

Data Path : Z:\VOASRV\HPCHEM1\MSVOA L\DATA\VL022820\
 Data File : VL034741.D
 Acq On : 28 Feb 2020 17:49
 Operator : SY/AP
 Sample : L1704-01
 Misc : 400ml/MSVOA L
 ALS Vial : 1 Sample Multiplier: 1

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2-4

Manual Integrations
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 3/2/2020 1:01:24 PM

Quant Time: Mar 02 11:58:40 2020
 Quant Method : Z:\VOASRV\HPCHEM1\MSVOA L\METHODS\VL022620AIR.M
 Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Feb 28 2020
 QLast Update : Fri Feb 28 01:15:02 2020
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	5.70	49	1106384	10.00	ppbv	0.03
33) 1,4-Difluorobenzene	7.21	114	2266011	10.00	ppbv	0.02
55) Chlorobenzene-d5	12.13	117	2283814	10.00	ppbv	0.00

System Monitoring Compounds

68) 1-Bromo-4-Fluorobenzene	14.46	95	1945829	10.39	ppbv	0.00
Spiked Amount	10.000	Range	65 - 135	Recovery	=	103.90%

Target Compounds	R.T.	QIon	Response	Conc	Units	Ovalue
2) Dichlorodifluoromethane	3.02	85	47207	0.270	ppbv #	84
3) Chlorodifluoromethane	2.95	51	38651m	0.324	ppbv	
4) Chloromethane	3.11	50	42485	0.636	ppbv	91
9) Propene	2.98	41	173649	3.479	ppbv	85
10) Heptane	8.15	43	7405511	57.646	ppbv	94
11) Trichlorofluoromethane	3.93	101	41832	0.274	ppbv	90
13) Ethanol	3.62	45	698186	44.281	ppbv	95
15) Acetone	3.85	43	23309169	184.886	ppbv #	24
17) tert-Butyl alcohol	4.31	59	65651	0.680	ppbv #	1
19) Isopropyl Alcohol	3.99	45	182989	2.437	ppbv #	94
20) Methylene Chloride	4.36	84	101052	2.155	ppbv #	94
26) Hexane	5.68	57	913957	8.885	ppbv #	49
30) Cyclohexane	7.15	84	596451	7.482	ppbv	95
34) 2-Butanone	5.27	43	181914m	1.275	ppbv	
35) Carbon Tetrachloride	7.05	117	9405m	0.062	ppbv	
36) Benzene	6.92	78	177791	0.908	ppbv	96
41) Tetrahydrofuran	6.08	42	18651m	0.248	ppbv	
52) Tetrachloroethene	11.27	164	17954m	0.250	ppbv	
53) Toluene	9.86	91	16519170	79.358	ppbv #	70
58) Ethyl Benzene	12.75	91	304403	1.102	ppbv	96
59) m/p-Xylene	13.01	91	1031323	4.279	ppbv	99
60) o-Xylene	13.73	91	342378	1.432	ppbv	97
64) n-propylbenzene	15.61	120	17280m	0.192	ppbv	
72) 4-Ethyltoluene	15.89	105	93504	0.351	ppbv #	94
73) 1,3,5-Trimethylbenzene	16.04	105	96279m	0.376	ppbv	
74) 1,2,4-Trimethylbenzene	16.81	105	294065	1.040	ppbv #	63
79) Naphthalene	22.28	128	59673m	0.240	ppbv	

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

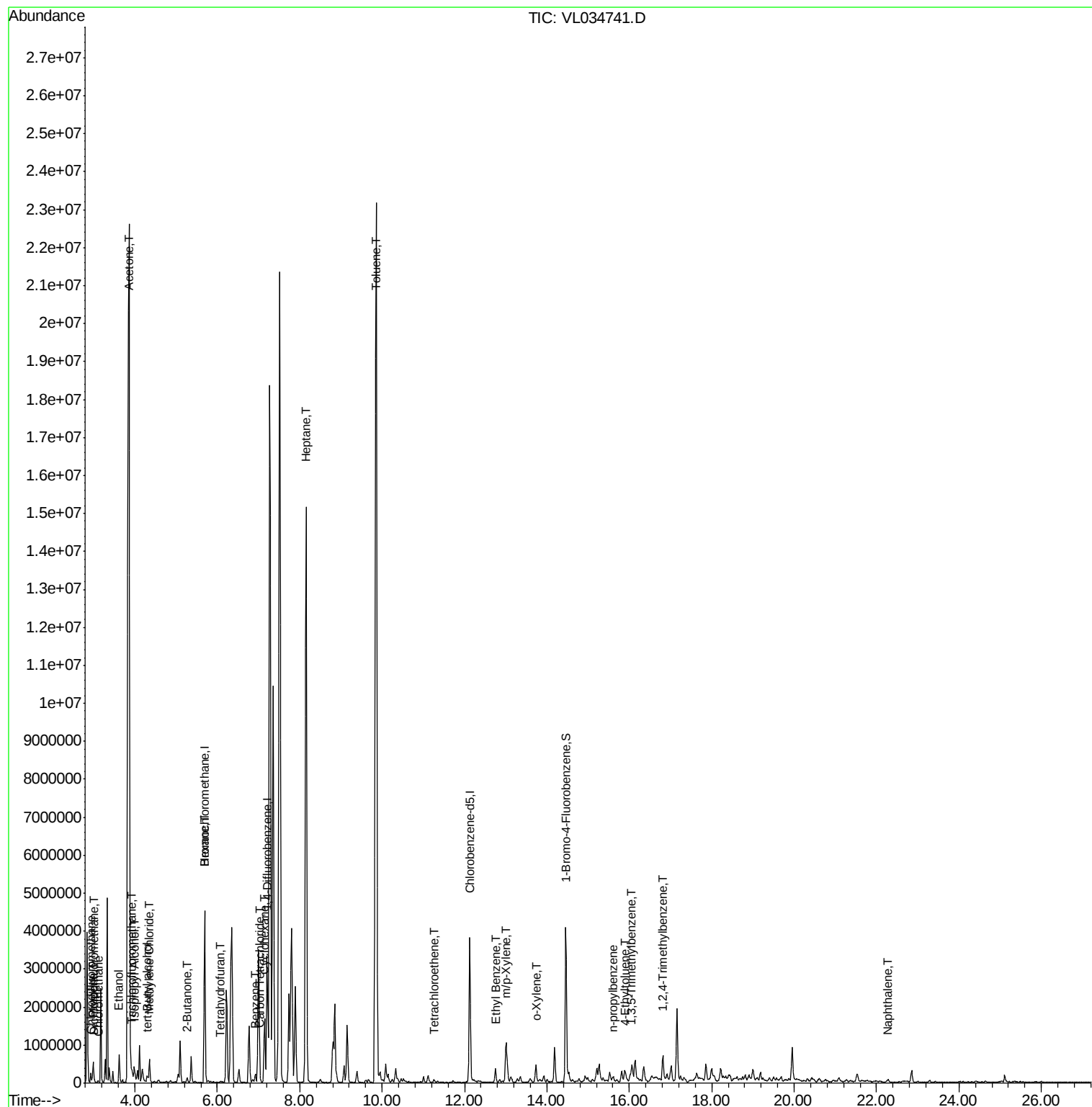
Data Path : Z:\V0ASRV\HPCHEM1\MSVOA L\DATA\VL022820\
Data File : VL034741.D
Acq On : 28 Feb 2020 17:49
Operator : SY/AP
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Misc : 400ml/MSVOA L
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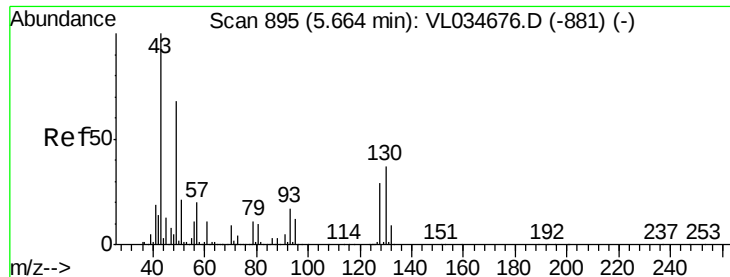
Instrument :
MSVOA_L
ClientSampleId :
IA-2-4

Manual Integrations
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Quant Time: Mar 02 11:58:40 2020
Quant Method : Z:\V0ASRV\HPCHEM1\MSVOA L\METHODS\VL022620AIR.M
Quant Title : AIR ANALYSIS BY METHOD TO-15 Instrument: MSVOA_L Fri Feb
QLast Update : Fri Feb 28 01:15:02 2020
Response via : Initial Calibration





#1

Bromochloromethane

Concen: 10.000 ppbv

RT: 5.70 min Scan# 905

Delta R.T. 0.03 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampled :

IA-2-4

Tot Ion: 49 Resp: 1106384

Ion Ratio Lower Upper

49 100

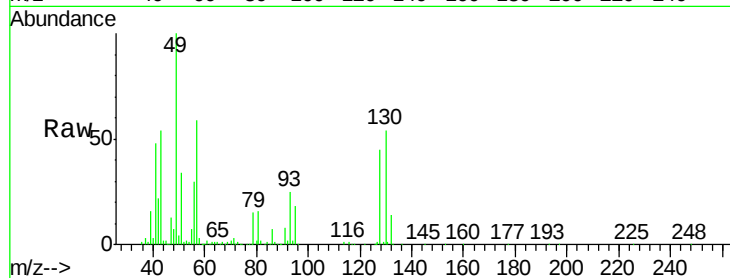
128 42.7 21.6 65.0

130 54.6 27.7 83.1

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Abundance Ion 49.10 (48.80 to 49.80): VL0

Ion 128.00 (127.70 to 128.70): V

Ion 130.00 (129.70 to 130.70): V

800000

600000

400000

200000

0

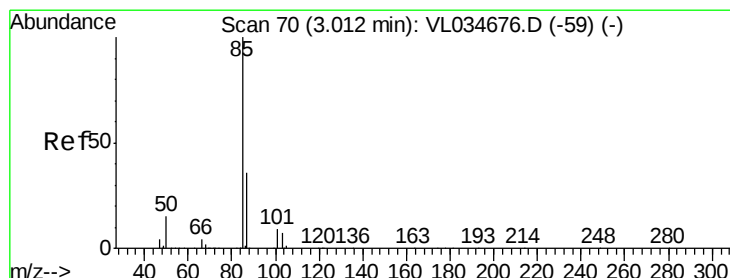
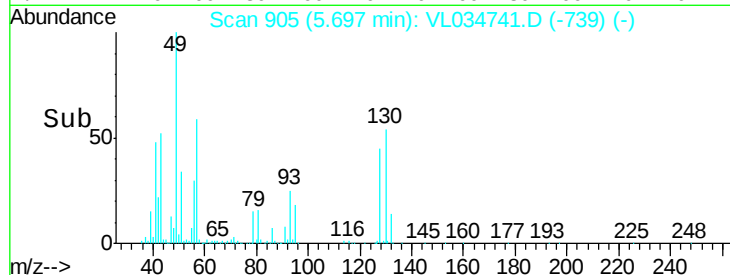
5.60

5.65

5.70

5.75

Time-->



#2

Dichlorodifluoromethane

Concen: 0.270 ppbv

RT: 3.02 min Scan# 72

Delta R.T. 0.01 min

Lab File: VL034741.D

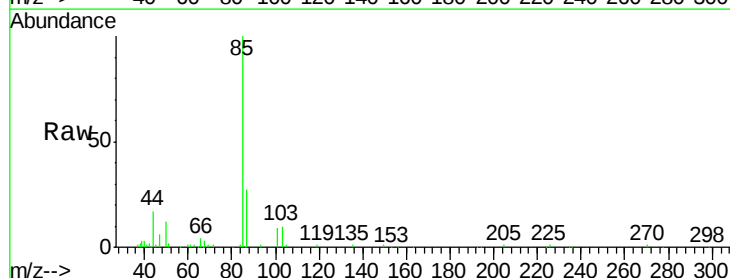
Acq: 28 Feb 2020 17:49

Tgt Ion: 85 Resp: 47207

Ion Ratio Lower Upper

85 100

87 27.2 29.2 43.8#



Abundance Ion 85.00 (84.70 to 85.70): VL0

Ion 87.00 (86.70 to 87.70): VL0

40000

30000

20000

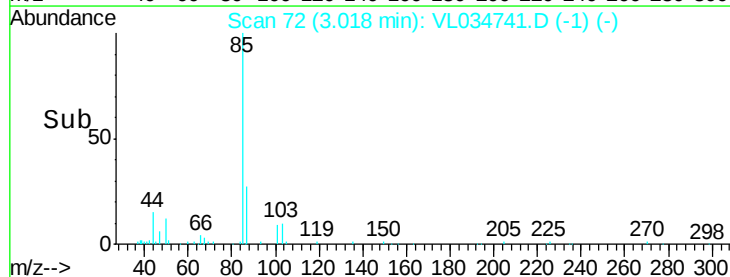
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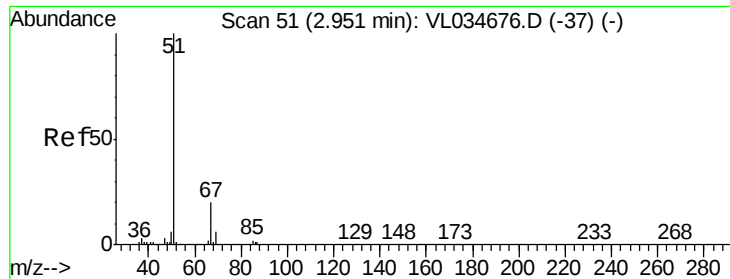
0

3.00

3.05

Time-->





#3

Chlorodifluoromethane

Concen: 0.324 ppbv

RT: 2.95 min Scan# 51

Delta R.T. 0.00 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampleId :

IA-2-4

Tot Ion: 51 Resp: 38651

Ion Ratio Lower Upper

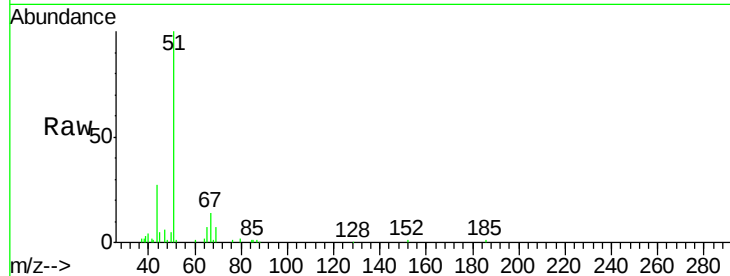
51 100

67 23.1 15.5 23.3

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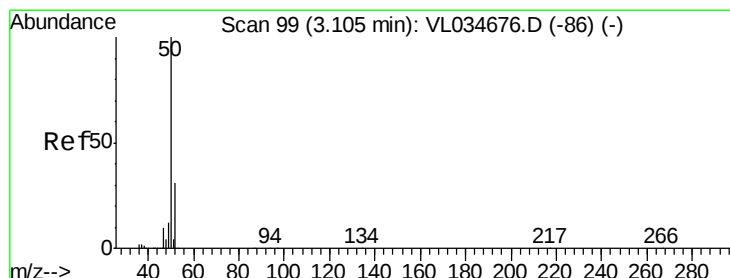
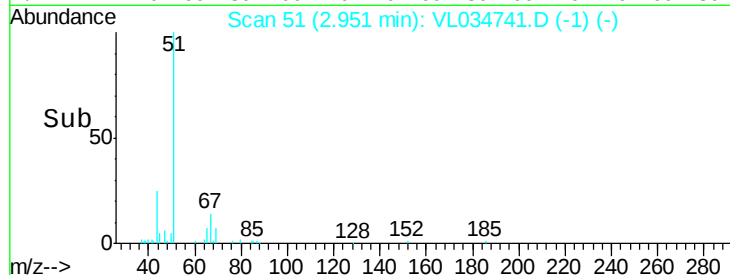
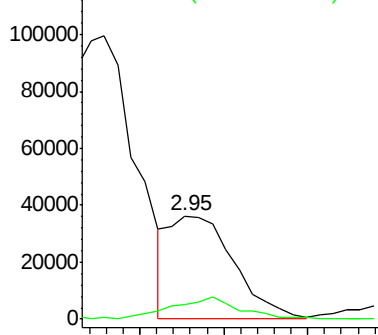
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Abundance Ion 51.00 (50.70 to 51.70): VL0

Ion 67.00 (66.70 to 67.70): VL0



#4

Chloromethane

Concen: 0.636 ppbv

RT: 3.11 min Scan# 100

Delta R.T. 0.00 min

Lab File: VL034741.D

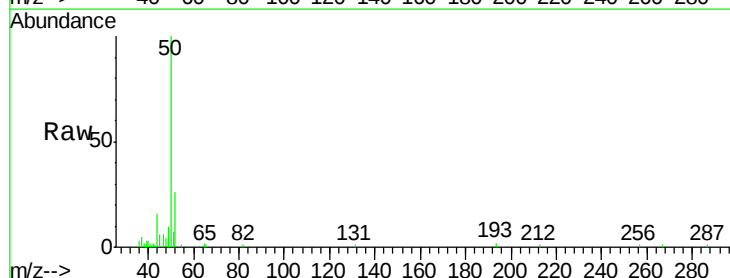
Acq: 28 Feb 2020 17:49

Tgt Ion: 50 Resp: 42485

Ion Ratio Lower Upper

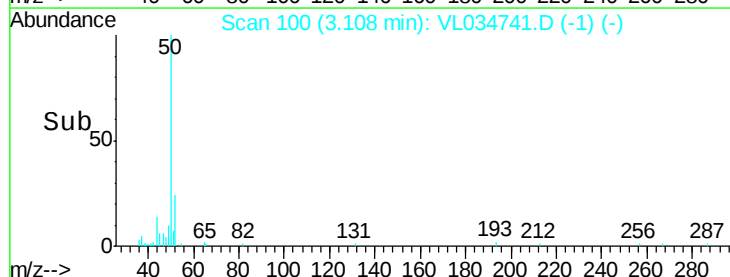
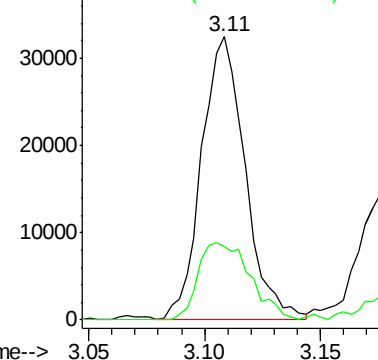
50 100

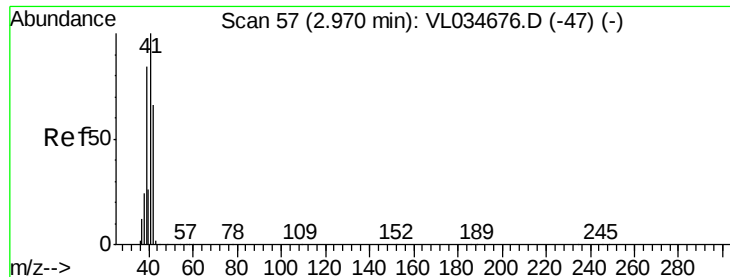
52 26.1 25.0 37.4



Abundance Ion 50.10 (49.80 to 50.80): VL0

Ion 52.10 (51.80 to 52.80): VL0





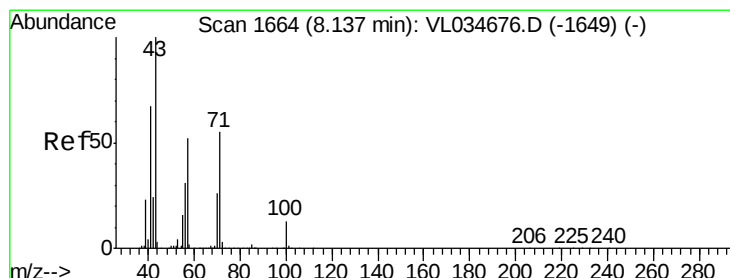
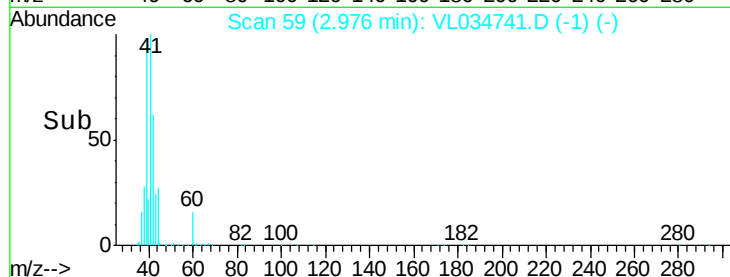
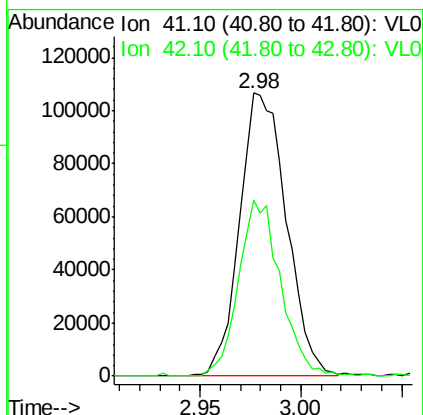
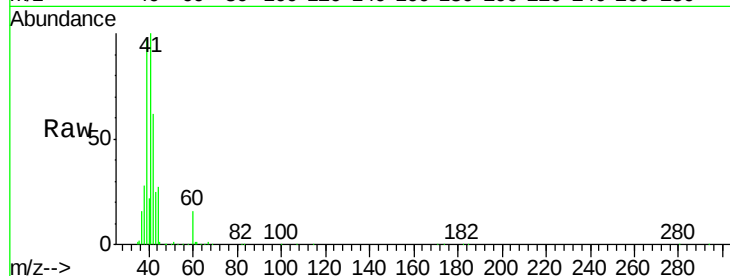
#9
 Propene
 Concen: 3.479 ppbv
 RT: 2.98 min Scan# 59
 Delta R.T. 0.01 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2-4

Tot Ion: 41 Resp: 173649
 Ion Ratio Lower Upper
 41 100
 42 56.2 54.9 82.3

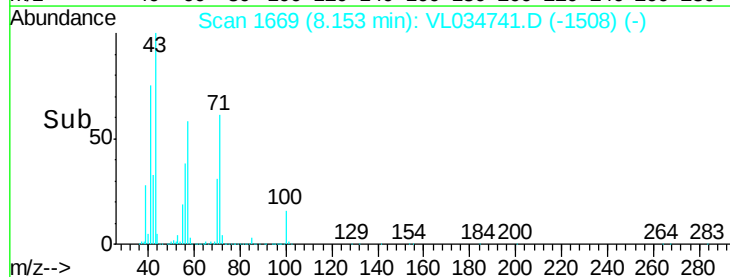
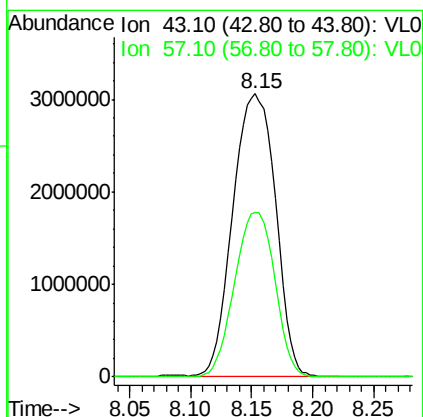
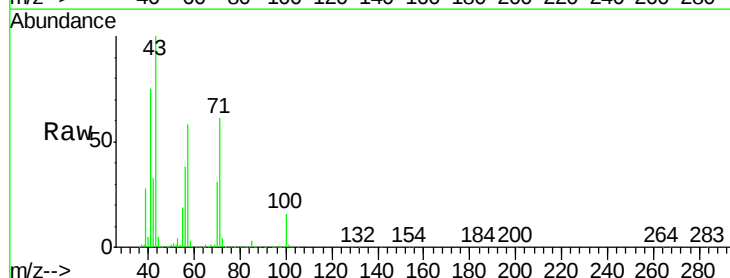
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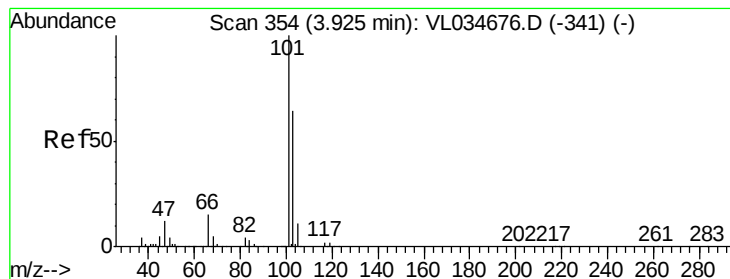
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#10
 Heptane
 Concen: 57.646 ppbv
 RT: 8.15 min Scan# 1669
 Delta R.T. 0.02 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Tgt Ion: 43 Resp: 7405511
 Ion Ratio Lower Upper
 43 100
 57 55.2 41.0 61.6





#11

Trichlorofluoromethane

Concen: 0.274 ppbv

RT: 3.93 min Scan# 355

Delta R.T. 0.00 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampleId :

IA-2-4

Tot Ion: 101 Resp: 41832

Ion Ratio Lower Upper

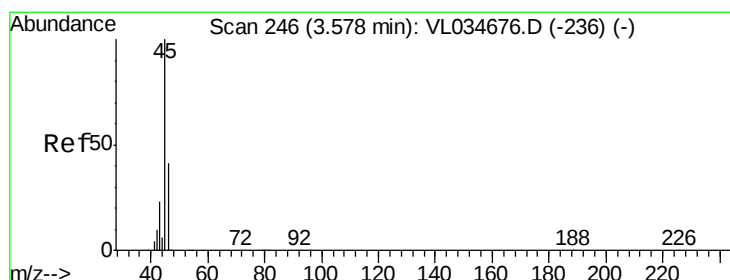
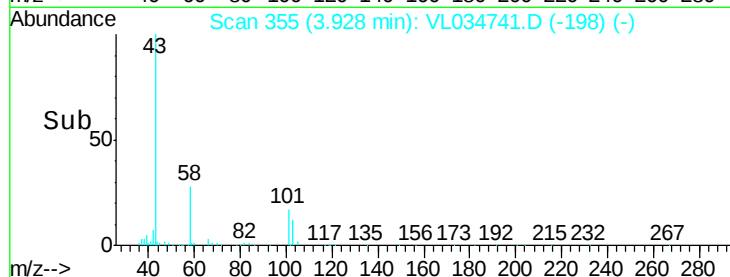
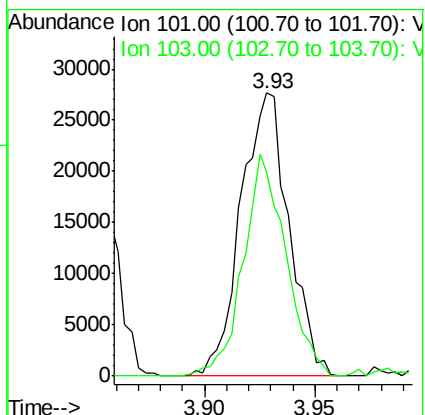
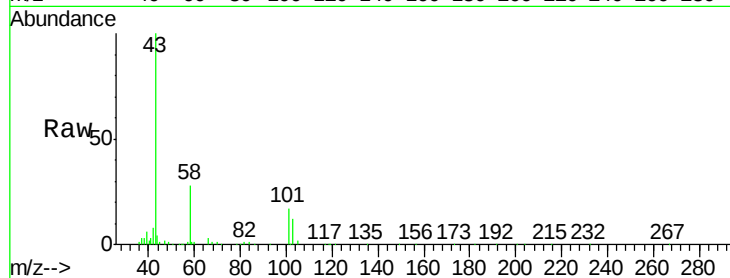
101 100

103 71.9 51.2 76.8

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#13

Ethanol

Concen: 44.281 ppbv

RT: 3.62 min Scan# 258

Delta R.T. 0.04 min

Lab File: VL034741.D

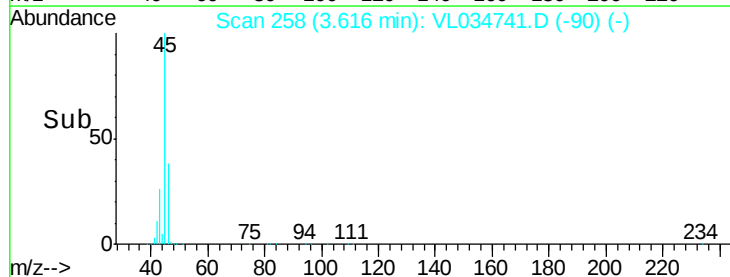
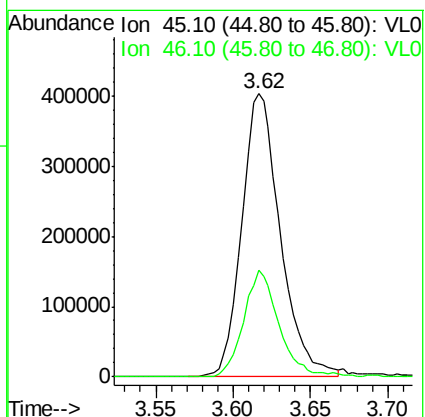
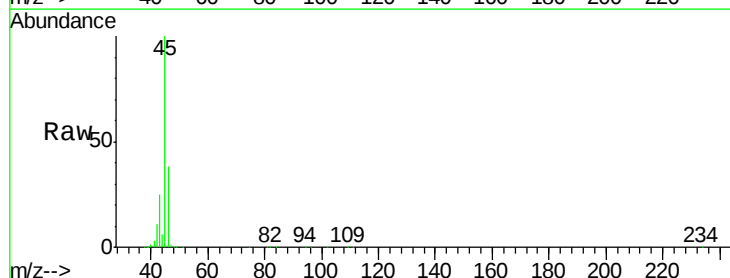
Acq: 28 Feb 2020 17:49

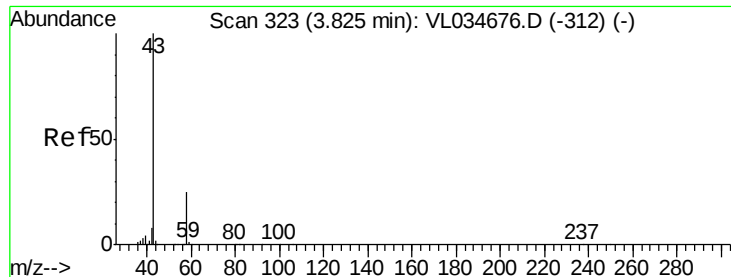
Tgt Ion: 45 Resp: 698186

Ion Ratio Lower Upper

45 100

46 35.4 15.4 61.4





#15

Acetone

Concen: 184.886 ppbv

RT: 3.85 min Scan# 331

Delta R.T. 0.03 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampleId :

IA-2-4

Tot Ion: 43 Resp: 23309169

Ion Ratio Lower Upper

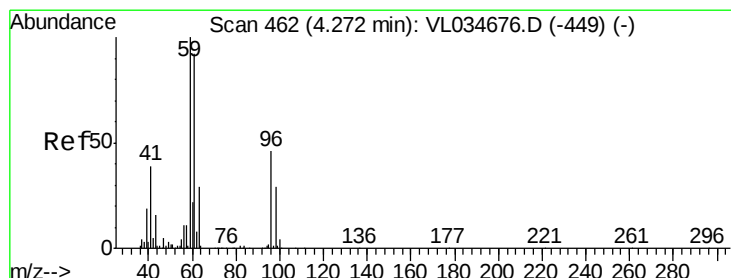
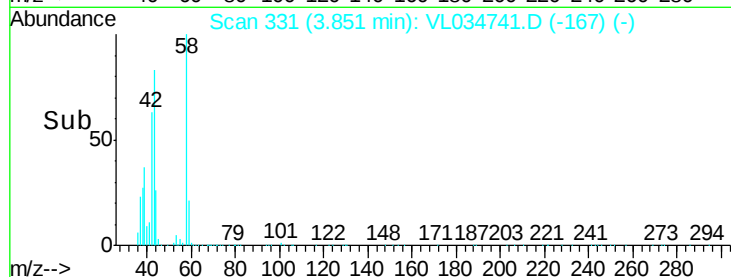
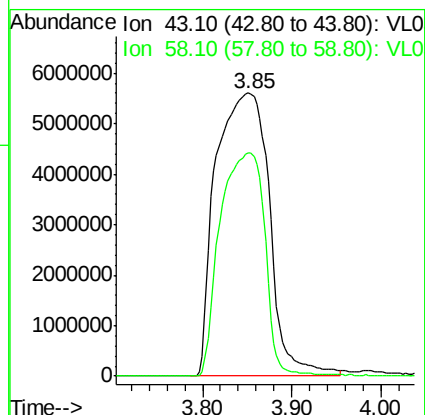
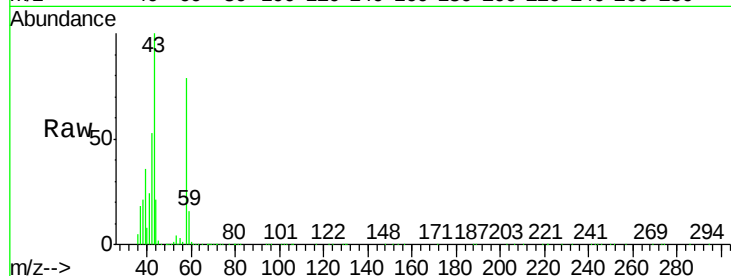
43 100

58 65.7 21.4 32.0#

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#17

tert-Butyl alcohol

Concen: 0.680 ppbv

RT: 4.31 min Scan# 475

Delta R.T. 0.04 min

Lab File: VL034741.D

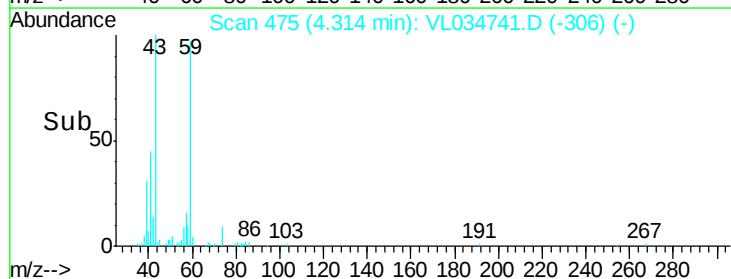
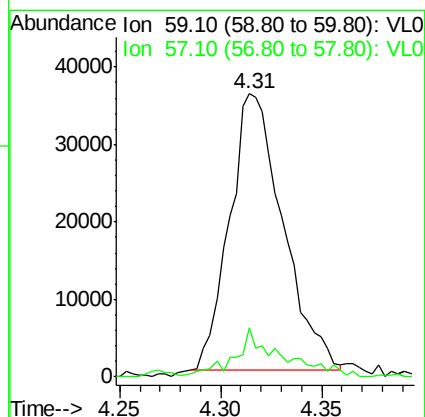
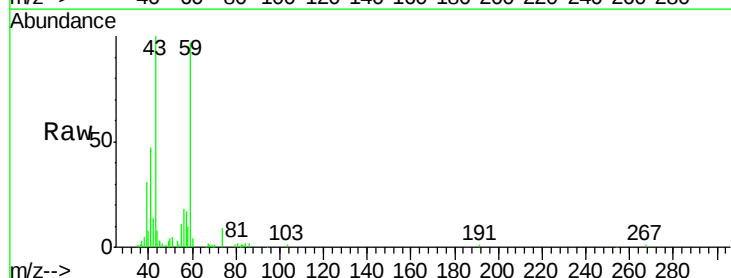
Acq: 28 Feb 2020 17:49

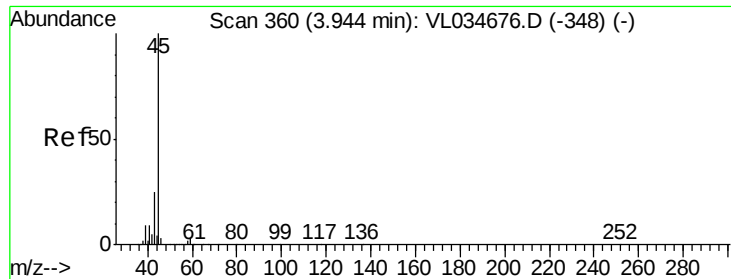
Tgt Ion: 59 Resp: 65651

Ion Ratio Lower Upper

59 100

57 96.4 8.8 13.2#





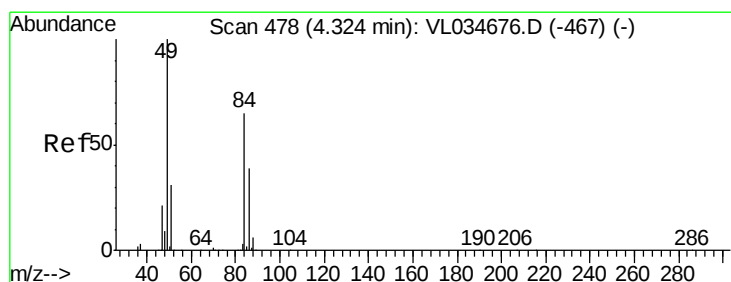
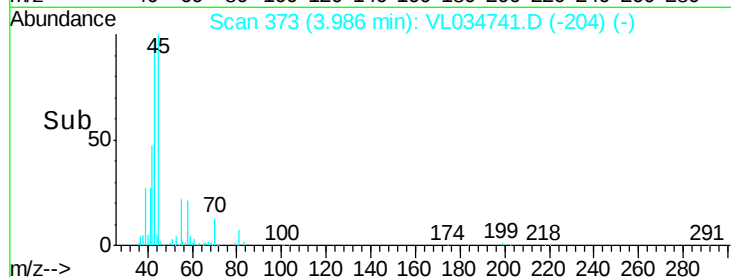
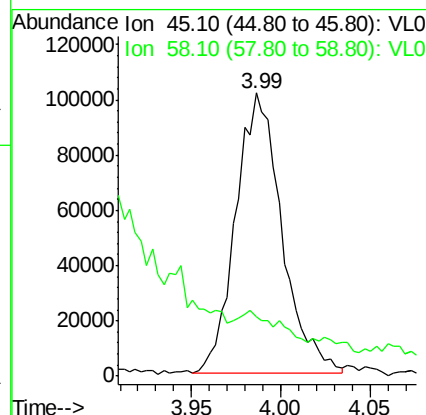
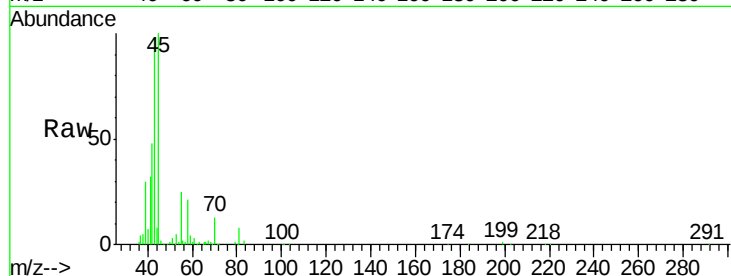
#19
Isopropyl Alcohol
Concen: 2.437 ppbv
RT: 3.99 min Scan# 373
Delta R.T. 0.04 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Instrument :
MSVOA_L
ClientSampleId :
IA-2-4

Tot Ion	Ratio	Lower	Upper
45	100		
58	0.0	1.8	2.6#

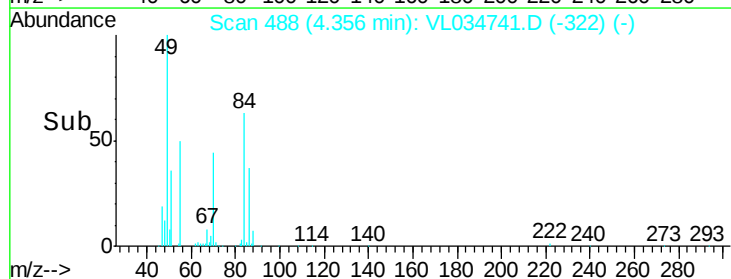
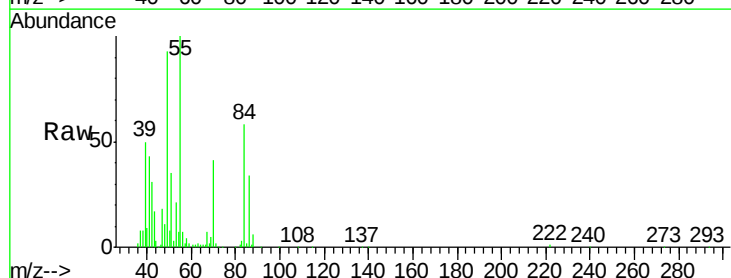
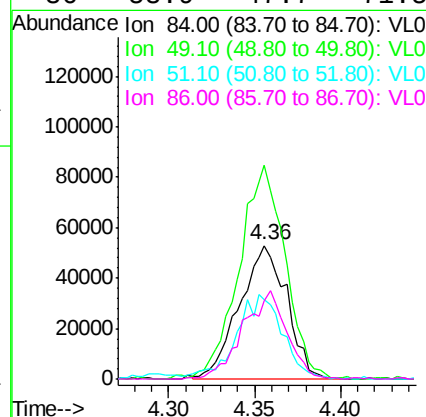
Manual Integrations
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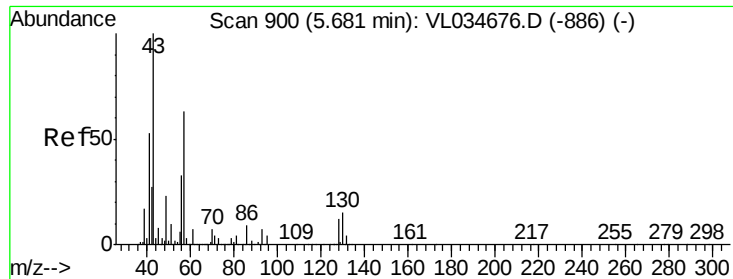
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#20
Methylene Chloride
Concen: 2.155 ppbv
RT: 4.36 min Scan# 488
Delta R.T. 0.03 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Tgt Ion	Ratio	Lower	Upper
84	100		
49	158.9	122.8	184.2
51	59.0	38.6	58.0#
86	58.9	47.7	71.5





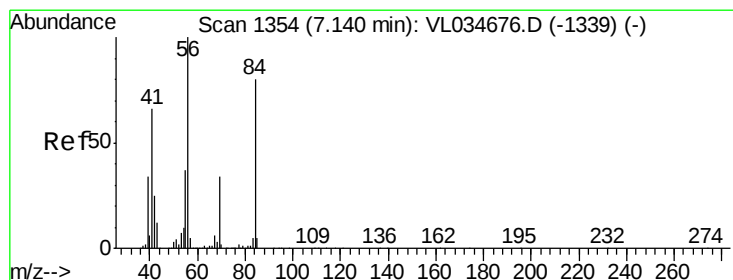
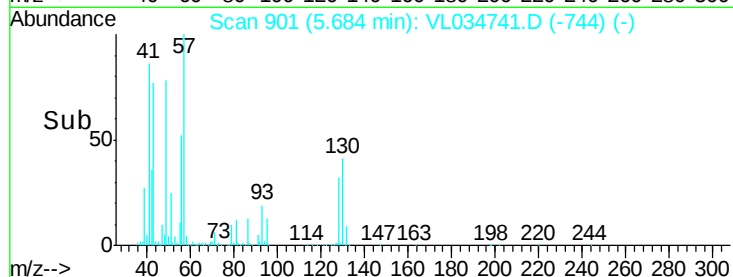
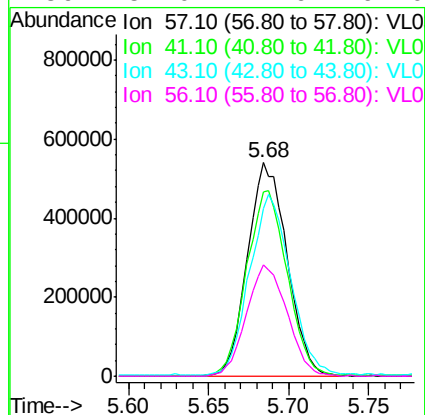
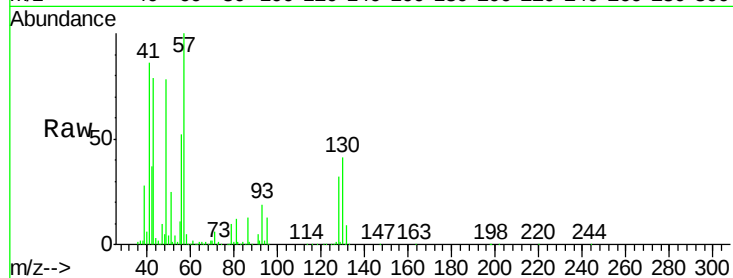
#26
Hexane
Concen: 8.885 ppbv
RT: 5.68 min Scan# 901
Delta R.T. 0.00 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Instrument :
MSVOA_L
ClientSampled :
IA-2-4

Tot Ion	Ion	Ratio	Resp	Lower	Upper
57	100		913957		
41	90.0	70.3	105.5		
43	88.7	177.0	265.4#		
56	54.0	42.6	64.0		

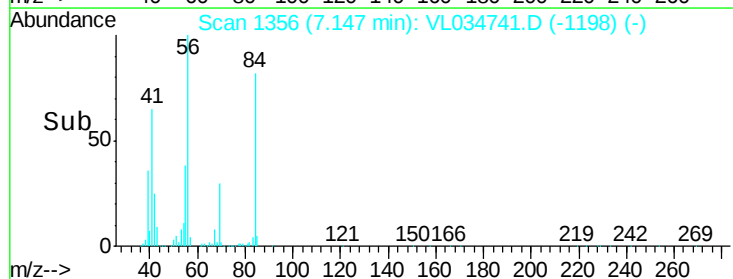
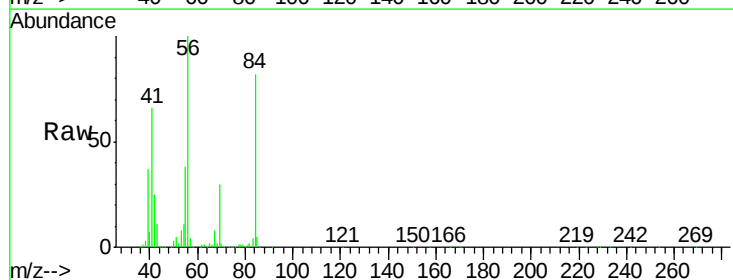
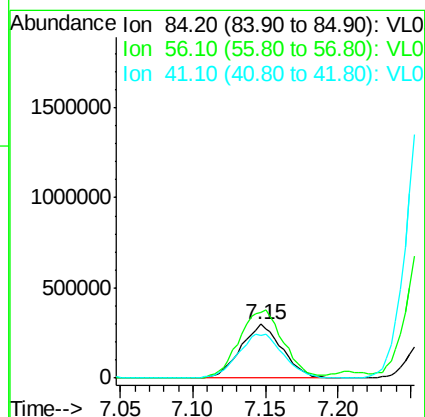
Manual Integrations
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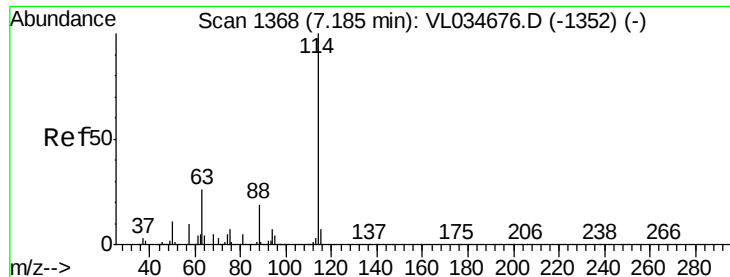
MMDadoda
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#30
Cyclohexane
Concen: 7.482 ppbv
RT: 7.15 min Scan# 1356
Delta R.T. 0.01 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Tgt Ion	Ion	Ratio	Resp	Lower	Upper
84	100		596451		
56	133.5	113.4	170.2		
41	87.9	68.2	102.4		





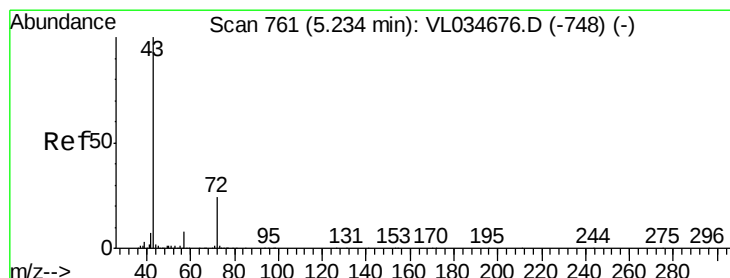
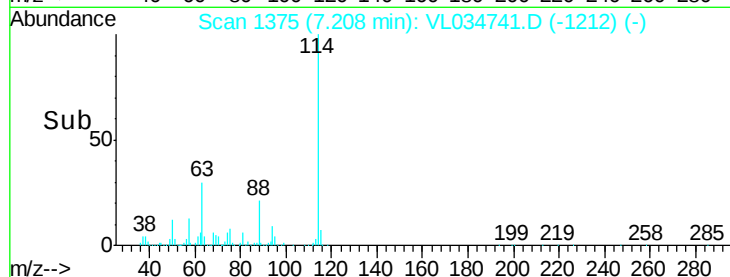
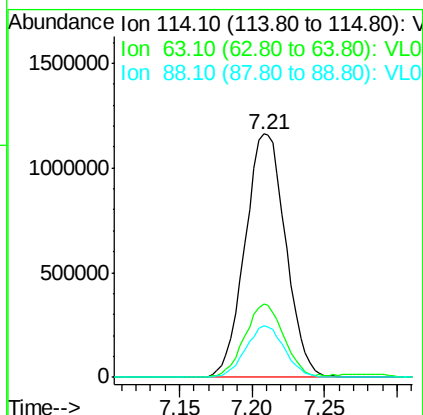
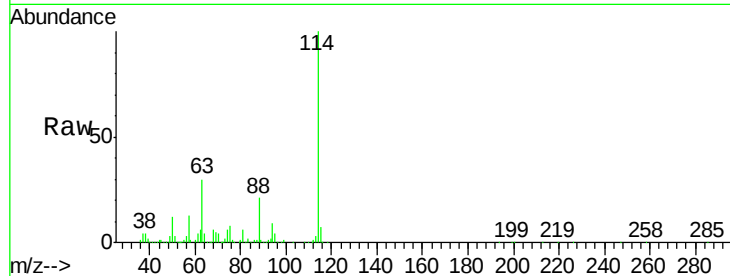
#33
 1,4-Difluorobenzene
 Concen: 10.000 ppbv
 RT: 7.21 min Scan# 1375
 Delta R.T. 0.02 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Instrument :
 MSVOA_L
 ClientSampleId :
 IA-2-4

Tot Ion	Ratio	Lower	Upper
114	100		
63	29.5	22.9	34.3
88	20.3	15.8	23.6

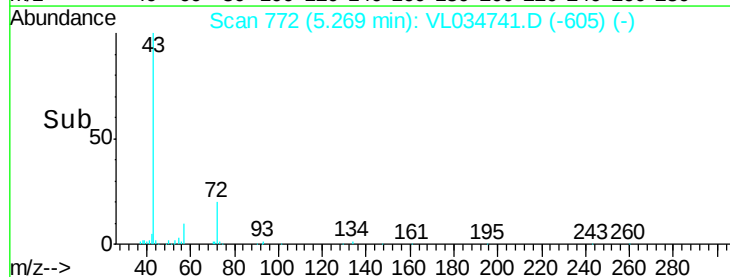
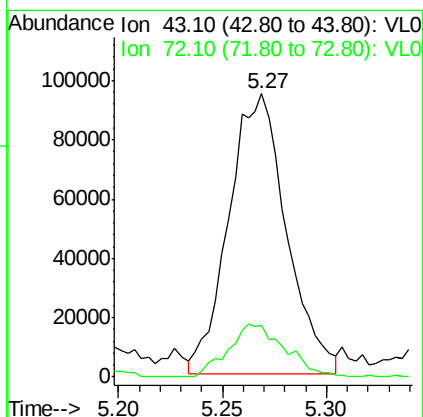
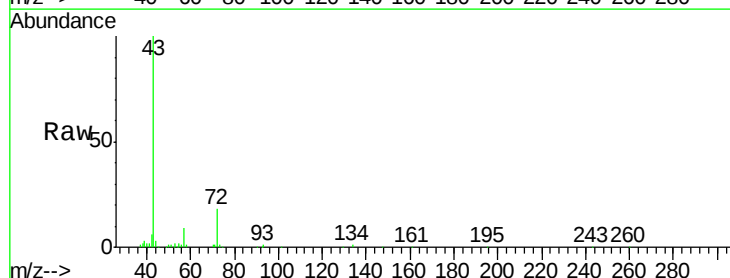
Manual Integrations
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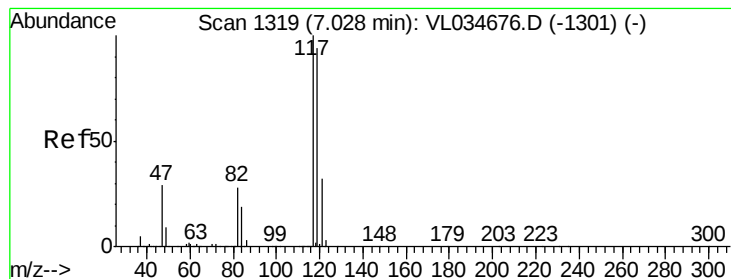
MMDadoda
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#34
 2-Butanone
 Concen: 1.275 ppbv m
 RT: 5.27 min Scan# 772
 Delta R.T. 0.04 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Tgt Ion	Ratio	Lower	Upper
43	100		
72	18.7	18.2	27.2





#35

Carbon Tetrachloride

Concen: 0.062 ppbv m

RT: 7.05 min Scan# 1325

Delta R.T. 0.02 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

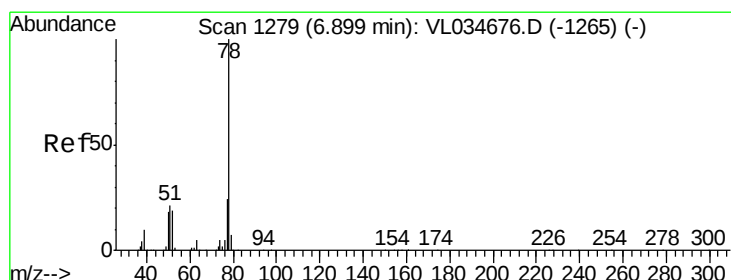
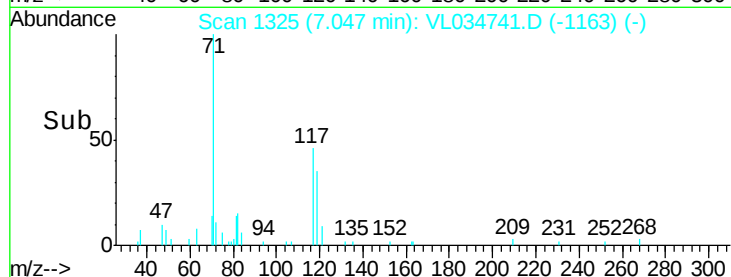
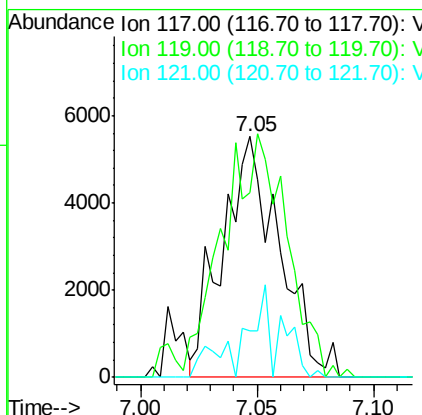
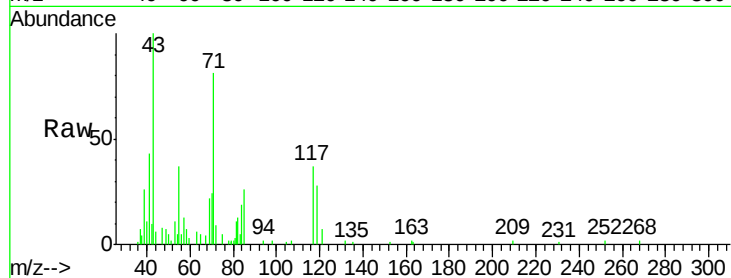
ClientSampleId :

IA-2-4

Tot Ion	Ratio	Lower	Upper
117	100		
119	76.7	75.5	113.3
121	19.1	25.4	38.0#

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#36

Benzene

Concen: 0.908 ppbv

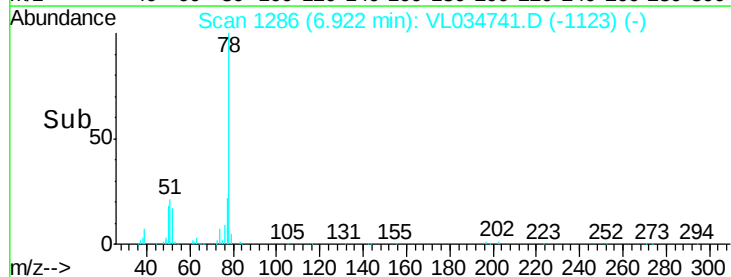
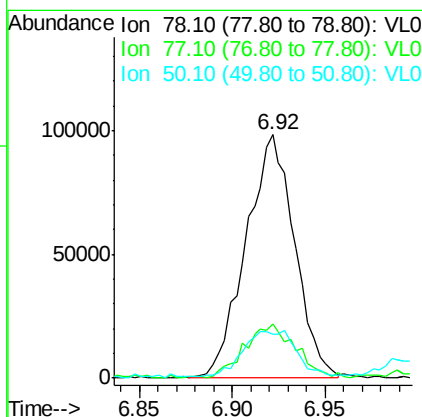
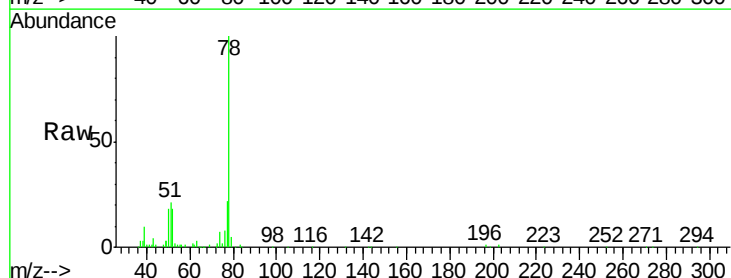
RT: 6.92 min Scan# 1286

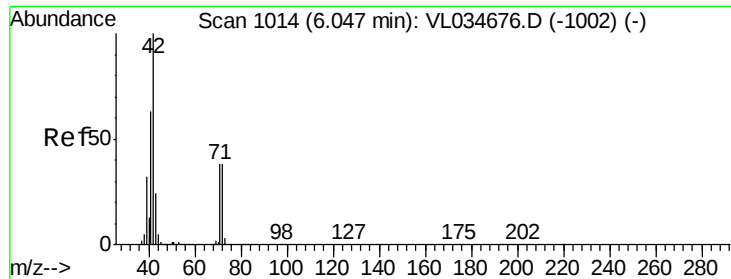
Delta R.T. 0.02 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Tgt Ion	Ratio	Lower	Upper
78	100		
77	22.1	19.5	29.3
50	17.2	14.6	21.8





#41

Tetrahydrofuran

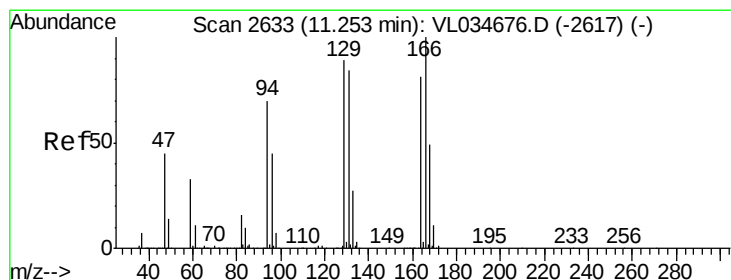
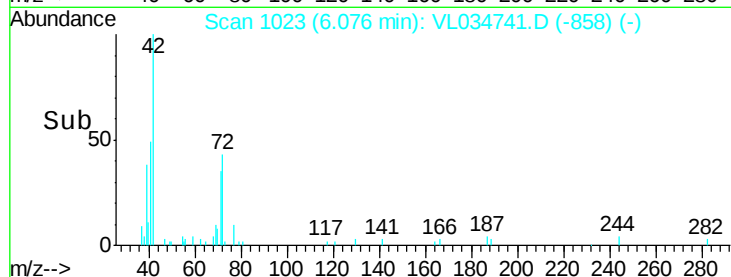
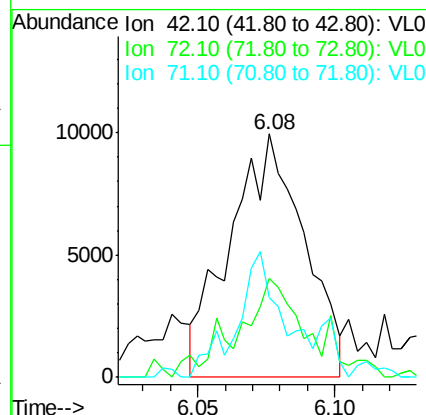
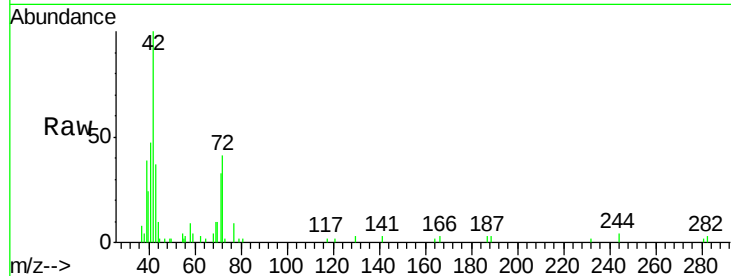
Concen: 0.248 ppbv m
RT: 6.08 min Scan# 1023
Delta R.T. 0.03 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Instrument :
MSVOA_L
ClientSampled :
IA-2-4

Tot Ion	42	Resp:	18651
Ion Ratio	Lower	Upper	
42	100		
72	40.9	31.7	47.5
71	40.6	30.7	46.1

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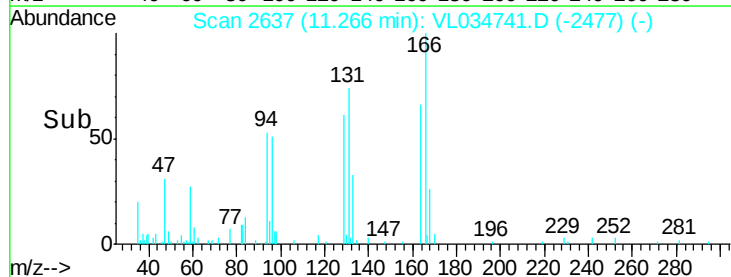
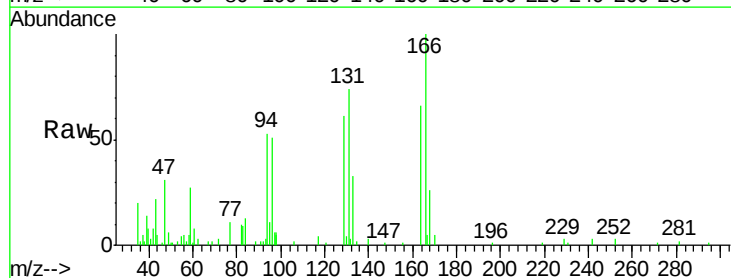
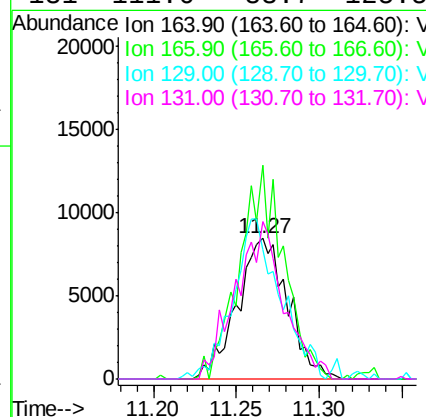


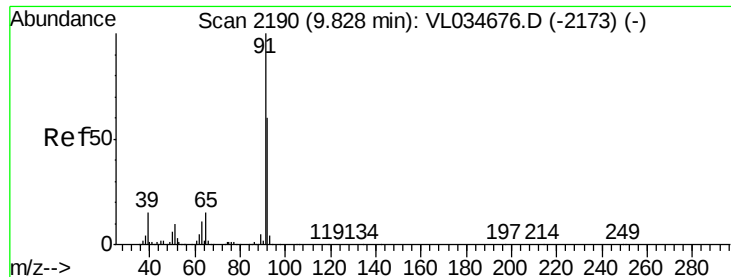
#52

Tetrachloroethene

Concen: 0.250 ppbv m
RT: 11.27 min Scan# 2637
Delta R.T. 0.01 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Tgt Ion	164	Resp:	17954
Ion Ratio	Lower	Upper	
164	100		
166	151.8	99.2	148.8#
129	92.2	88.0	132.0
131	111.6	83.7	125.5





#53

Toluene

Concen: 79.358 ppbv

RT: 9.86 min Scan# 2199

Delta R.T. 0.03 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampleId :

IA-2-4

Tot Ion: 91 Resp:16519170

Ion Ratio Lower Upper

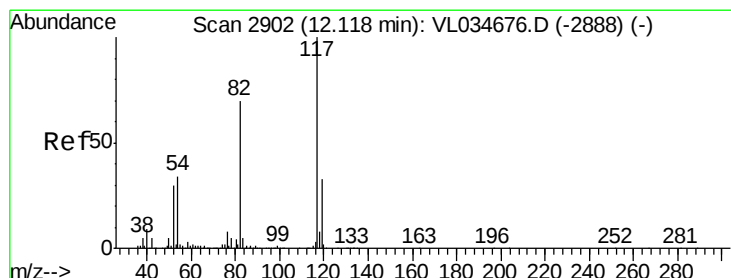
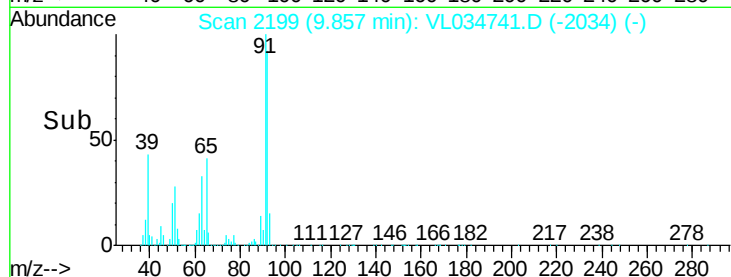
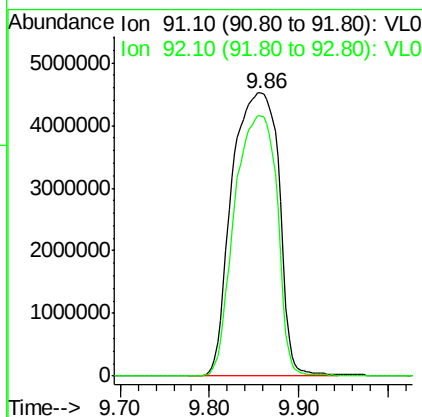
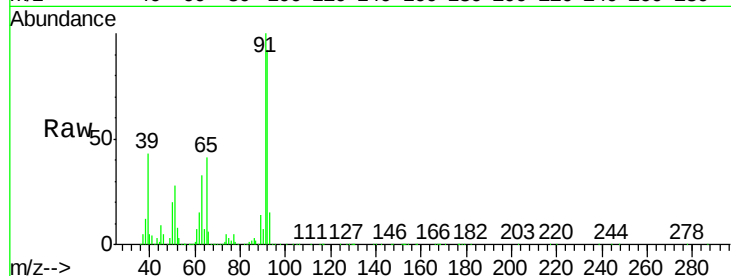
91 100

92 83.4 48.5 72.7#

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#55

Chlorobenzene-d5

Concen: 10.000 ppbv

RT: 12.13 min Scan# 2905

Delta R.T. 0.01 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

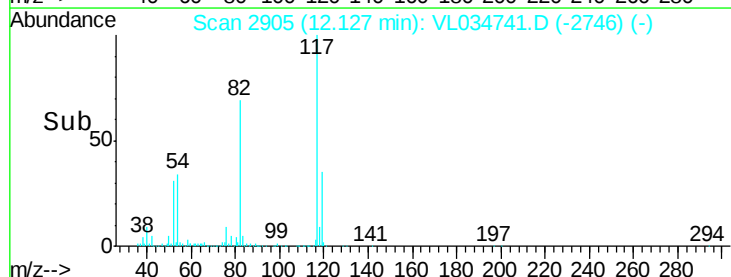
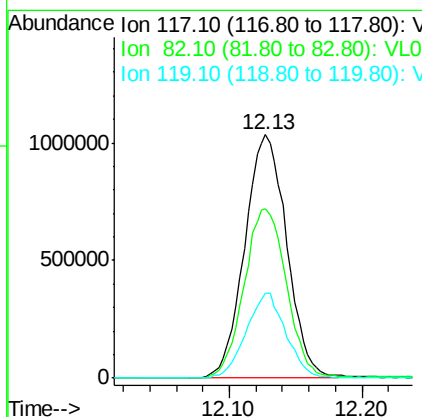
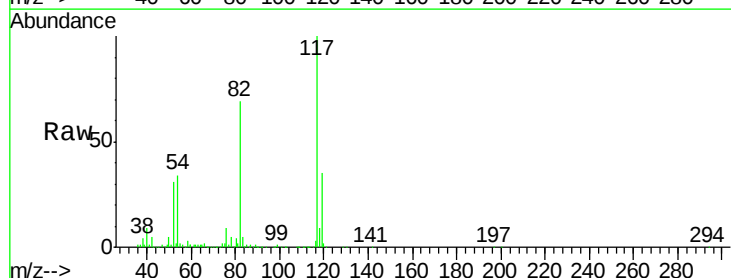
Tgt Ion:117 Resp: 2283814

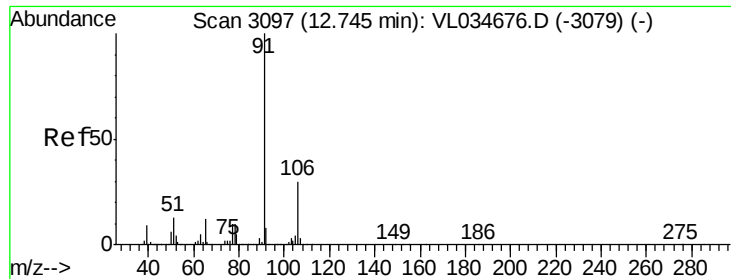
Ion Ratio Lower Upper

117 100

82 70.4 54.1 81.1

119 33.2 27.6 41.4





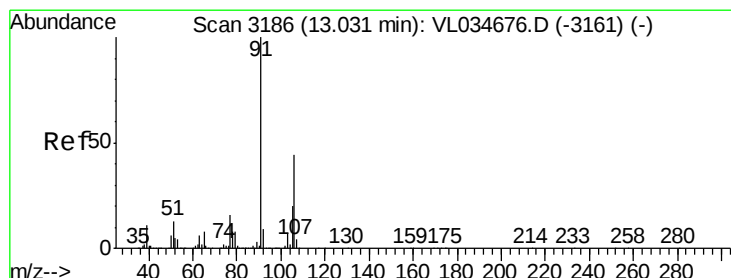
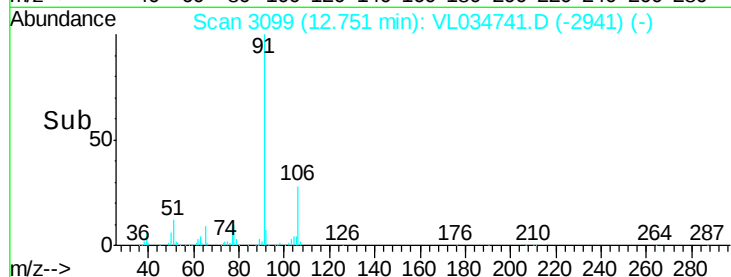
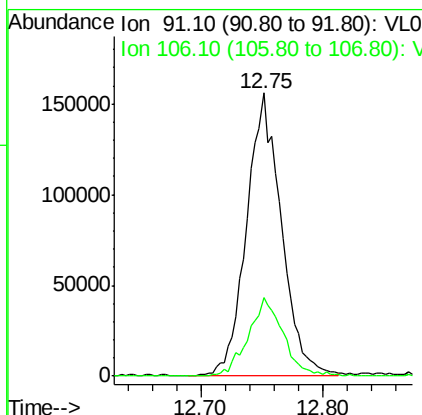
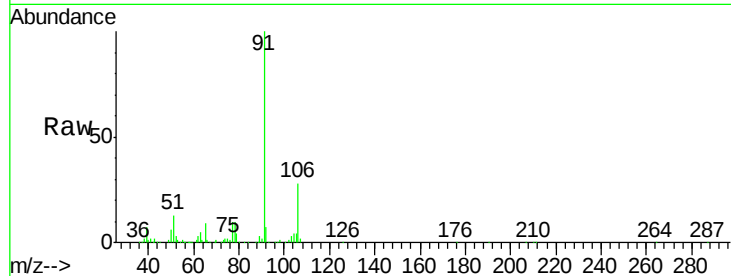
#58
Ethyl Benzene
Concen: 1.102 ppbv
RT: 12.75 min Scan# 3099
Delta R.T. 0.01 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Instrument :
MSVOA_L
ClientSampleId :
IA-2-4

Tot Ion: 91 Resp: 304403
Ion Ratio Lower Upper
91 100
106 28.0 24.0 36.0

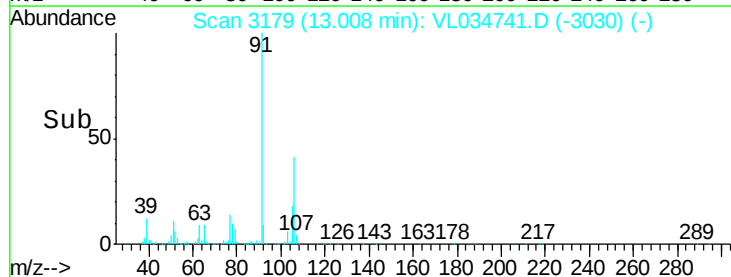
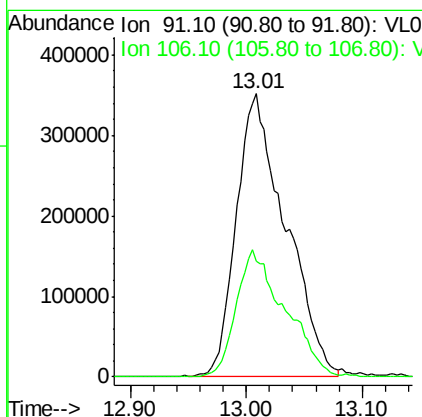
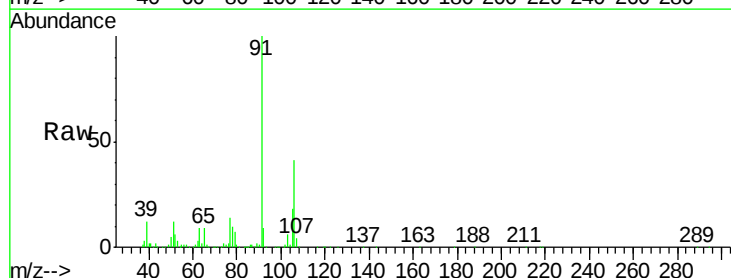
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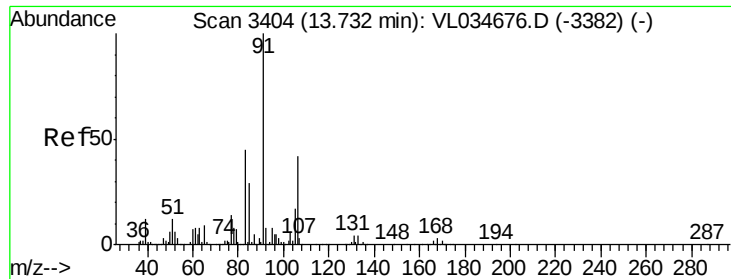
MMDadoda
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#59
m/p-Xylene
Concen: 4.279 ppbv
RT: 13.01 min Scan# 3179
Delta R.T. -0.02 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Tgt Ion: 91 Resp: 1031323
Ion Ratio Lower Upper
91 100
106 44.9 35.6 53.4





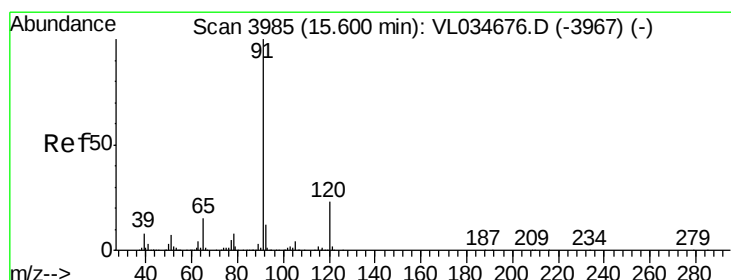
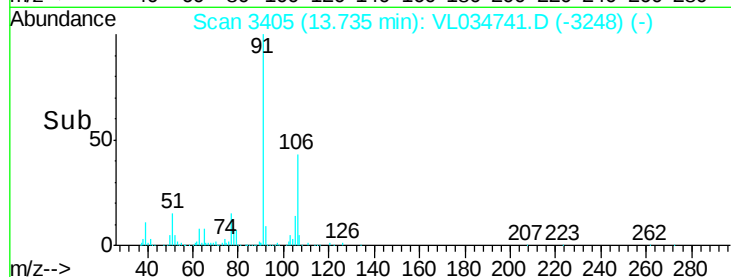
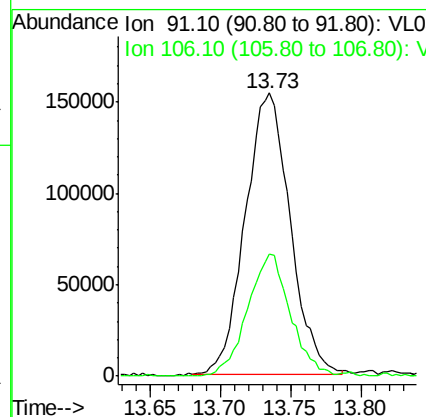
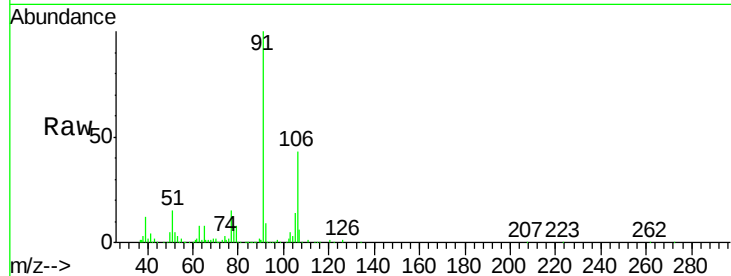
#60
o-Xylene
Concen: 1.432 ppbv
RT: 13.73 min Scan# 3405
Delta R.T. 0.00 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Instrument :
MSVOA_L
ClientSampled :
IA-2-4

Tot Ion	Ratio	Lower	Upper
91	100		
106	42.1	21.9	65.5

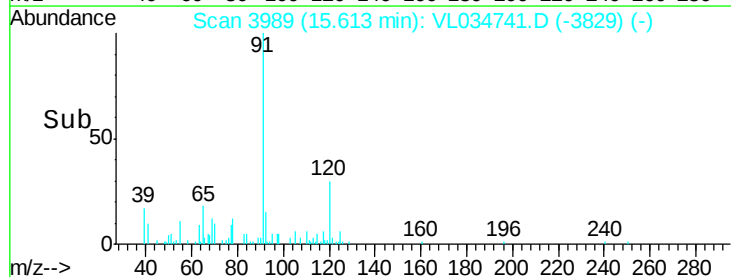
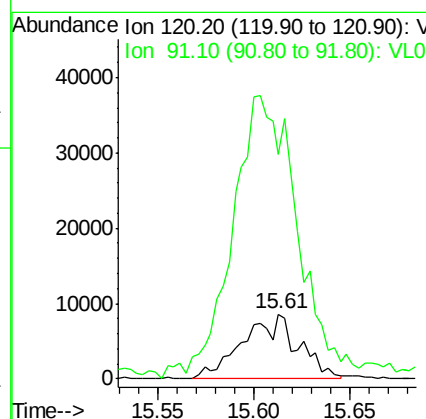
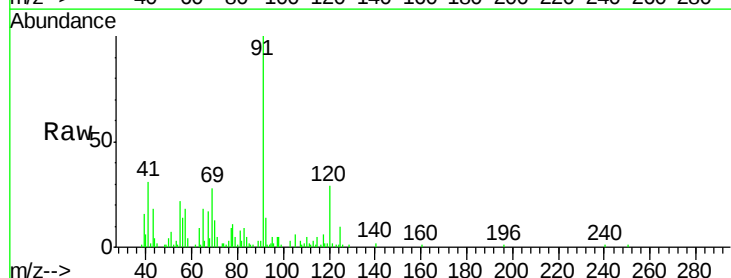
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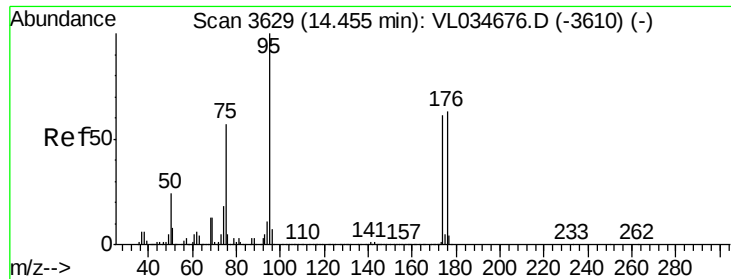
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#64
n-propylbenzene
Concen: 0.192 ppbv m
RT: 15.61 min Scan# 3989
Delta R.T. 0.01 min
Lab File: VL034741.D
Acq: 28 Feb 2020 17:49

Tgt Ion	Ratio	Lower	Upper
120	100		
91	0.0	369.8	554.8#





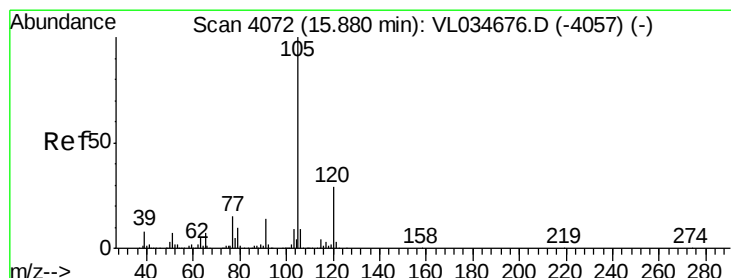
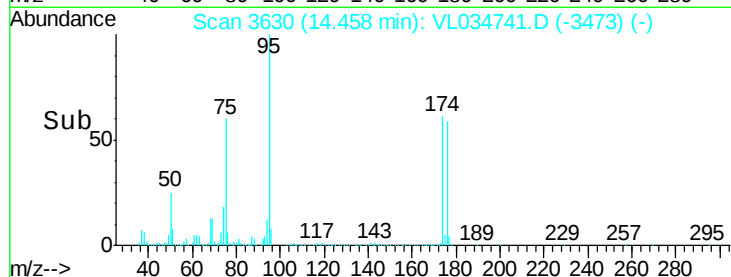
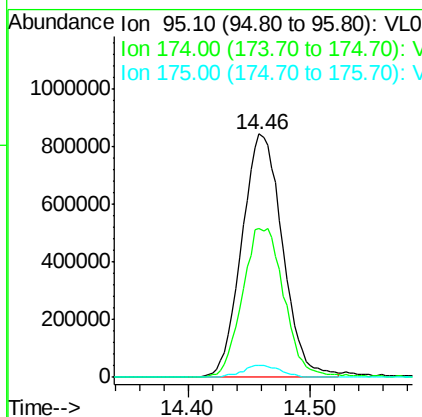
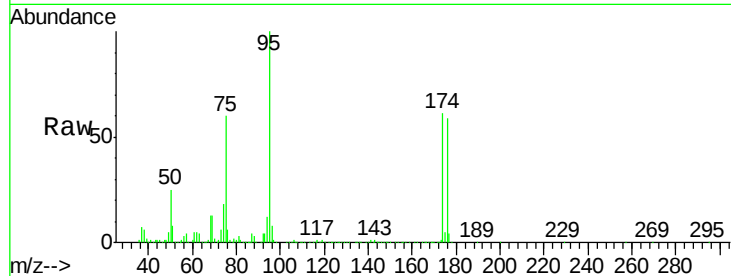
#68
 1-Bromo-4-Fluorobenzene
 Concen: 10.391 ppbv
 RT: 14.46 min Scan# 3630
 Delta R.T. 0.00 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Instrument :
 MSVOA_L
 ClientSampled :
 IA-2-4

Tot Ion: 95 Resp: 1945829
 Ion Ratio Lower Upper
 95 100
 174 63.3 50.7 76.1
 175 4.7 3.9 5.9

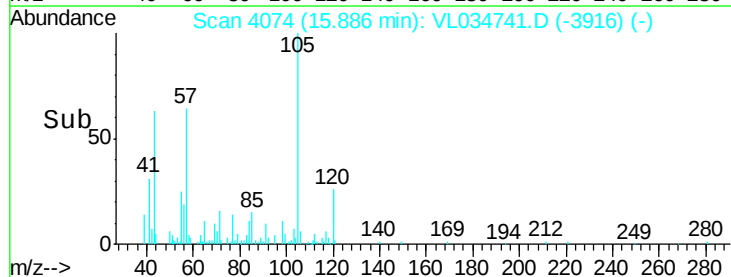
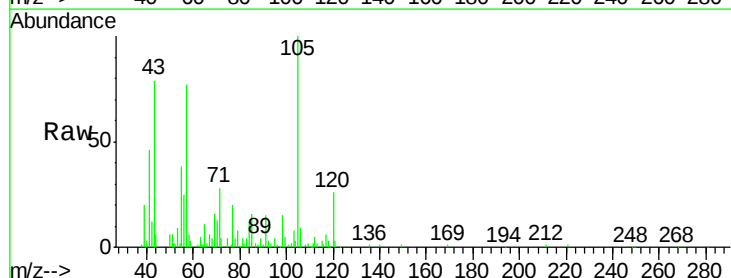
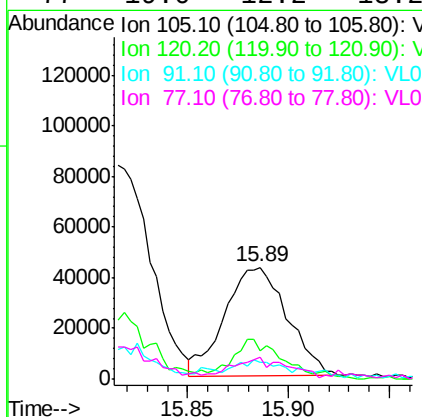
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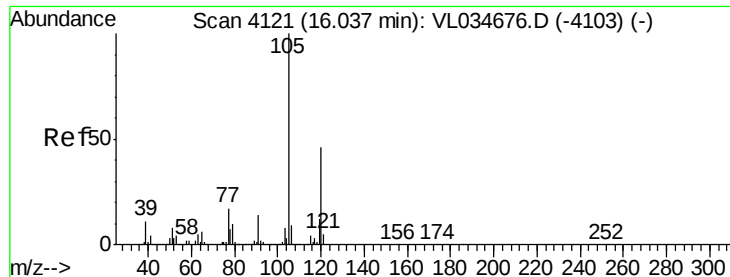
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 3/2/2020 1:01:24 PM



#72
 4-Ethyltoluene
 Concen: 0.351 ppbv
 RT: 15.89 min Scan# 4074
 Delta R.T. 0.01 min
 Lab File: VL034741.D
 Acq: 28 Feb 2020 17:49

Tgt Ion: 105 Resp: 93504
 Ion Ratio Lower Upper
 105 100
 120 31.4 23.7 35.5
 91 17.7 10.9 16.3#
 77 19.0 12.2 18.2#





#73

1,3,5-Trimethylbenzene

Concen: 0.376 ppbv m

RT: 16.04 min Scan# 4122

Delta R.T. 0.00 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampled :

IA-2-4

Tot Ion:105 Resp: 96279

Ion Ratio Lower Upper

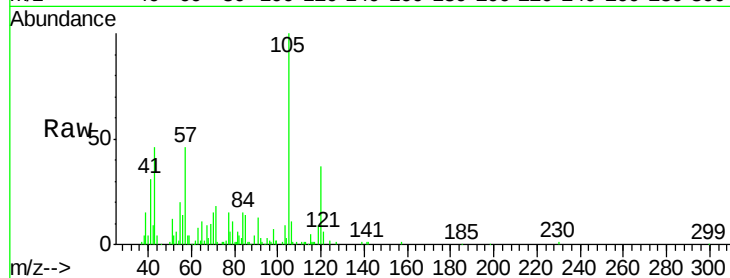
105 100

120 37.3 37.1 55.7

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Abundance Ion 105.10 (104.80 to 105.80): V

Ion 120.20 (119.90 to 120.90): V

16.04

50000

40000

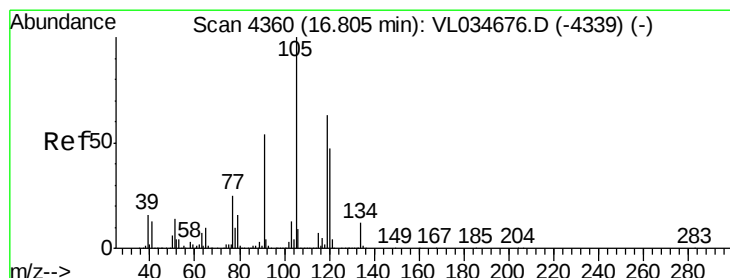
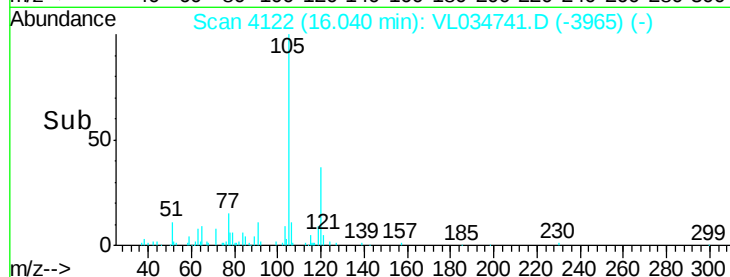
30000

20000

10000

0

Time-->



#74

1,2,4-Trimethylbenzene

Concen: 1.040 ppbv

RT: 16.81 min Scan# 4361

Delta R.T. 0.00 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Tgt Ion:105 Resp: 294065

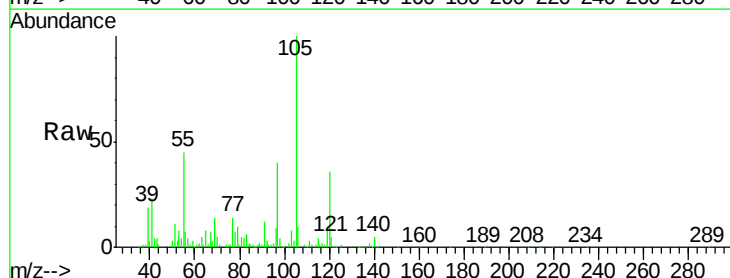
Ion Ratio Lower Upper

105 100

120 35.6 37.9 56.9#

91 10.9 43.9 65.9#

77 13.3 20.3 30.5#



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

16.81

200000

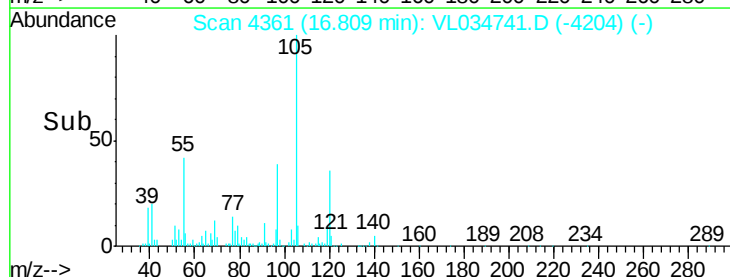
150000

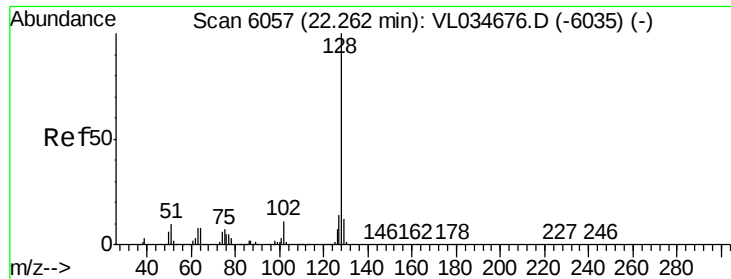
100000

50000

0

Time-->





#79

Naphthalene

Concen: 0.240 ppbv m

RT: 22.28 min Scan# 6063

Delta R.T. 0.02 min

Lab File: VL034741.D

Acq: 28 Feb 2020 17:49

Instrument :

MSVOA_L

ClientSampleId :

IA-2-4

Tot Ion:	128	Resp:	59673
Ion Ratio	Lower	Upper	
128	100		
127	9.9	11.0	16.6#
129	11.4	9.4	14.2

Manual Integrations
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3/2/2020 1:01:24 PM

