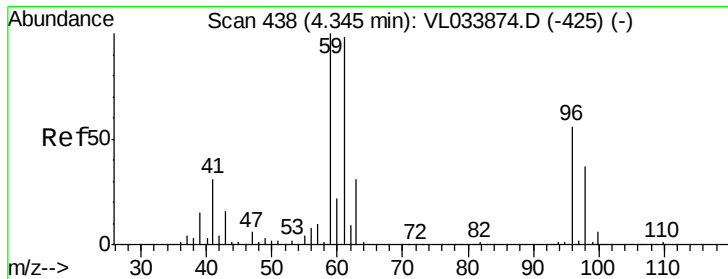
MMDadoda
6/26/2019 8:15:37 AM



#15
Acetone
Concen: 5.998 ppbv
RT: 3.89 min Scan# 296
Delta R.T. -0.00 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
43	100		
58	29.0	21.3	31.9





#17

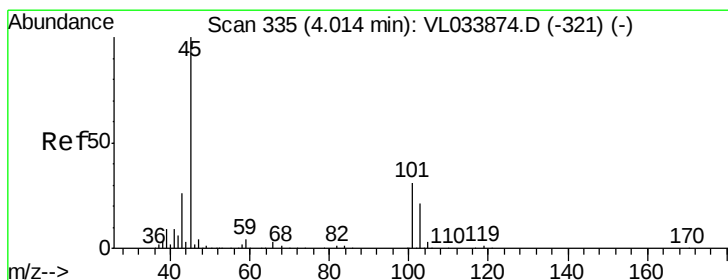
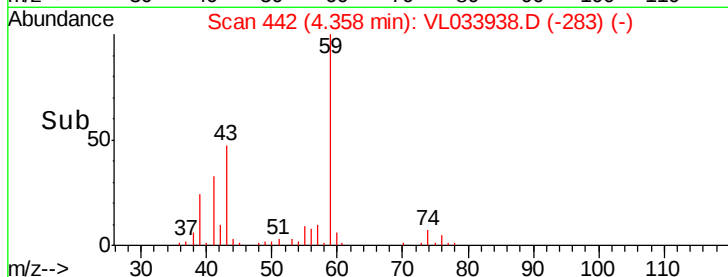
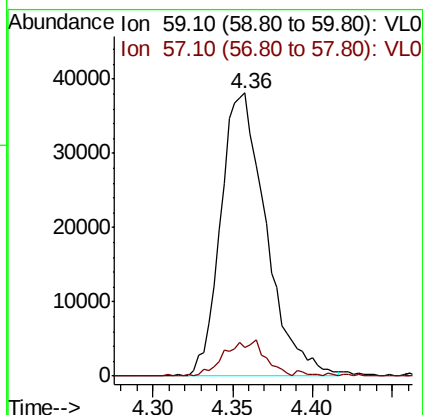
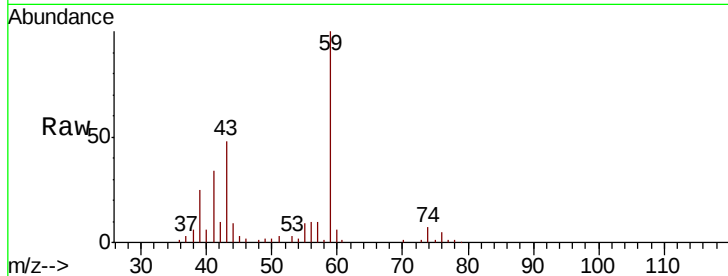
tert-Butyl alcohol
Concen: 0.729 ppbv
RT: 4.36 min Scan# 442
Delta R.T. 0.01 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

Tot Ion	59	Resp	74125
Ion Ratio	100	Lower	Upper
57	11.9	8.4	12.6

Manual Integrations
APPROVED

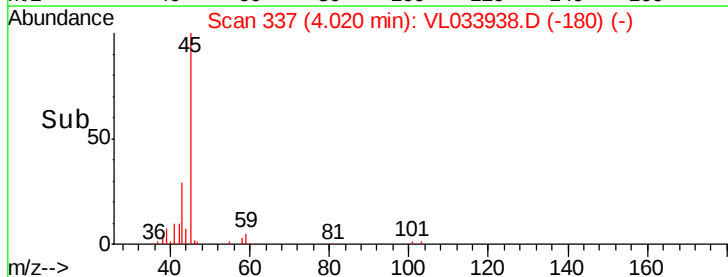
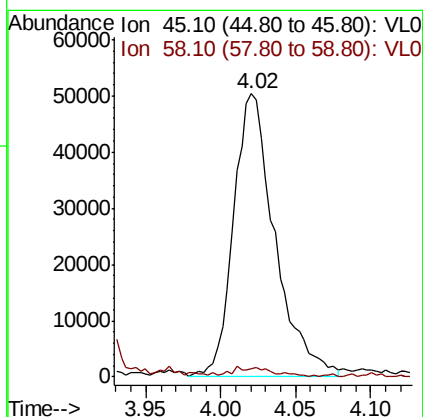
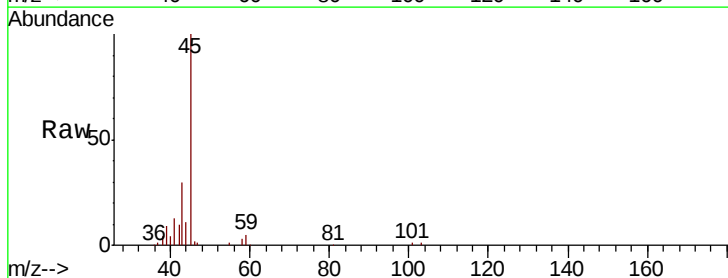
MMDadoda
6/26/2019 8:15:37 AM

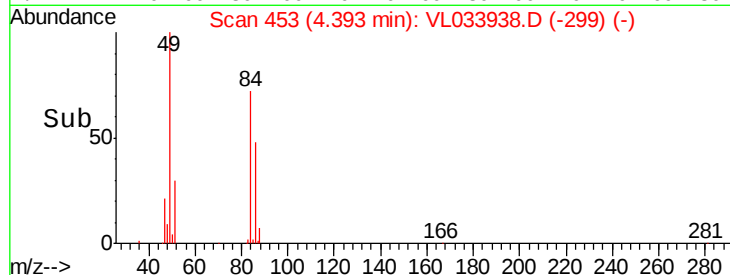
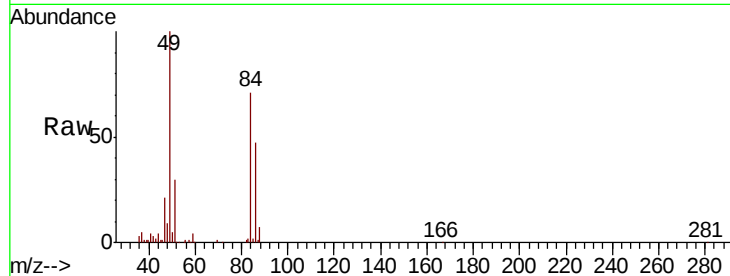
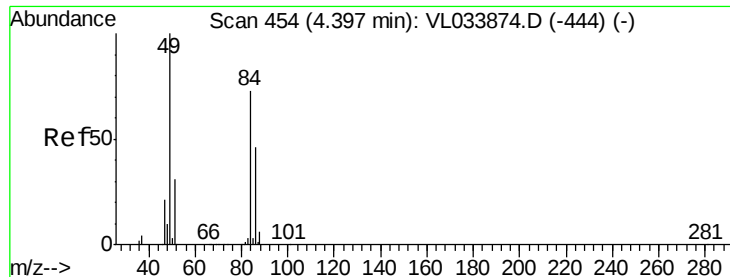


#19

Isopropyl Alcohol
Concen: 1.308 ppbv
RT: 4.02 min Scan# 337
Delta R.T. 0.01 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion	45	Resp	97217
Ion Ratio	100	Lower	Upper
58	233.2	1.8	2.6#





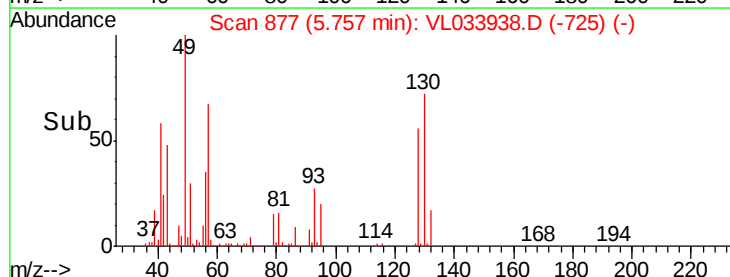
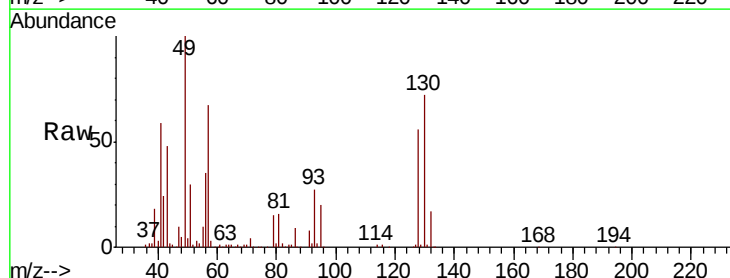
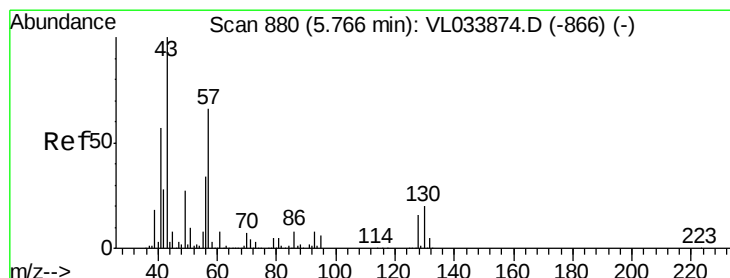
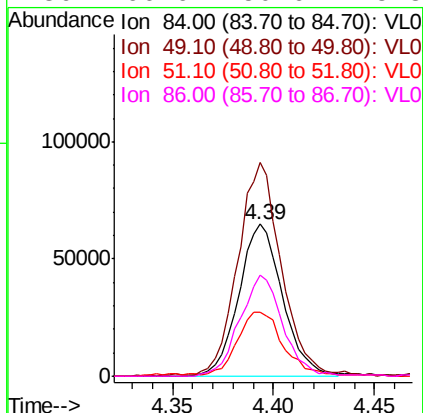
#20
Methvlene Chloride
Concen: 1.942 ppbv
RT: 4.39 min Scan# 453
Delta R.T. -0.00 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tot Ion	84	Resp	98558
Ion	Ratio	Lower	Upper
84	100		
49	139.5	110.0	165.0
51	41.2	34.6	51.8
86	66.6	50.6	75.8

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

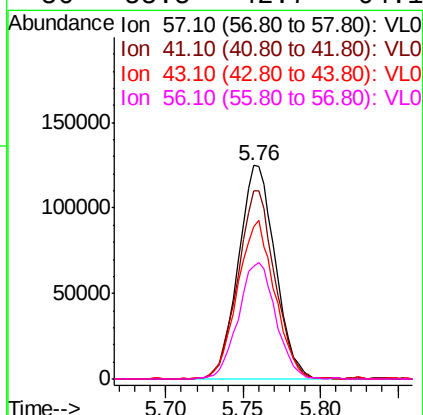
Manual Integrations
APPROVED

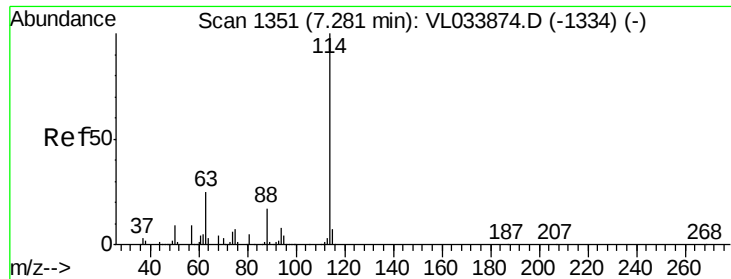
MMDadoda
6/26/2019 8:15:37 AM



#26
Hexane
Concen: 2.283 ppbv
RT: 5.76 min Scan# 877
Delta R.T. -0.01 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion	57	Resp	206008
Ion	Ratio	Lower	Upper
57	100		
41	89.3	71.4	107.2
43	75.0	183.7	275.5#
56	55.5	42.7	64.1





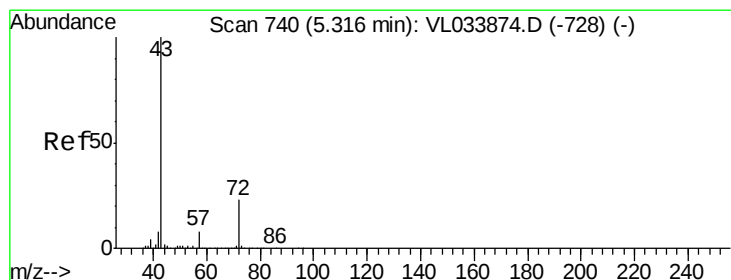
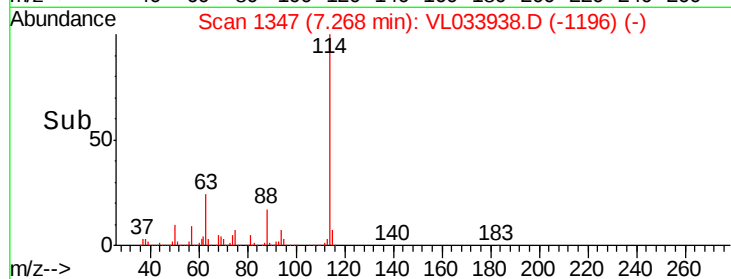
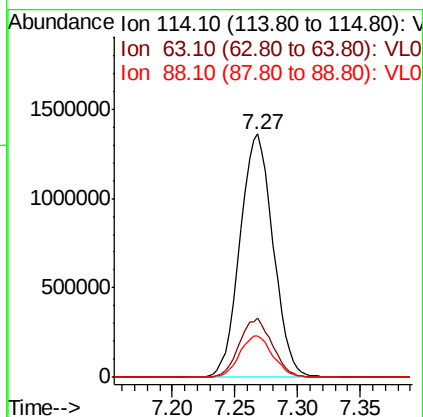
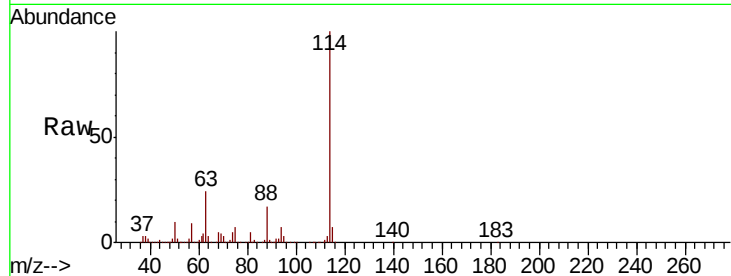
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.27 min Scan# 1347
 Delta R.T. -0.01 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-2DUP

Tot Ion:114 Resp: 2503824
 Ion Ratio Lower Upper
 114 100
 63 24.2 21.1 31.7
 88 17.1 14.2 21.4

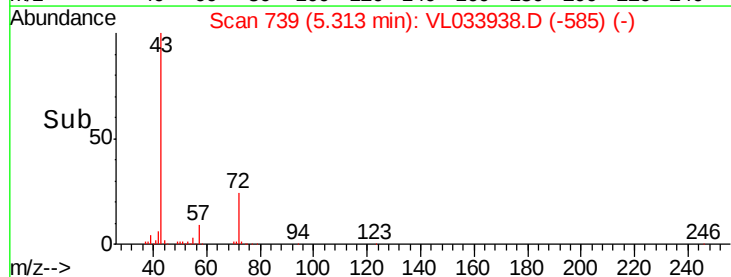
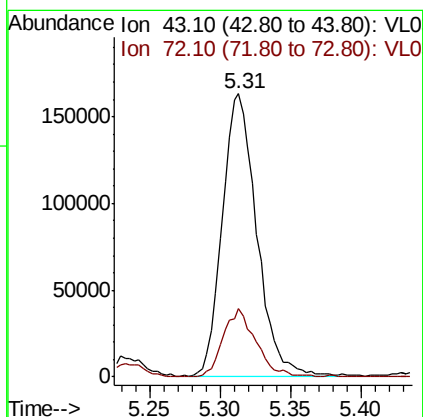
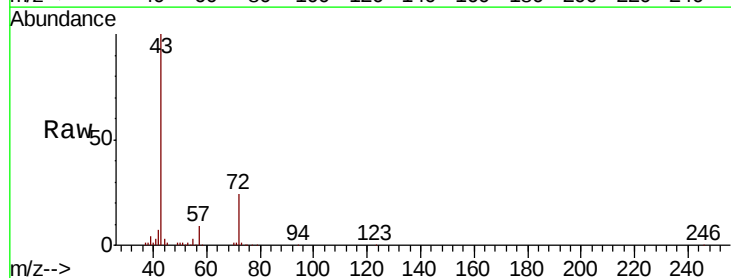
Manual Integrations
 APPROVED

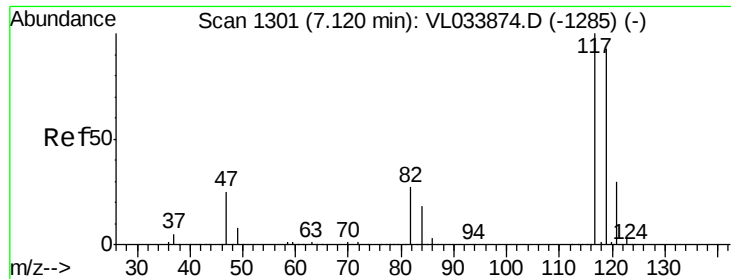
MMDadoda
 6/26/2019 8:15:37 AM



#34
 2-Butanone
 Concen: 1.950 ppbv
 RT: 5.31 min Scan# 739
 Delta R.T. -0.00 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Tgt Ion: 43 Resp: 275477
 Ion Ratio Lower Upper
 43 100
 72 23.4 17.9 26.9





#35

Carbon Tetrachloride

Concen: 0.065 ppbv

RT: 7.11 min Scan# 1298

Delta R.T. -0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Instrument :

MSVOA_L

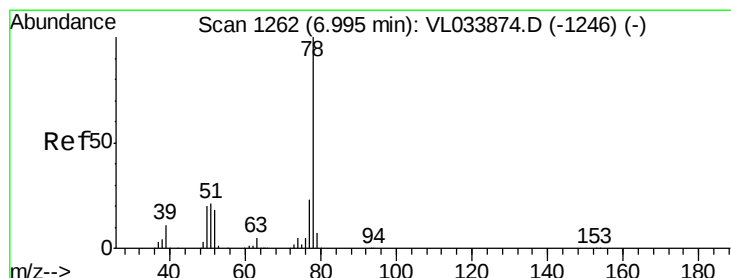
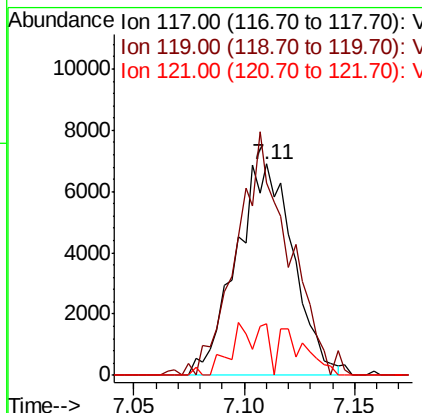
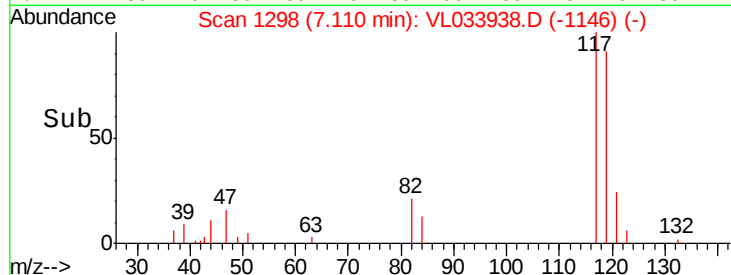
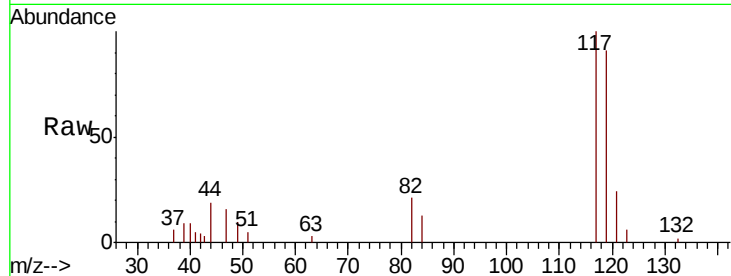
ClientSampleId :

TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
117	100		
119	85.5	74.6	111.8
121	24.5	24.0	36.0

Manual Integrations
APPROVED

MMDadoda
6/26/2019 8:15:37 AM



#36

Benzene

Concen: 0.204 ppbv m

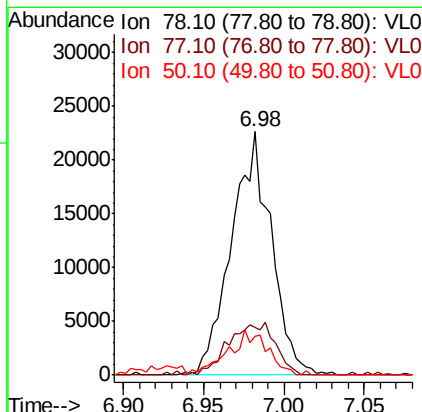
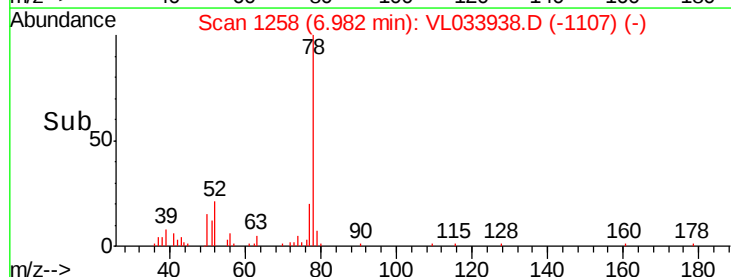
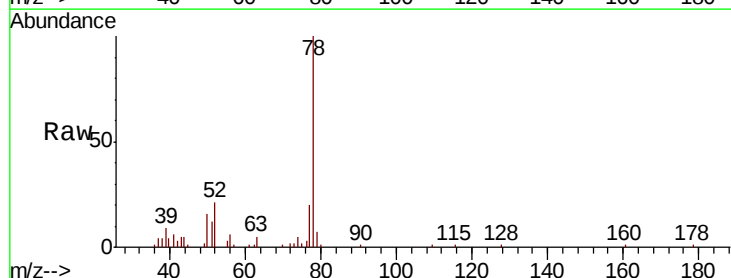
RT: 6.98 min Scan# 1258

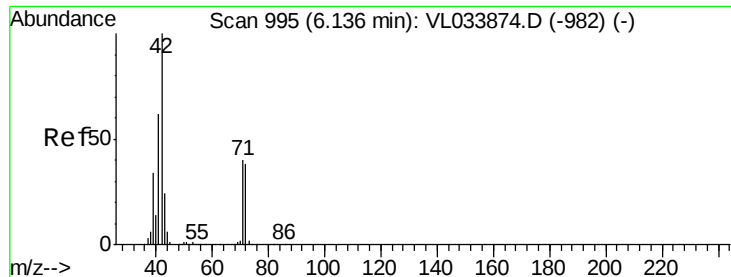
Delta R.T. -0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
78	100		
77	19.7	18.2	27.2
50	16.0	15.9	23.9





#41

Tetrahydrofuran

Concen: 0.275 ppbv m

RT: 6.15 min Scan# 998

Delta R.T. 0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Instrument :

MSVOA_L

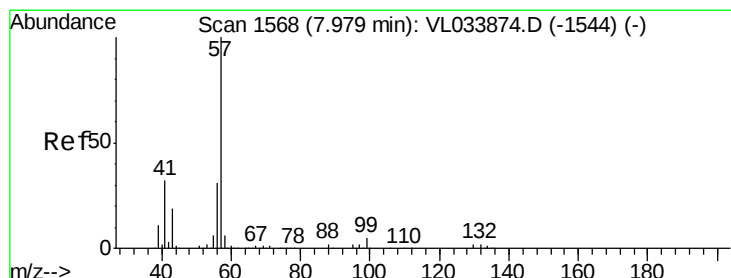
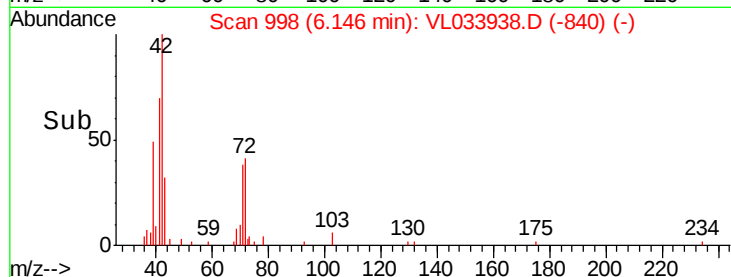
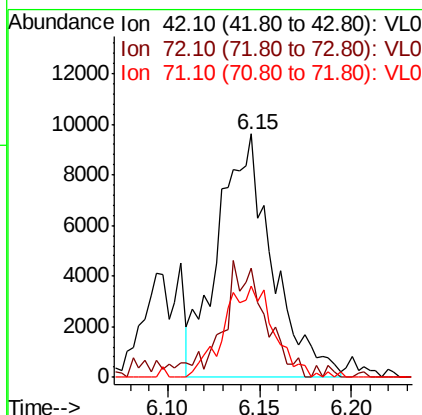
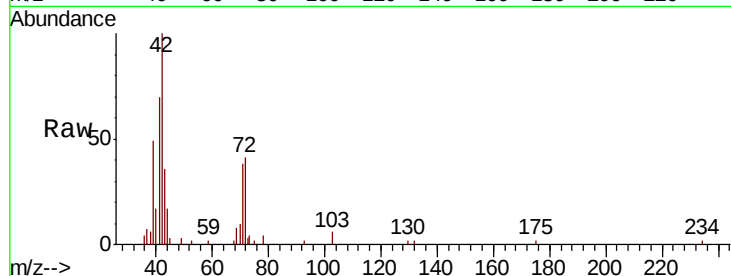
ClientSampleId :

TZC-SSDS-AREA-B-2DUP

Tot Ion:	42	Resp:	19712
Ion Ratio	Lower	Upper	
42	100		
72	41.6	32.2	48.4
71	0.0	31.7	47.5#

Manual Integrations
APPROVED

MMDadoda
6/26/2019 8:15:37 AM



#44

2,2,4-Trimethylpentane

Concen: 0.120 ppbv m

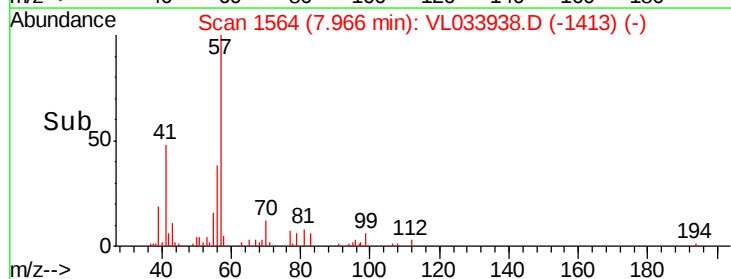
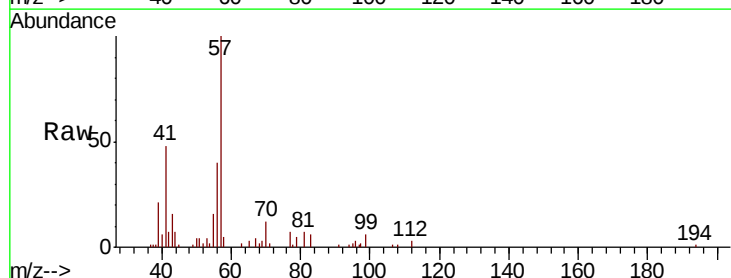
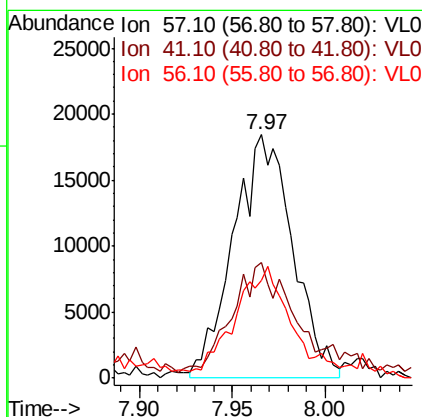
RT: 7.97 min Scan# 1564

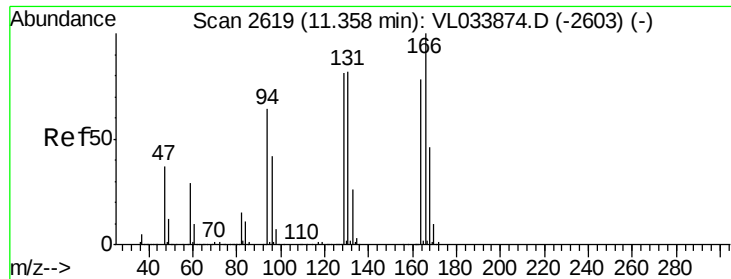
Delta R.T. -0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Tgt Ion:	57	Resp:	40789
Ion Ratio	Lower	Upper	
57	100		
41	60.1	26.1	39.1#
56	0.0	24.6	36.8#





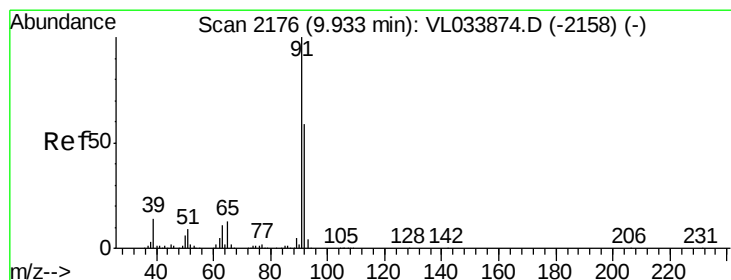
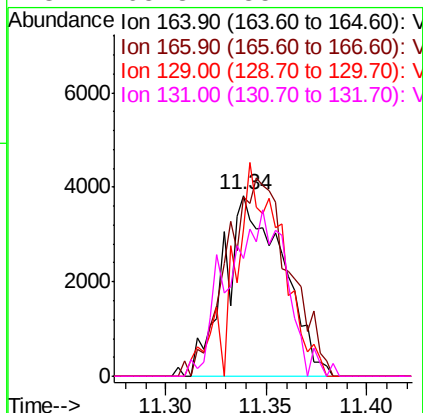
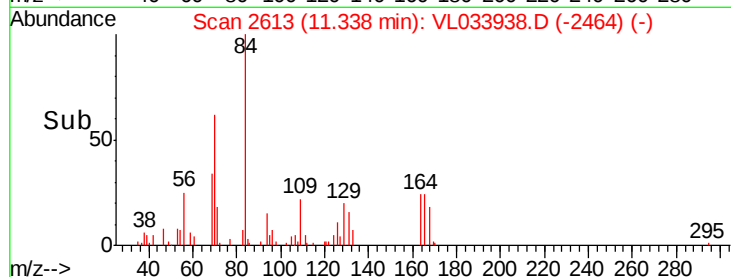
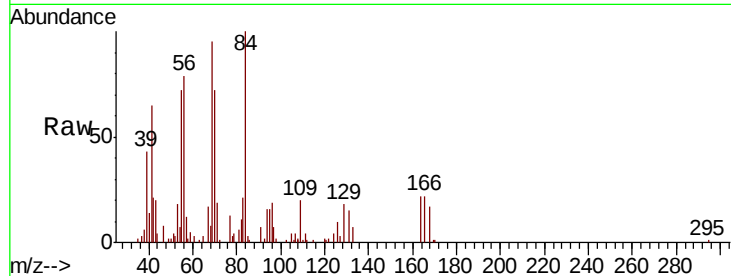
#52
Tetrachloroethene
Concen: 0.116 ppbv m
RT: 11.34 min Scan# 2613
Delta R.T. -0.02 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

Tot Ion	Ratio	Lower	Upper
164	100		
166	98.7	103.1	154.7#
129	81.6	83.9	125.9#
131	65.3	85.1	127.7#

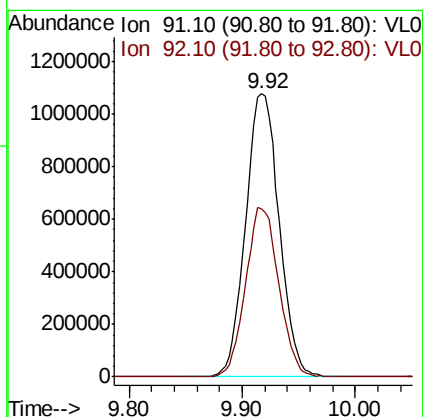
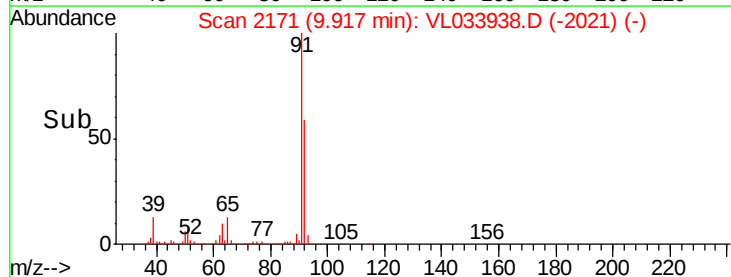
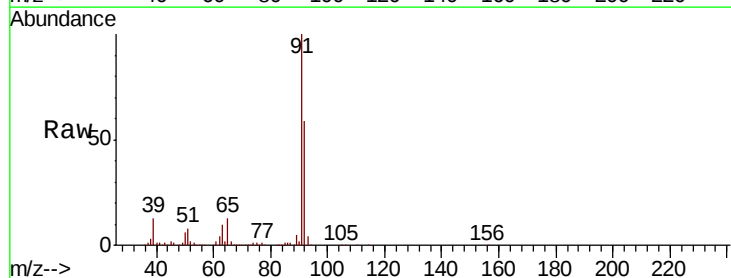
Manual Integrations
APPROVED

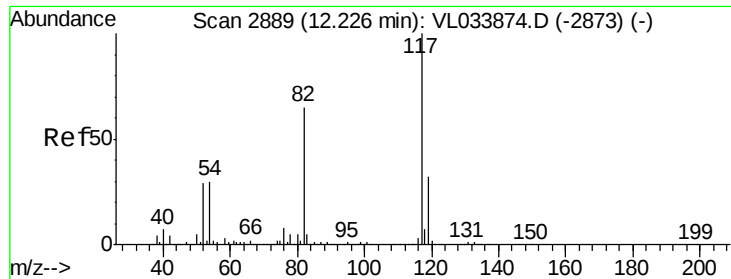
MMDadoda
6/26/2019 8:15:37 AM



#53
Toluene
Concen: 10.533 ppbv
RT: 9.92 min Scan# 2171
Delta R.T. -0.02 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.0	70.6





#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.21 min Scan# 2885

Delta R.T. -0.01 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-2DUP

Tot Ion:117 Resp: 2606059

Ion Ratio Lower Upper

117 100

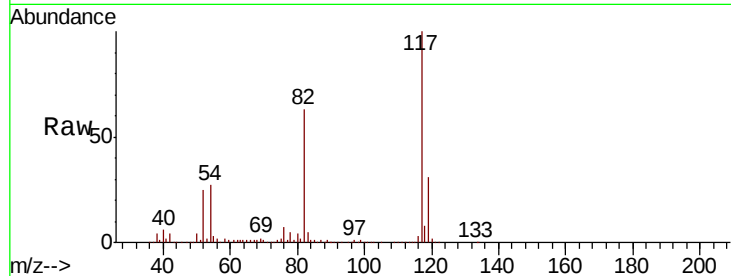
82 63.7 50.2 75.2

119 32.7 24.8 37.2

Manual Integrations
APPROVED

MMDadoda

6/26/2019 8:15:37 AM

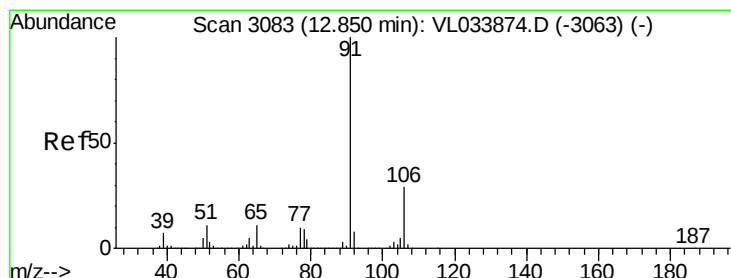
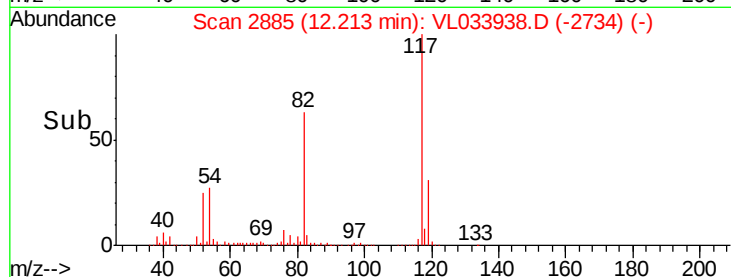
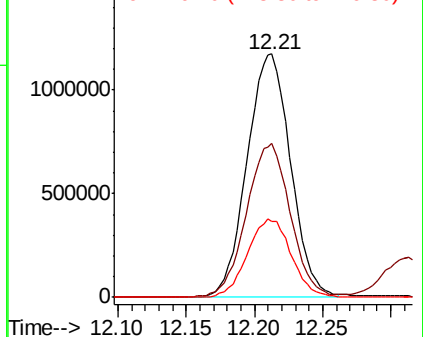


Abundance

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



#58

Ethyl Benzene

Concen: 3.890 ppbv

RT: 12.83 min Scan# 3078

Delta R.T. -0.02 min

Lab File: VL033938.D

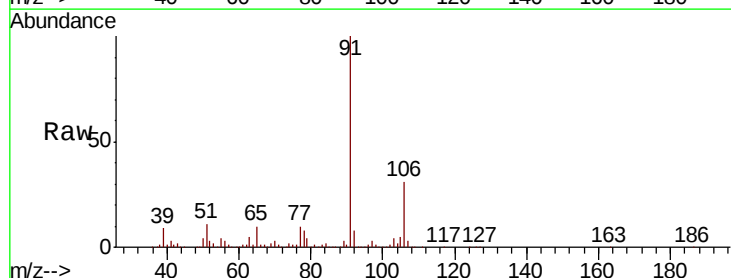
Acq: 24 Jun 2019 15:59

Tgt Ion: 91 Resp: 1142804

Ion Ratio Lower Upper

91 100

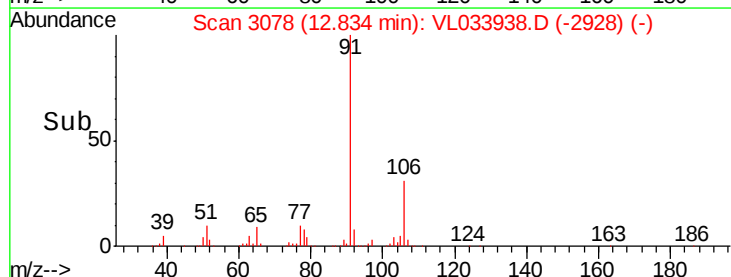
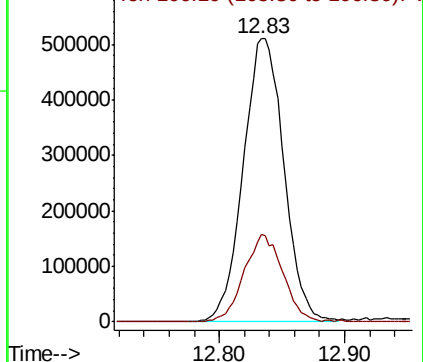
106 31.1 23.0 34.6

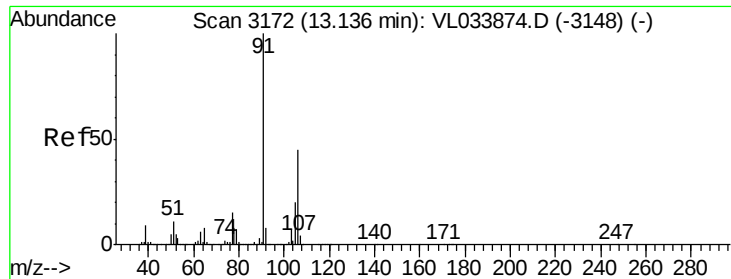


Abundance

Ion 91.10 (90.80 to 91.80): VL0

Ion 106.10 (105.80 to 106.80): V





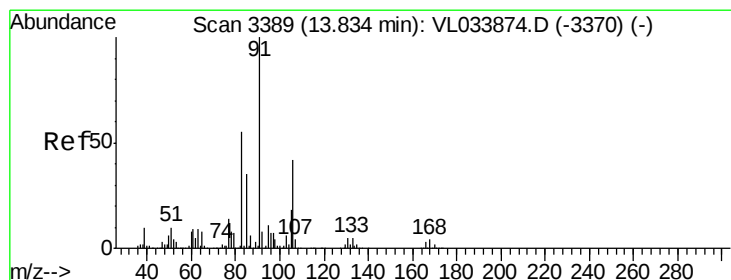
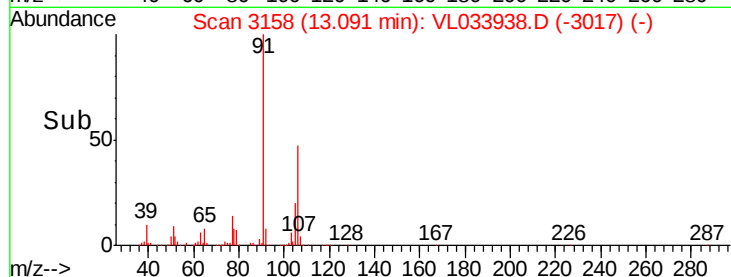
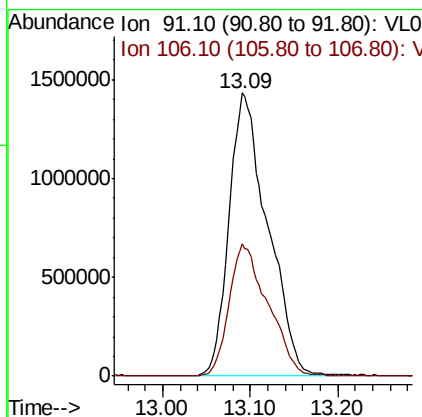
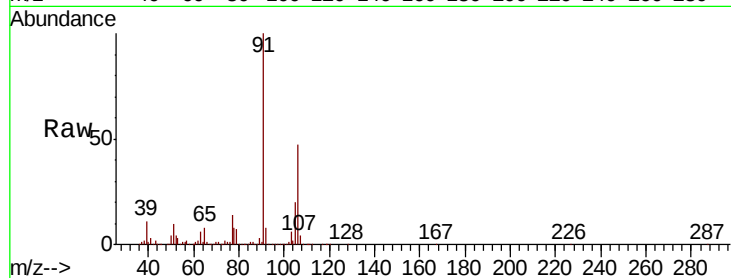
#59
m/p-Xylene
Concen: 16.347 ppbv
RT: 13.09 min Scan# 3158
Delta R.T. -0.05 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Instrument :
MSVOA_L
ClientSampleId :
TZC-SSDS-AREA-B-2DUP

Tot Ion: 91 Resp: 4367734
Ion Ratio Lower Upper
91 100
106 47.3 35.8 53.8

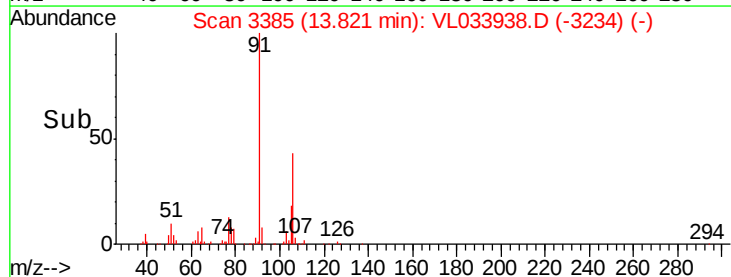
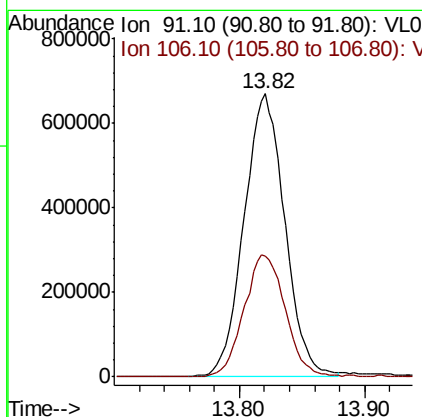
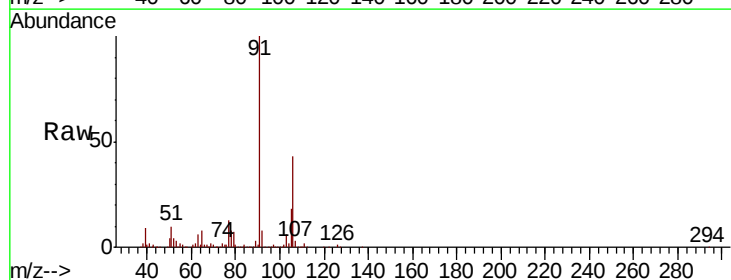
Manual Integrations
APPROVED

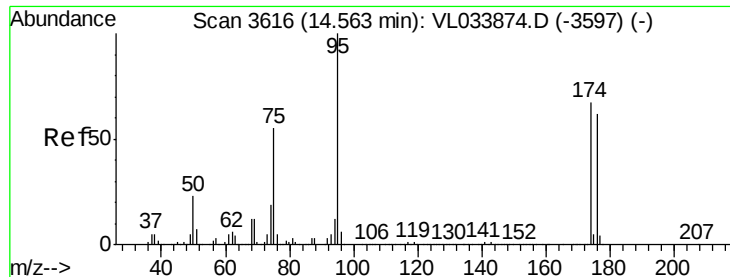
MMDadoda
6/26/2019 8:15:37 AM



#60
o-Xylene
Concen: 5.464 ppbv
RT: 13.82 min Scan# 3385
Delta R.T. -0.01 min
Lab File: VL033938.D
Acq: 24 Jun 2019 15:59

Tgt Ion: 91 Resp: 1507260
Ion Ratio Lower Upper
91 100
106 44.3 21.7 65.1





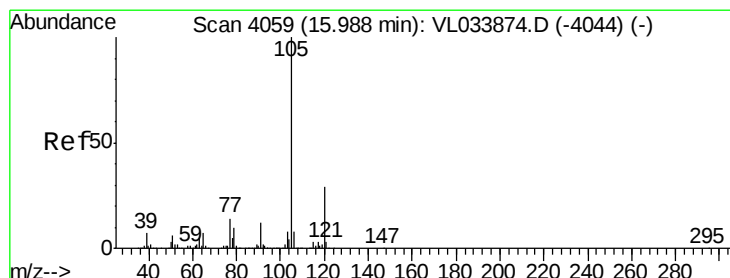
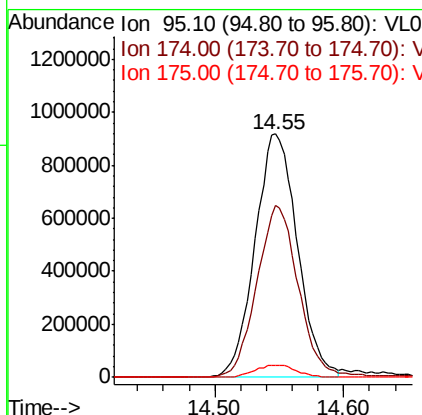
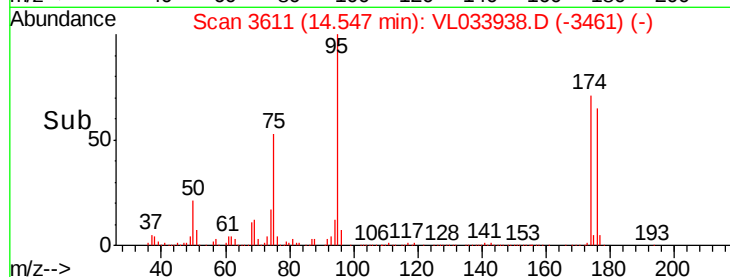
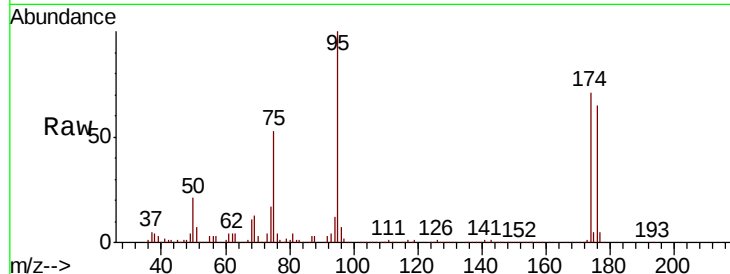
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.813 ppbv
 RT: 14.55 min Scan# 3611
 Delta R.T. -0.02 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Instrument :
 MSVOA_L
 ClientSampleId :
 TZC-SSDS-AREA-B-2DUP

Tot Ion: 95 Resp: 2100479
 Ion Ratio Lower Upper
 95 100
 174 70.3 54.0 81.0
 175 5.0 3.8 5.8

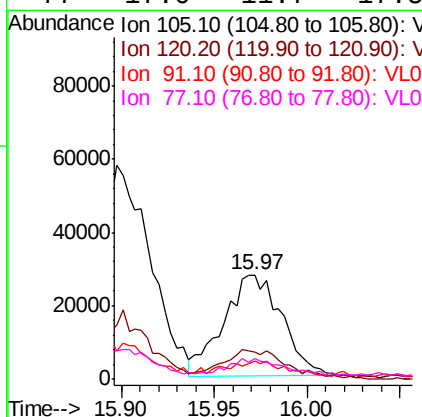
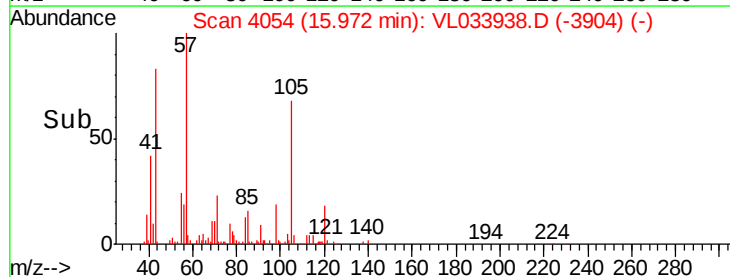
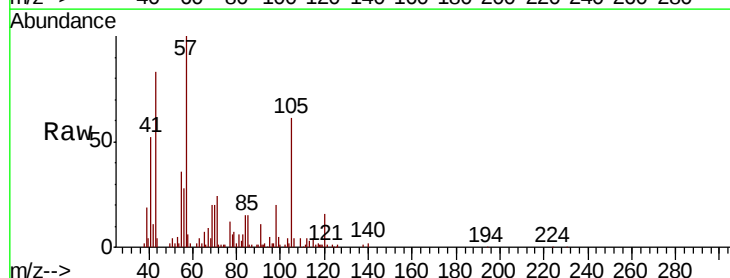
Manual Integrations
 APPROVED

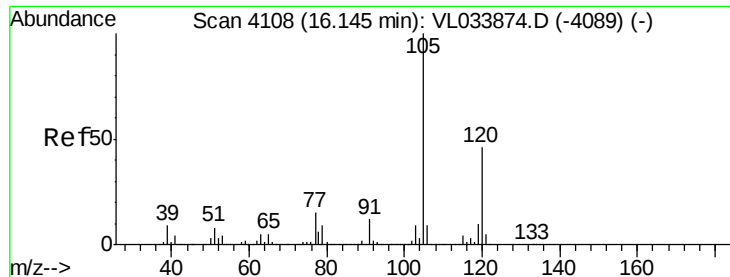
MMDadoda
 6/26/2019 8:15:37 AM



#72
 4-Ethyltoluene
 Concen: 0.192 ppbv
 RT: 15.97 min Scan# 4054
 Delta R.T. -0.02 min
 Lab File: VL033938.D
 Acq: 24 Jun 2019 15:59

Tgt Ion: 105 Resp: 60328
 Ion Ratio Lower Upper
 105 100
 120 31.2 23.5 35.3
 91 19.6 10.4 15.6#
 77 17.0 11.7 17.5





#73

1,3,5-Trimethylbenzene

Concen: 0.208 ppbv

RT: 16.13 min Scan# 4102

Delta R.T. -0.02 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Instrument :

MSVOA_L

ClientSampleId :

TZC-SSDS-AREA-B-2DUP

Tot Ion:105 Resp: 64465

Ion Ratio Lower Upper

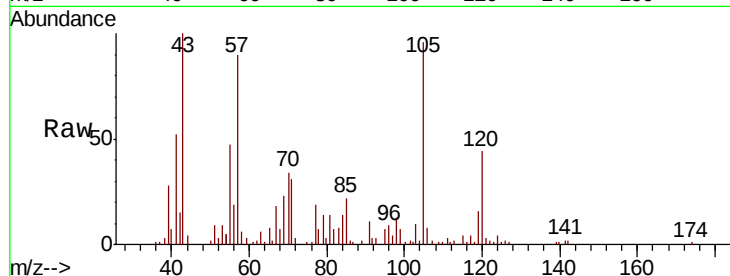
105 100

120 45.8 37.1 55.7

Manual Integrations
APPROVED

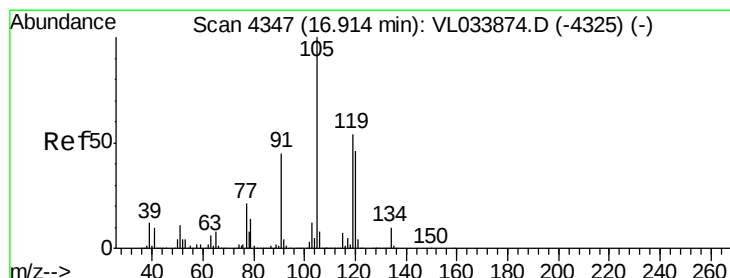
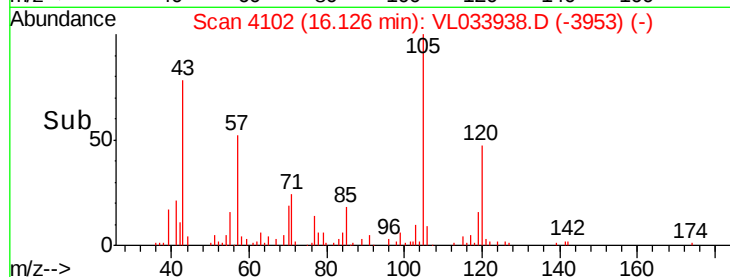
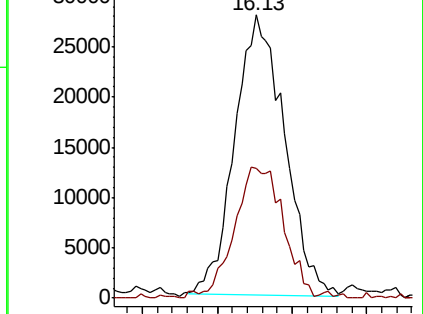
MMDadoda

6/26/2019 8:15:37 AM



Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V



#74

1,2,4-Trimethylbenzene

Concen: 0.562 ppbv

RT: 16.90 min Scan# 4342

Delta R.T. -0.02 min

Lab File: VL033938.D

Acq: 24 Jun 2019 15:59

Tgt Ion:105 Resp: 200284

Ion Ratio Lower Upper

105 100

120 42.4 36.7 55.1

91 11.7 35.8 53.8#

77 13.9 16.9 25.3#

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

