

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL032019\
 Data File : VL033404.D
 Acq On : 21 Mar 2019 00:22
 Operator : SY/AP
 Sample : K1976-02
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA2

Manual Integrations
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 3/25/2019 8:26:36 AM

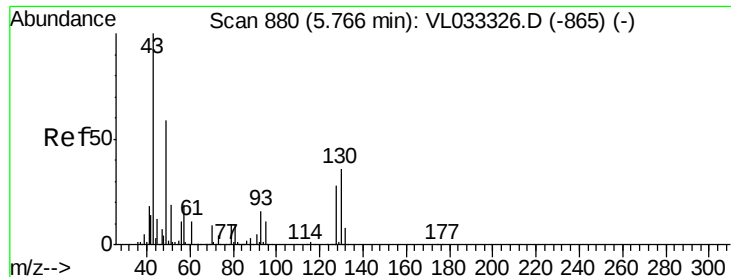
Quant Time: Mar 22 06:29:02 2019
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL031519AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Mar 1
 QLast Update : Fri Mar 15 14:52:14 2019
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.76	49	800514	10.00	ppbv	0.00
33) 1,4-Difluorobenzene	7.29	114	2011848	10.00	ppbv	-0.01
55) Chlorobenzene-d5	12.24	117	1928975	10.00	ppbv	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
68) 1-Bromo-4-Fluorobenzene	14.57	95	1428252	9.99	ppbv	0.00	
Spiked Amount	10.000	Range	65 - 135	Recovery	=	99.90%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.07	85	66093	0.469	ppbv	96
3) Chlorodifluoromethane	3.01	51	53001m	0.577	ppbv	
4) Chloromethane	3.17	50	32172	0.647	ppbv	98
9) Propene	3.04	41	71965m	1.755	ppbv	
11) Trichlorofluoromethane	4.00	101	35928	0.256	ppbv	89
13) Ethanol	3.65	45	540318	27.633	ppbv	98
15) Acetone	3.90	43	662699	5.326	ppbv	98
19) Isopropyl Alcohol	4.03	45	175776	2.970	ppbv #	97
20) Methylene Chloride	4.41	84	176115	4.340	ppbv	95
26) Hexane	5.78	57	223128	2.759	ppbv #	53
34) 2-Butanone	5.33	43	56896	0.431	ppbv	97
36) Benzene	7.00	78	88070	0.489	ppbv	98
44) 2,2,4-Trimethylpentane	7.99	57	66266	0.222	ppbv #	64
52) Tetrachloroethene	11.38	164	29512m	0.393	ppbv	
53) Toluene	9.94	91	964814	4.716	ppbv	100
58) Ethyl Benzene	12.86	91	54048	0.198	ppbv	93
59) m/p-Xylene	13.11	91	148397m	0.633	ppbv	
60) o-Xylene	13.84	91	52080	0.228	ppbv	99
61) Styrene	13.68	104	18006m	0.112	ppbv	
74) 1,2,4-Trimethylbenzene	16.92	105	72731	0.271	ppbv #	66

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



#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.76 min Scan# 877

Delta R.T. -0.01 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

Instrument :

MSVOA_L

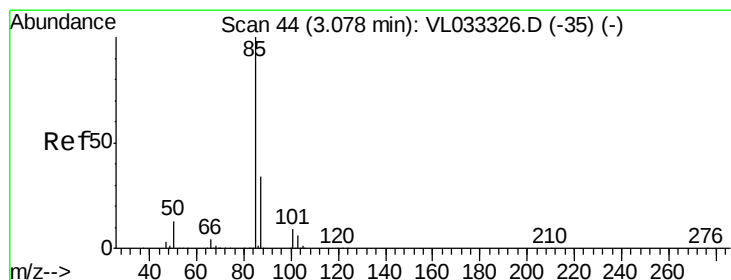
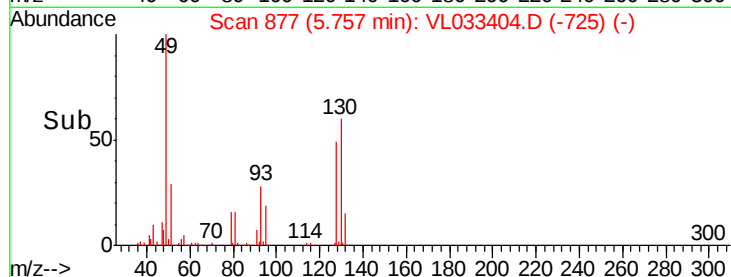
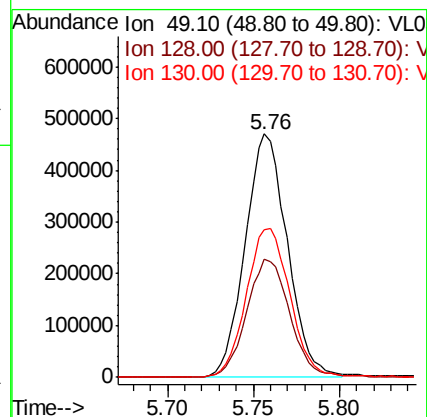
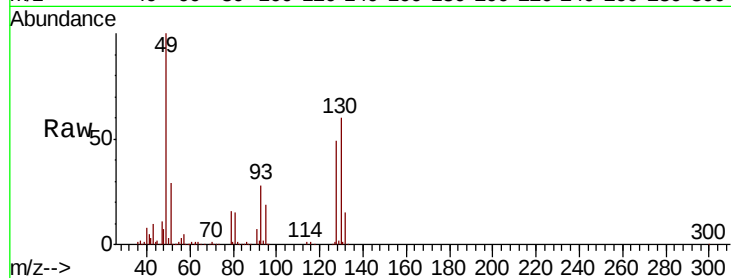
ClientSampled :

IA2

Tot Ion	Ratio	Lower	Upper
49	100		
128	50.0	23.5	70.6
130	63.9	30.1	90.3

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#2

Dichlorodifluoromethane

Concen: 0.469 ppbv

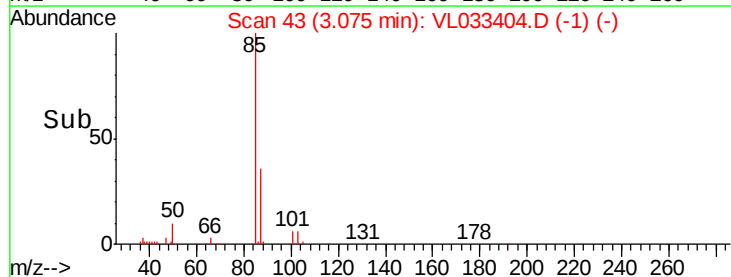
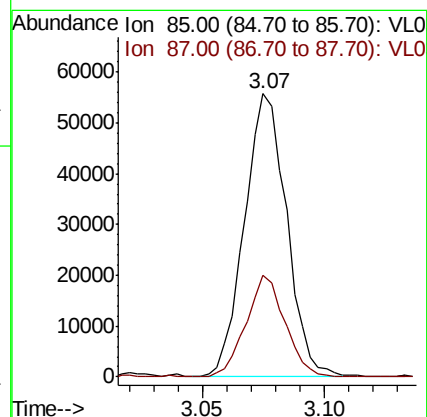
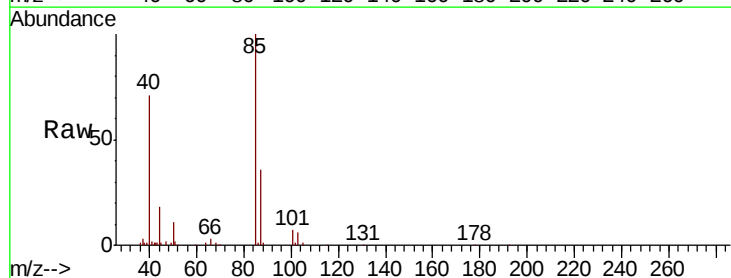
RT: 3.07 min Scan# 43

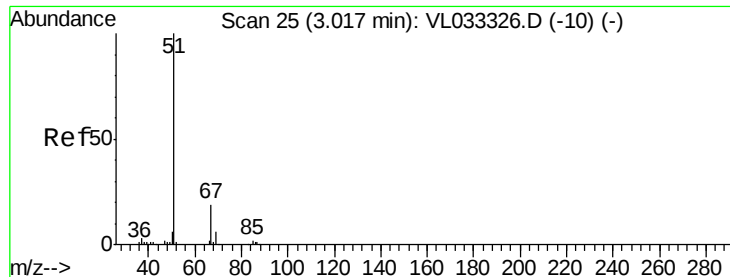
Delta R.T. -0.00 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

Tgt Ion	Ratio	Lower	Upper
85	100		
87	36.1	26.9	40.3





#3

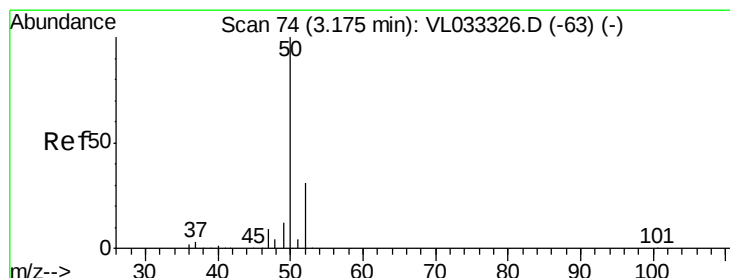
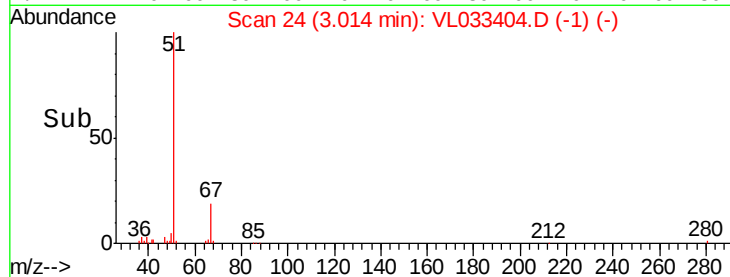
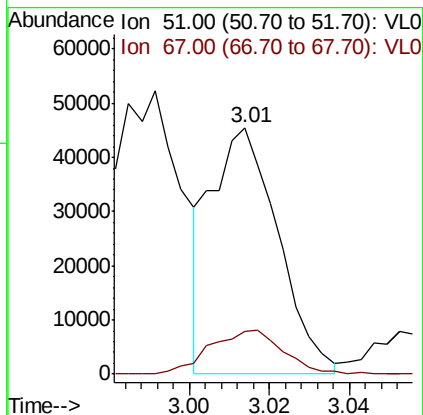
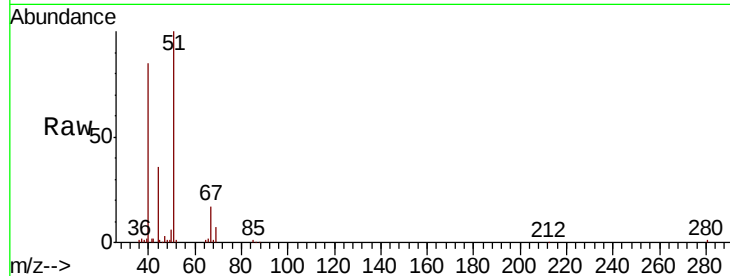
Chlorodifluoromethane
 Concen: 0.577 ppbv
 RT: 3.01 min Scan# 24
 Delta R.T. -0.00 min
 Lab File: VL033404.D
 Acq: 21 Mar 2019 00:22

Instrument :
 MSVOA_L
 ClientSampled :
 IA2

Tot Ion	51	Resp	53001
Ion	Ratio	Lower	Upper
51	100		
67	19.7	14.9	22.3

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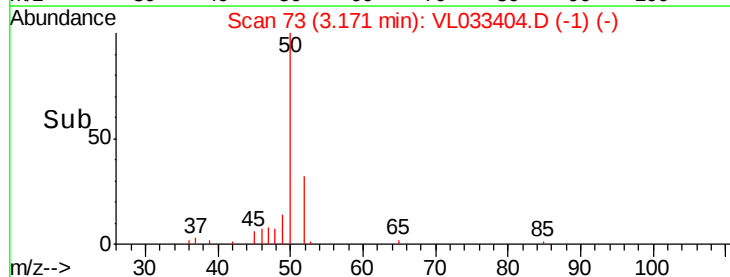
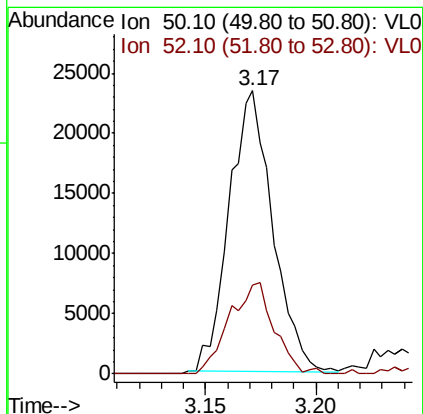
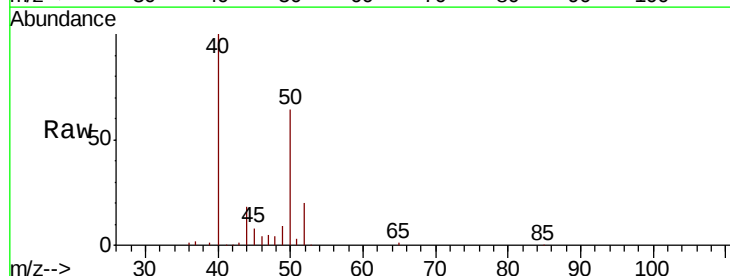
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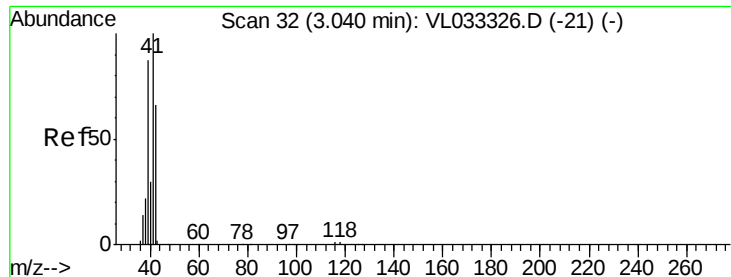


#4

Chloromethane
 Concen: 0.647 ppbv
 RT: 3.17 min Scan# 73
 Delta R.T. -0.00 min
 Lab File: VL033404.D
 Acq: 21 Mar 2019 00:22

Tgt Ion	50	Resp	32172
Ion	Ratio	Lower	Upper
50	100		
52	32.3	25.0	37.6





#9

Propene

Concen: 1.755 ppbv m

RT: 3.04 min Scan# 32

Delta R.T. -0.00 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

Instrument :

MSVOA_L

ClientSampleId :

IA2

Tot Ion: 41 Resp: 71965

Ion Ratio Lower Upper

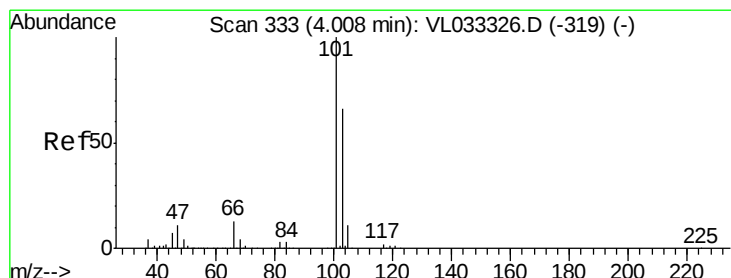
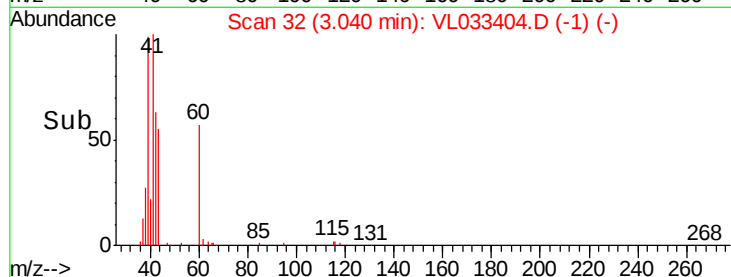
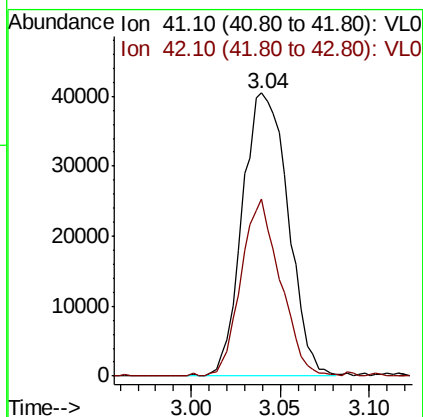
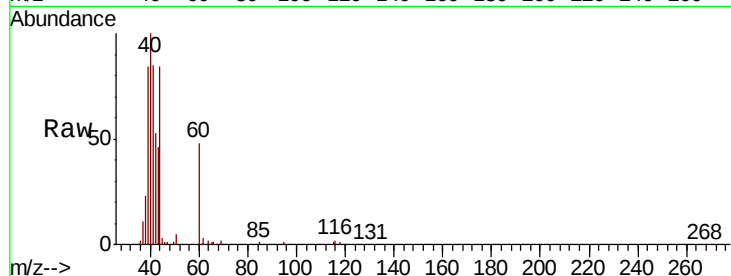
41 100

42 116.5 55.2 82.8#

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#11

Trichlorofluoromethane

Concen: 0.256 ppbv

RT: 4.00 min Scan# 332

Delta R.T. -0.00 min

Lab File: VL033404.D

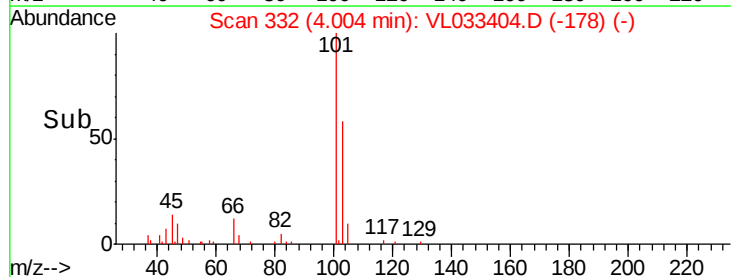
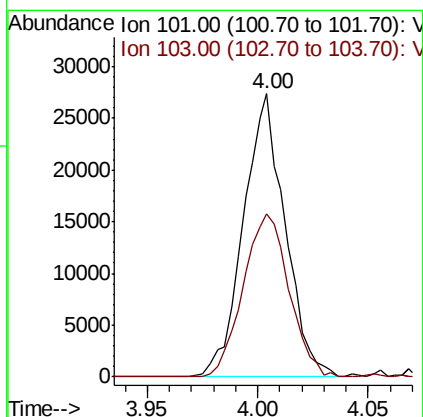
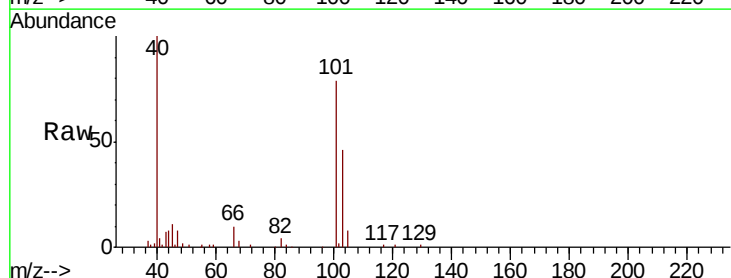
Acq: 21 Mar 2019 00:22

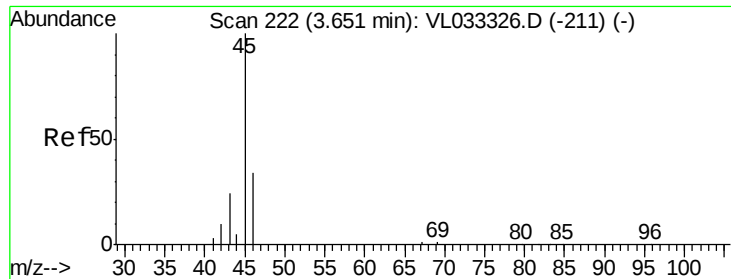
Tgt Ion: 101 Resp: 35928

Ion Ratio Lower Upper

101 100

103 57.7 52.9 79.3





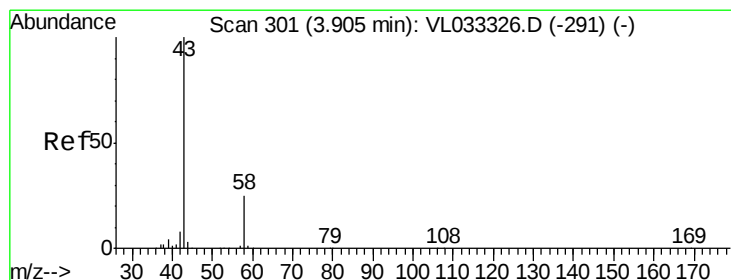
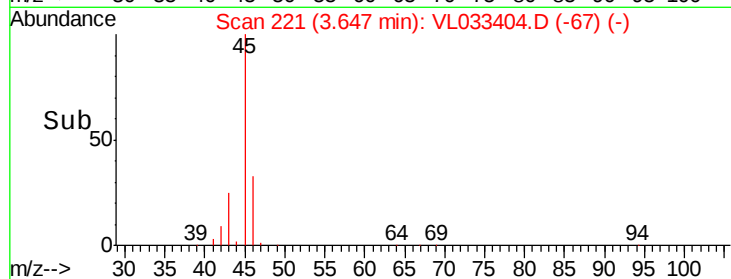
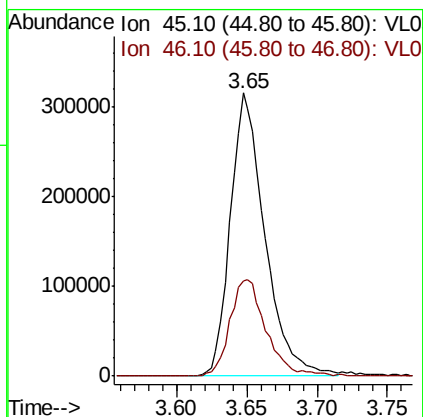
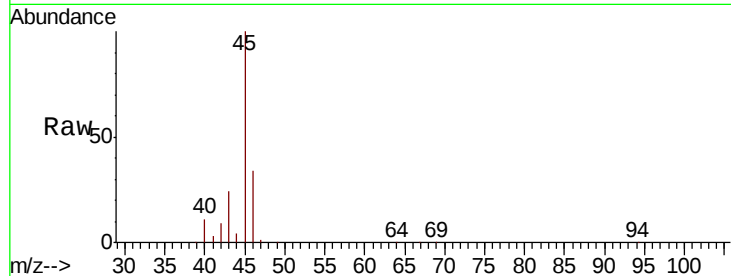
#13
Ethanol
Concen: 27.633 ppbv
RT: 3.65 min Scan# 221
Delta R.T. -0.00 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampleId :
IA2

Tot Ion	45	46	Ratio	Lower	Upper
45	100				
46	35.9			14.9	59.7

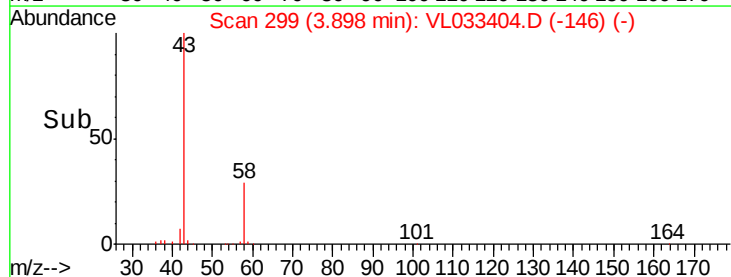
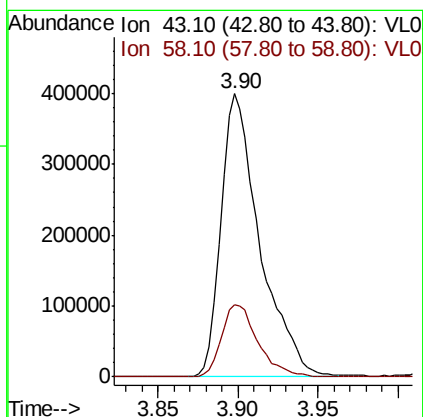
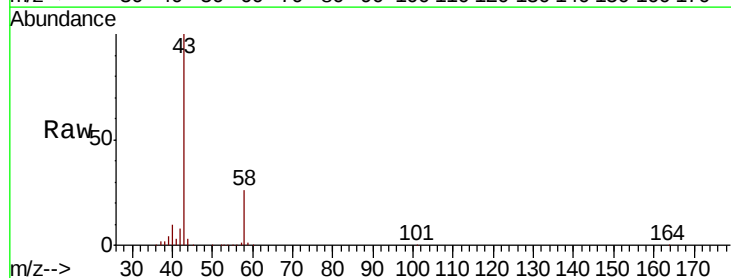
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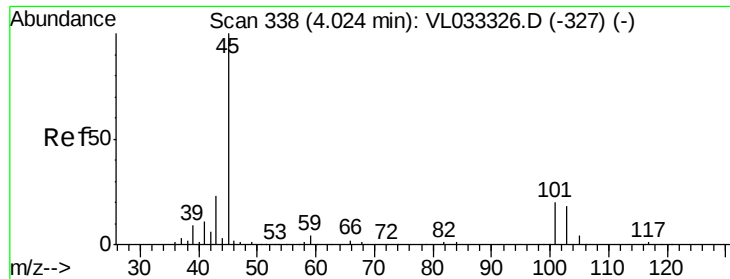
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#15
Acetone
Concen: 5.326 ppbv
RT: 3.90 min Scan# 299
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion	43	58	Ratio	Lower	Upper
43	100				
58	24.3			20.4	30.6





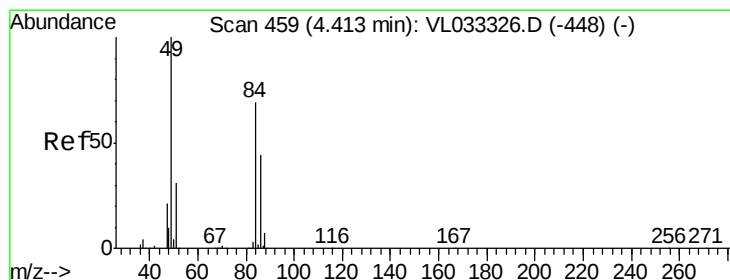
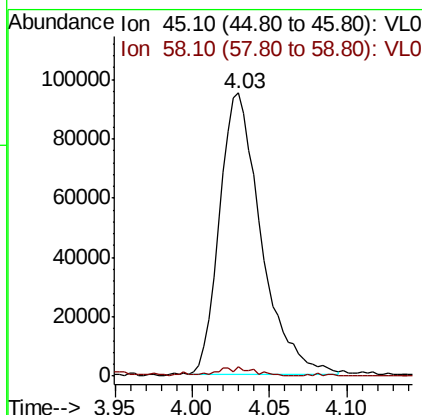
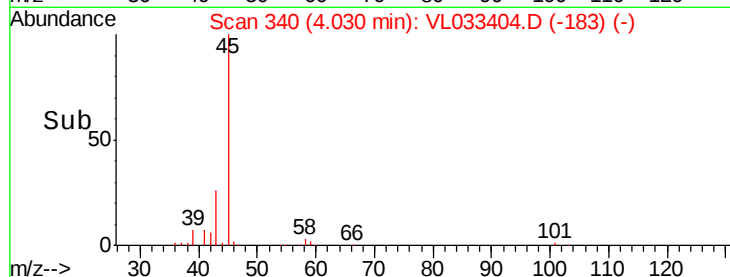
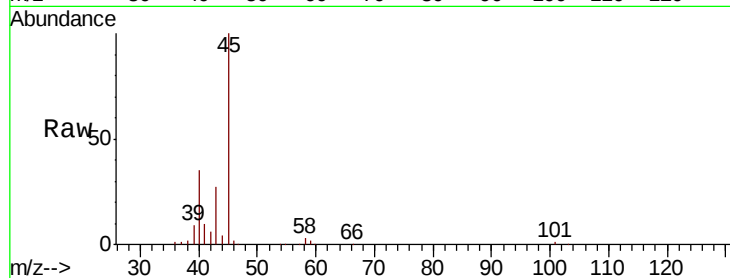
#19
Isopropyl Alcohol
Concen: 2.970 ppbv
RT: 4.03 min Scan# 340
Delta R.T. 0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampled :
IA2

Tot Ion: 45 Resp: 175776
Ion Ratio Lower Upper
45 100
58 2.8 1.5 2.3#

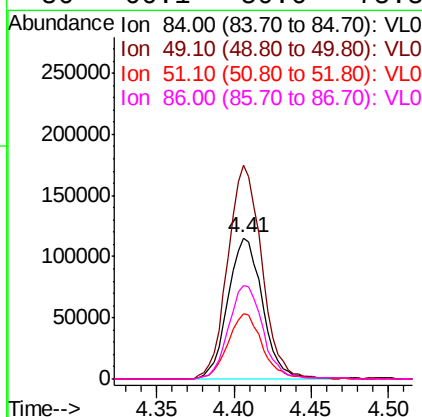
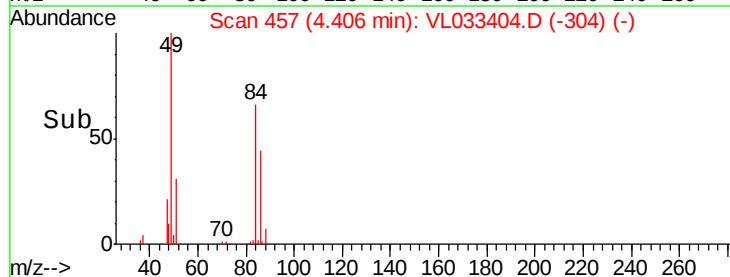
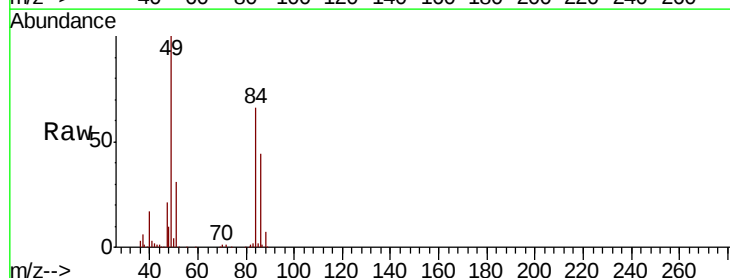
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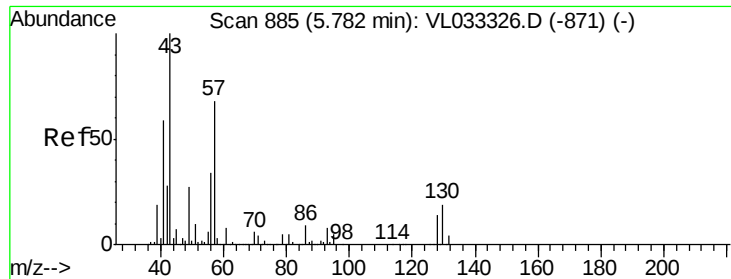
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#20
Methylene Chloride
Concen: 4.340 ppbv
RT: 4.41 min Scan# 457
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion: 84 Resp: 176115
Ion Ratio Lower Upper
84 100
49 151.6 115.4 173.0
51 46.5 35.8 53.6
86 66.1 50.6 75.8





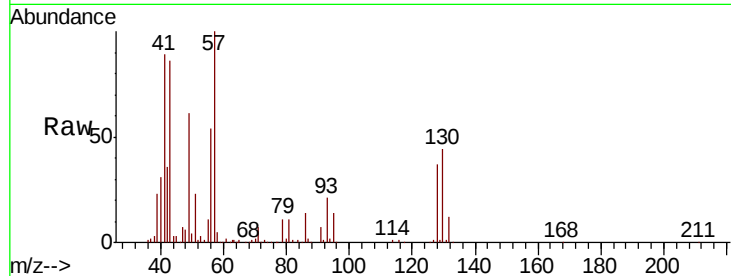
#26
Hexane
Concen: 2.759 ppbv
RT: 5.78 min Scan# 884
Delta R.T. -0.00 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampleId :
IA2

Tot Ion	Ion	Ratio	Lower	Upper
57	100			
41	88.3	70.5	105.7	
43	104.3	181.8	272.8	
56	54.6	42.2	63.2	

Manual Integrations
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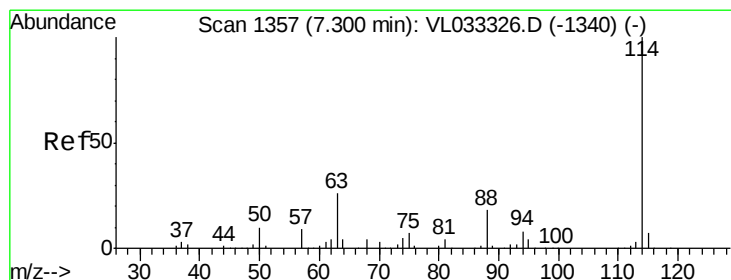
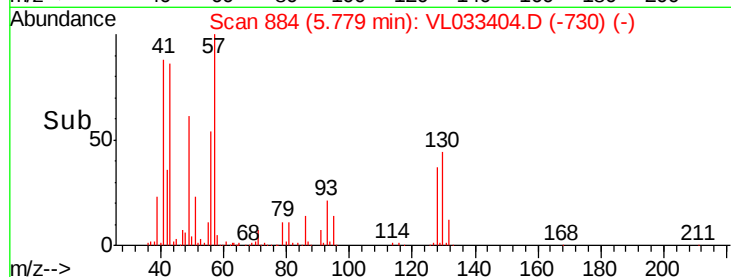
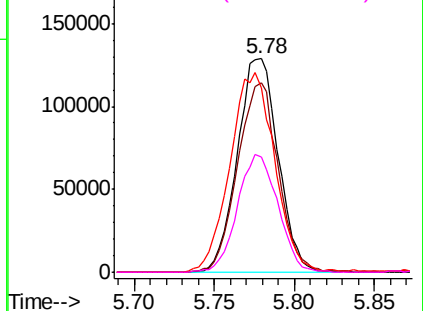
Abundance

Ion 57.10 (56.80 to 57.80): VL0

Ion 41.10 (40.80 to 41.80): VL0

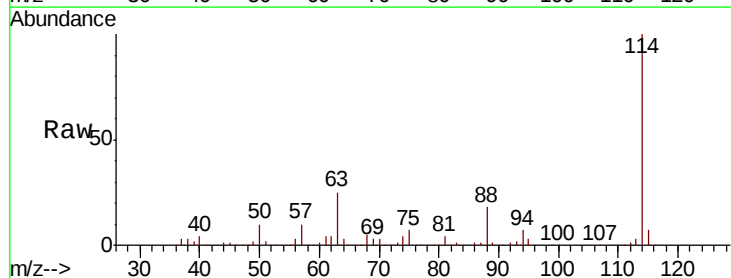
Ion 43.10 (42.80 to 43.80): VL0

Ion 56.10 (55.80 to 56.80): VL0



#33
1,4-Difluorobenzene
Concen: 10.000 ppbv
RT: 7.29 min Scan# 1353
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion	Ion	Ratio	Lower	Upper
114	100			
63	25.1	21.4	32.2	
88	17.8	14.5	21.7	

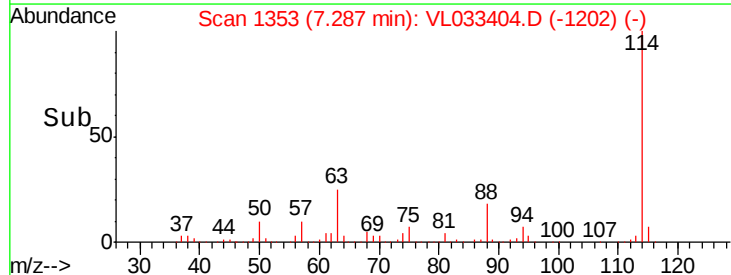
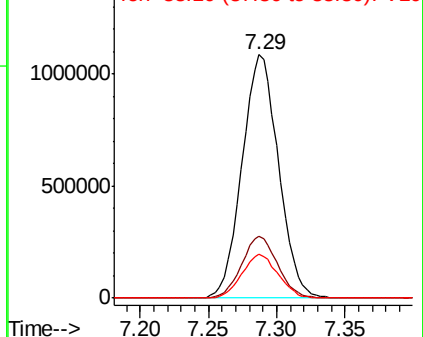


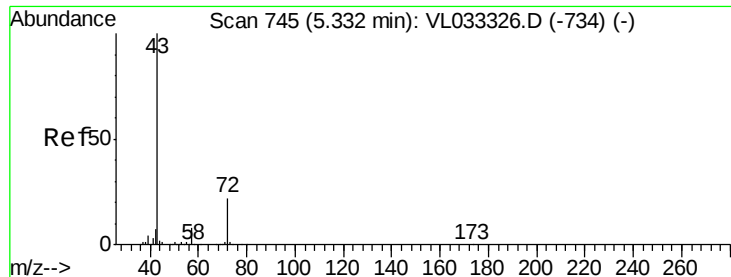
Abundance

Ion 114.10 (113.80 to 114.80): VL0

Ion 63.10 (62.80 to 63.80): VL0

Ion 88.10 (87.80 to 88.80): VL0





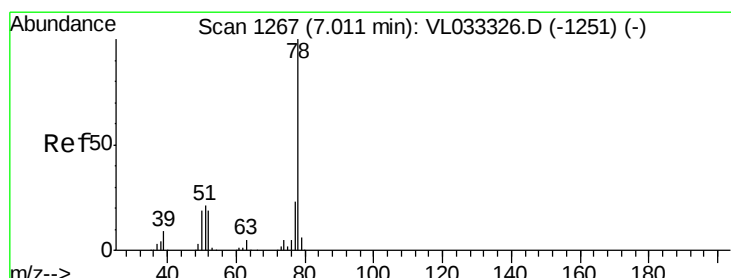
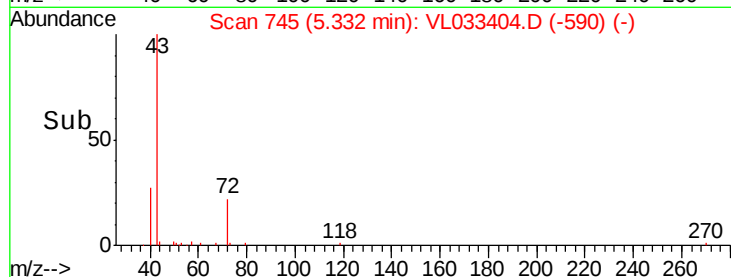
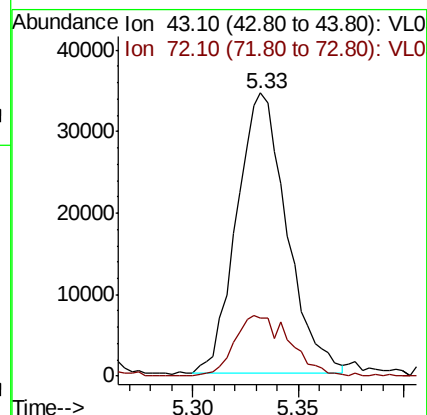
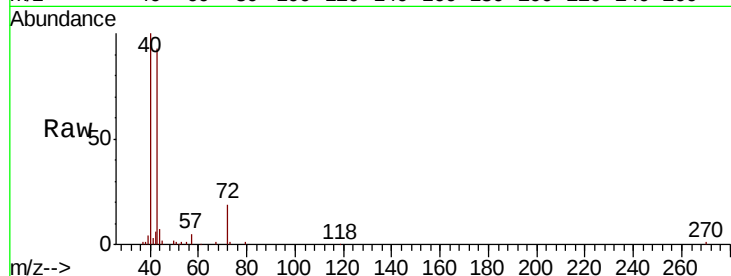
#34
2-Butanone
Concen: 0.431 ppbv
RT: 5.33 min Scan# 745
Delta R.T. -0.00 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampleId :
IA2

Tot Ion	Ratio	Lower	Upper
43	100		
72	23.7	17.7	26.5

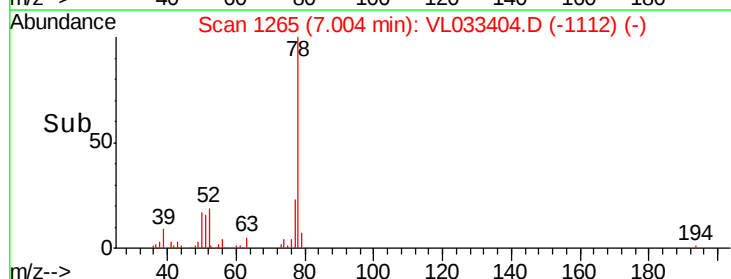
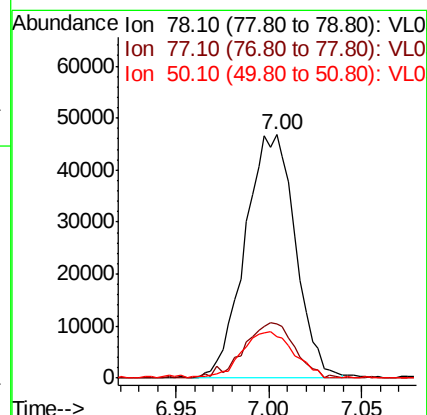
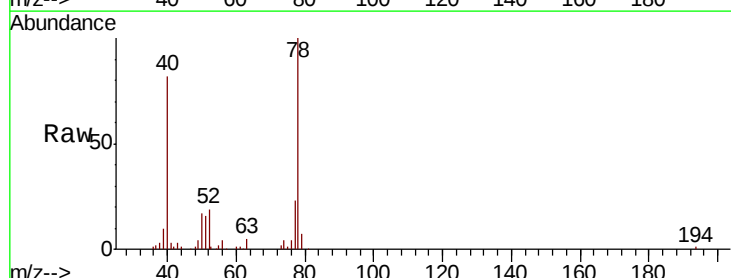
Manual Integrations
APPROVED

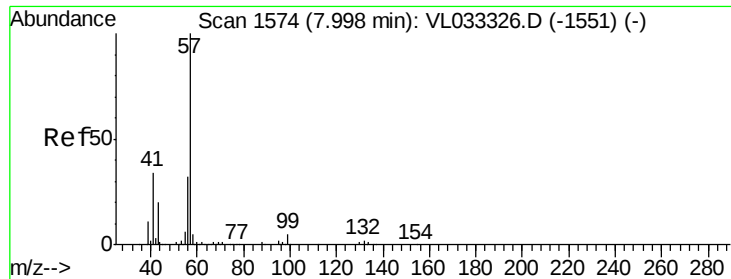
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3/25/2019 8:26:36 AM



#36
Benzene
Concen: 0.489 ppbv
RT: 7.00 min Scan# 1265
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion	Ratio	Lower	Upper
78	100		
77	22.5	18.1	27.1
50	16.9	15.2	22.8





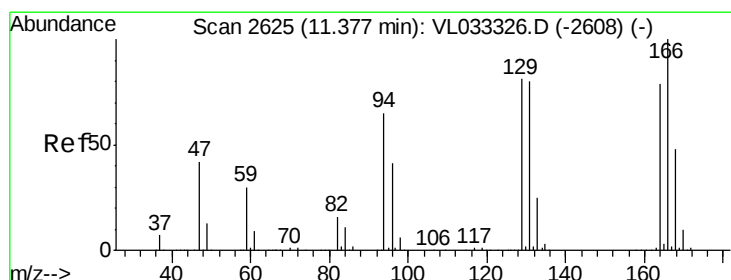
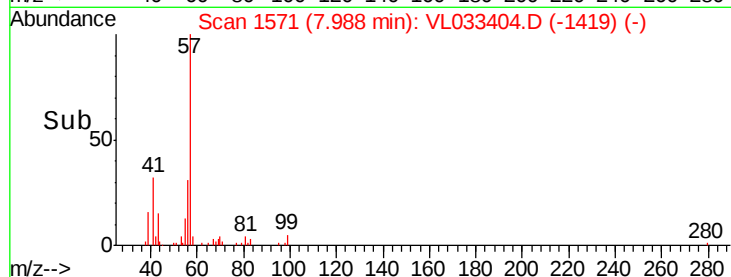
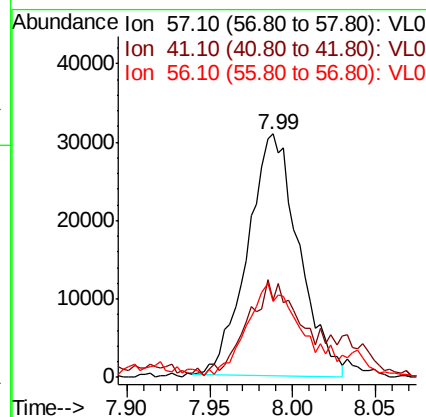
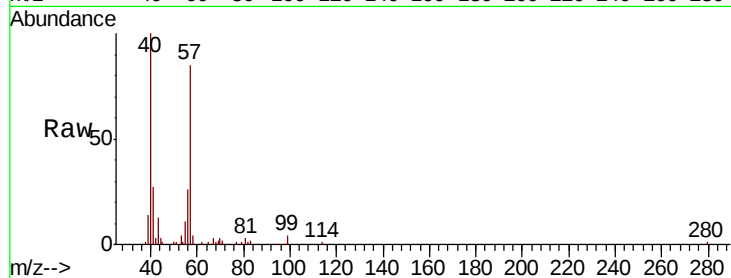
#44
2,2,4-Trimethylpentane
Concen: 0.222 ppbv
RT: 7.99 min Scan# 1571
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampleId :
IA2

Tot Ion	Ratio	Lower	Upper
57	100		
41	55.3	26.0	39.0#
56	47.3	24.6	36.8#

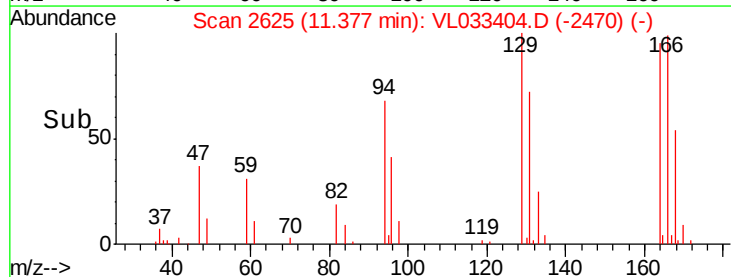
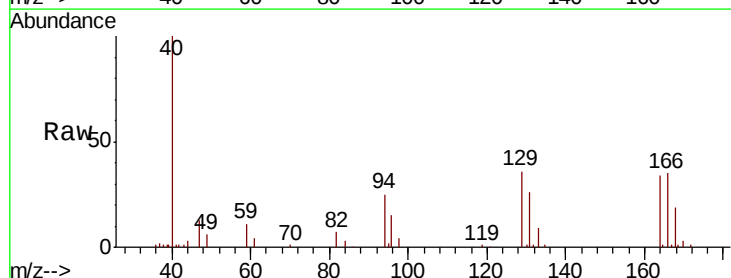
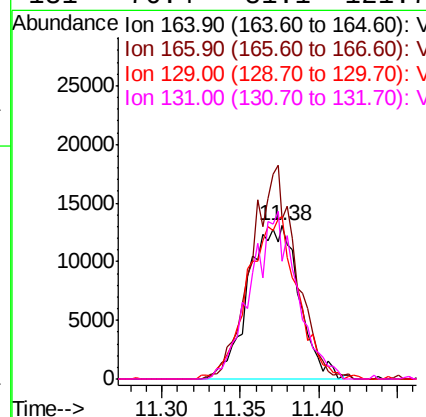
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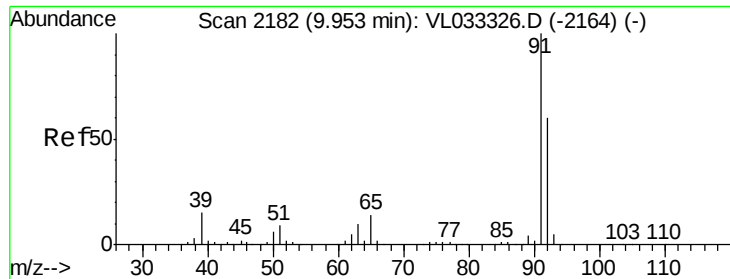
MMDadoda
3/25/2019 8:26:36 AM



#52
Tetrachloroethene
Concen: 0.393 ppbv m
RT: 11.38 min Scan# 2625
Delta R.T. -0.00 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion	Ratio	Lower	Upper
164	100		
166	104.2	101.5	152.3
129	105.6	82.2	123.2
131	76.4	81.1	121.7#





#53

Toluene

Concen: 4.716 ppbv

RT: 9.94 min Scan# 2179

Delta R.T. -0.01 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

Instrument :

MSVOA_L

ClientSampled :

IA2

Tot Ion: 91 Resp: 964814

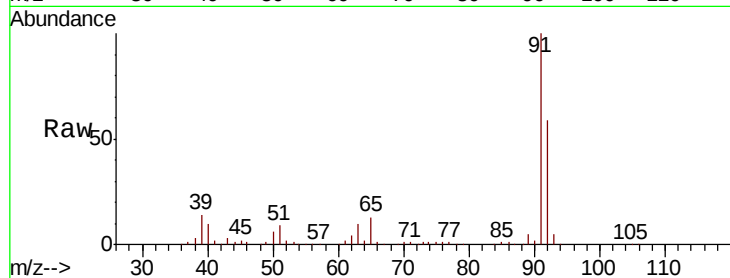
Ion Ratio Lower Upper

91 100

92 58.9 47.4 71.0

Manual Integrations
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3/25/2019 8:26:36 AM



Abundance Ion 91.10 (90.80 to 91.80): VL0

Ion 92.10 (91.80 to 92.80): VL0

9.94

500000

400000

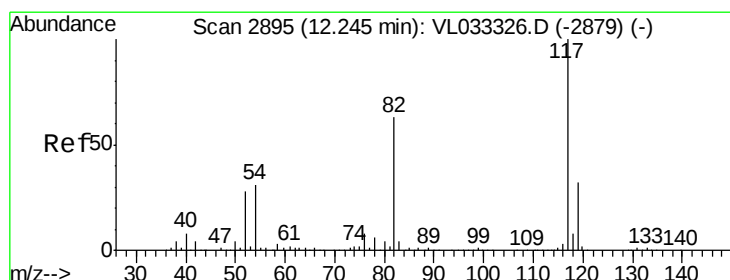
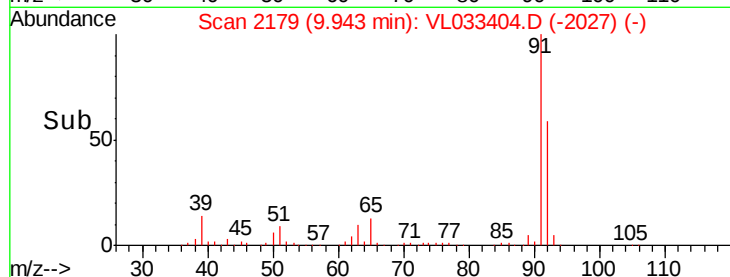
300000

200000

100000

0

Time-->



#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.24 min Scan# 2892

Delta R.T. -0.01 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

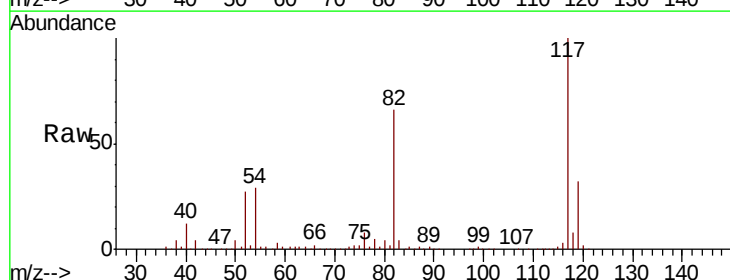
Tgt Ion: 117 Resp: 1928975

Ion Ratio Lower Upper

117 100

82 64.6 53.4 80.2

119 32.5 27.3 40.9



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

1200000

1000000

800000

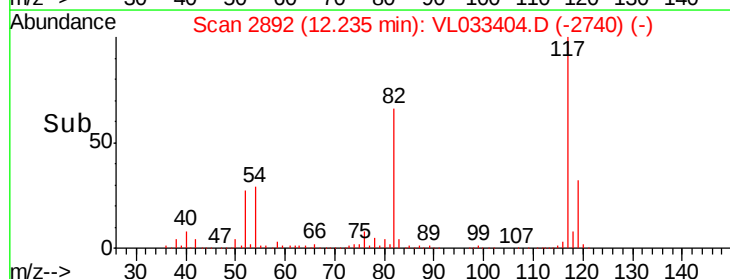
600000

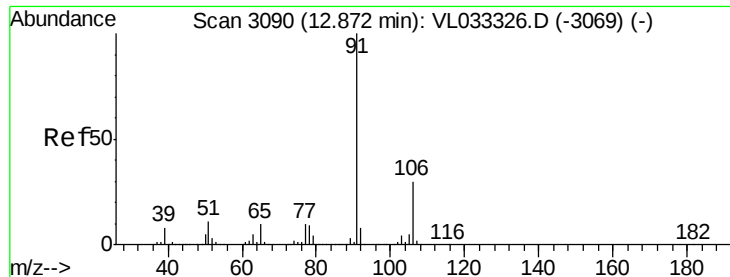
400000

200000

0

Time-->





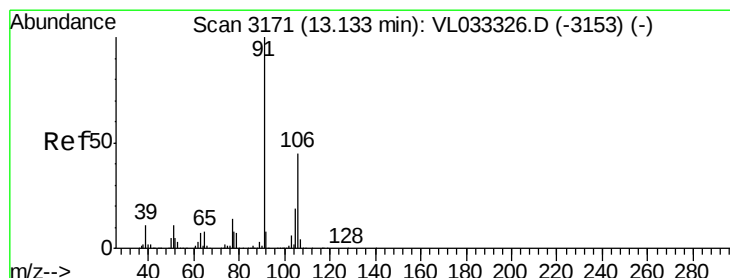
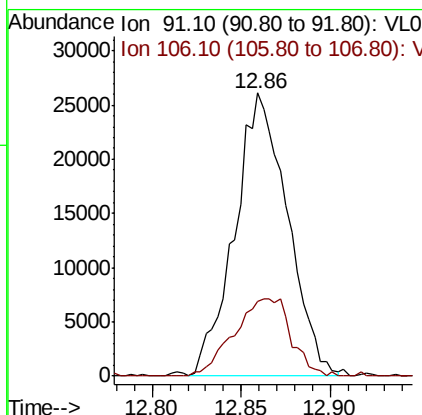
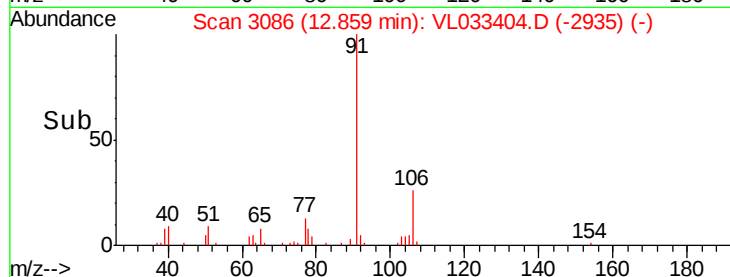
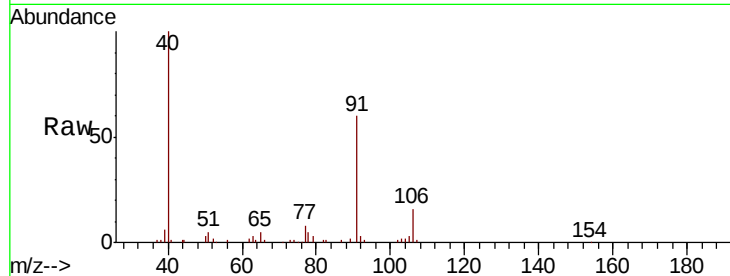
#58
Ethyl Benzene
Concen: 0.198 ppbv
RT: 12.86 min Scan# 3086
Delta R.T. -0.01 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Instrument :
MSVOA_L
ClientSampled :
IA2

Tot Ion: 91 Resp: 54048
Ion Ratio Lower Upper
91 100
106 26.5 24.2 36.2

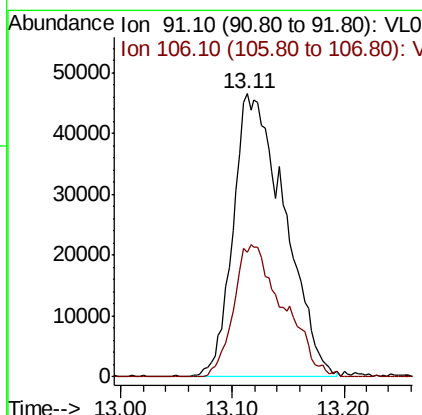
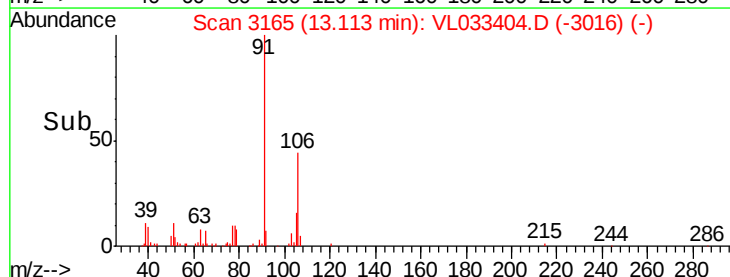
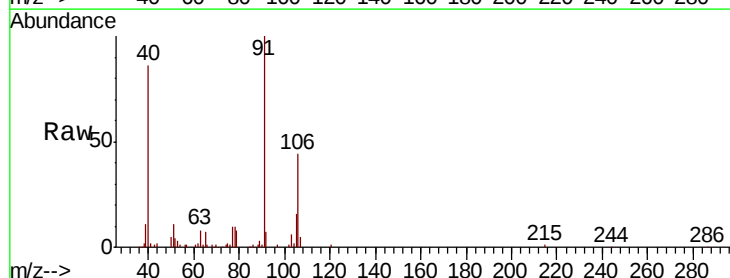
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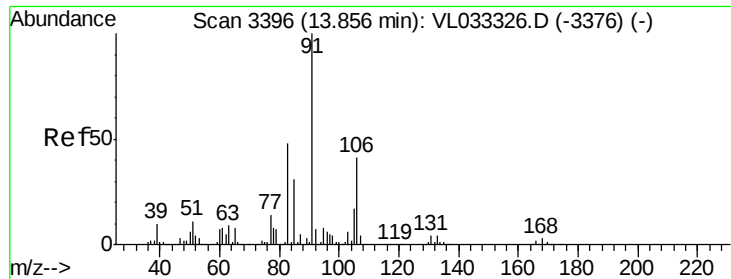
MMDadoda
3/25/2019 8:26:36 AM



#59
m/p-Xylene
Concen: 0.633 ppbv m
RT: 13.11 min Scan# 3165
Delta R.T. -0.02 min
Lab File: VL033404.D
Acq: 21 Mar 2019 00:22

Tgt Ion: 91 Resp: 148397
Ion Ratio Lower Upper
91 100
106 45.3 0.0 0.0#





#60

o-Xylene

Concen: 0.228 ppbv

RT: 13.84 min Scan# 3392

Delta R.T. -0.01 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

Instrument :

MSVOA_L

ClientSampled :

IA2

Tot Ion: 91 Resp: 52080

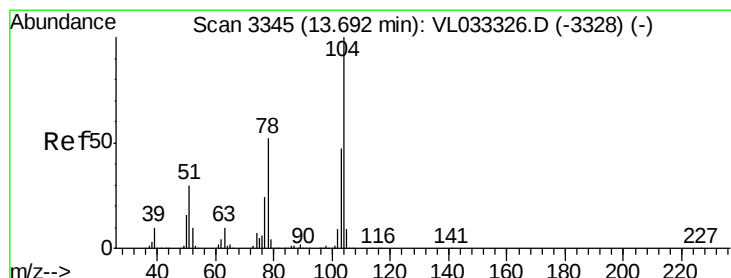
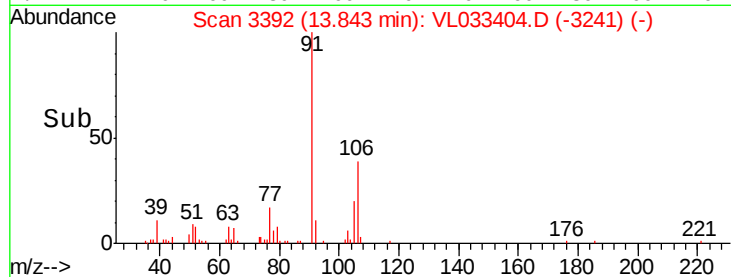
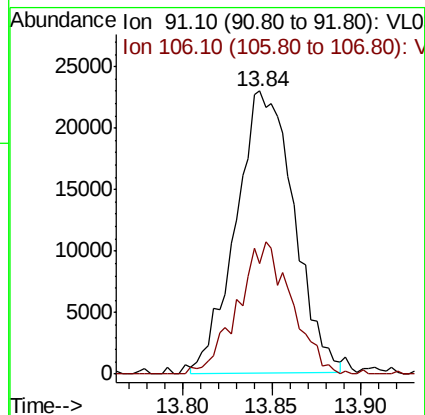
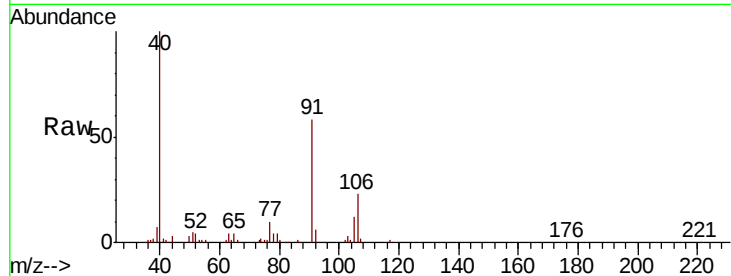
Ion Ratio Lower Upper

91 100

106 43.3 21.3 63.9

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3/25/2019 8:26:36 AM



#61

Styrene

Concen: 0.112 ppbv m

RT: 13.68 min Scan# 3342

Delta R.T. -0.01 min

Lab File: VL033404.D

Acq: 21 Mar 2019 00:22

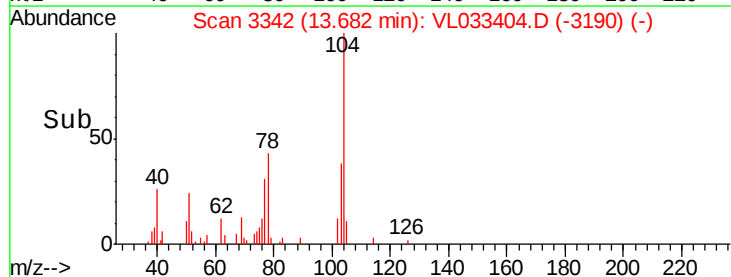
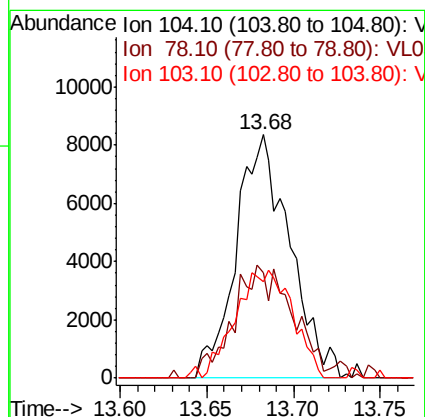
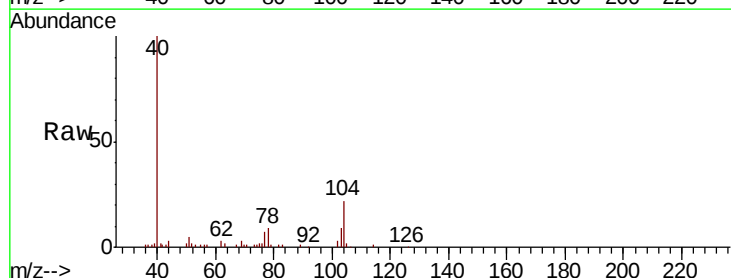
Tgt Ion: 104 Resp: 18006

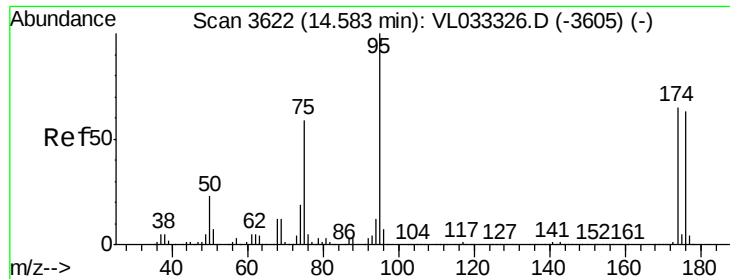
Ion Ratio Lower Upper

104 100

78 53.0 42.7 64.1

103 47.7 38.0 57.0





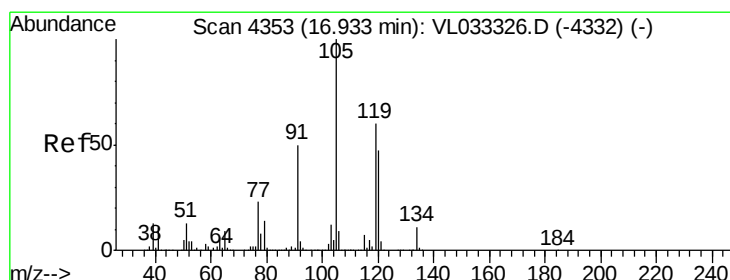
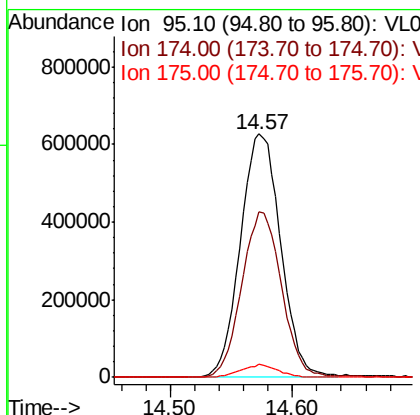
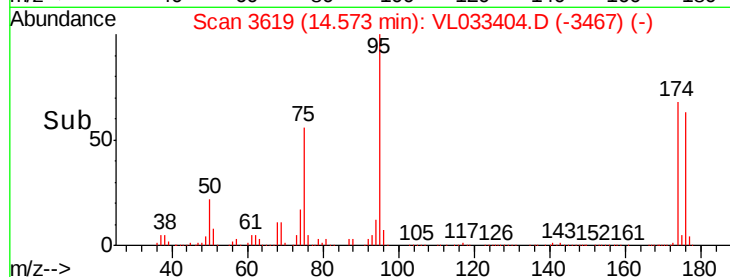
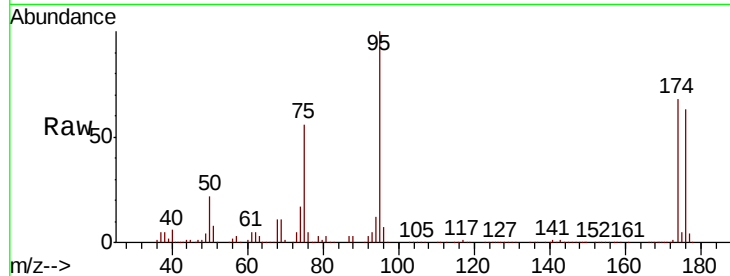
#68
 1-Bromo-4-Fluorobenzene
 Concen: 9.992 ppbv
 RT: 14.57 min Scan# 3619
 Delta R.T. -0.01 min
 Lab File: VL033404.D
 Acq: 21 Mar 2019 00:22

Instrument :
 MSVOA_L
 ClientSampleId :
 IA2

Tot Ion: 95 Resp: 1428252
 Ion Ratio Lower Upper
 95 100
 174 67.8 51.5 77.3
 175 4.9 3.8 5.6

Manual Integrations
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 3/25/2019 8:26:36 AM



#74
 1,2,4-Trimethylbenzene
 Concen: 0.271 ppbv
 RT: 16.92 min Scan# 4350
 Delta R.T. -0.01 min
 Lab File: VL033404.D
 Acq: 21 Mar 2019 00:22

Tgt Ion: 105 Resp: 72731
 Ion Ratio Lower Upper
 105 100
 120 36.1 37.4 56.2#
 91 11.4 41.0 61.4#
 77 12.9 18.5 27.7#

