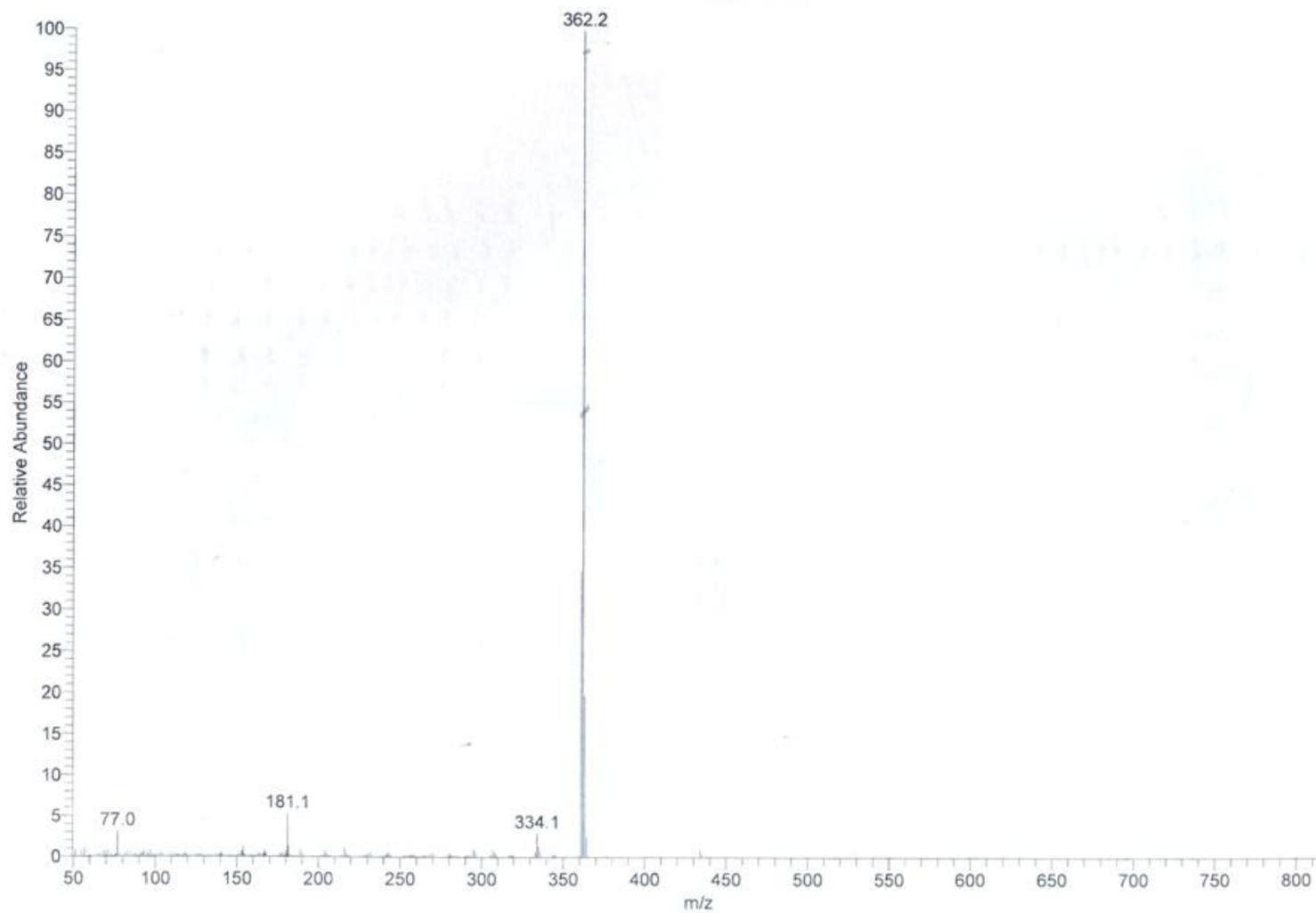


(Supplementary material)

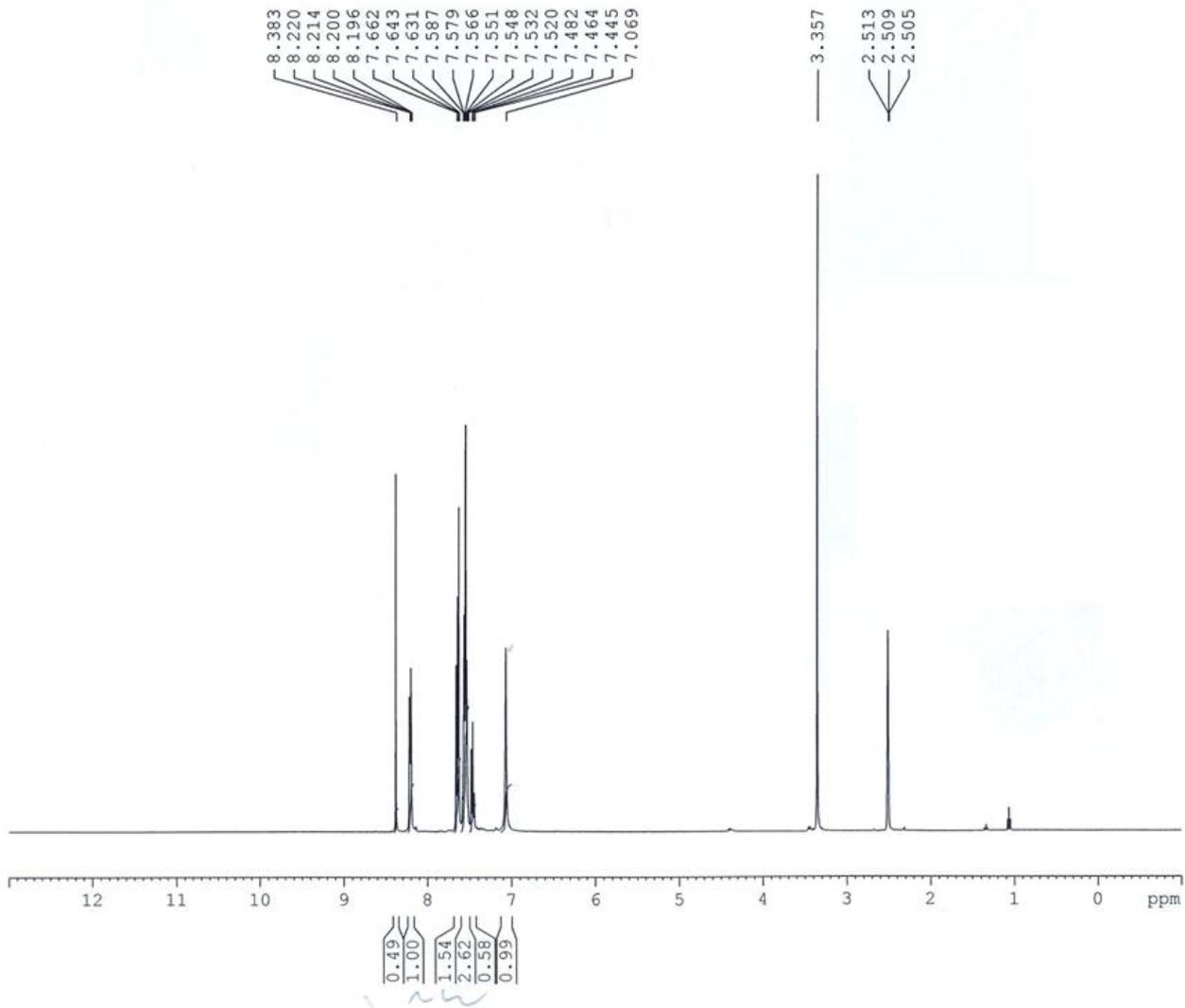
Multi component reactions under increased pressure: On the mechanism of formation of pyridazino[5,4,3-de][1,6]naphthyridine derivatives from reaction of malononitrile, aldehyde and 2-oxoglyoxalarylhydrazones in Q-tubes

Majdah A. AL-Johani ¹, Khadijah M. Al-Zaydi ^{1*}, Sameera M. Mousally ¹, Norah F. Alqahtani ¹, Noha Hilmy Elnagdi ², Mohamed H. Elnagdi ³

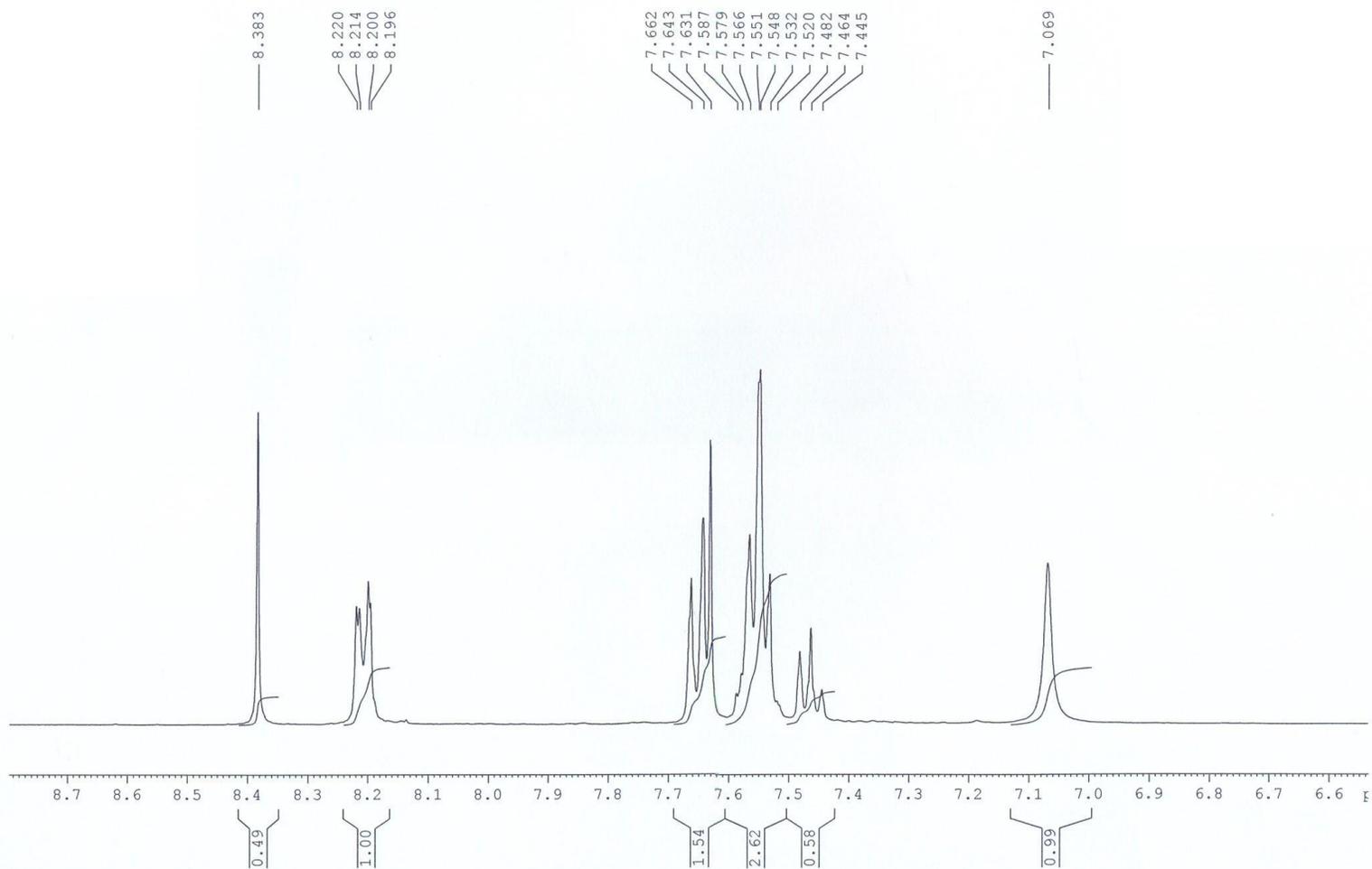
Compound 12a



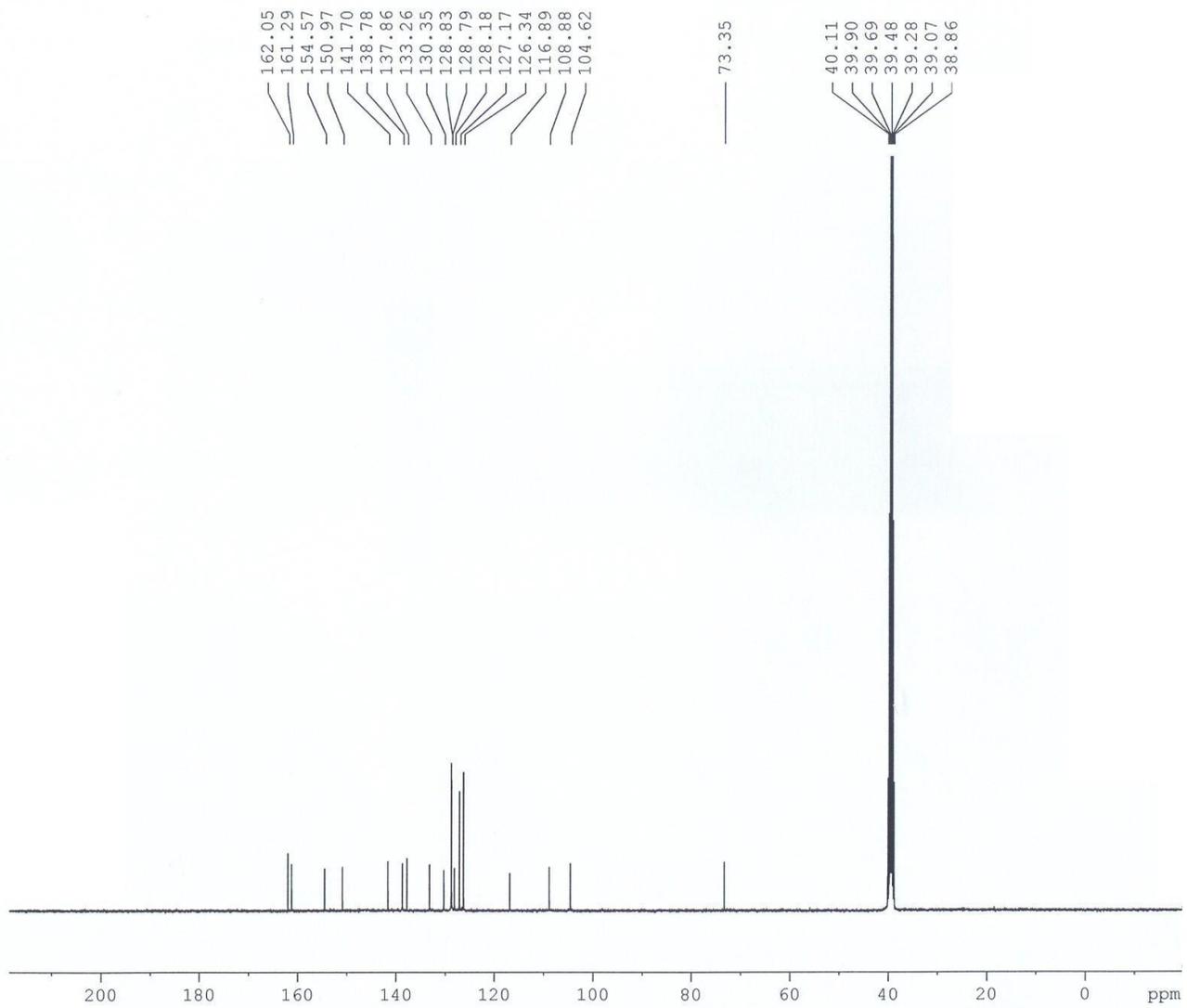
Compound 12a



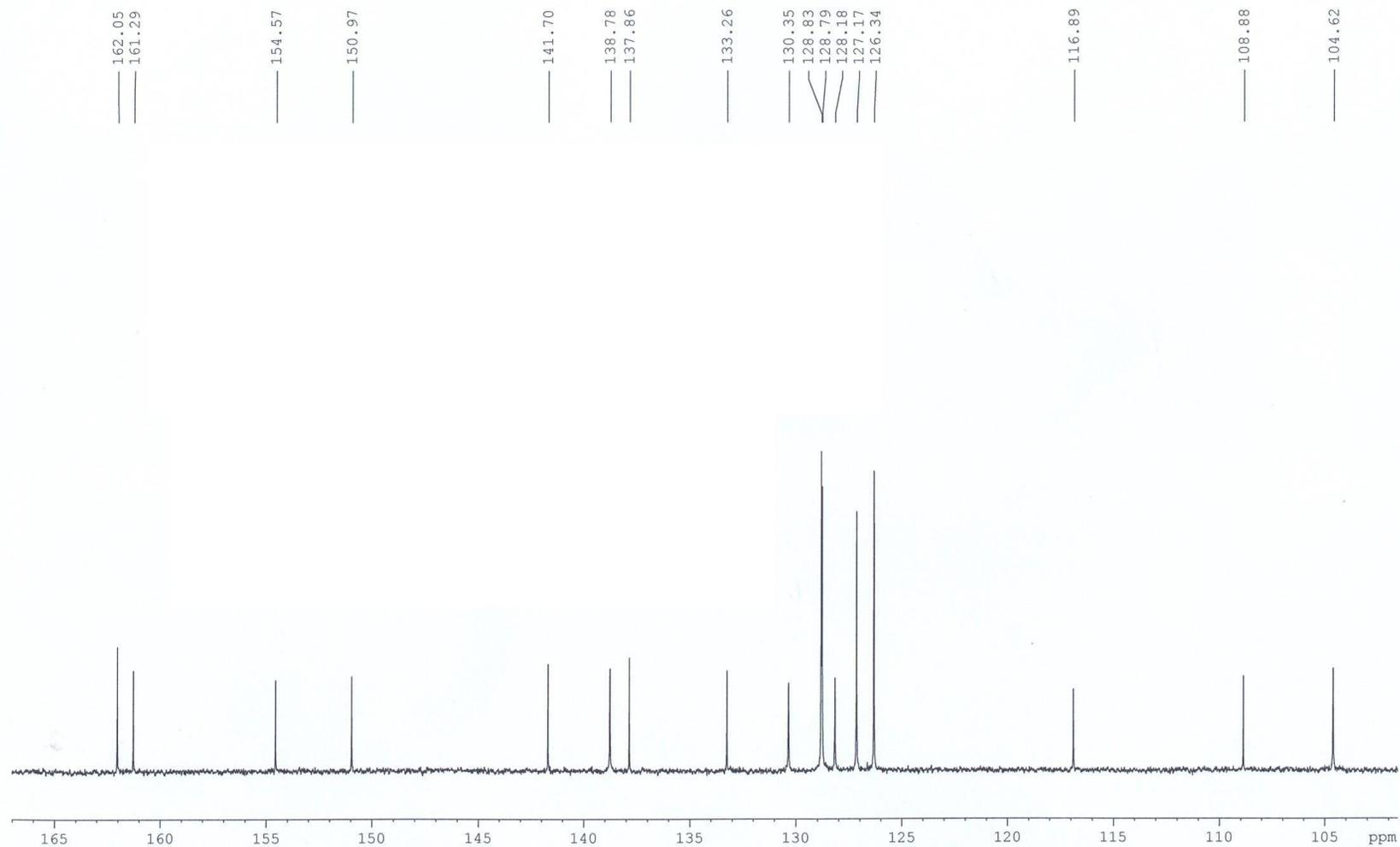
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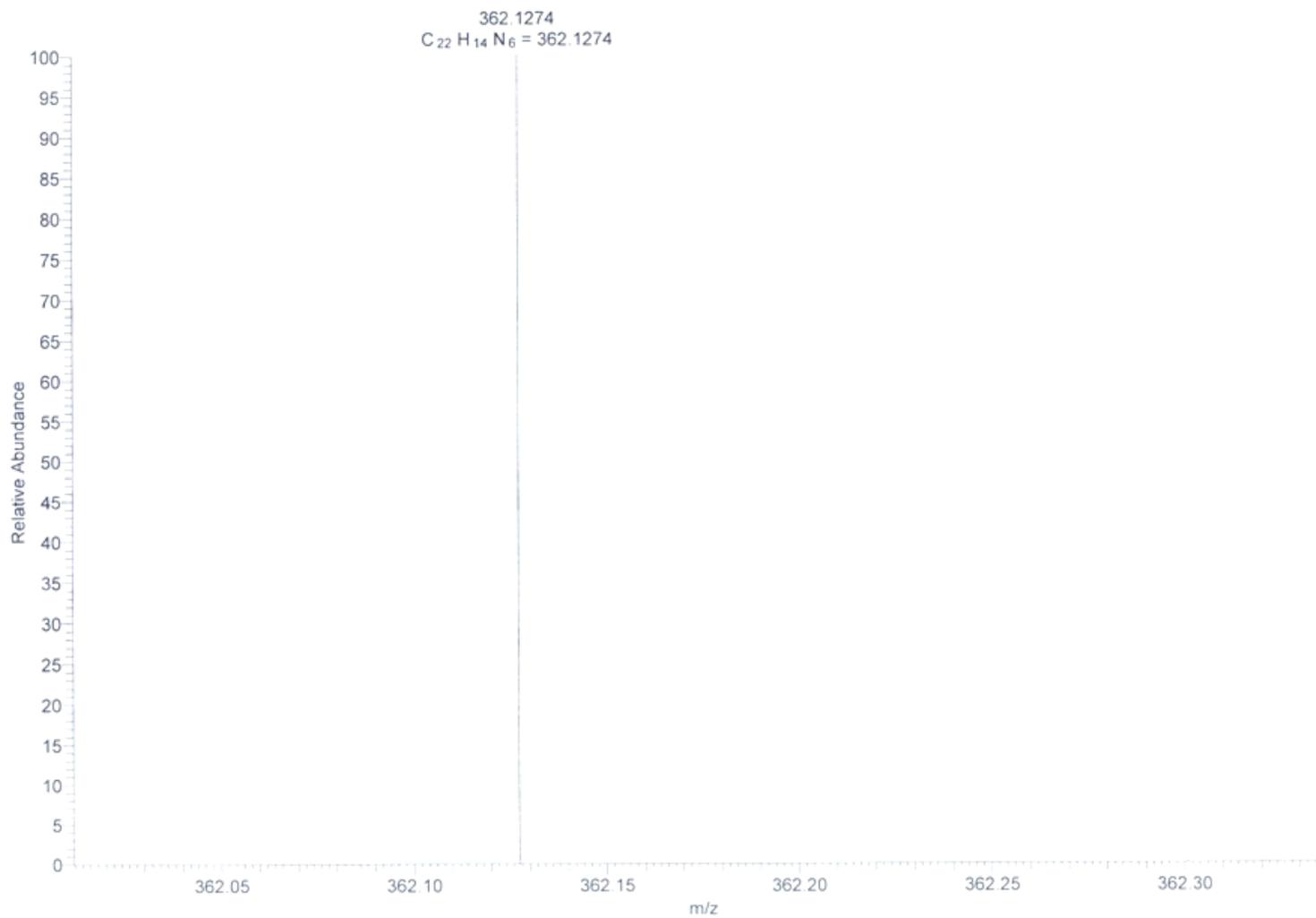
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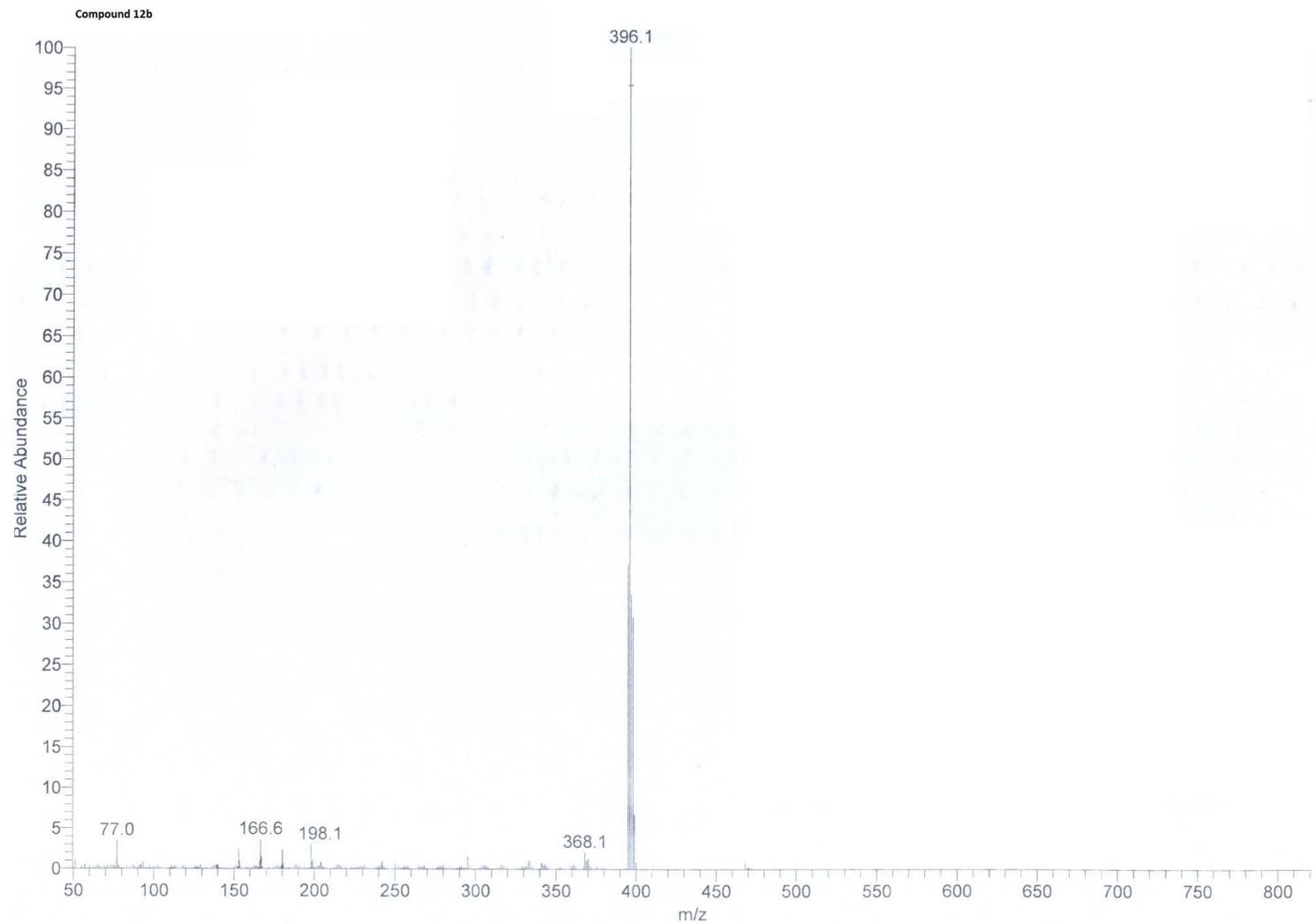


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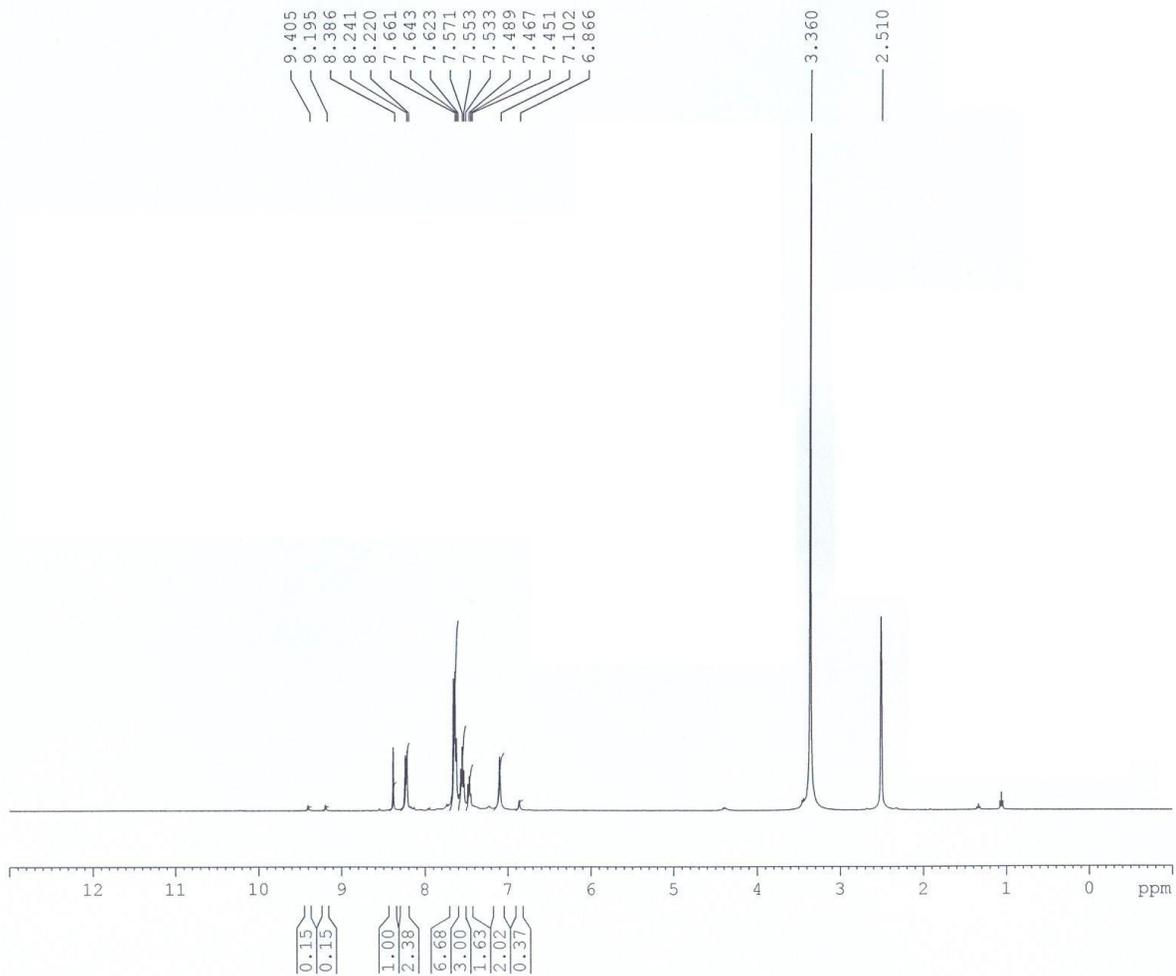


Compound 12a

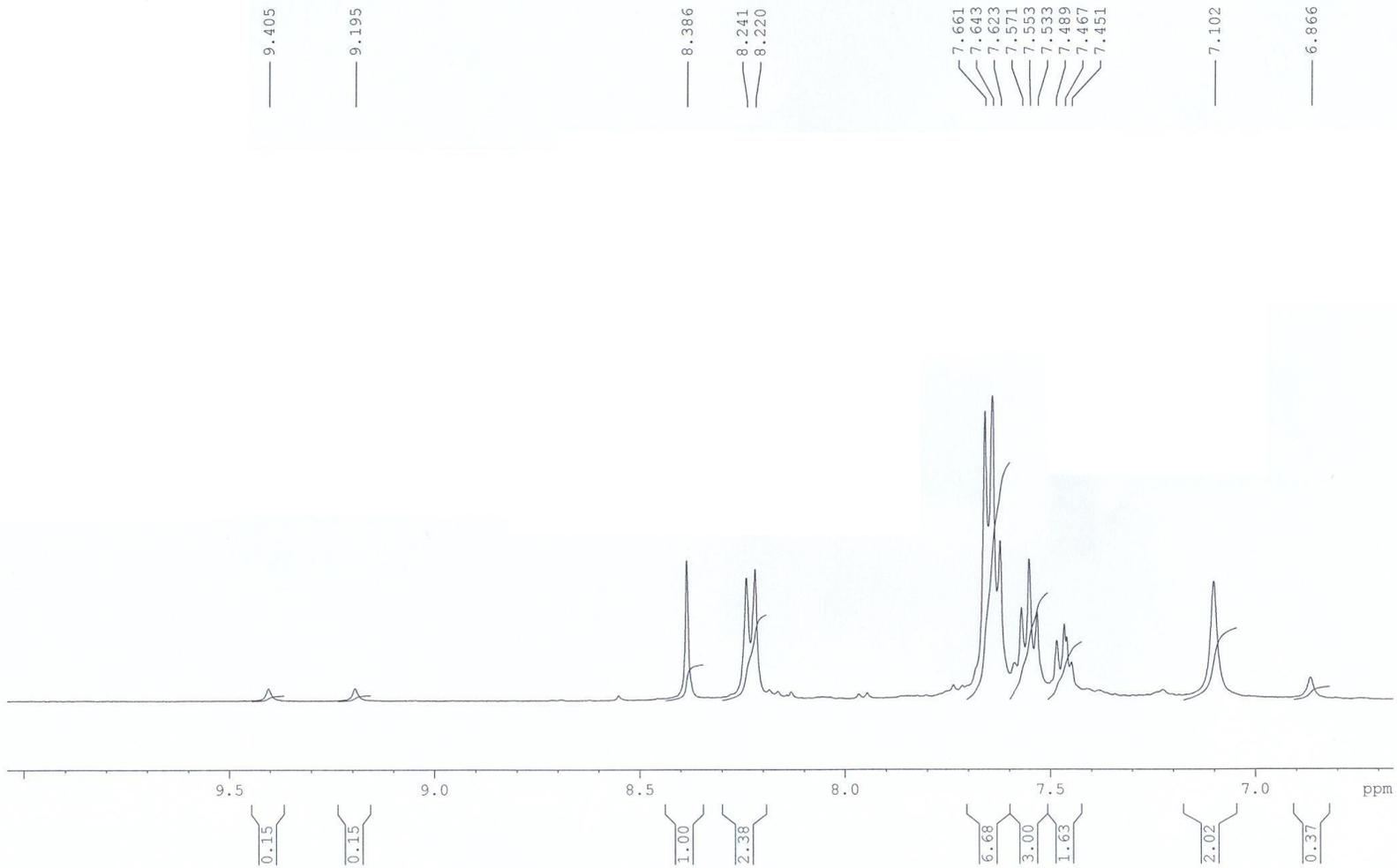




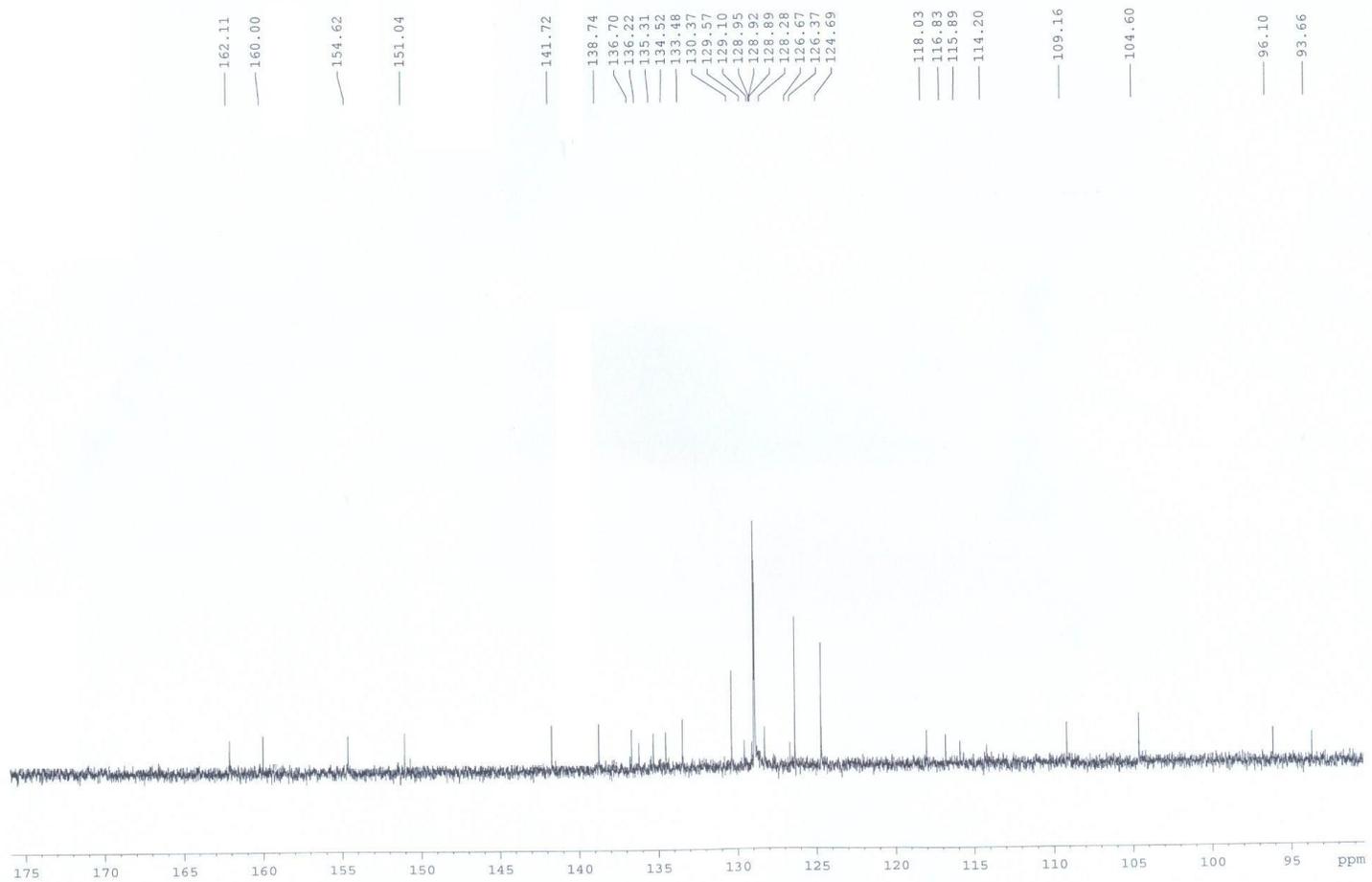
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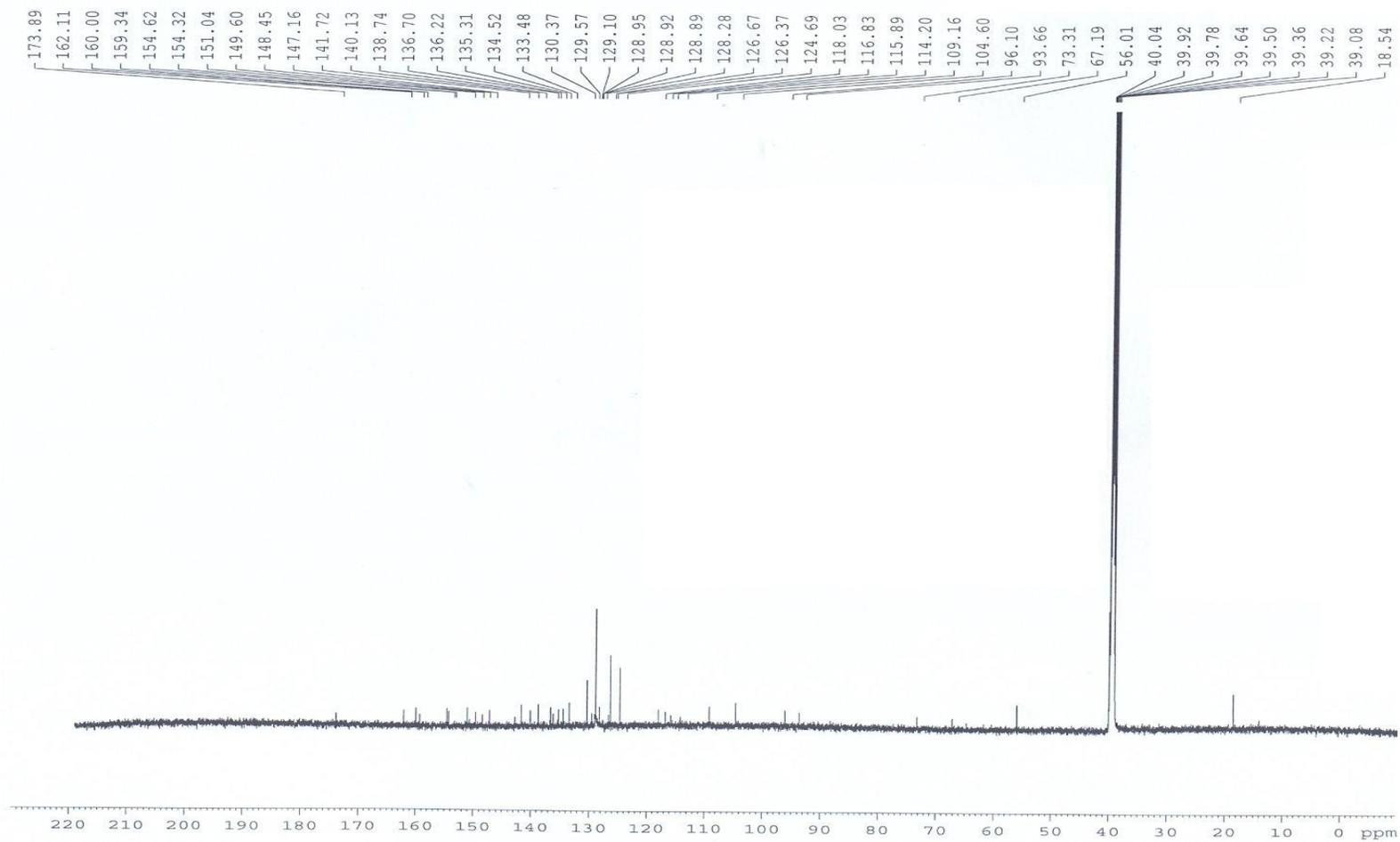
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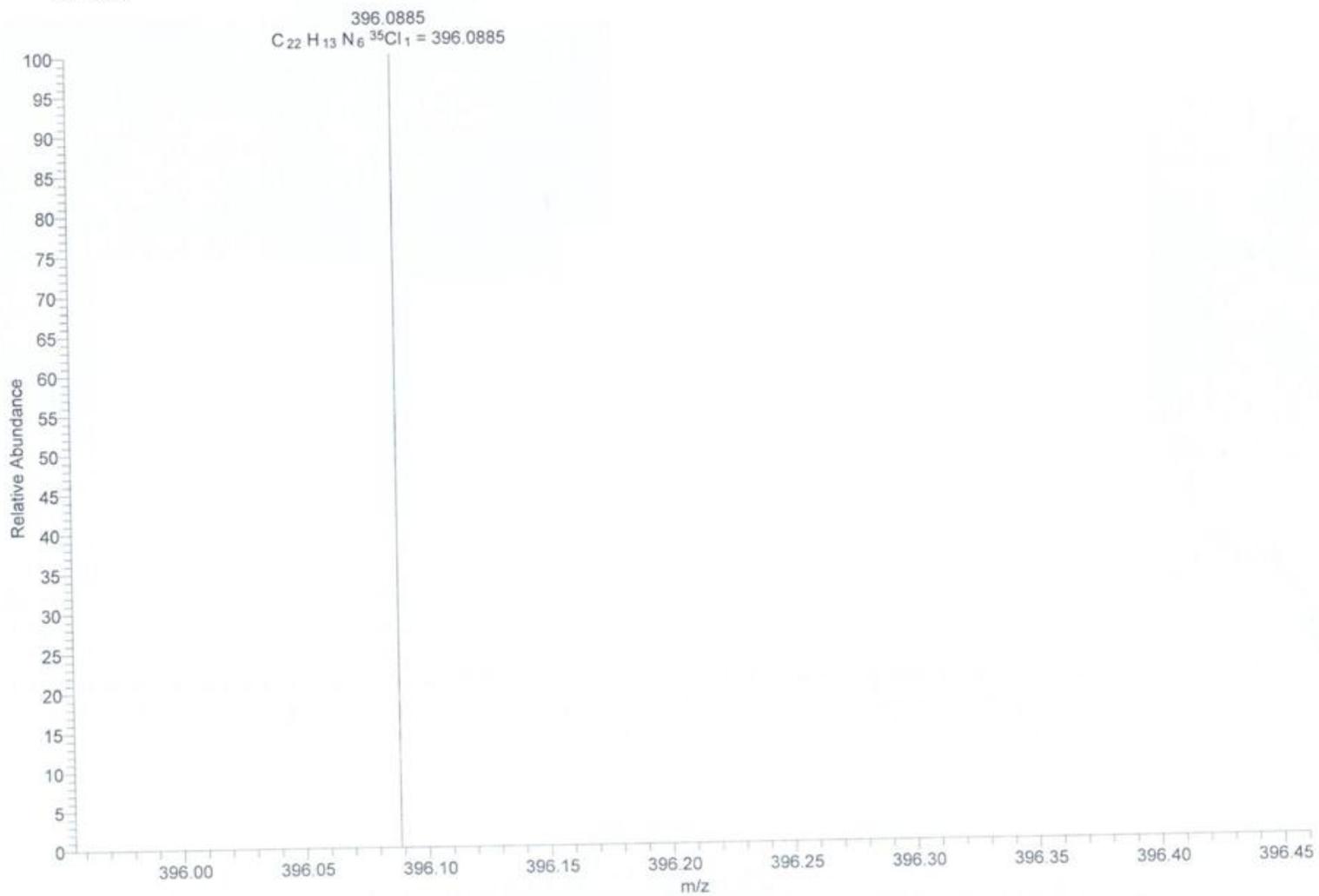
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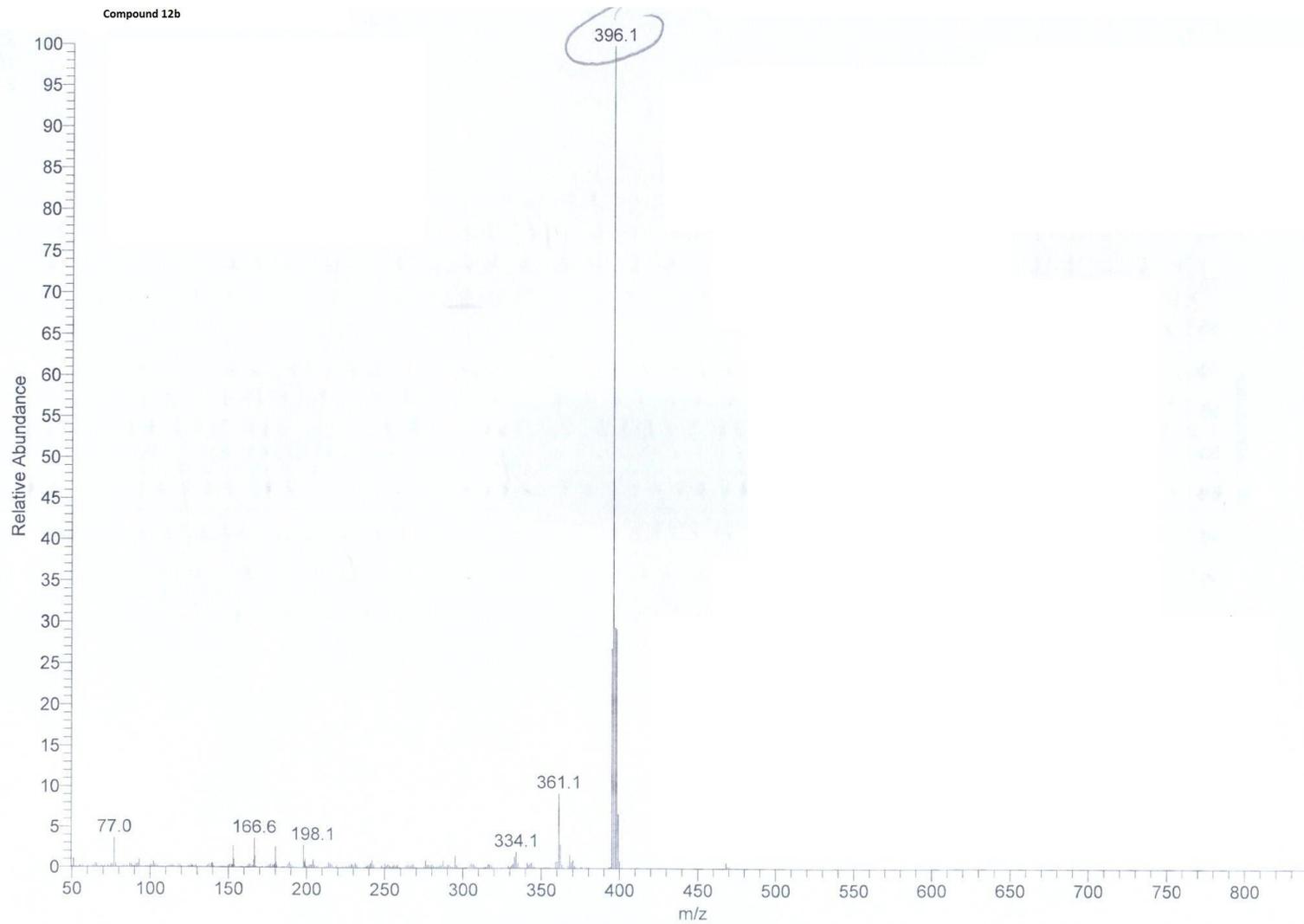
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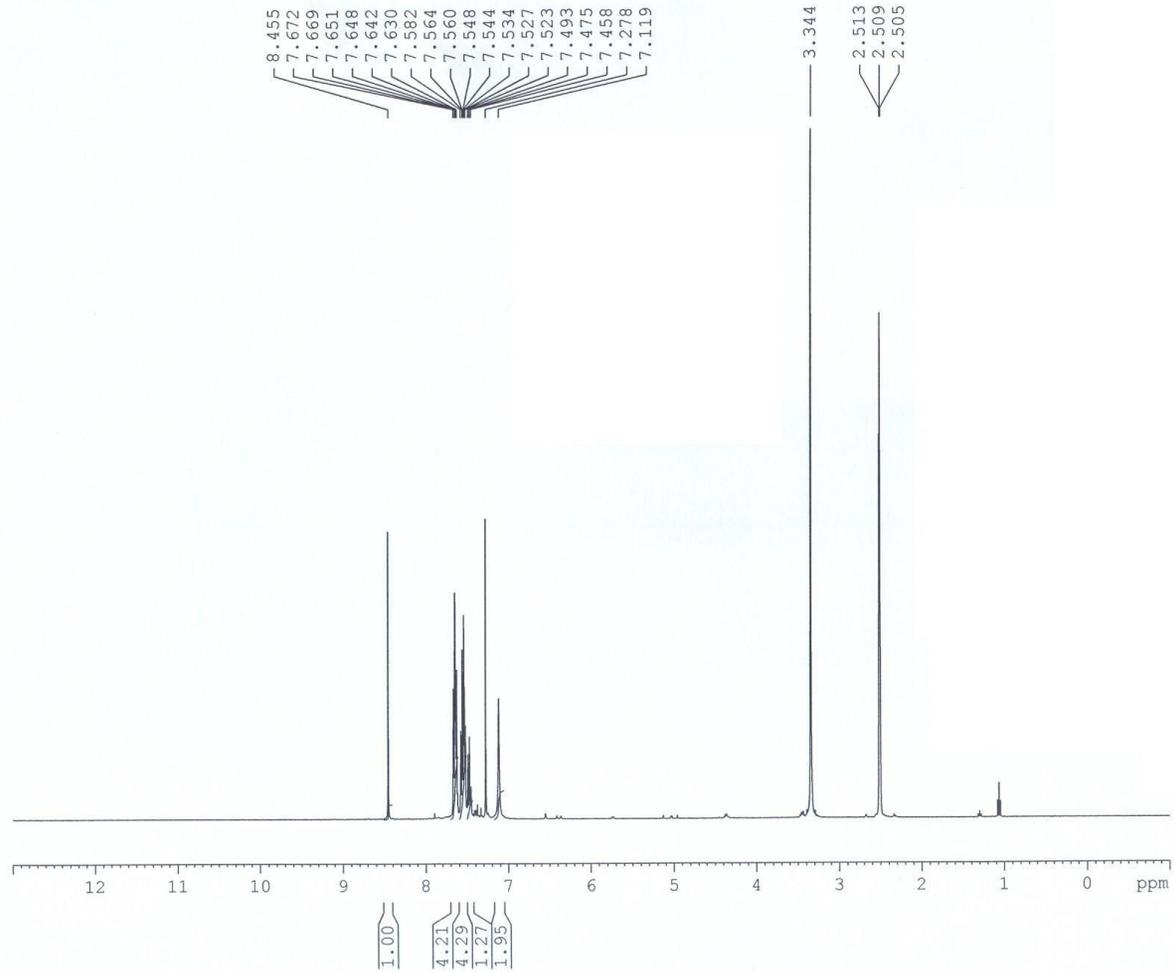
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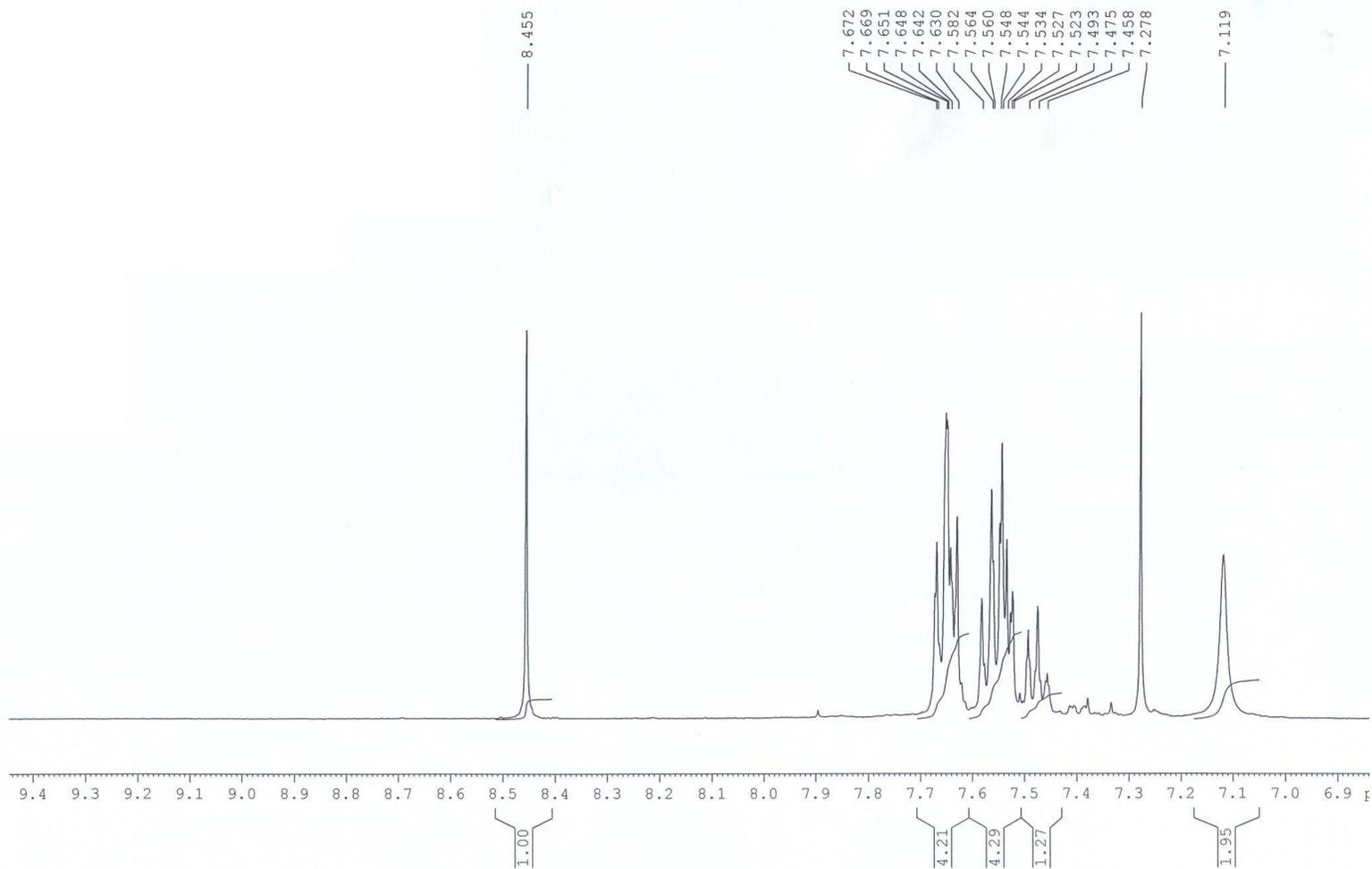
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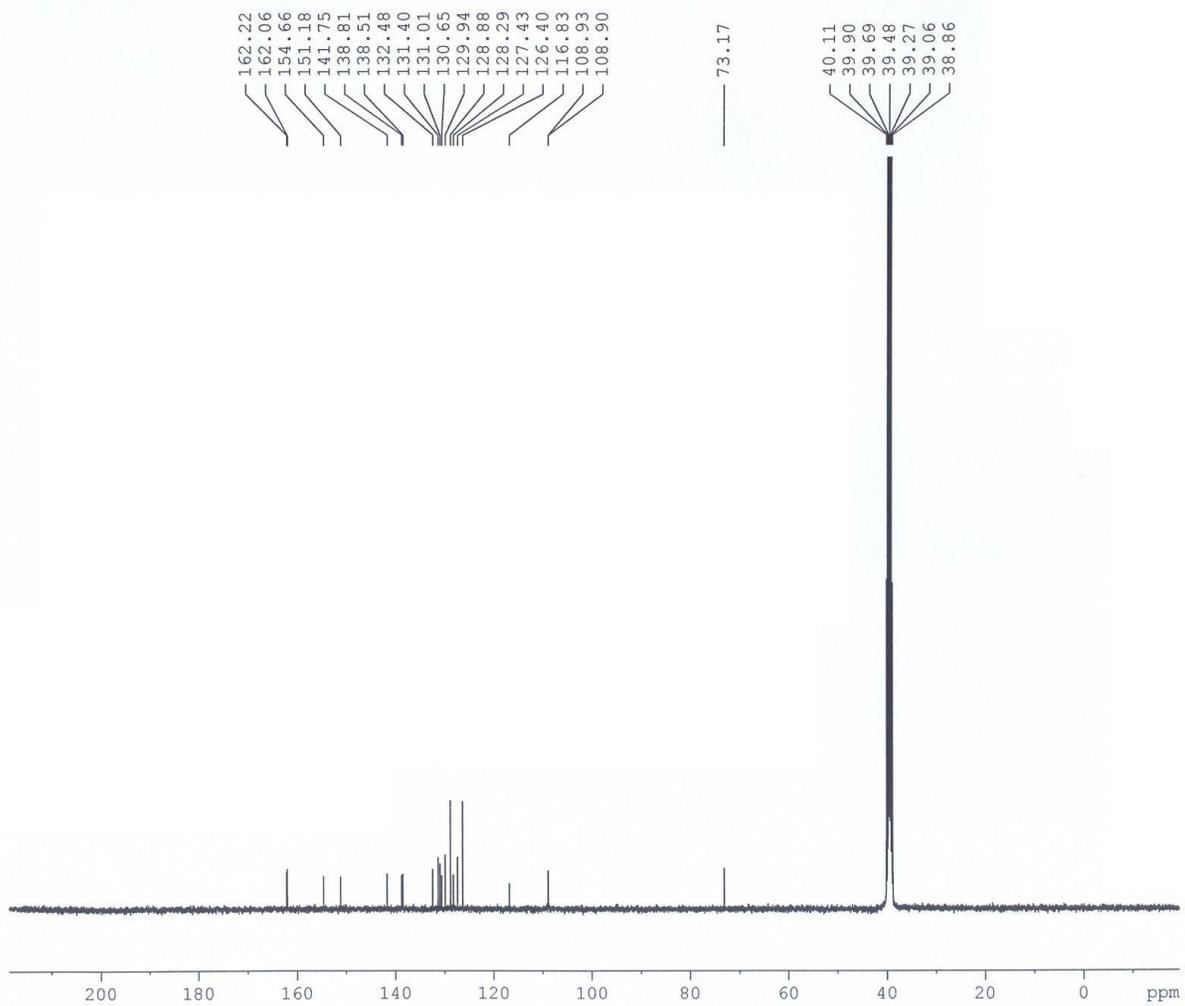
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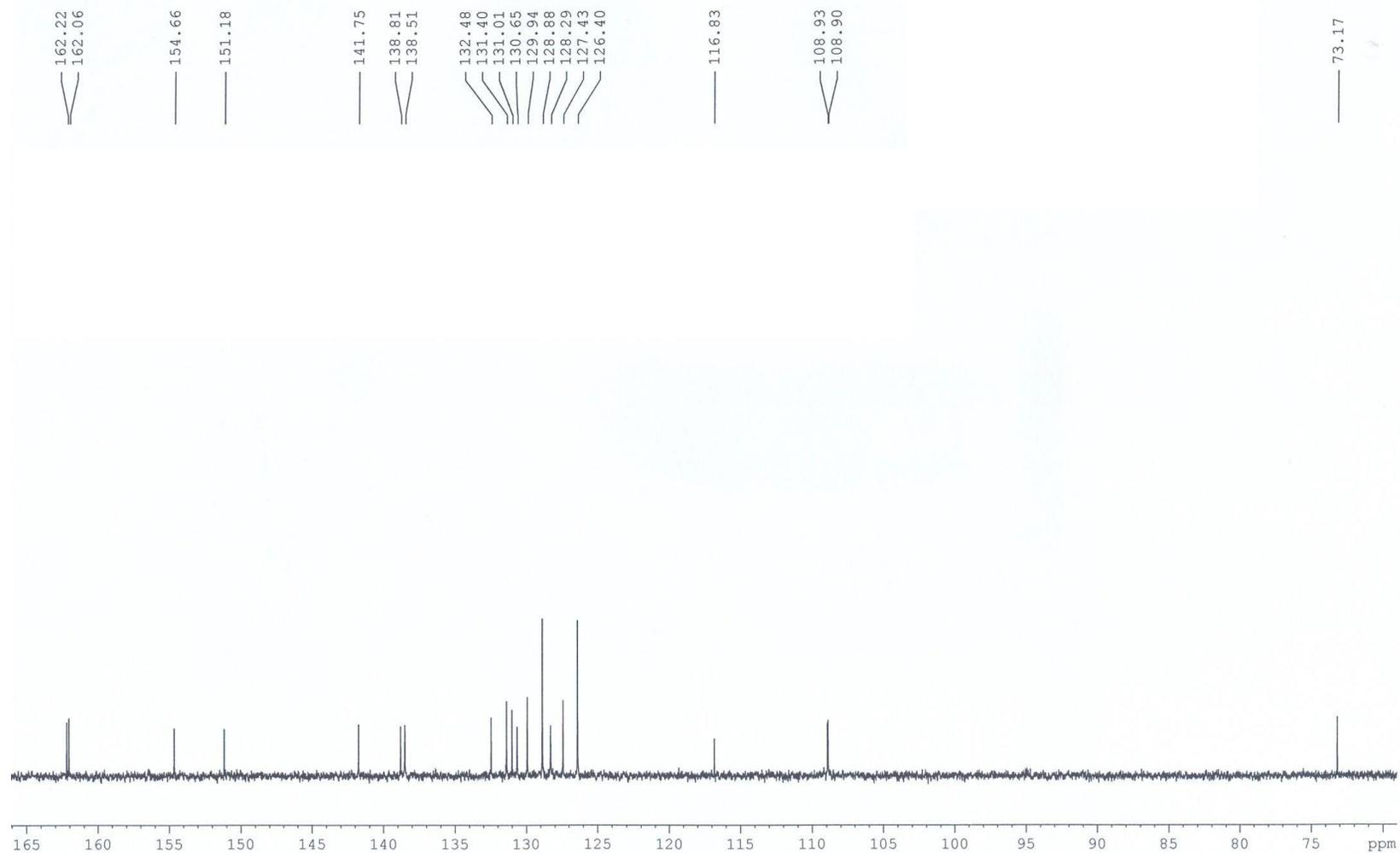
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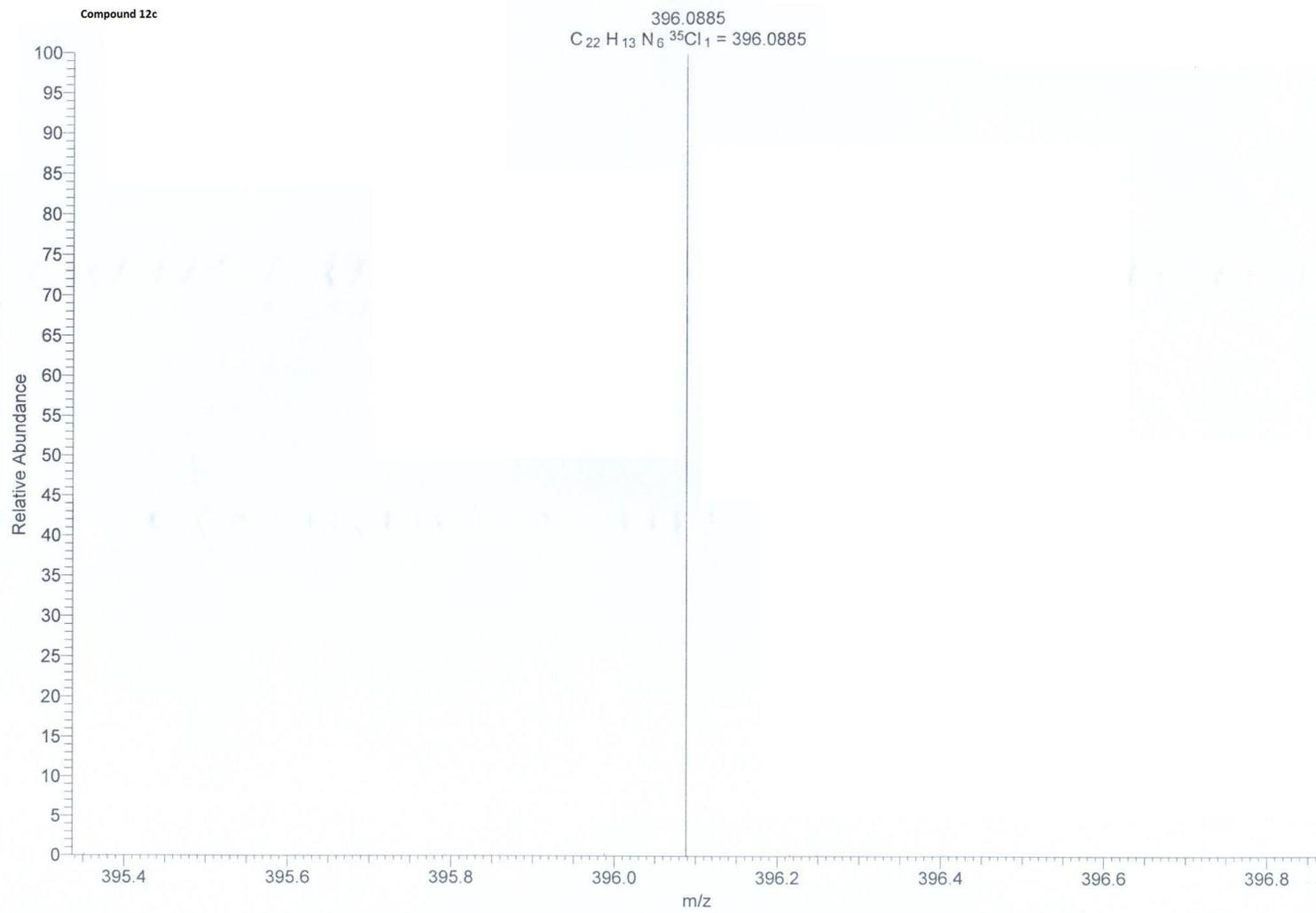
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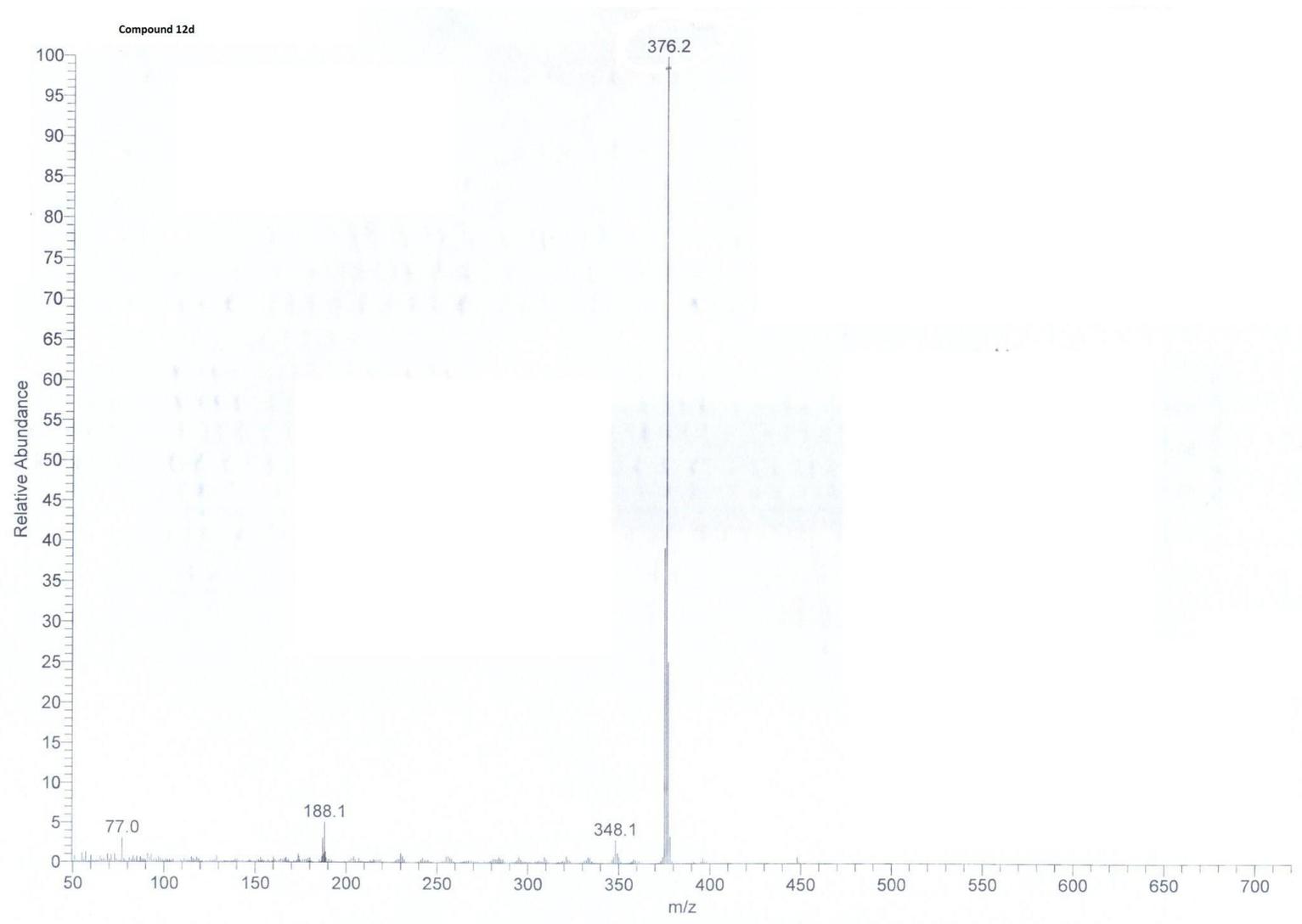


Compound 12b

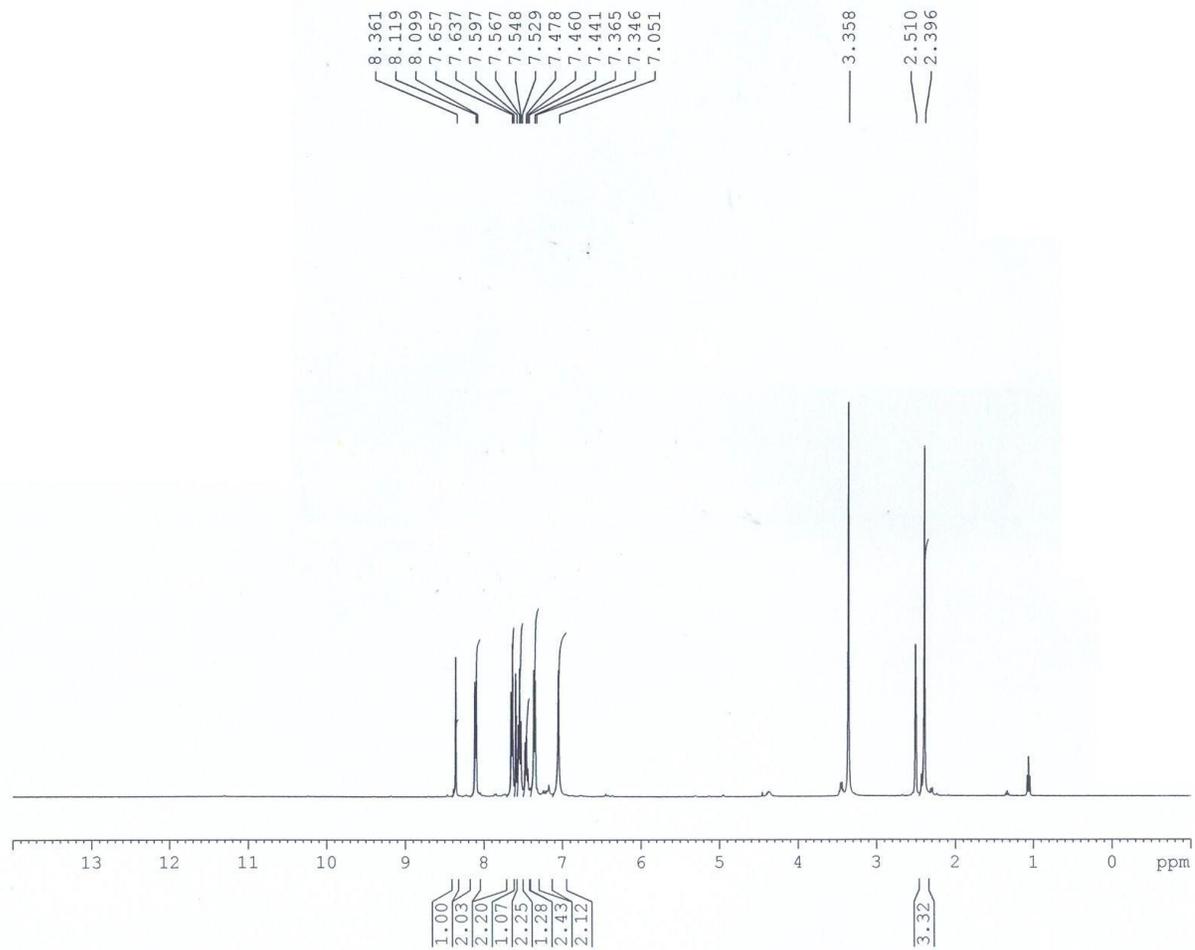


Compound 12c

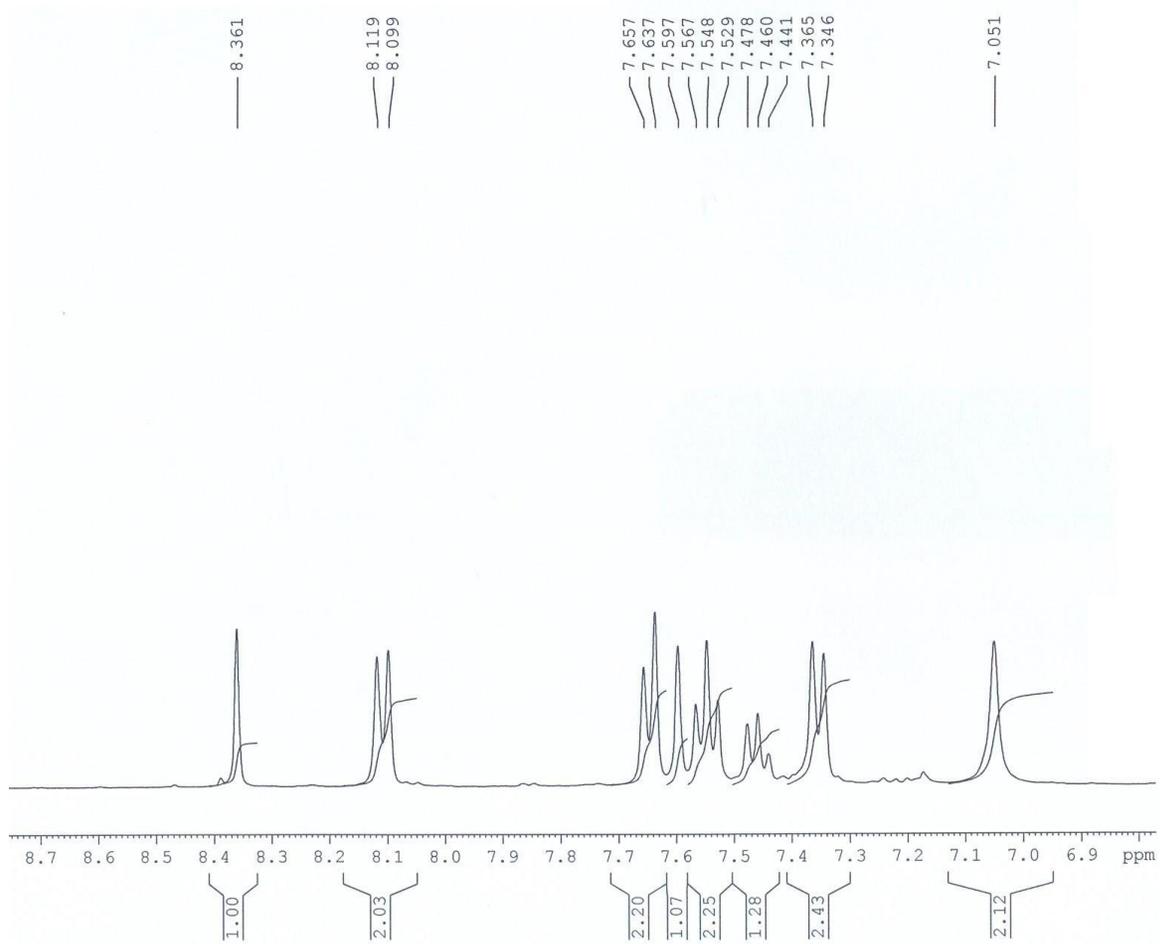




Compound 12d



Compound 12d



Compound 12d

162.06
161.25

154.56

150.94

141.73

140.27

138.83

135.10

133.20

129.40

128.84

128.17

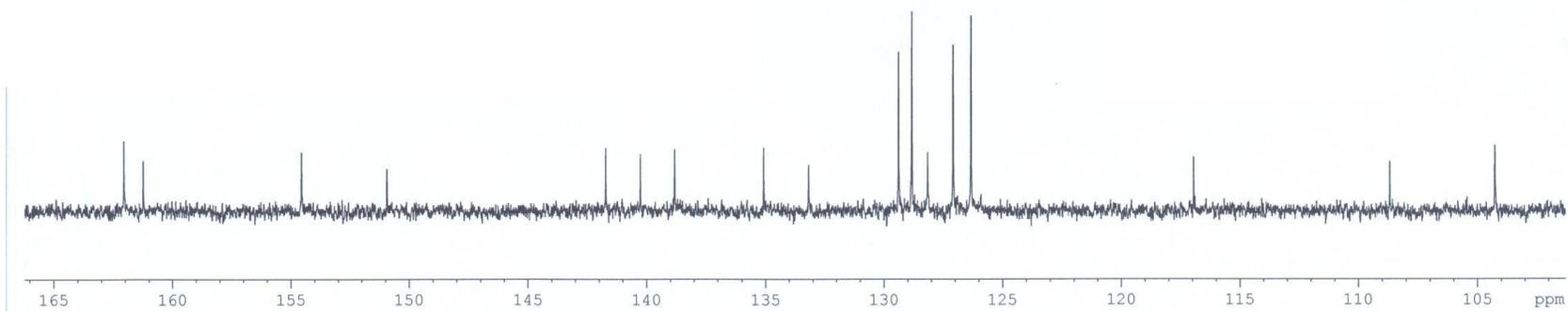
127.10

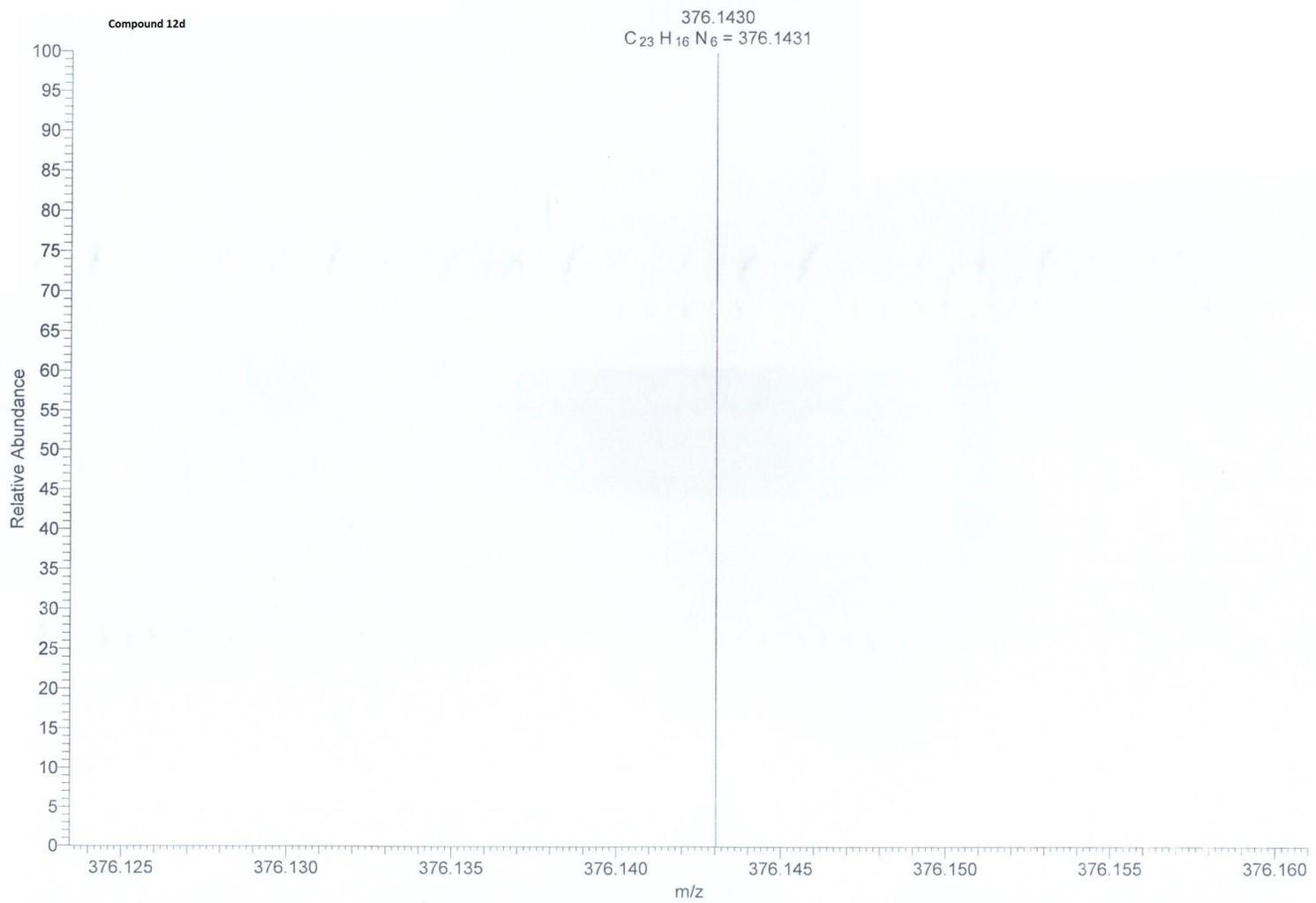
126.34

116.97

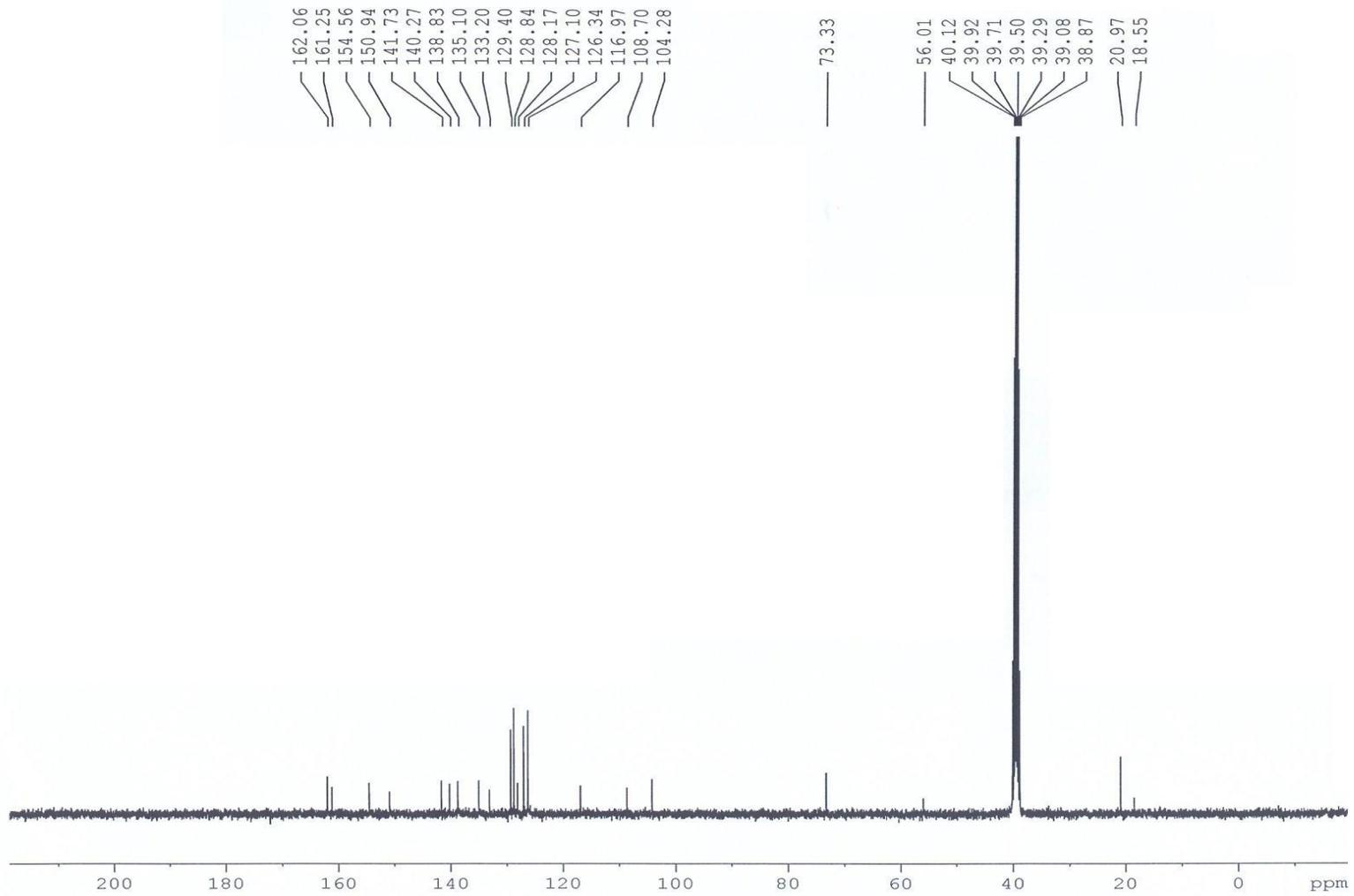
108.70

104.28

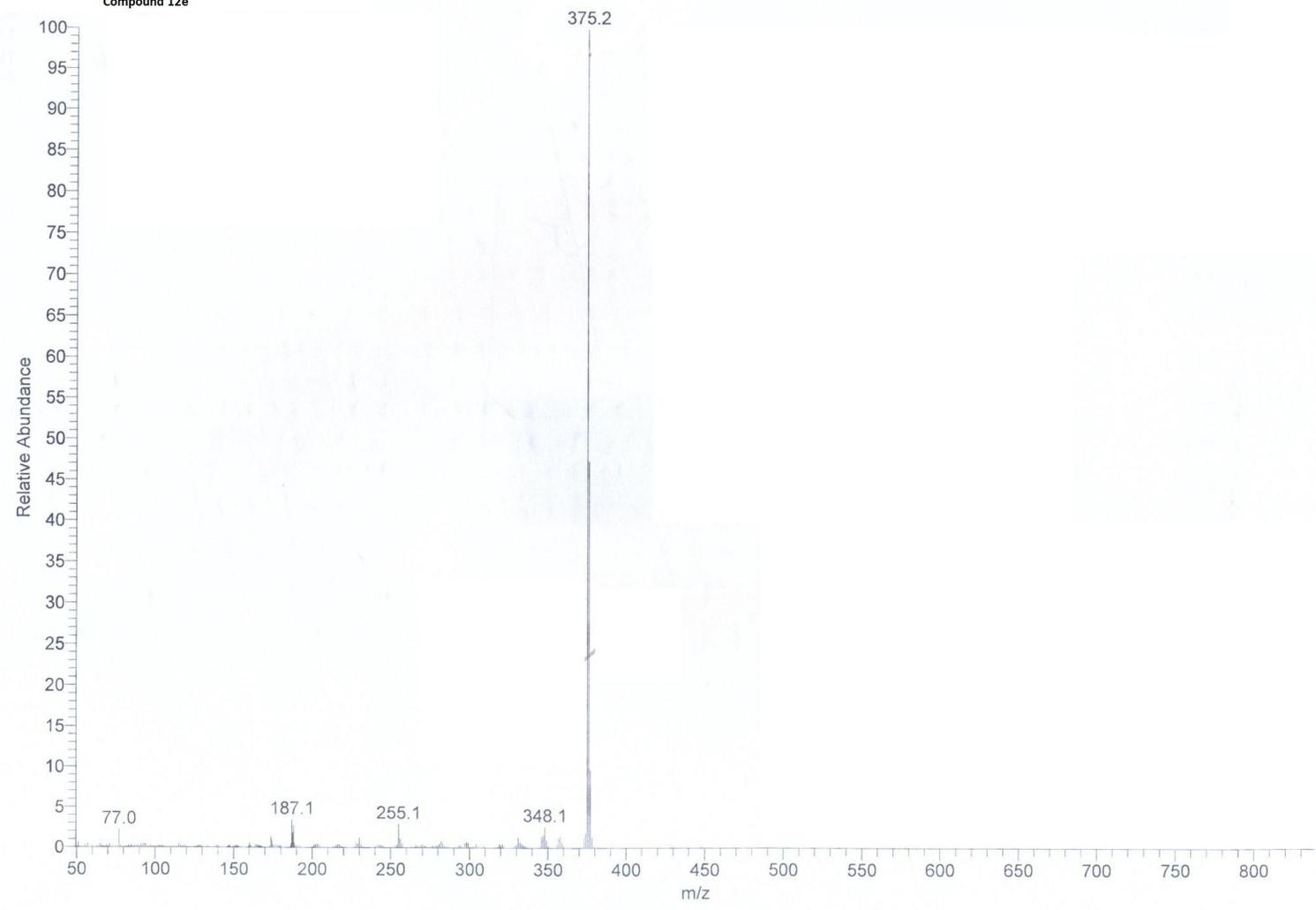




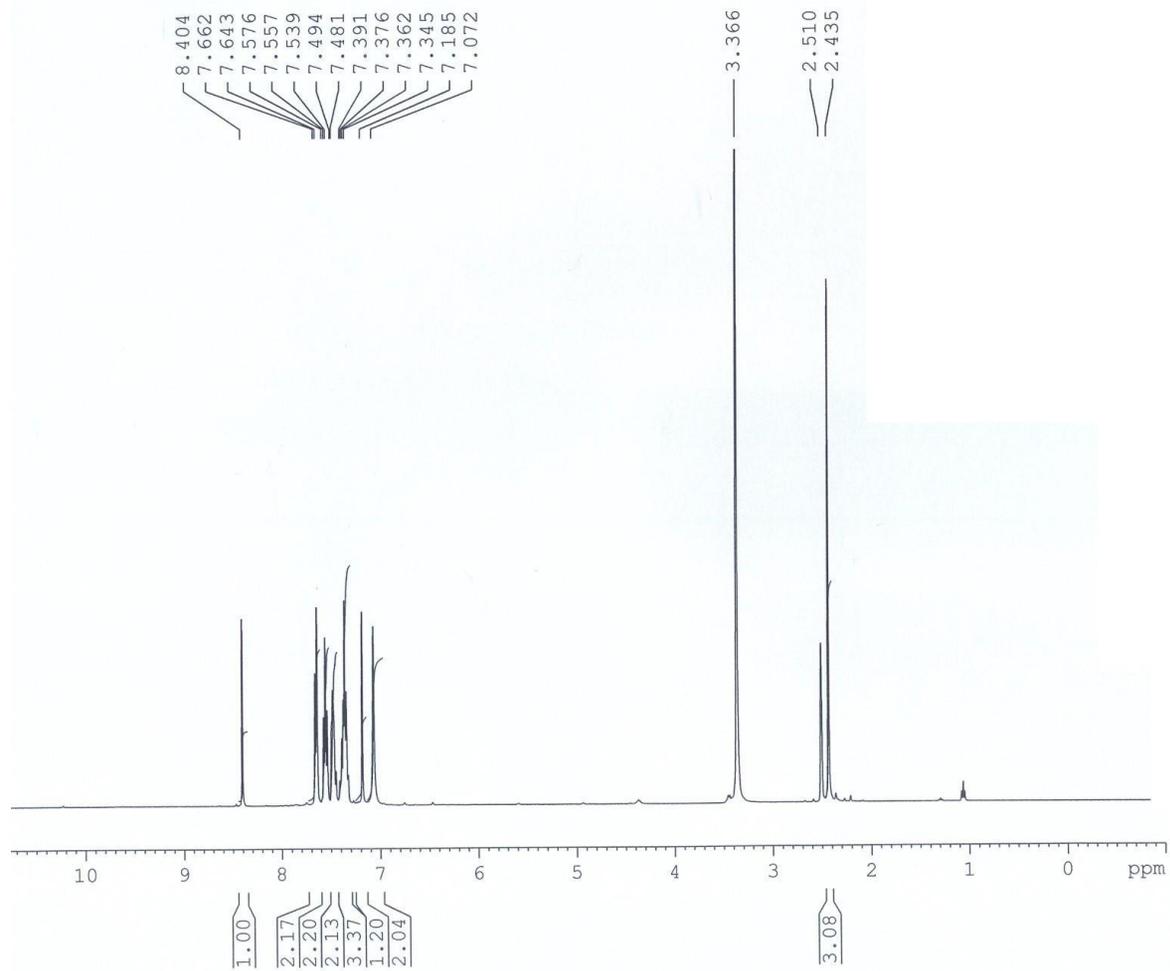
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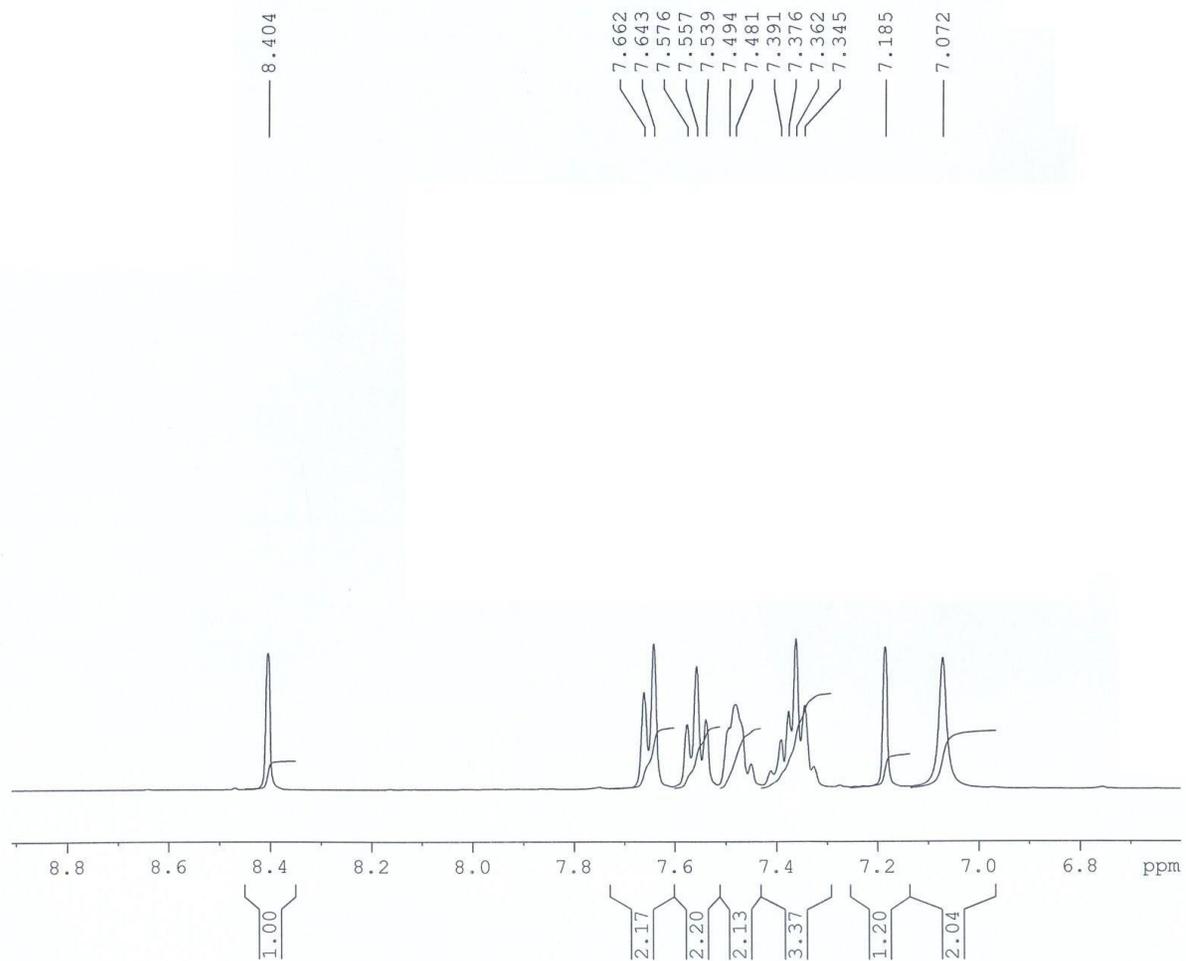
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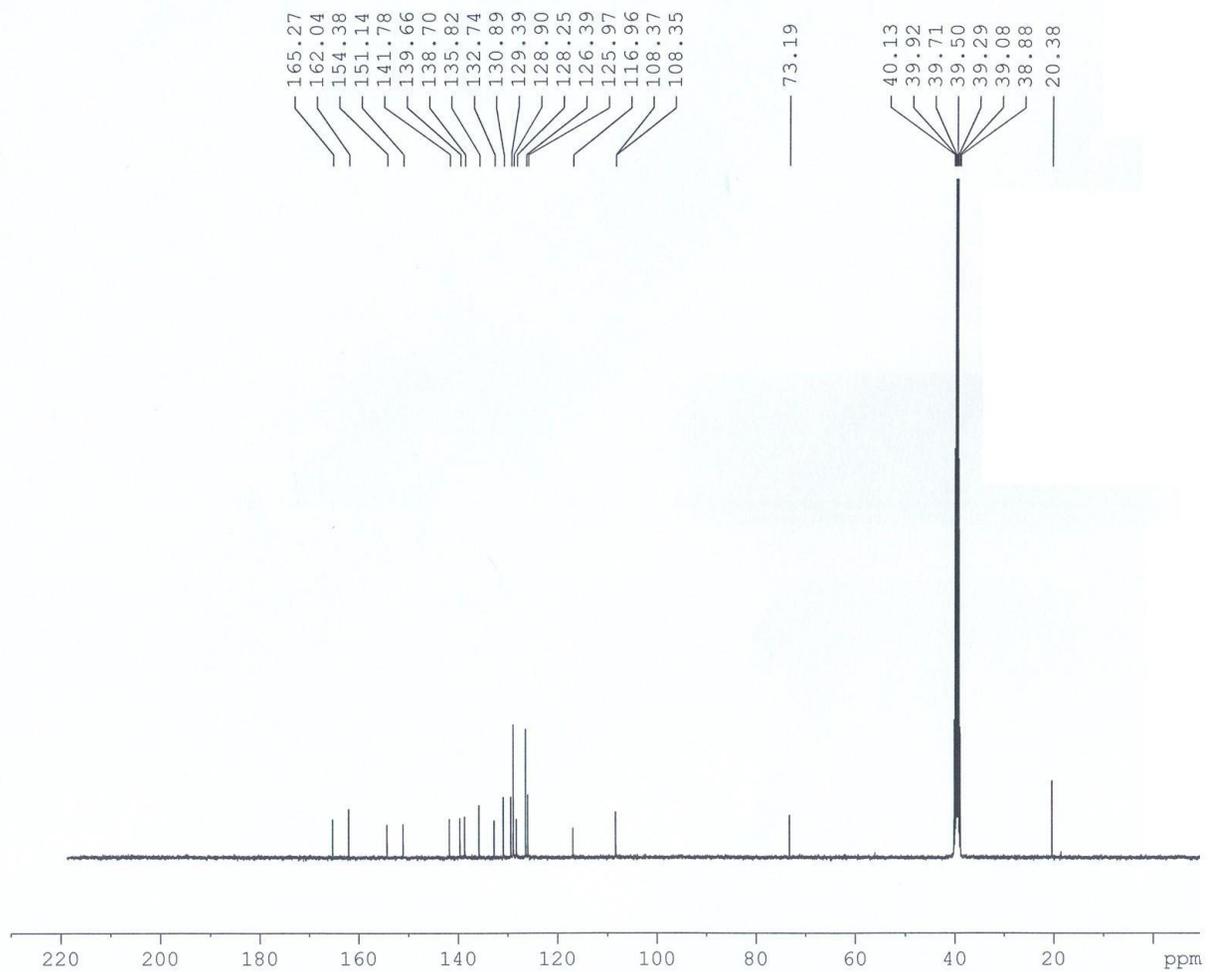
Compound 12e



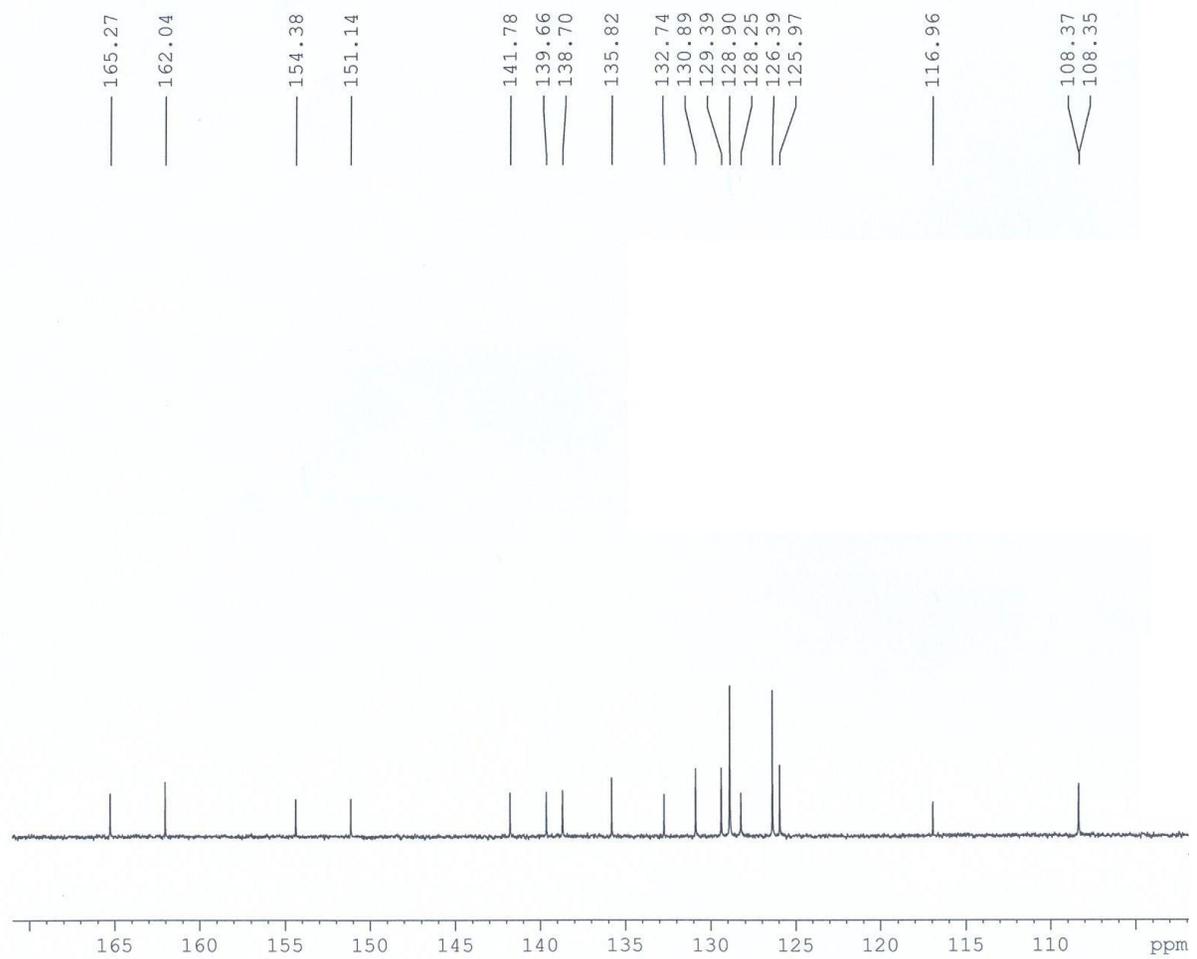
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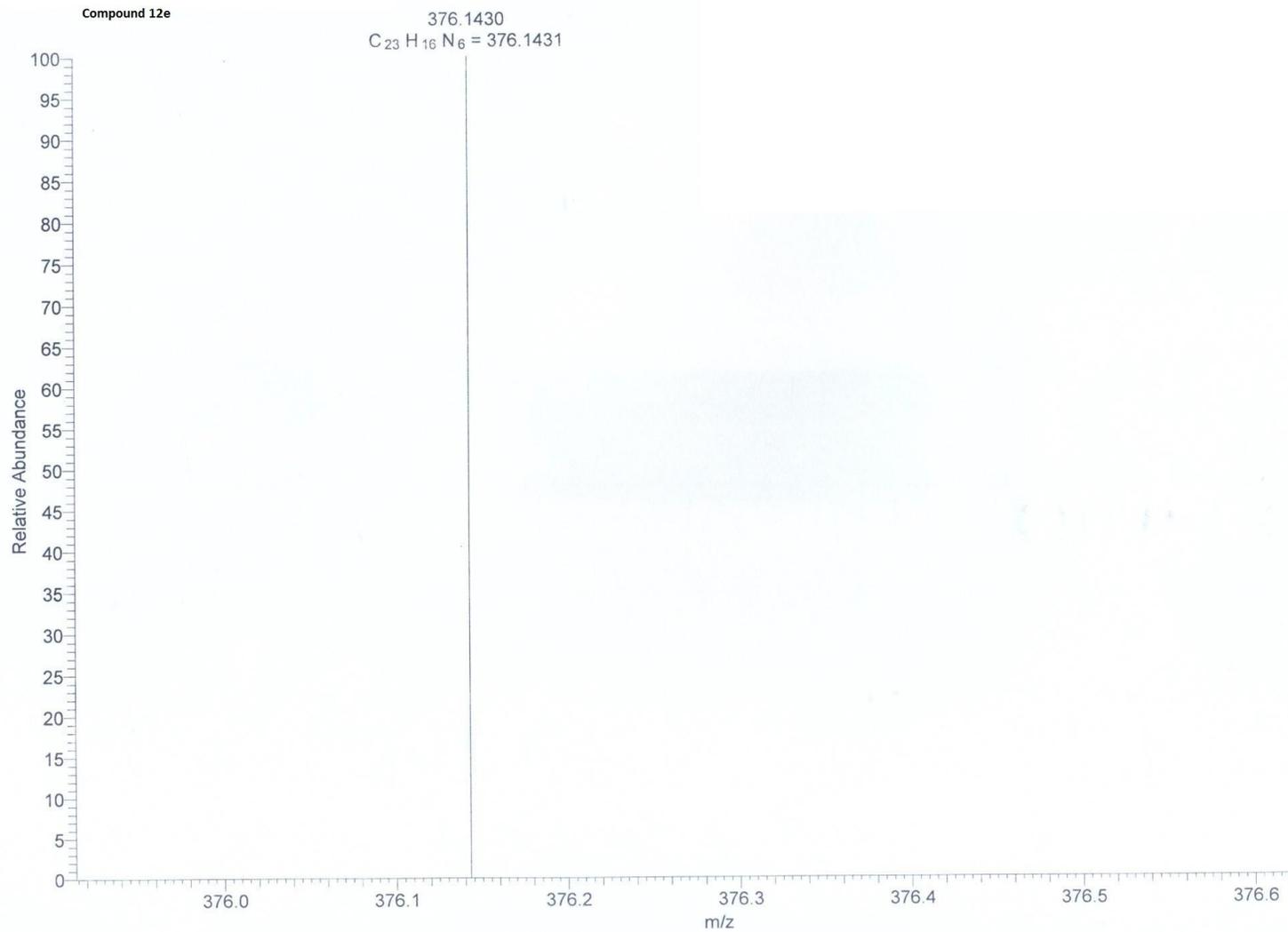
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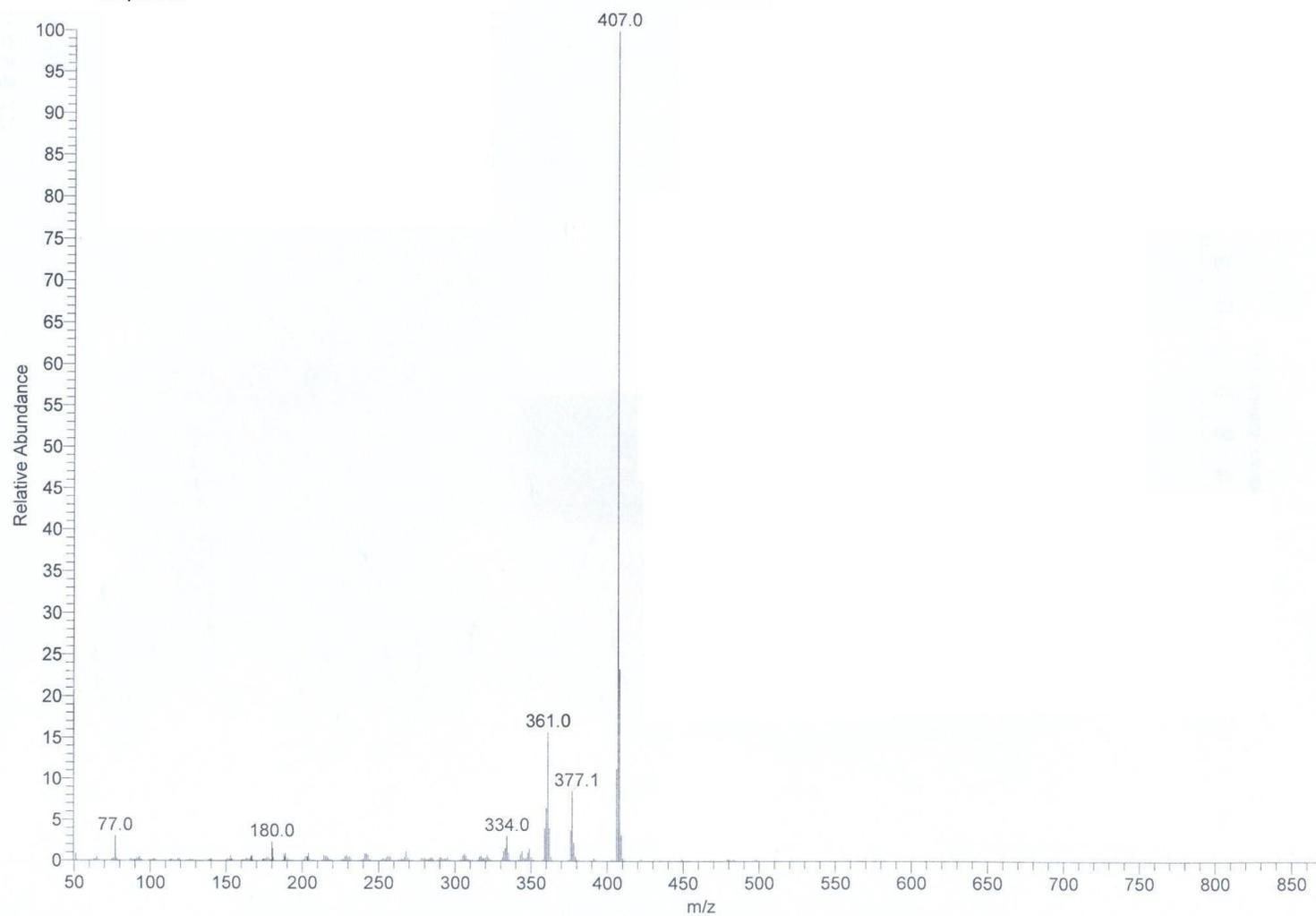
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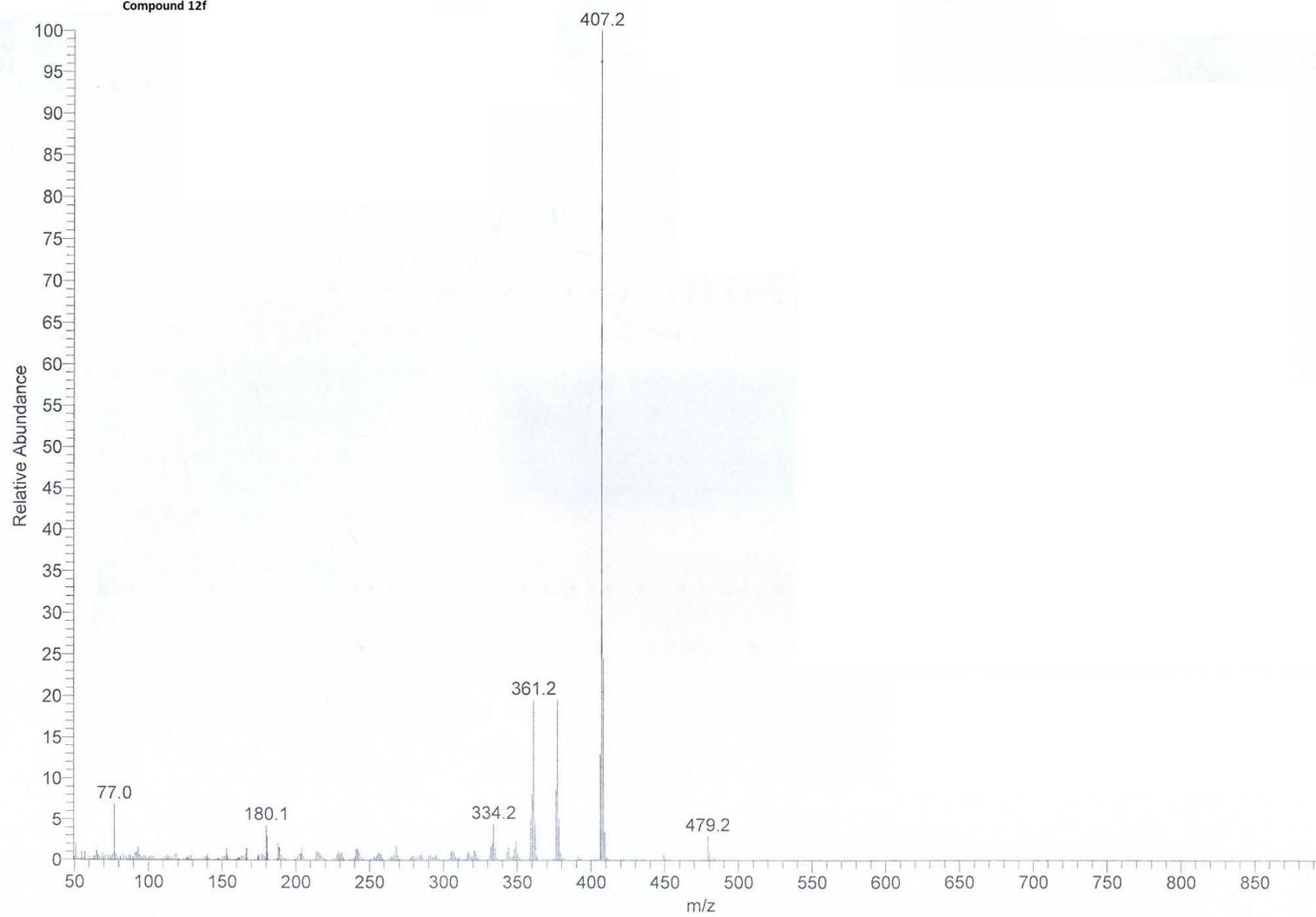
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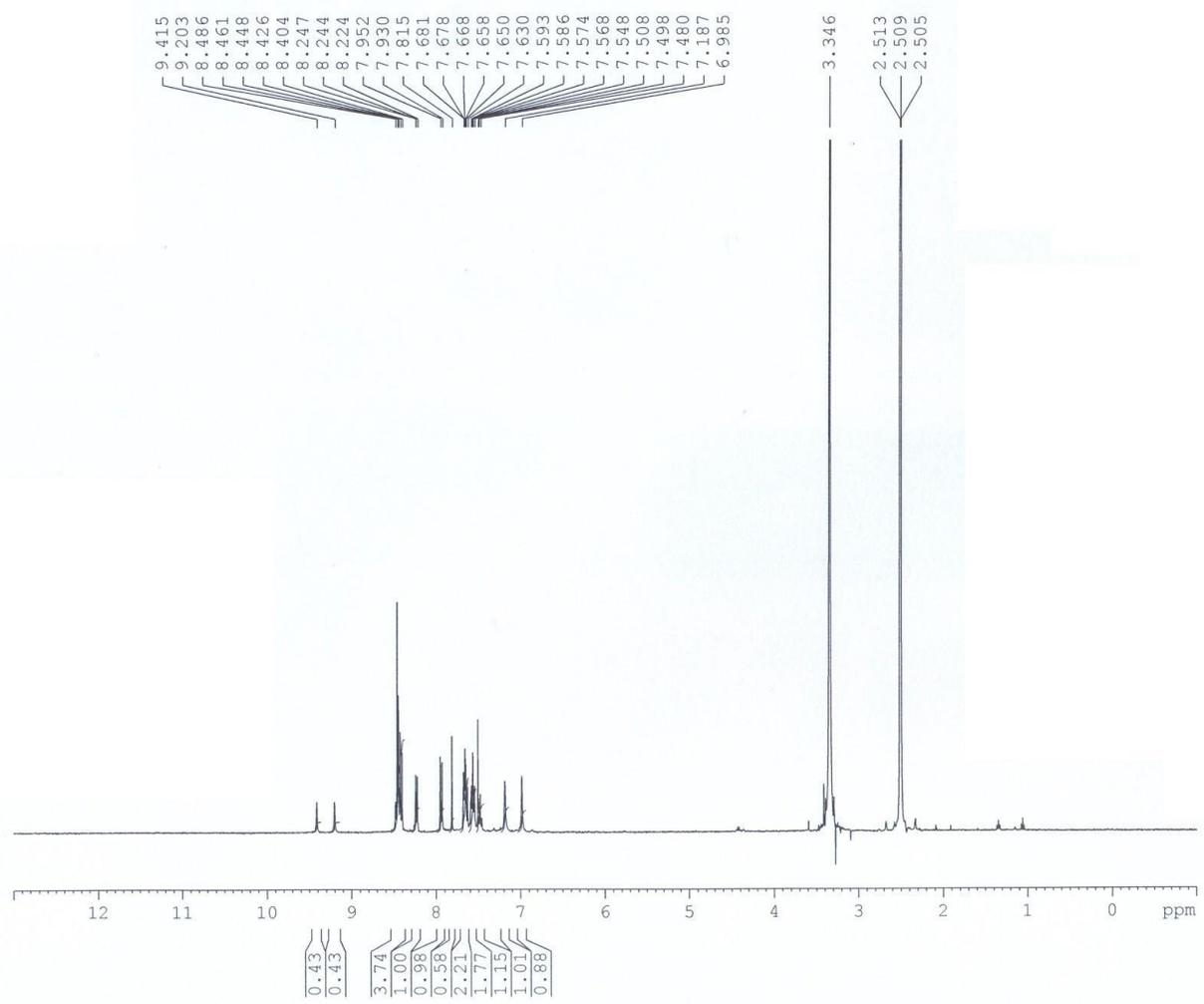
Compound 12f



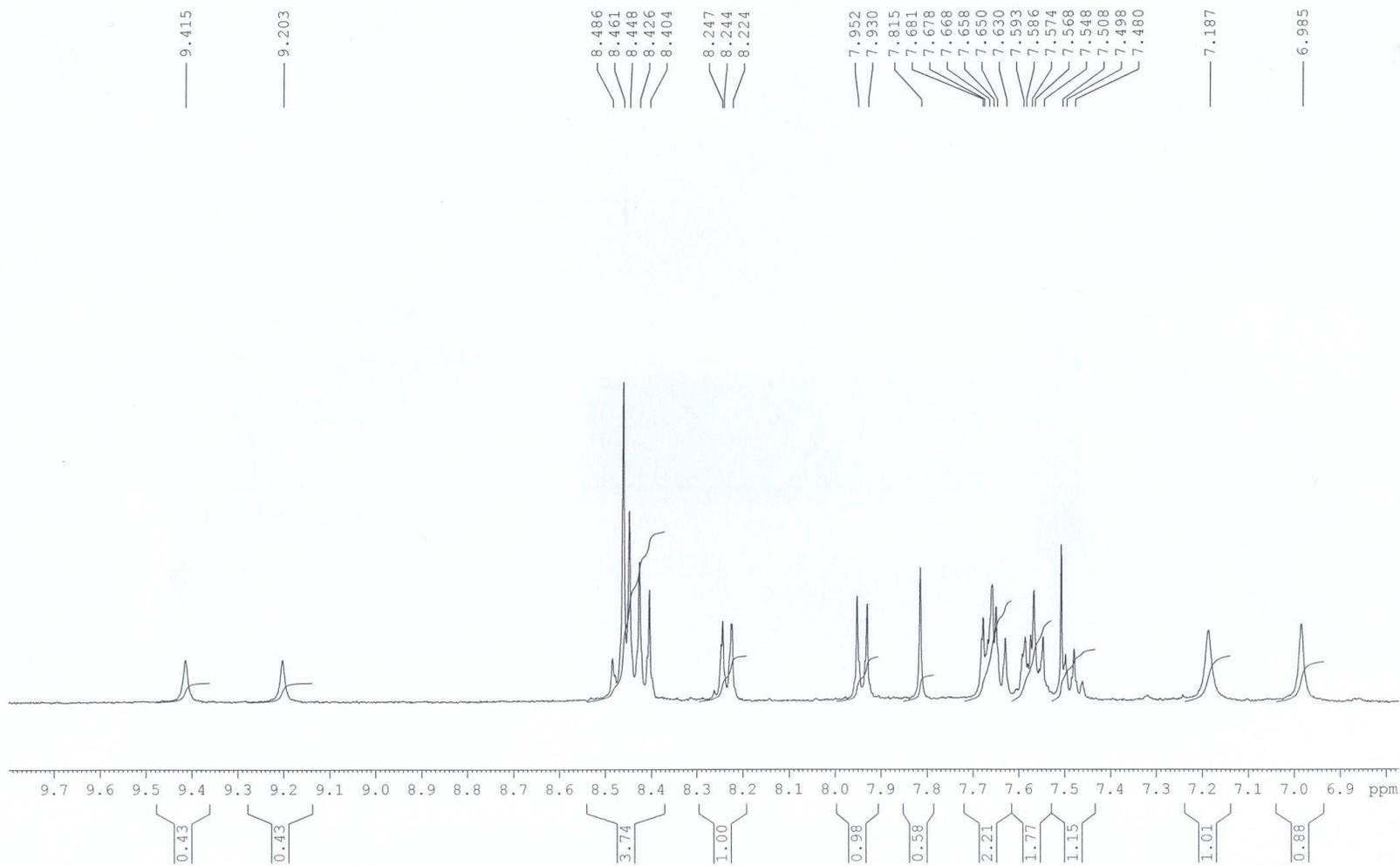
Compound 12f



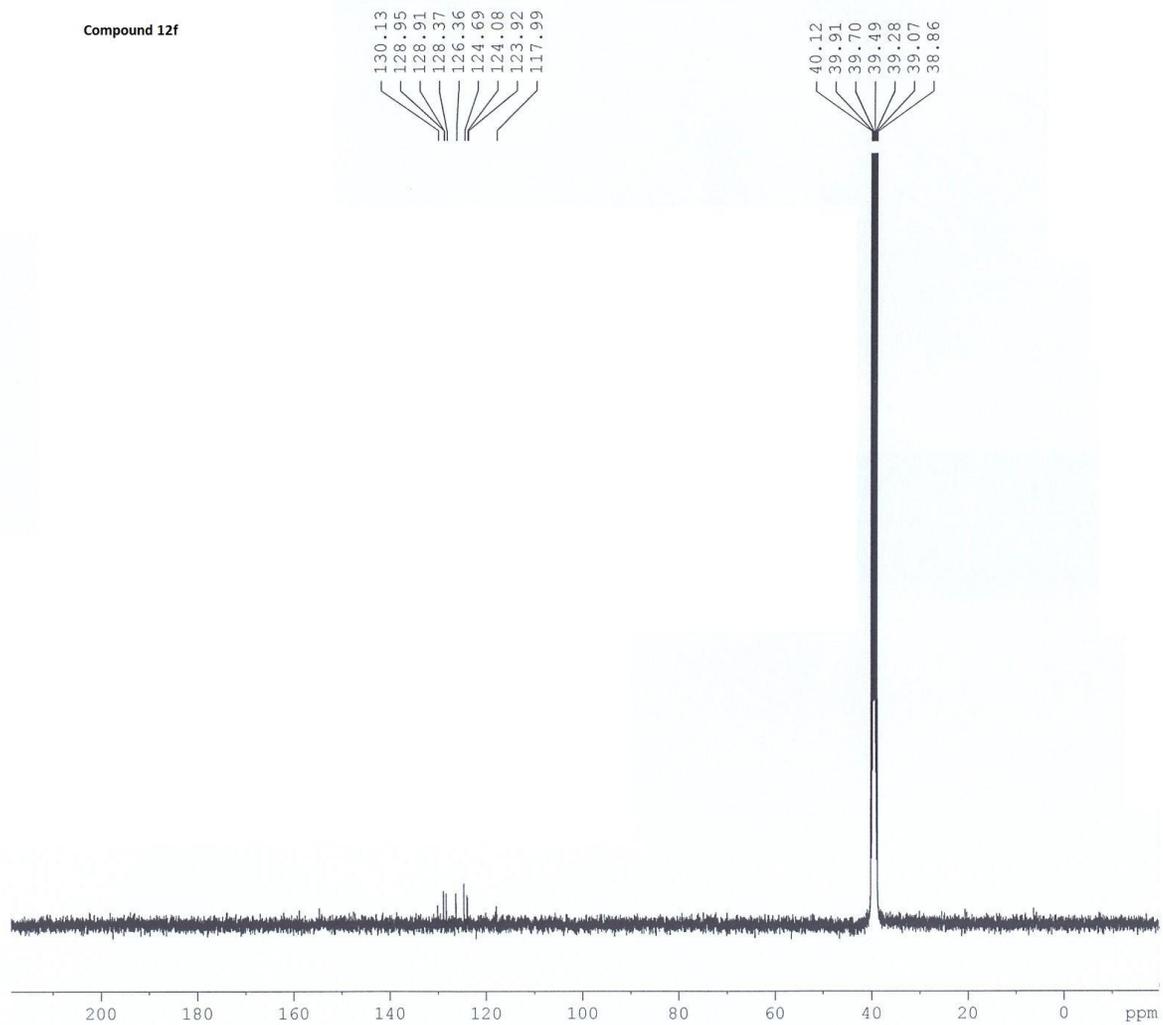
Compound 12f



Compound 12f



Compound 12f



Compound 12f

130.13

128.95

128.91

128.37

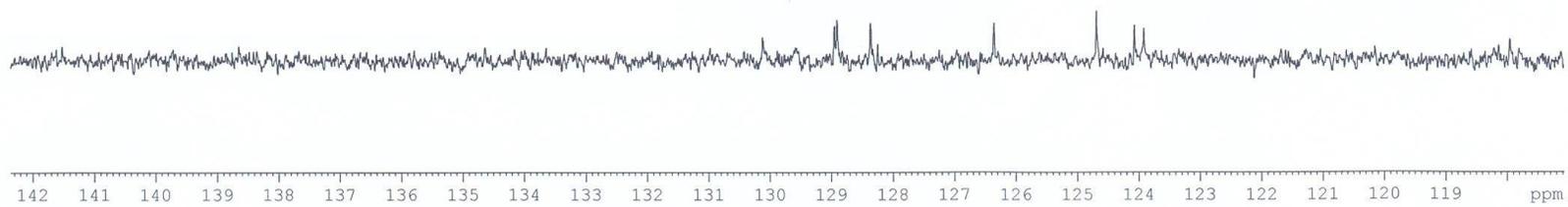
126.36

124.69

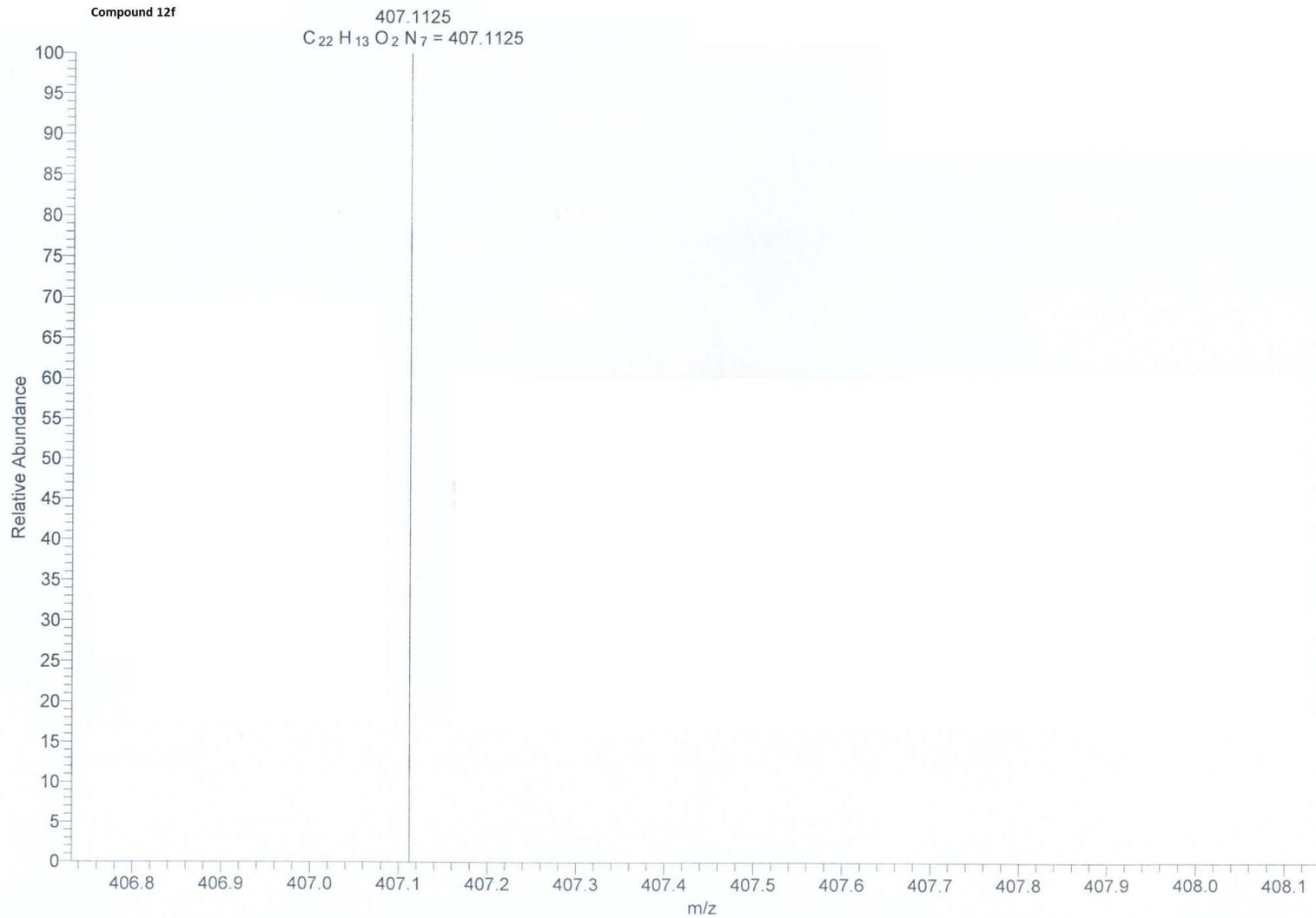
124.08

123.92

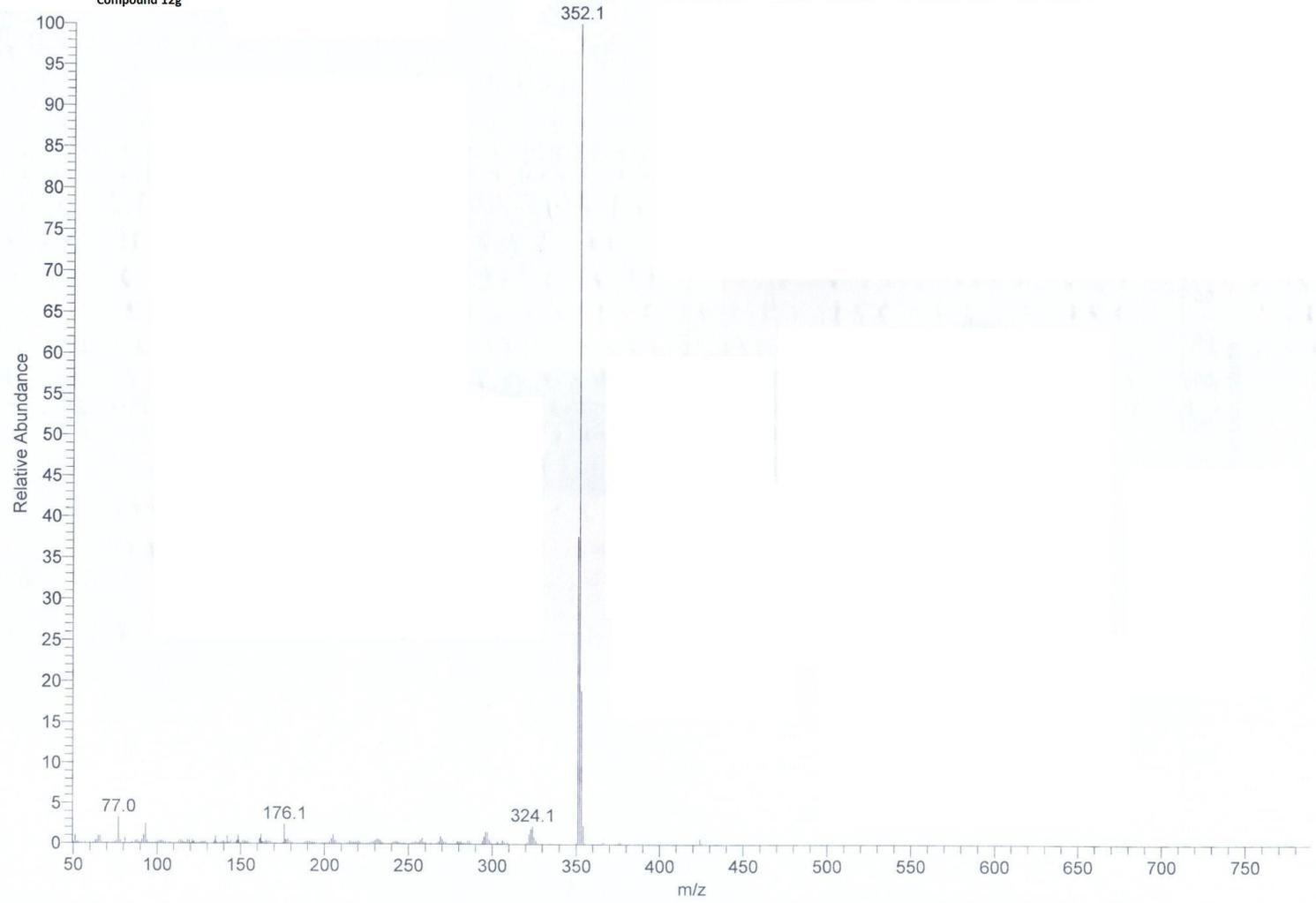
117.99



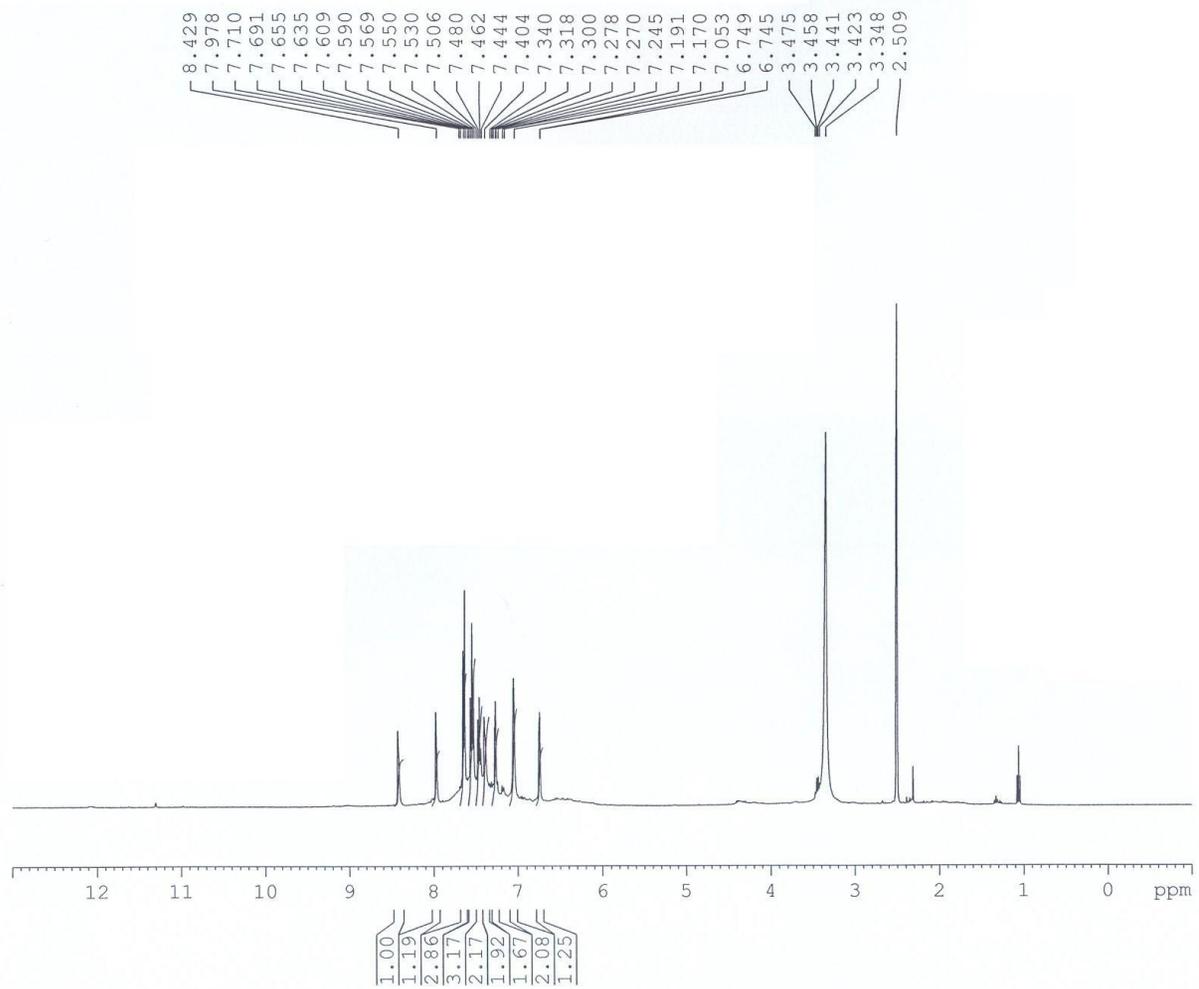
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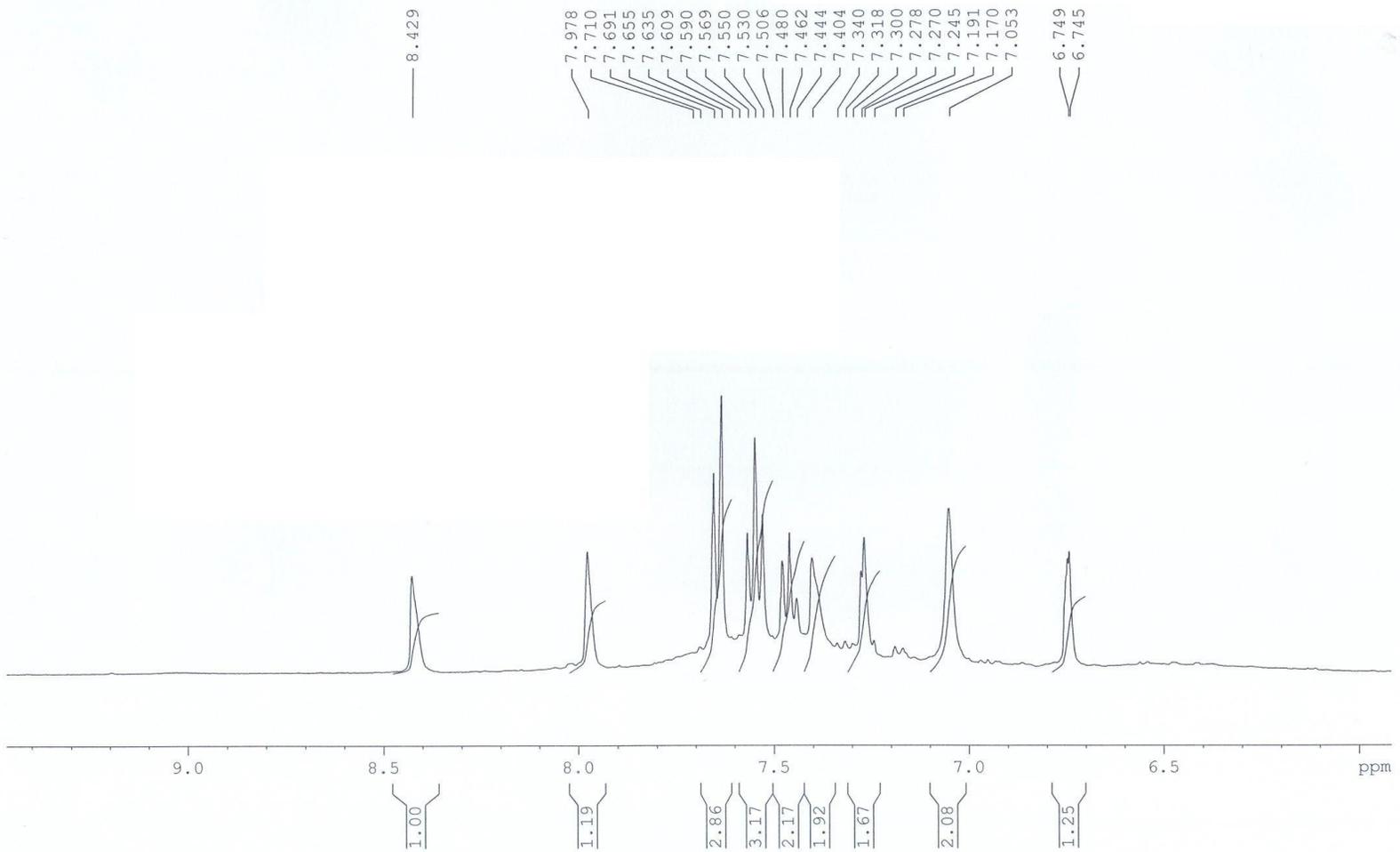
Compound 12g



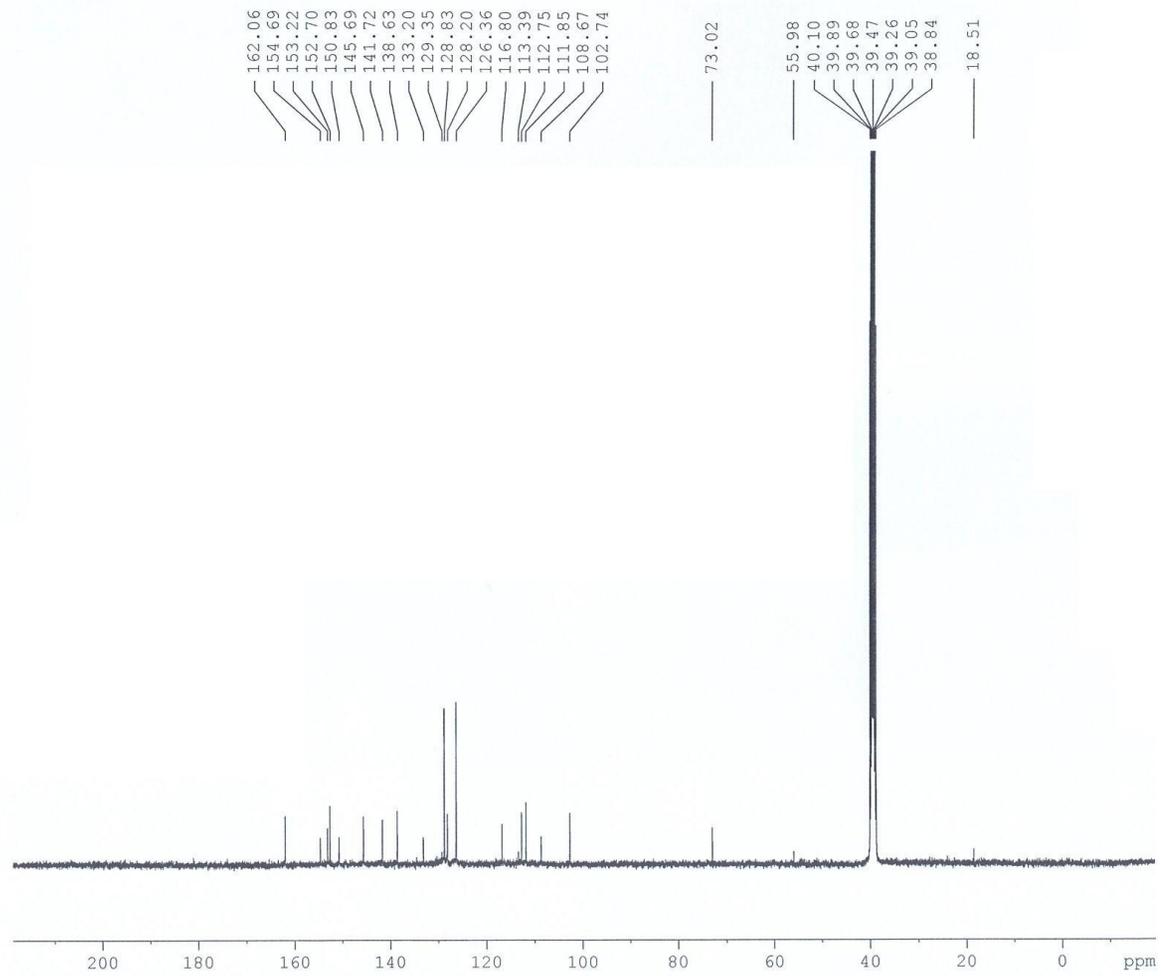
Compound 12g



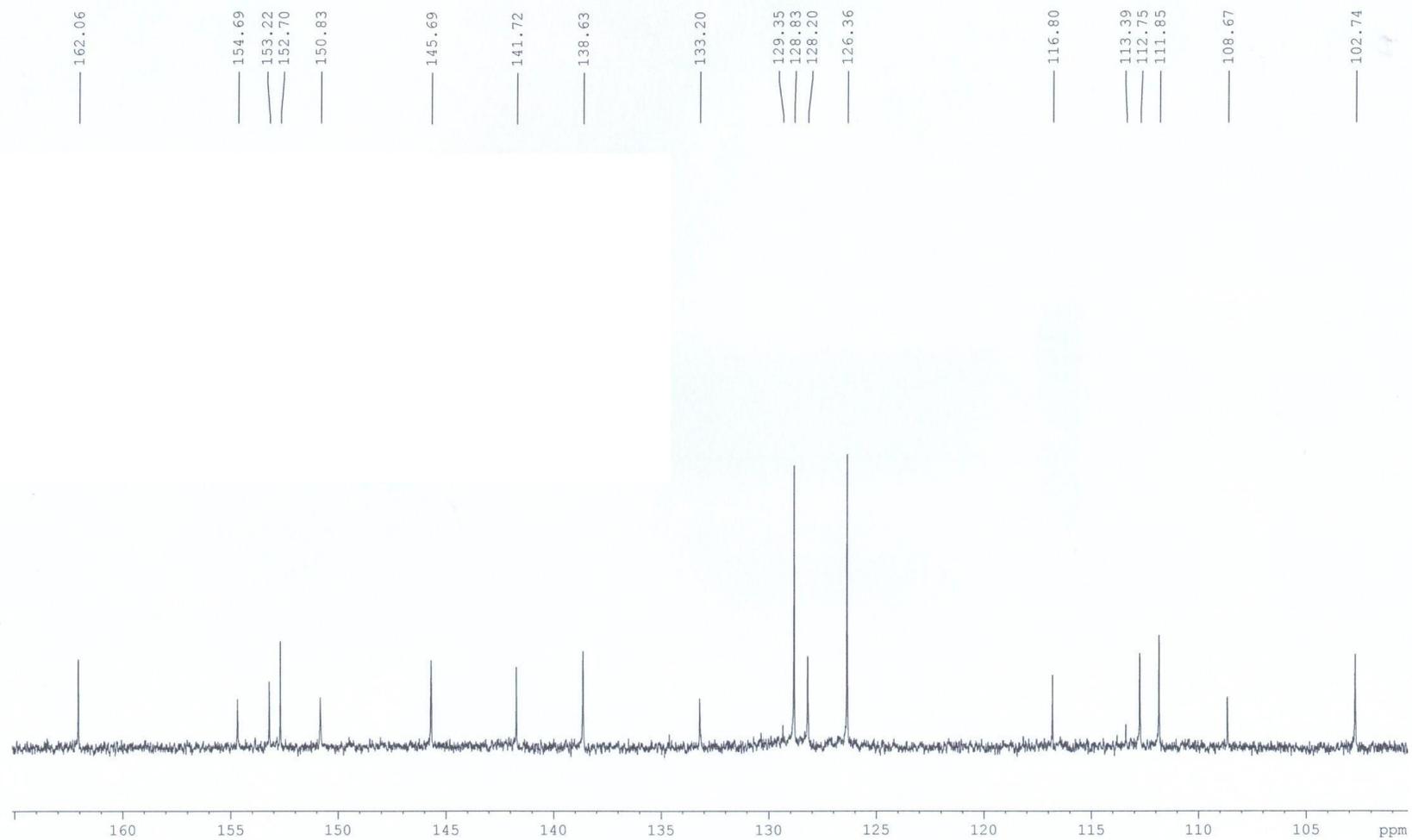
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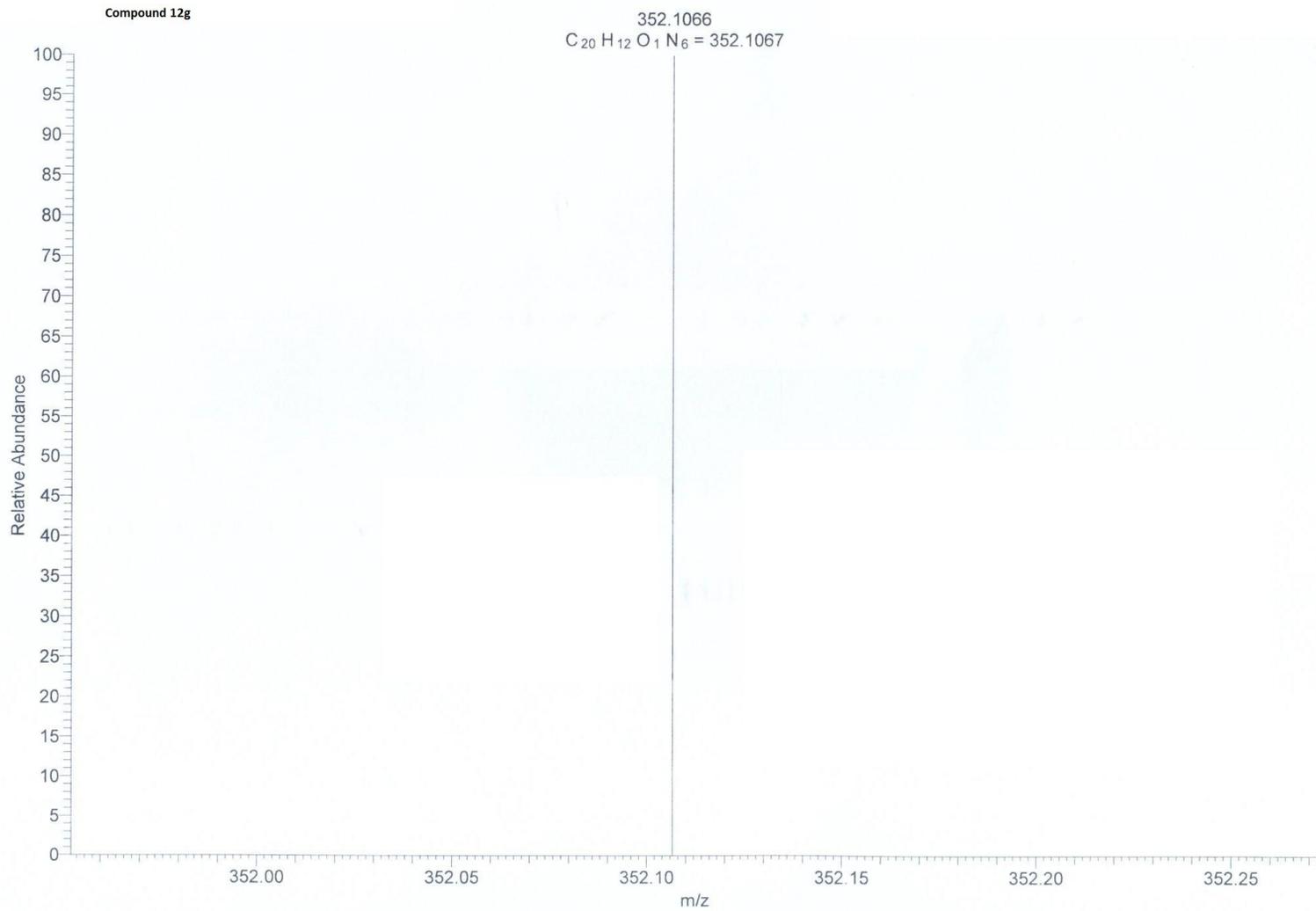
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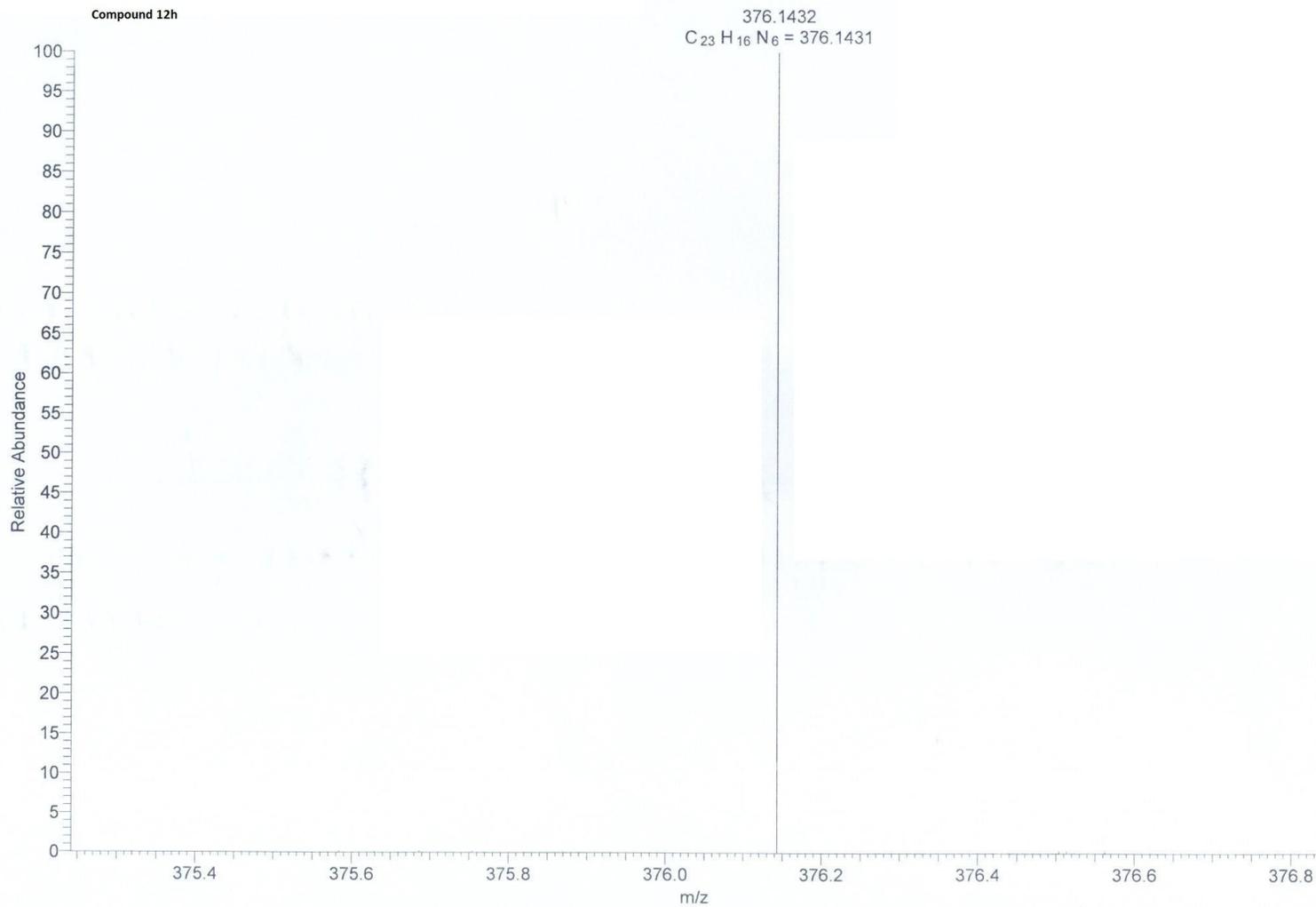
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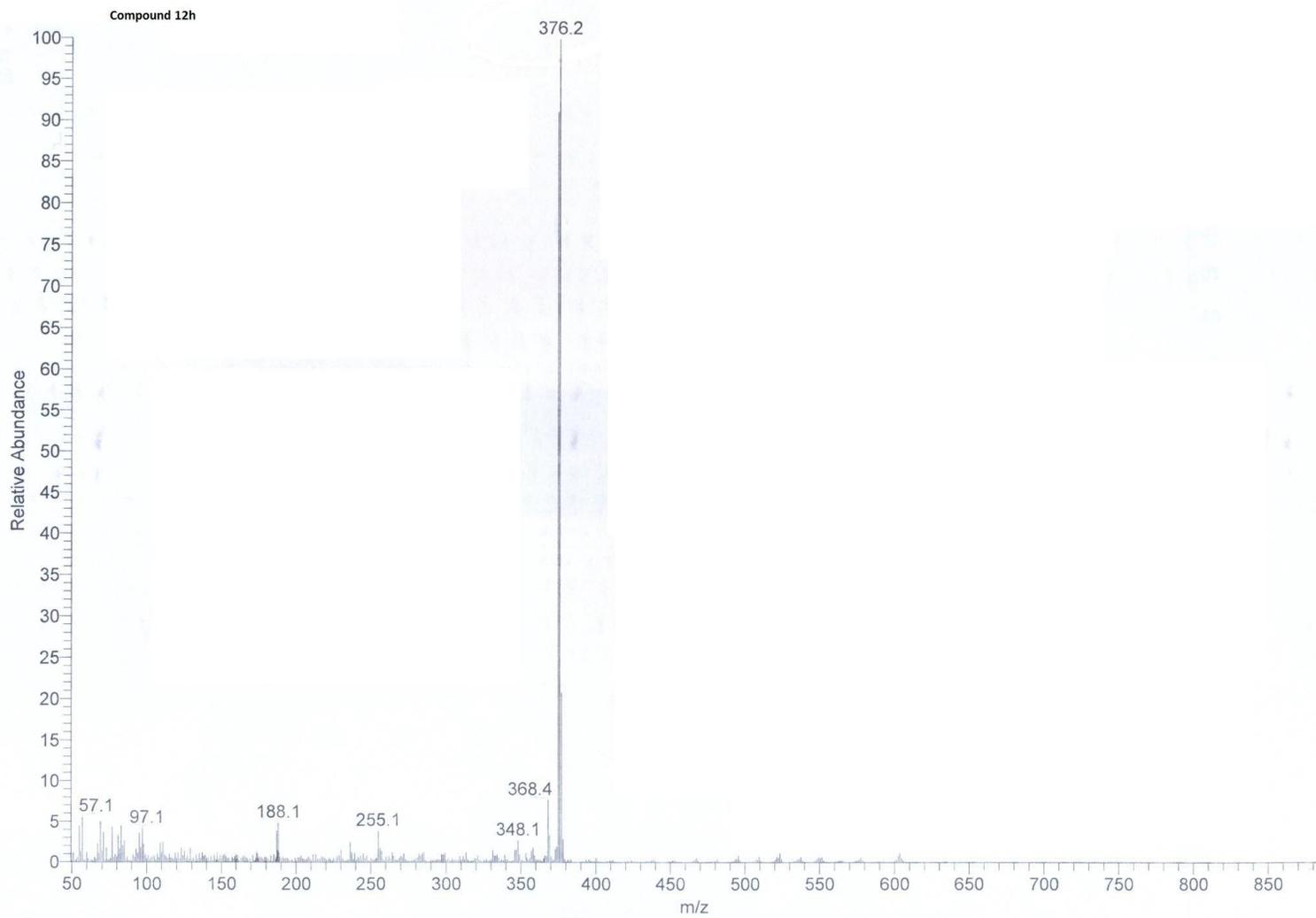


Compound 12g

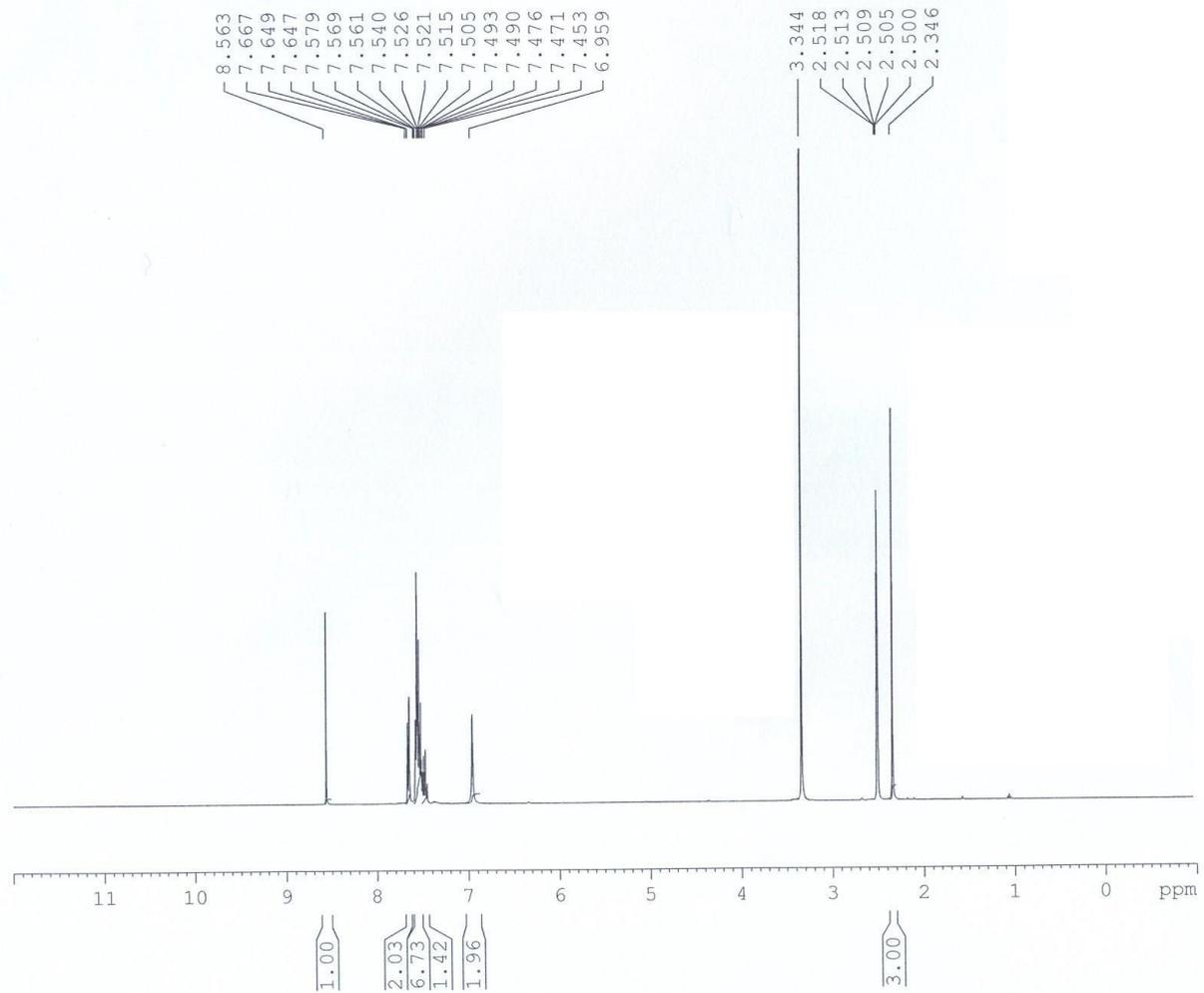


Compound 12h

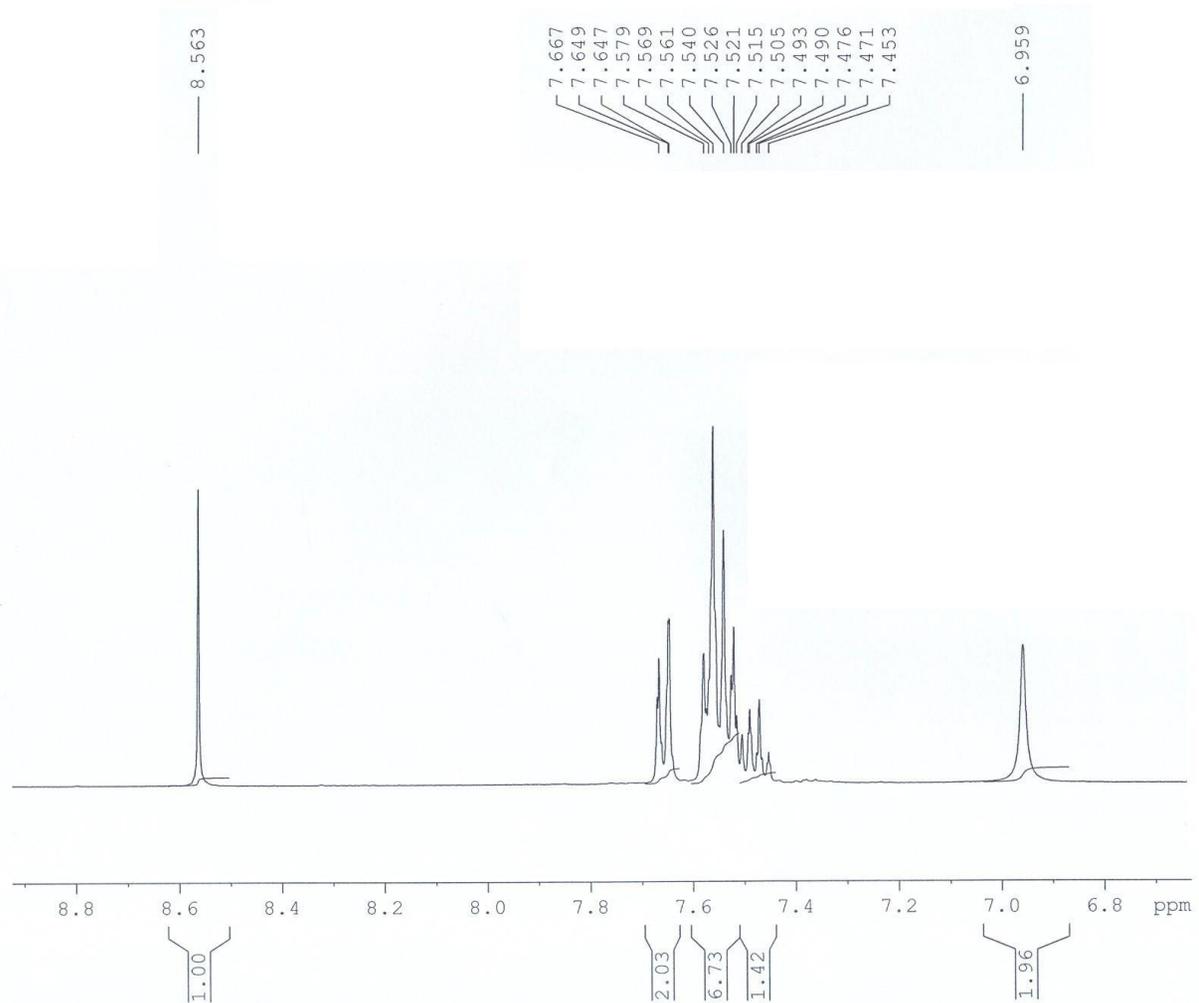




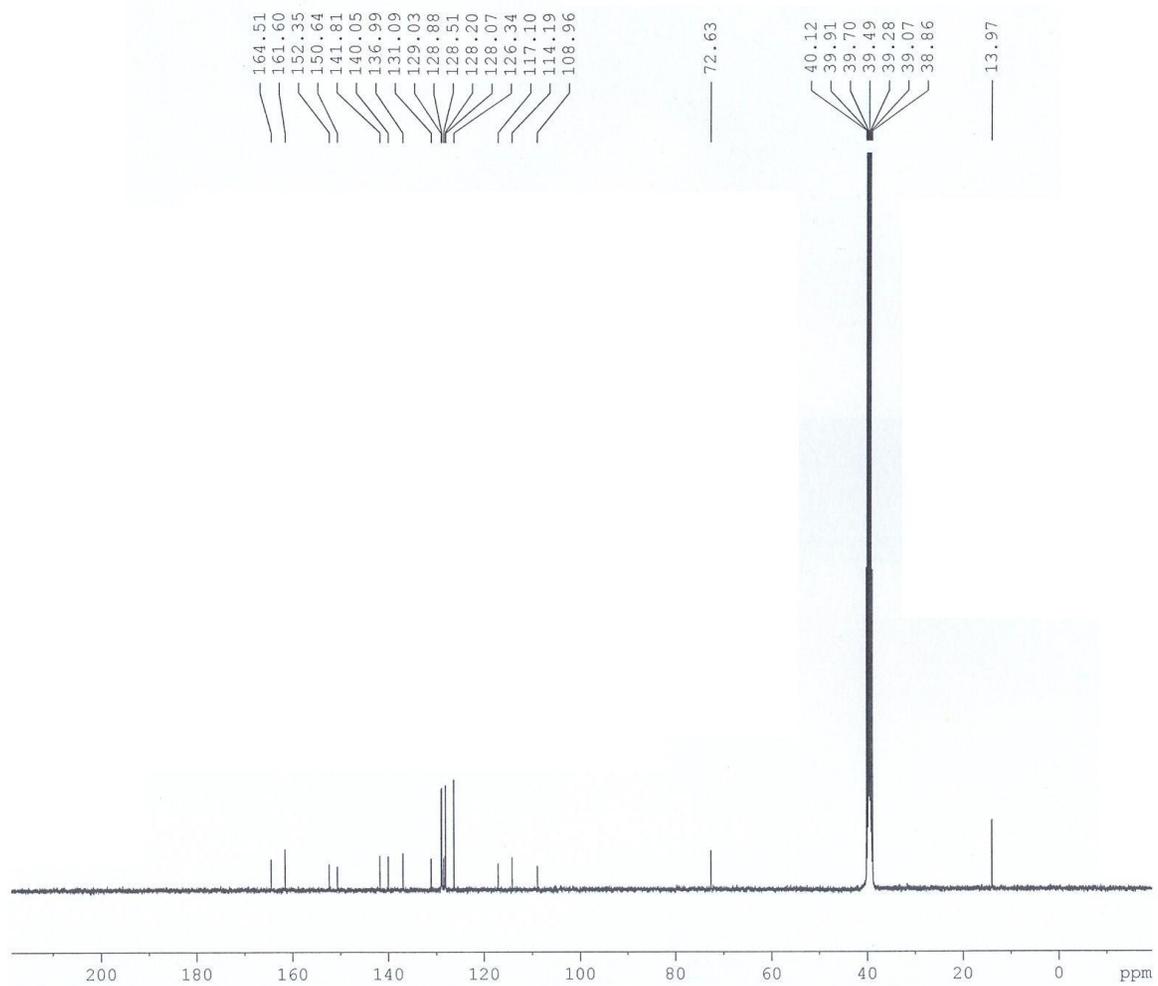
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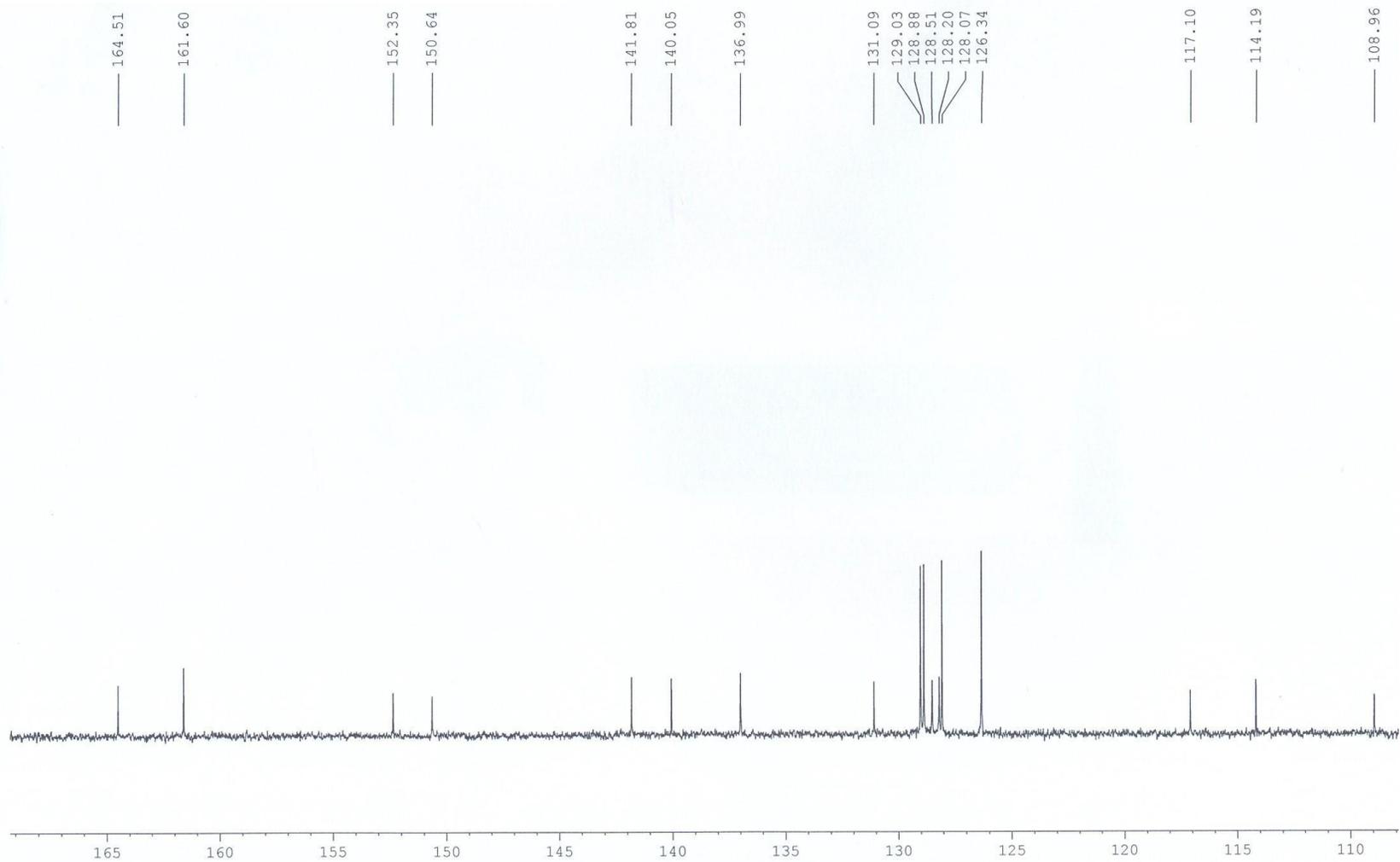
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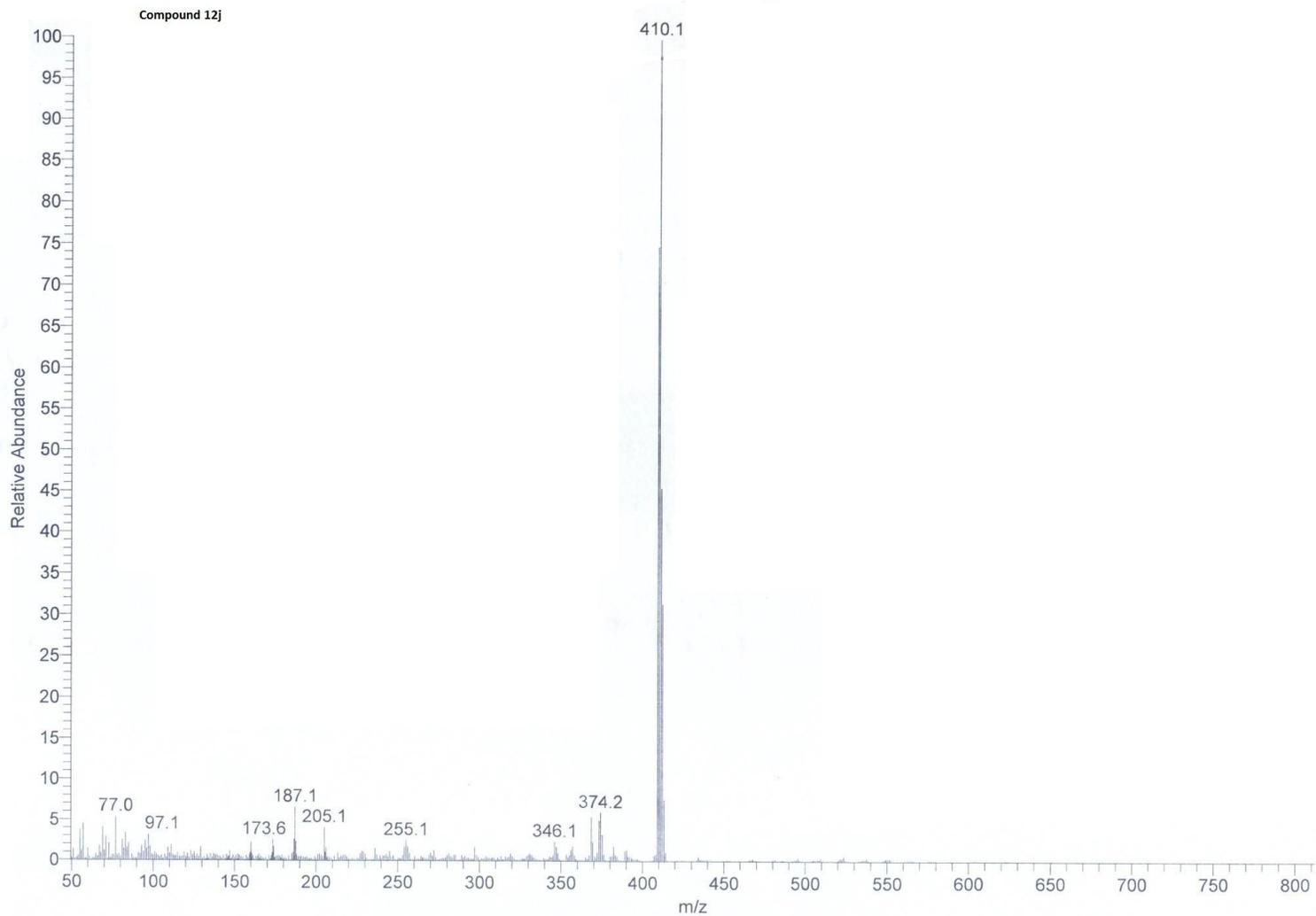


Compound 12h

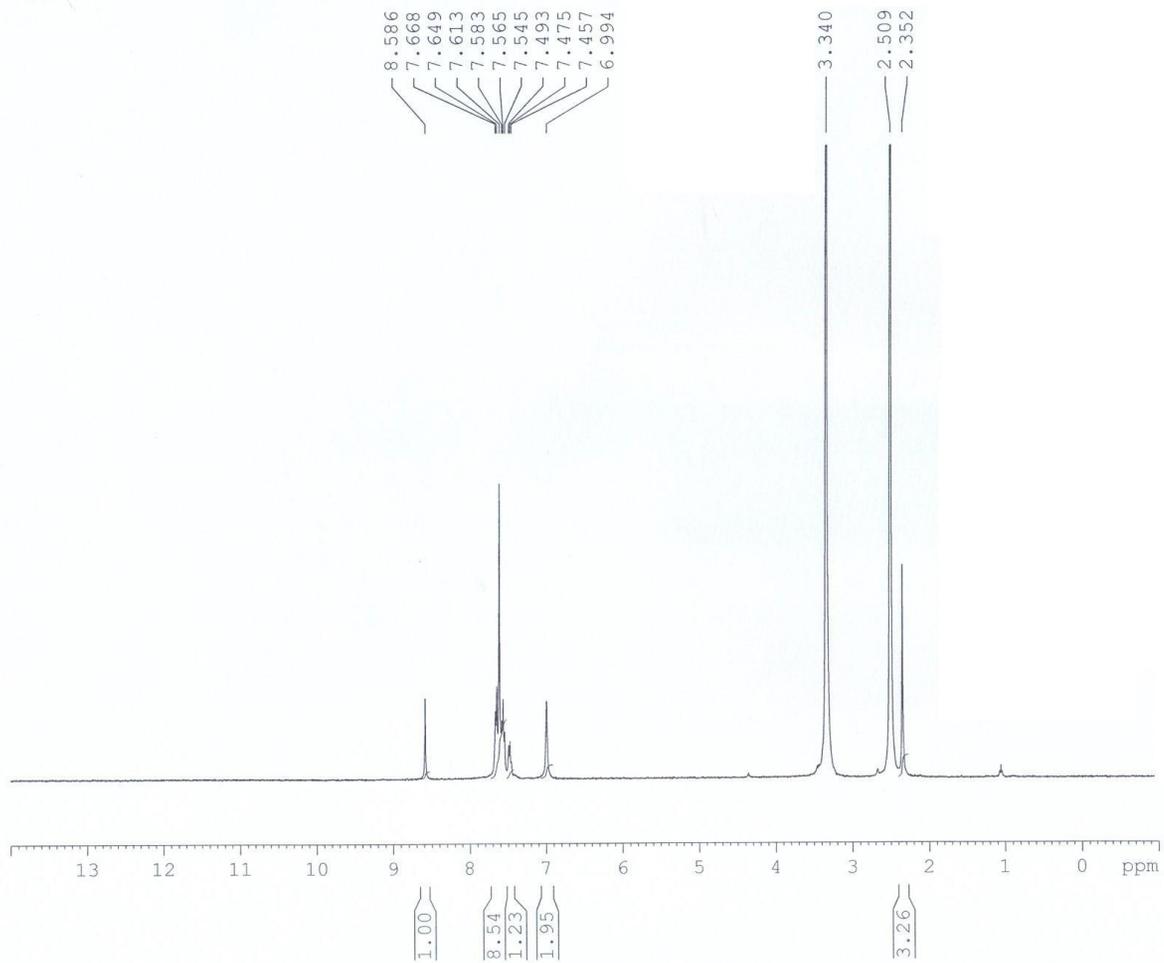


Compound 12h

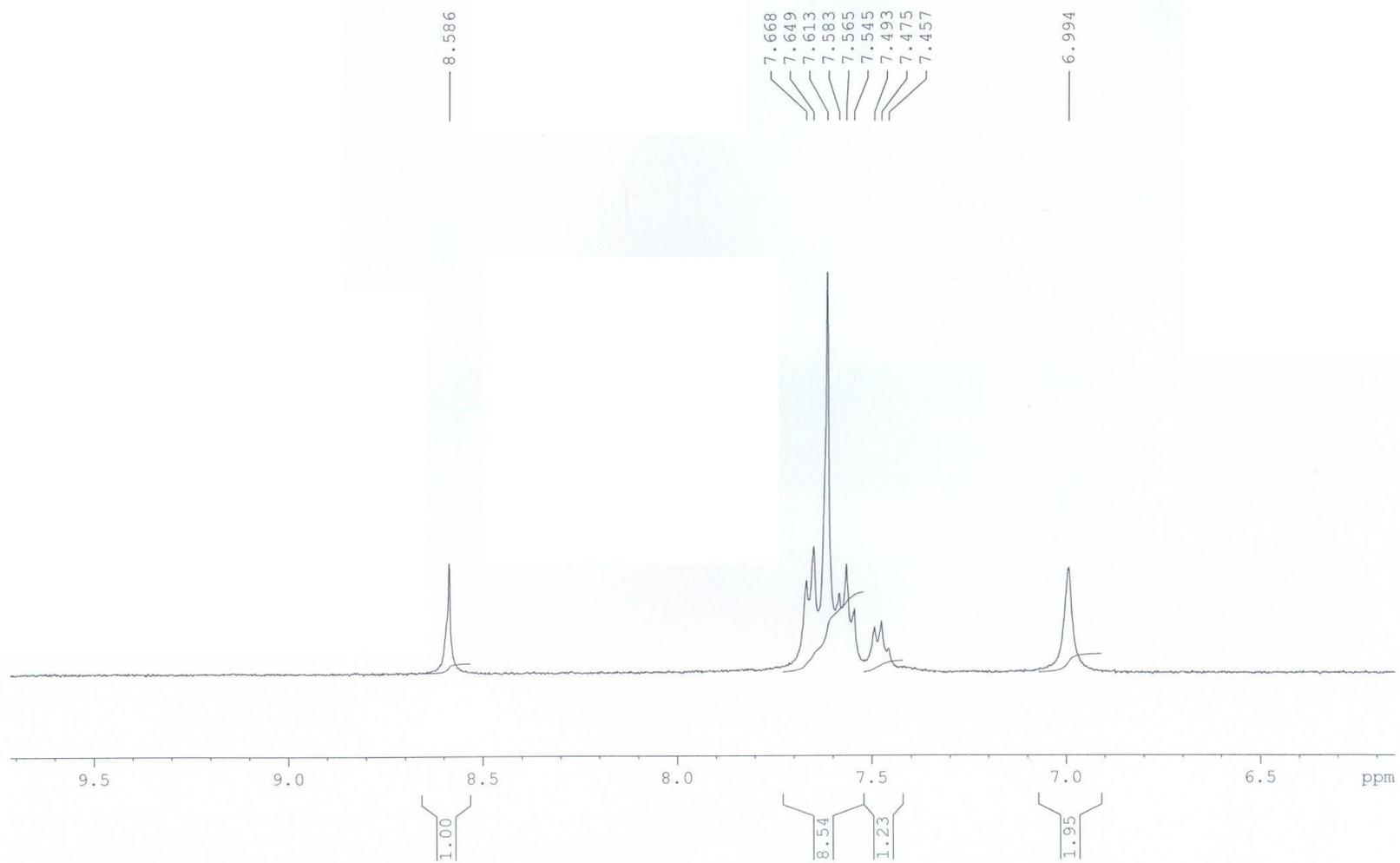




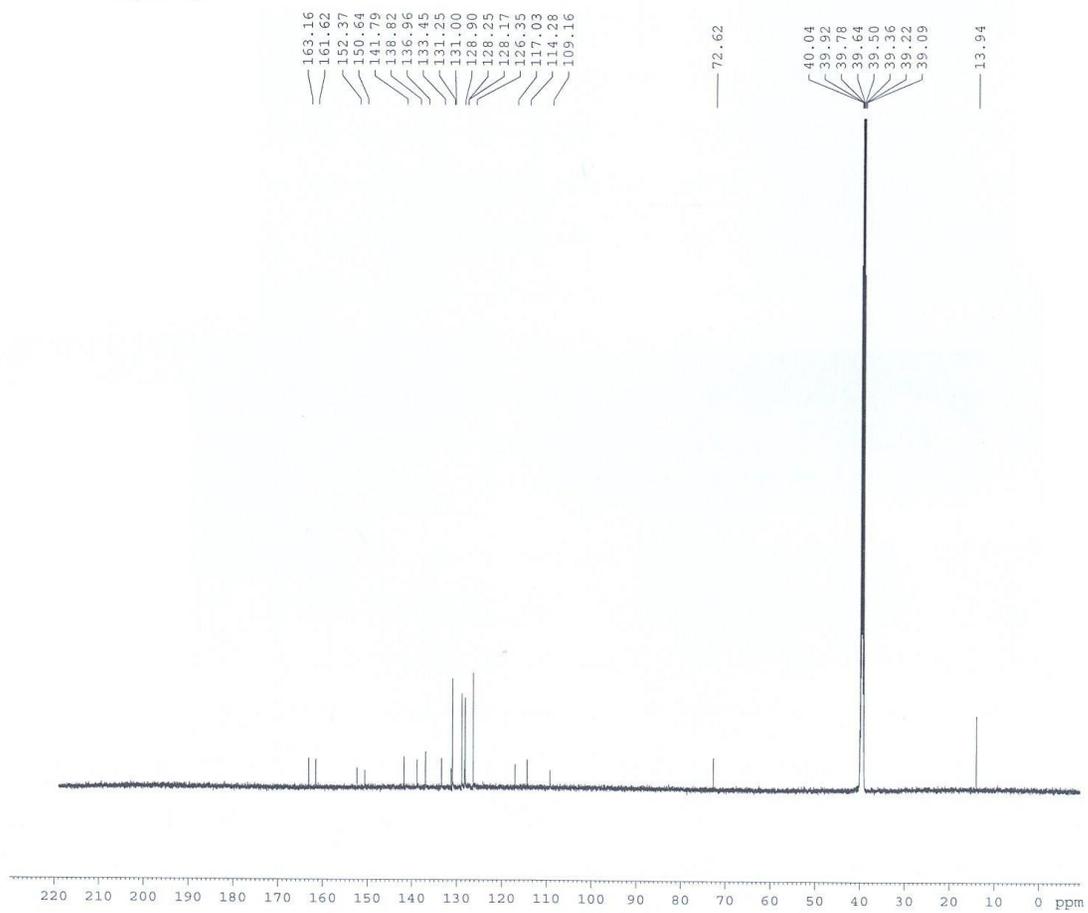
Compound 12j



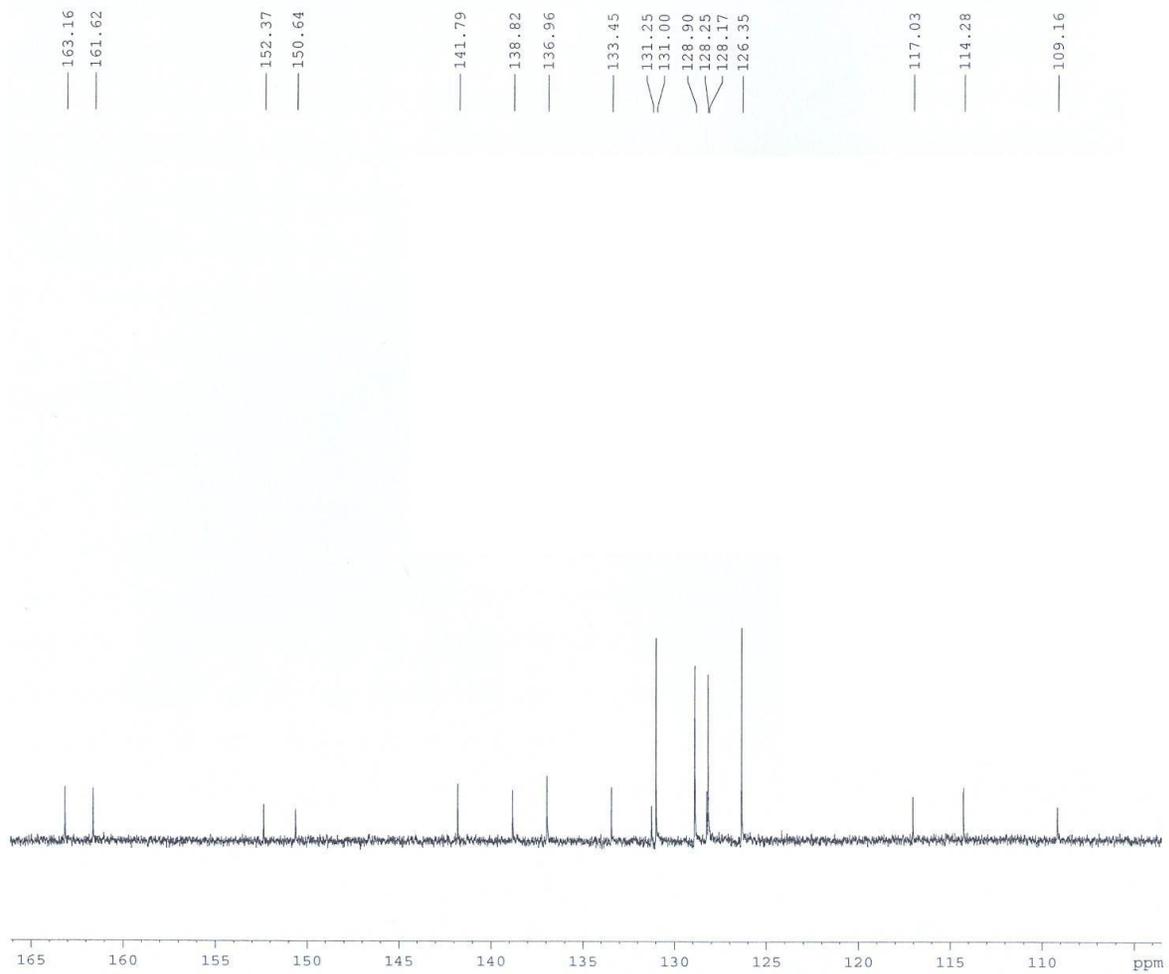
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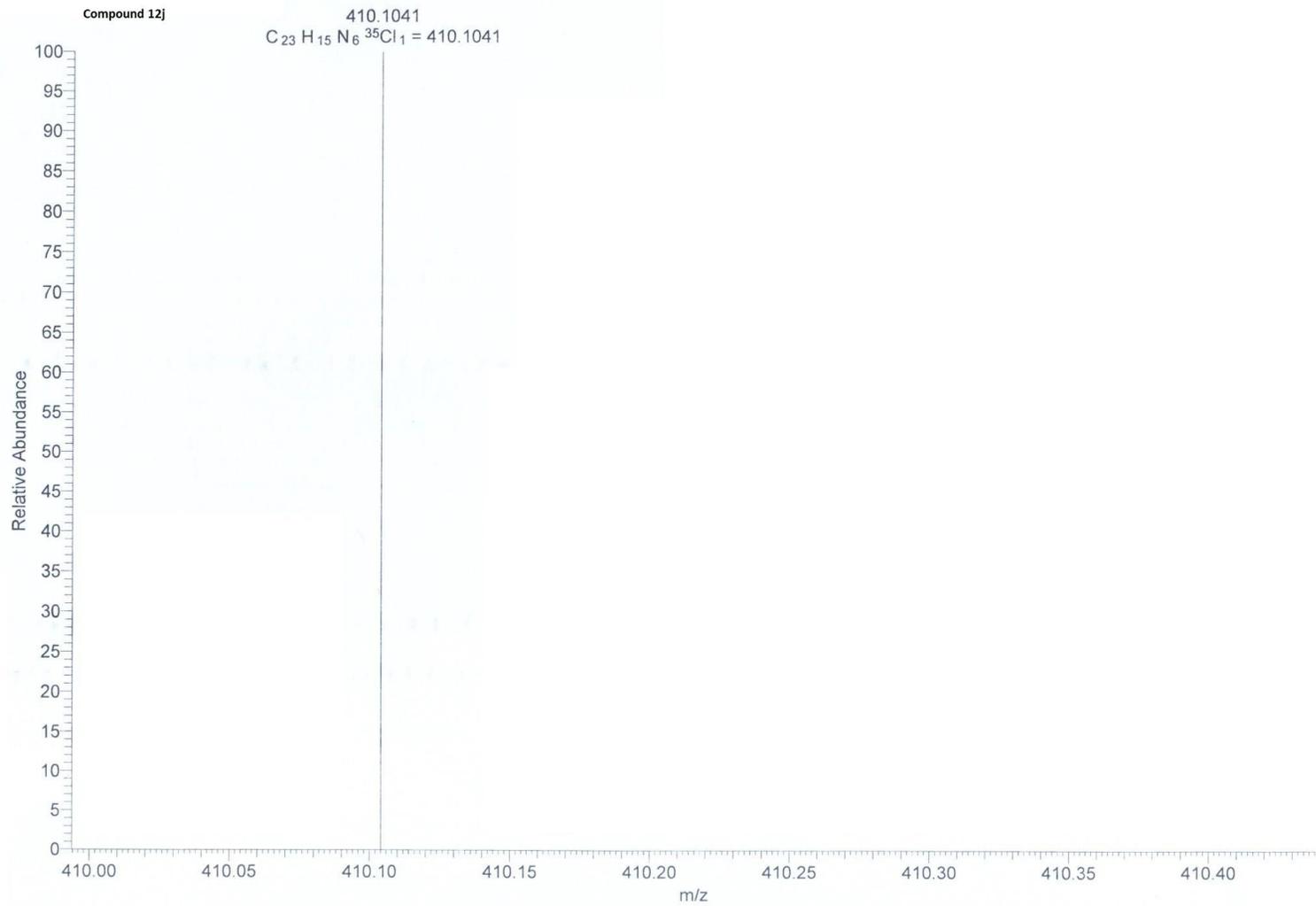


Compound 12]

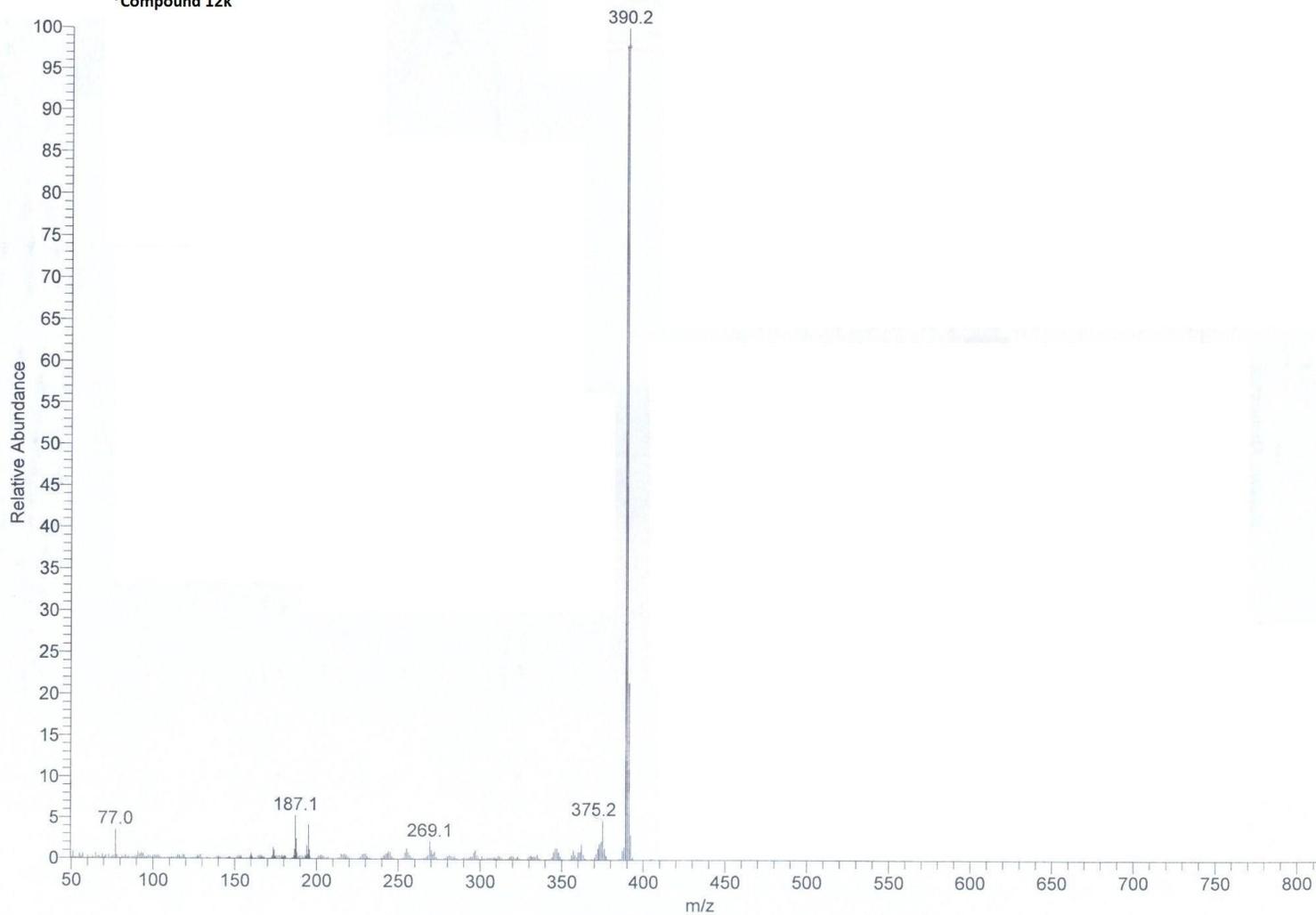


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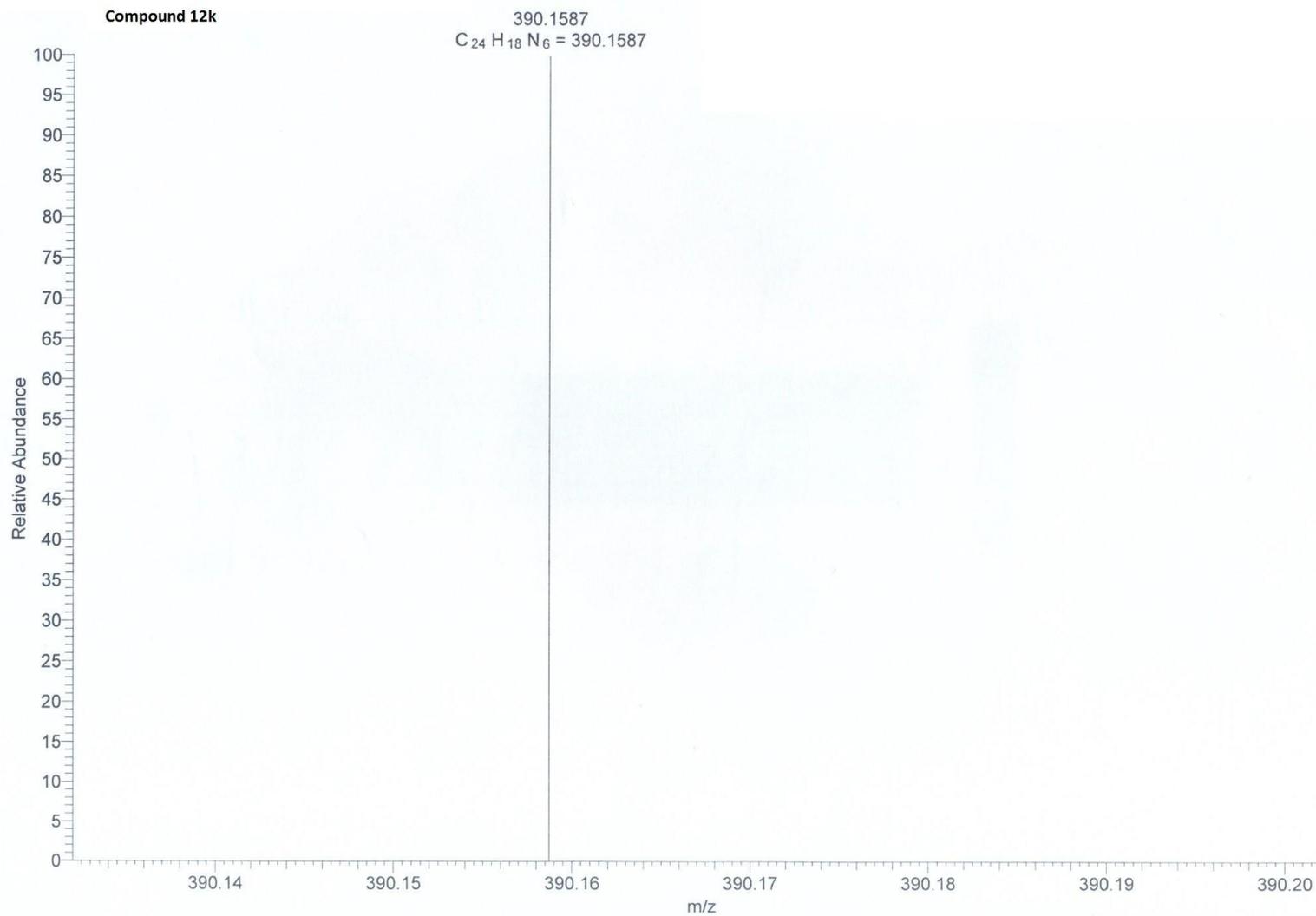




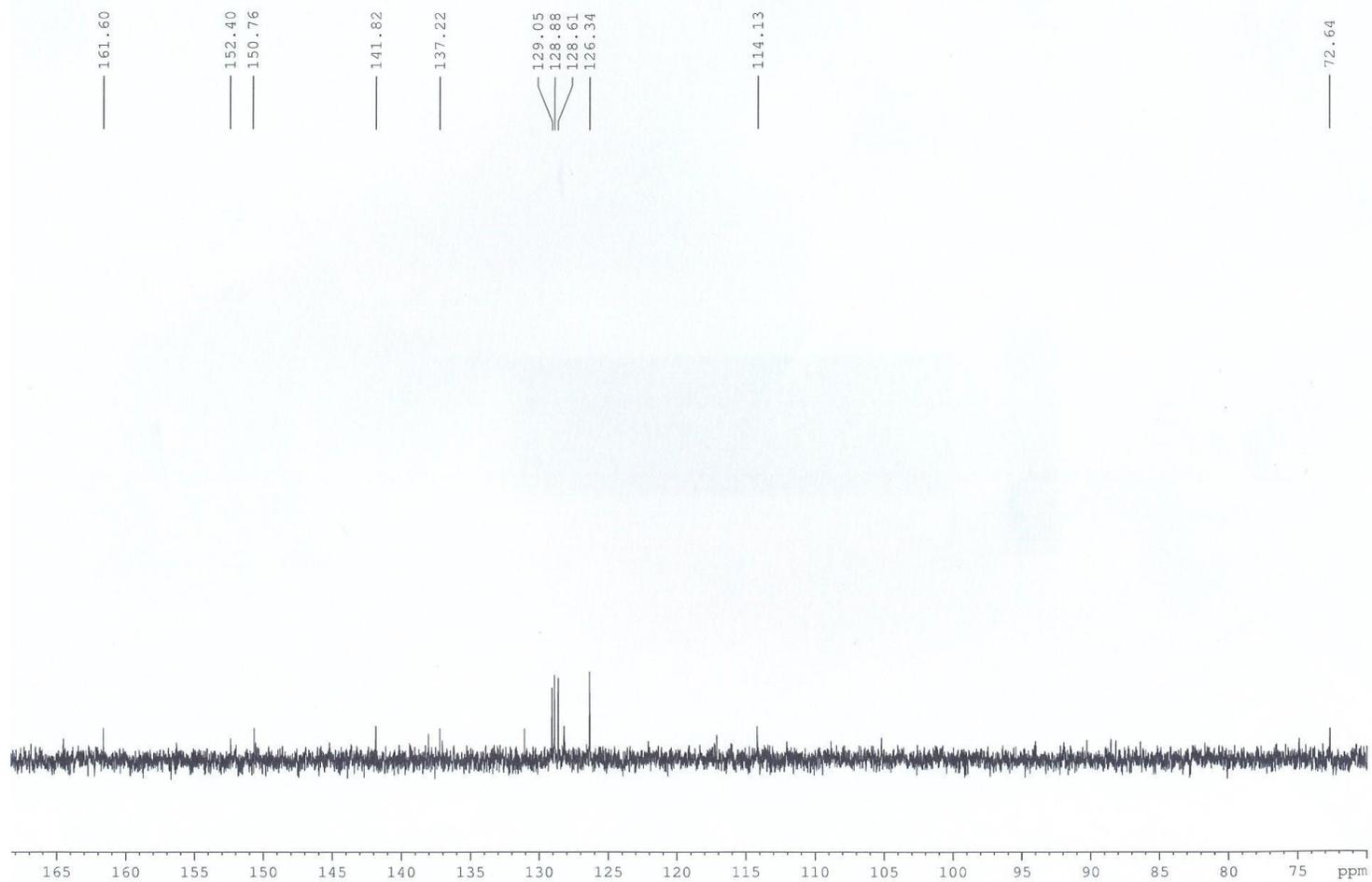
Compound 12k



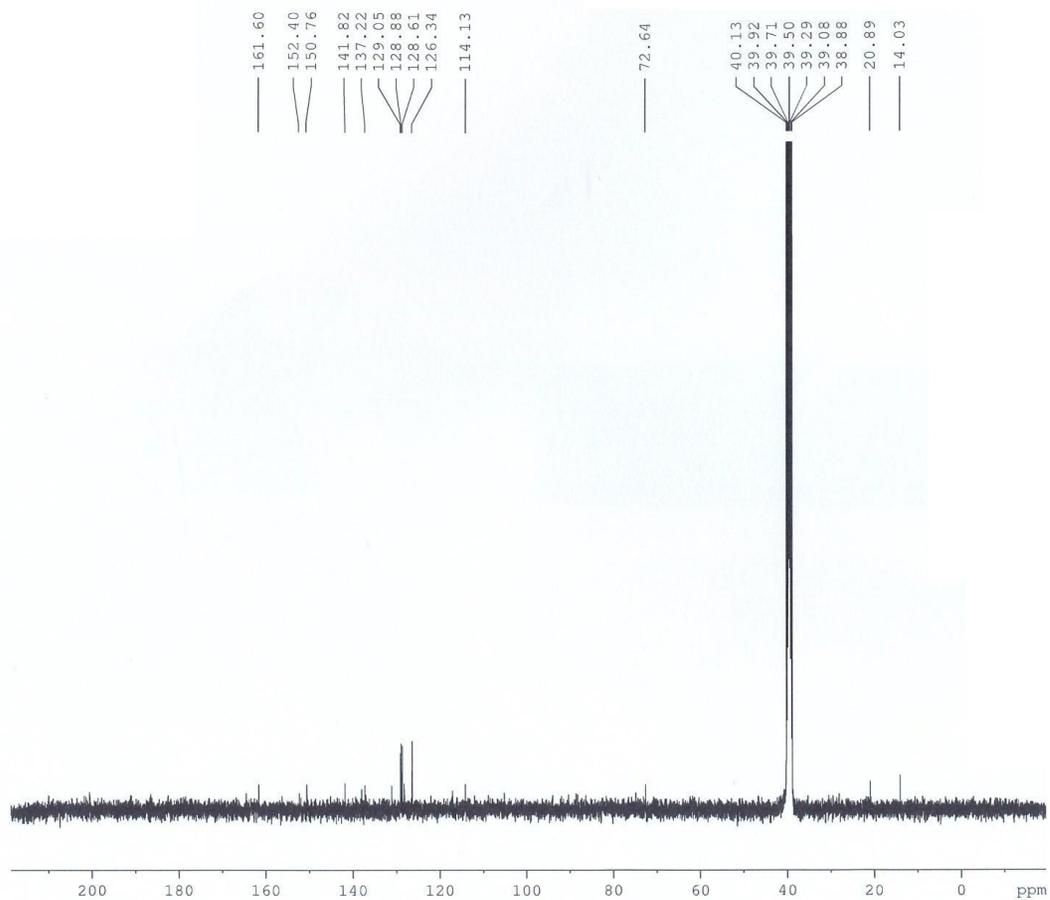
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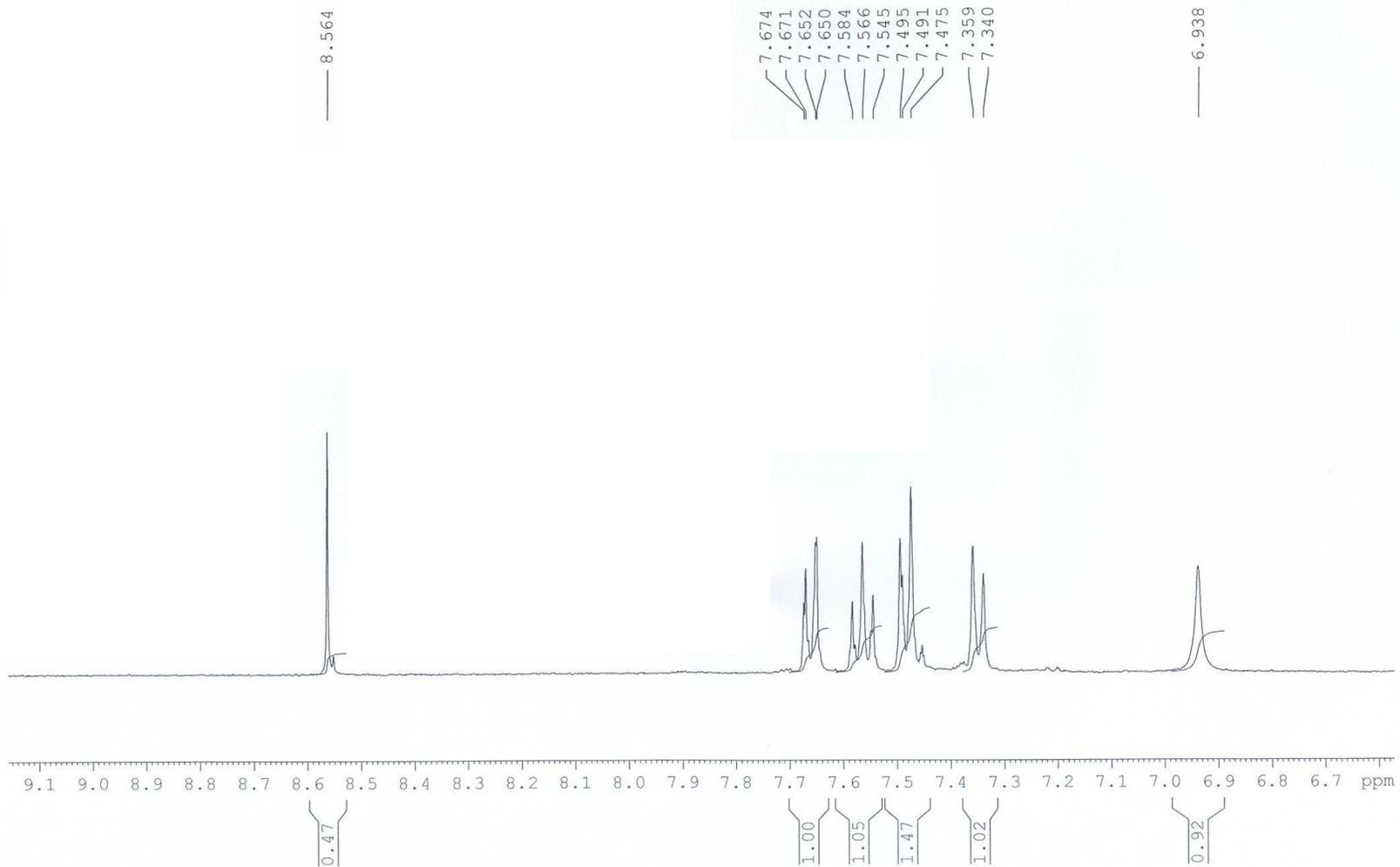
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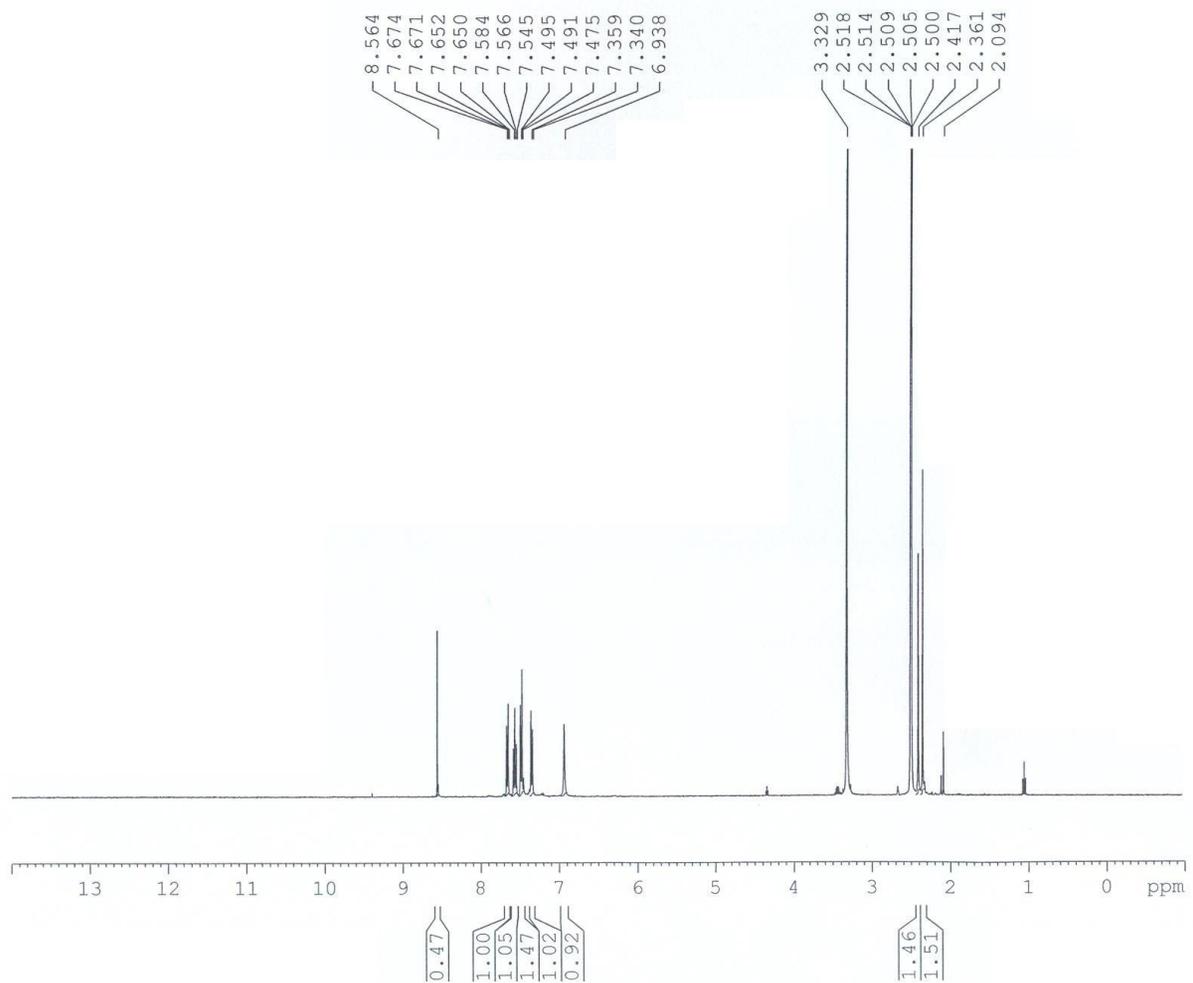
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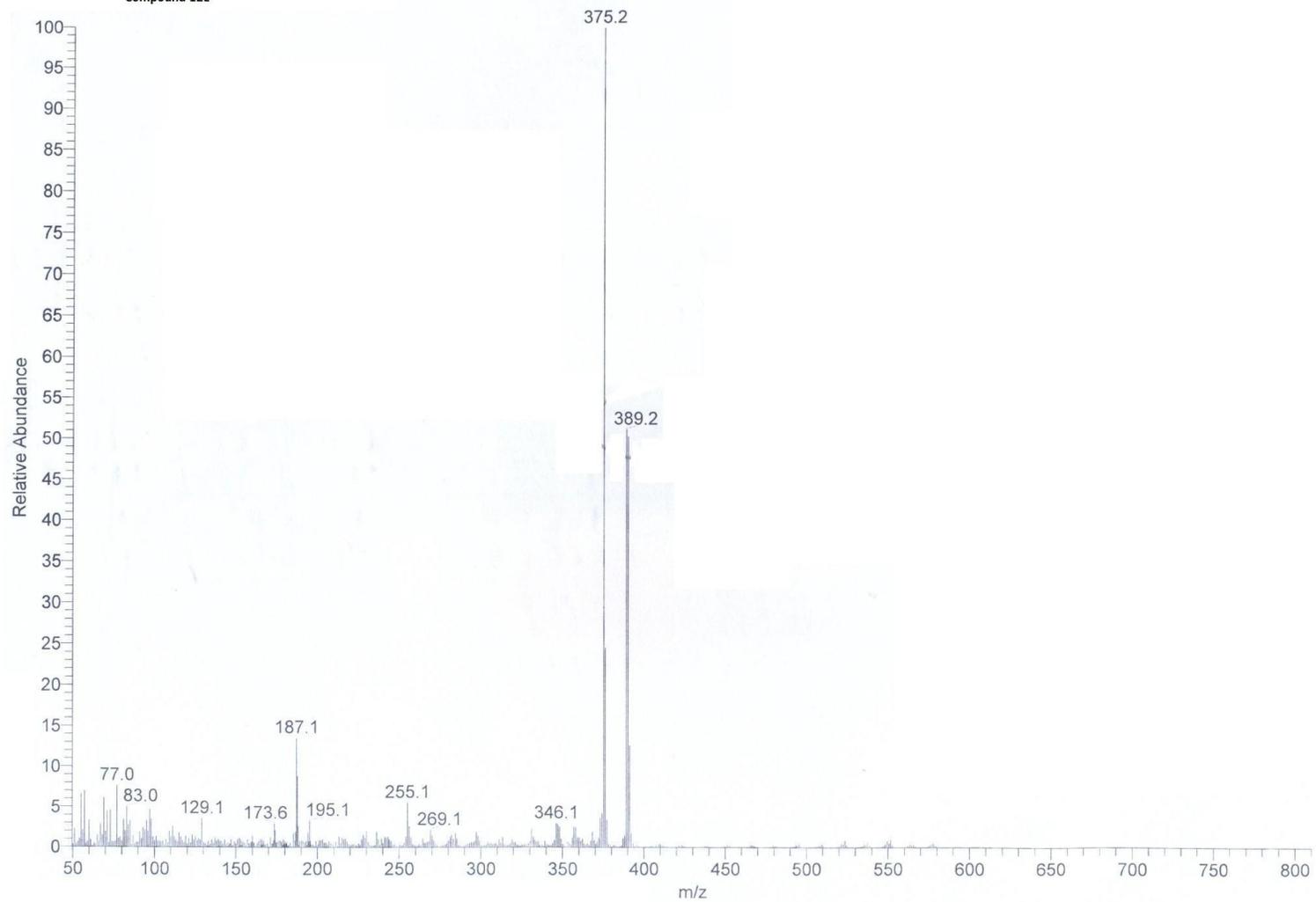
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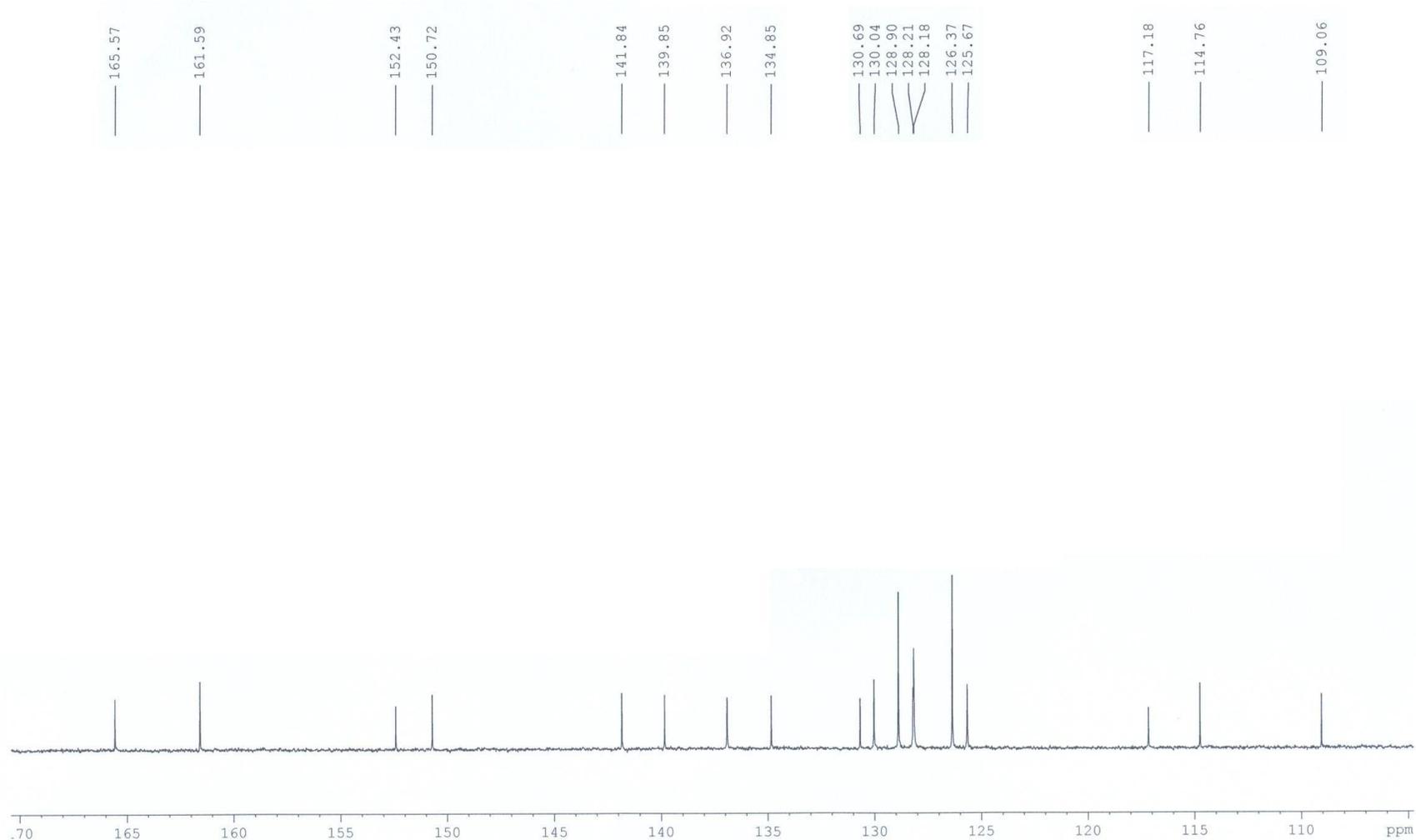
Compound 12k



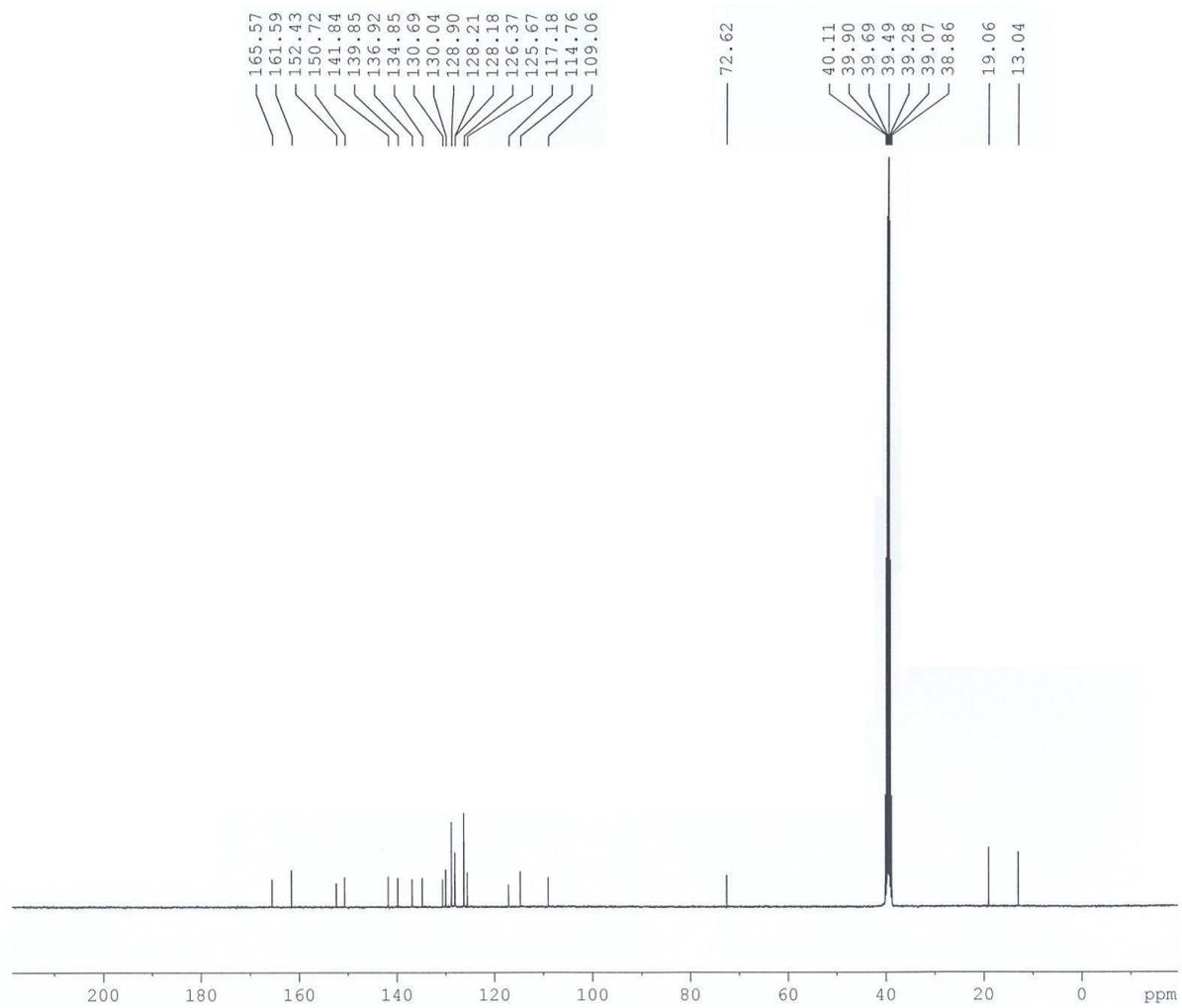
Compound 12L

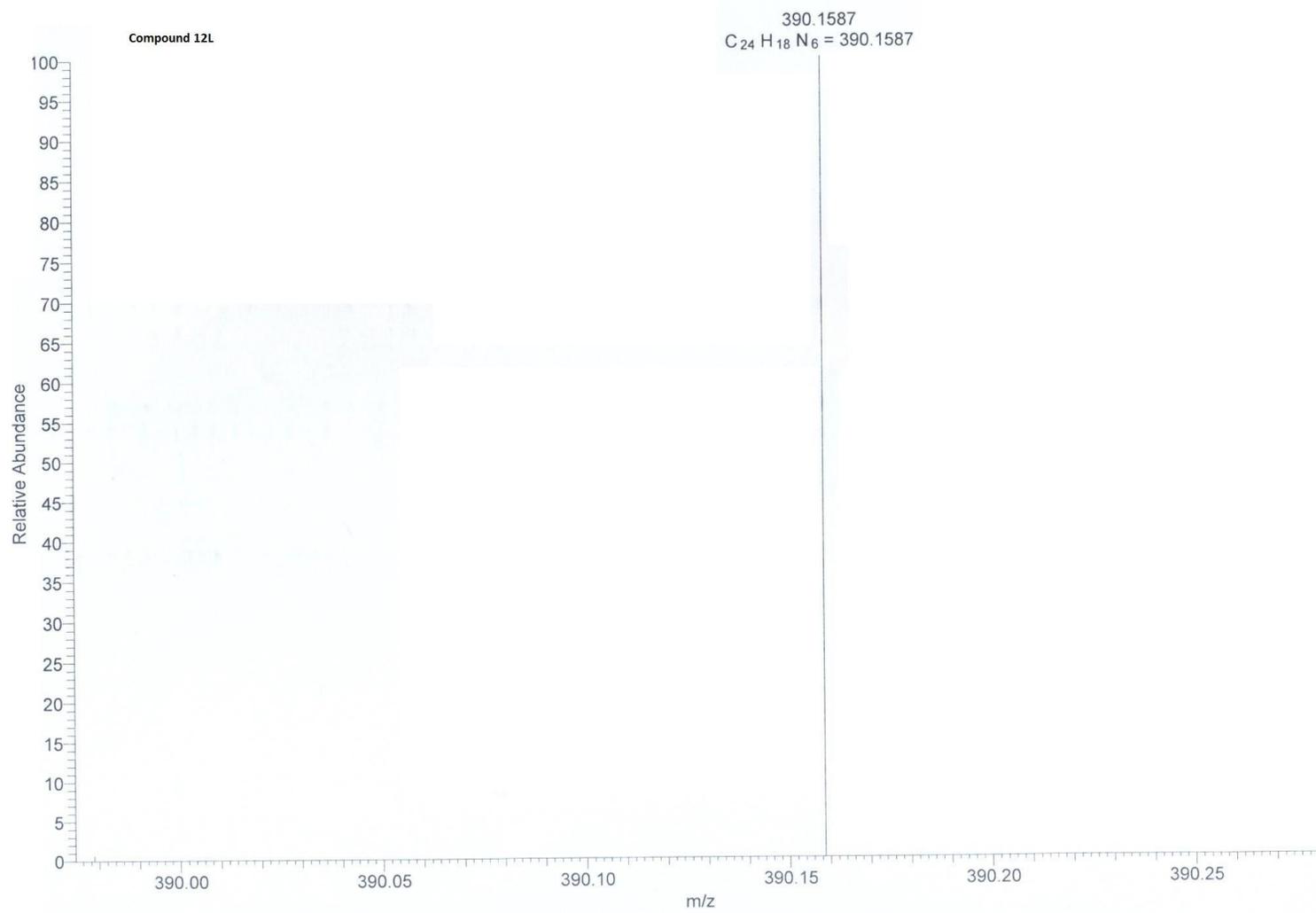


Compound 12L

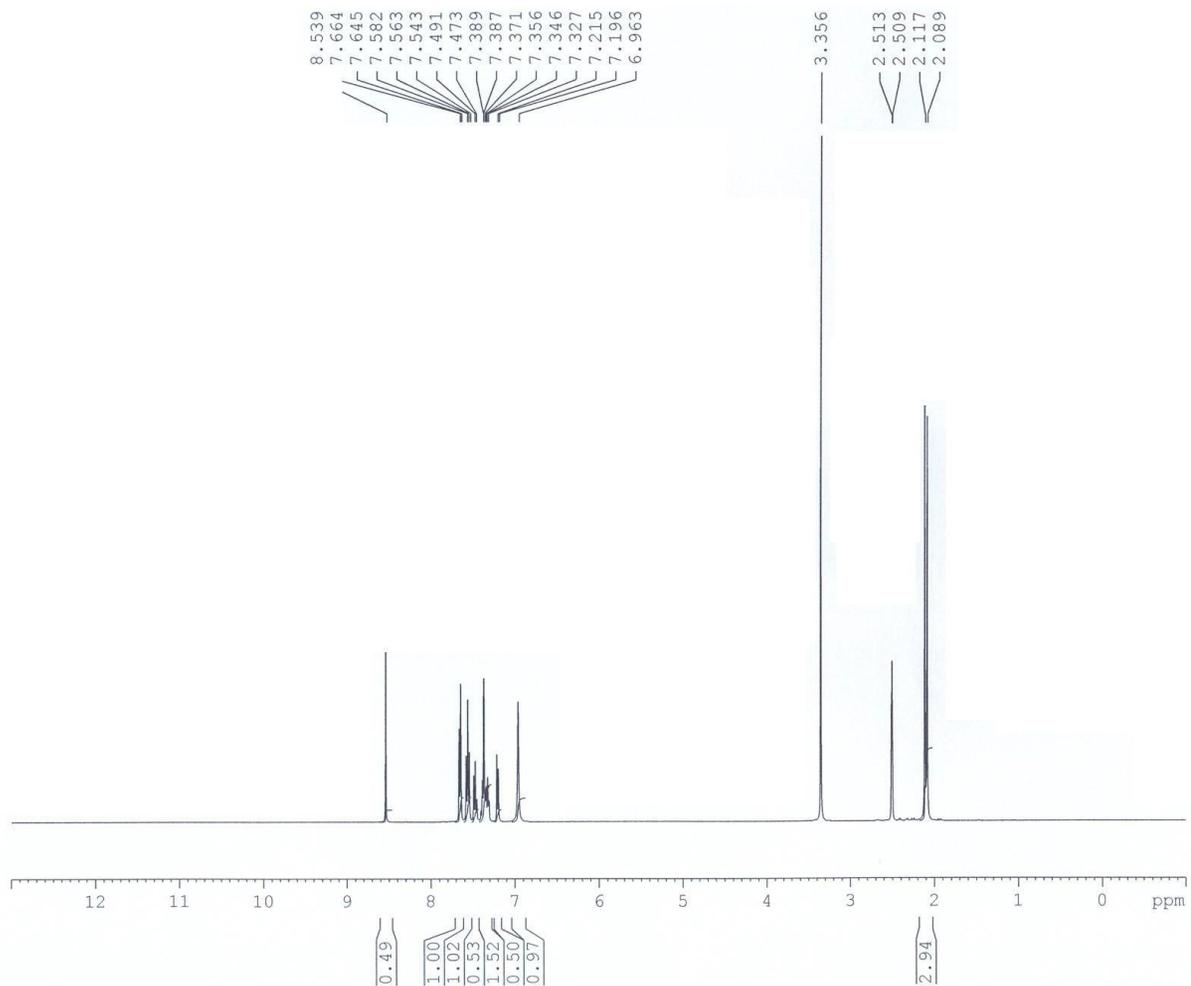


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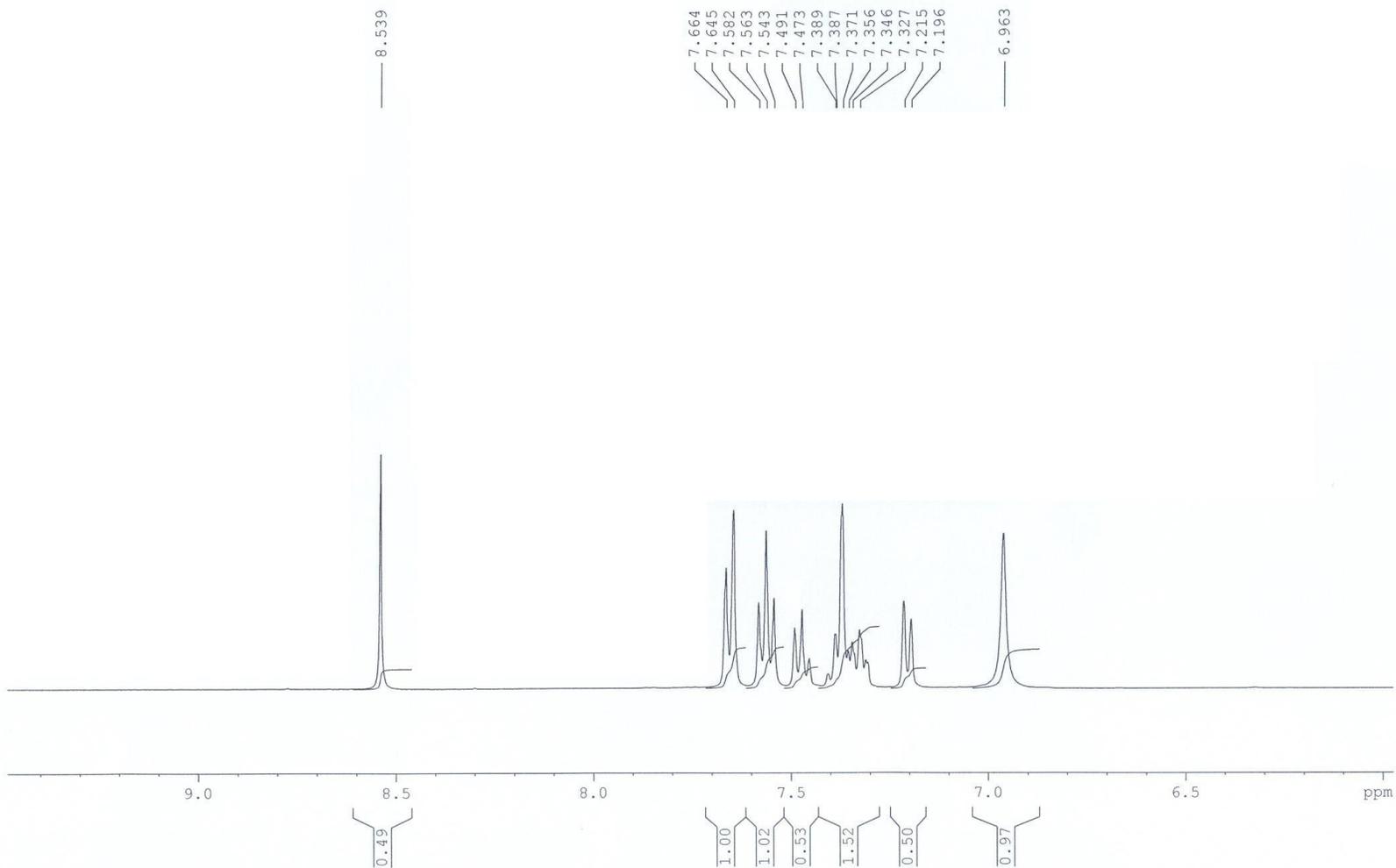




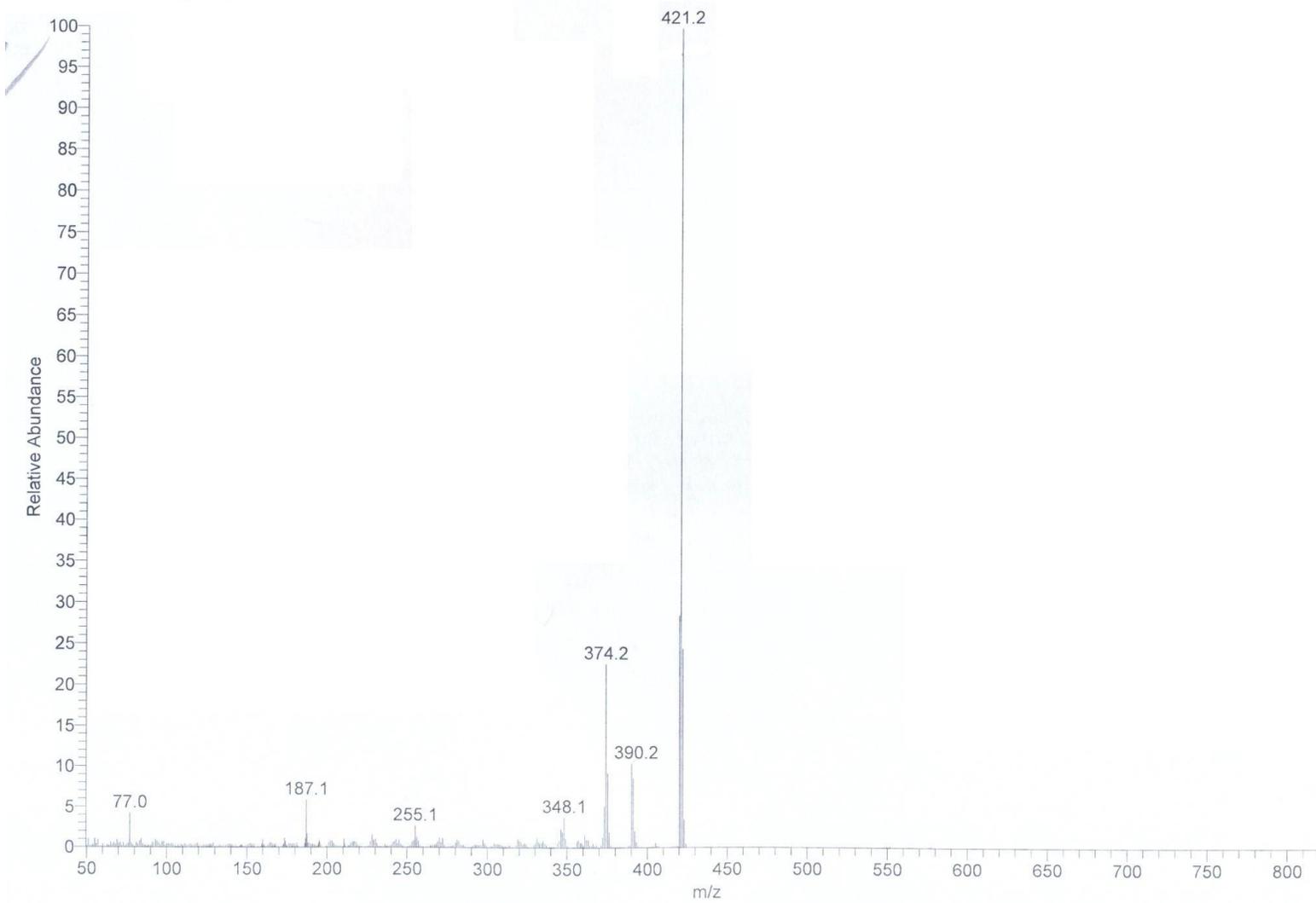
Compound 12L



Compound 12L



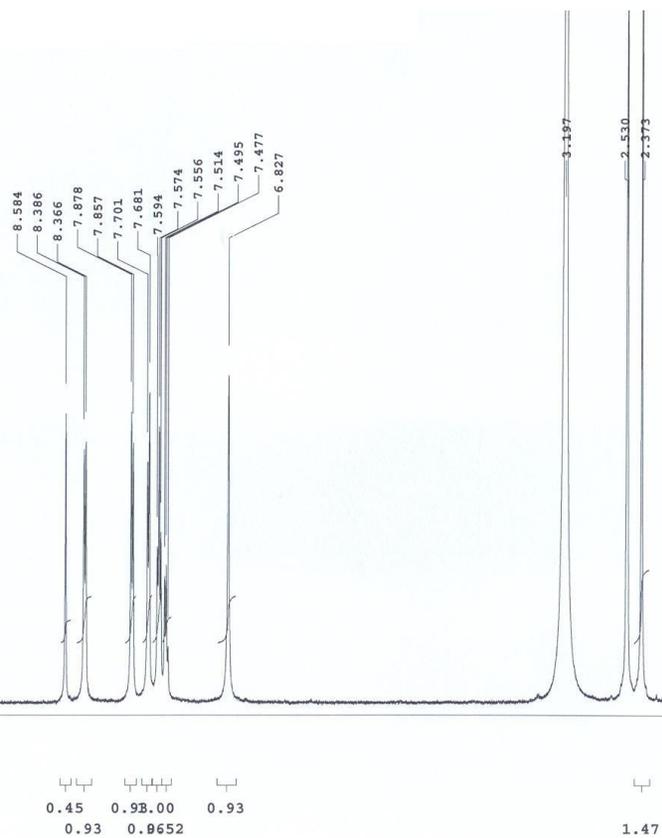
Compound 12m



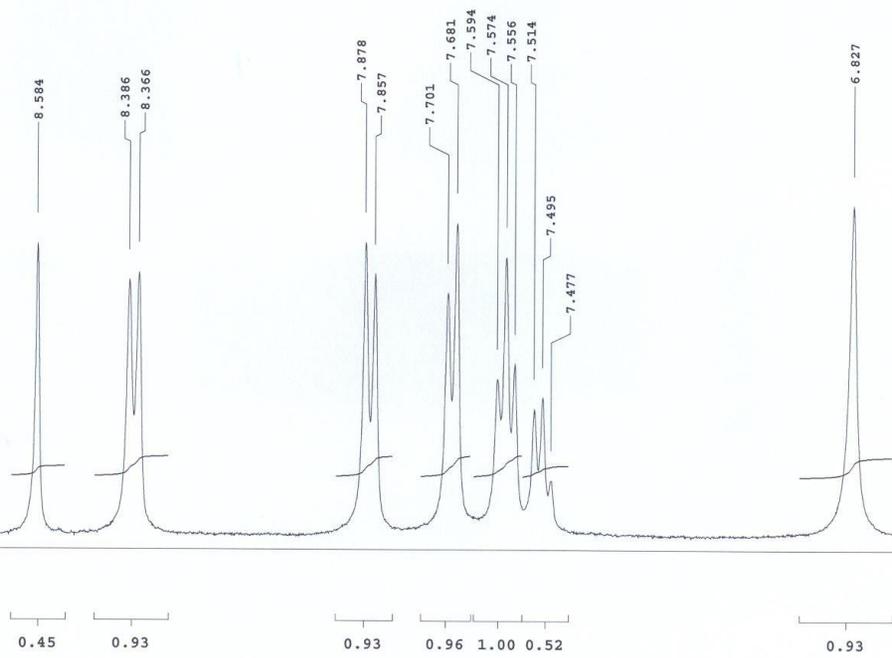


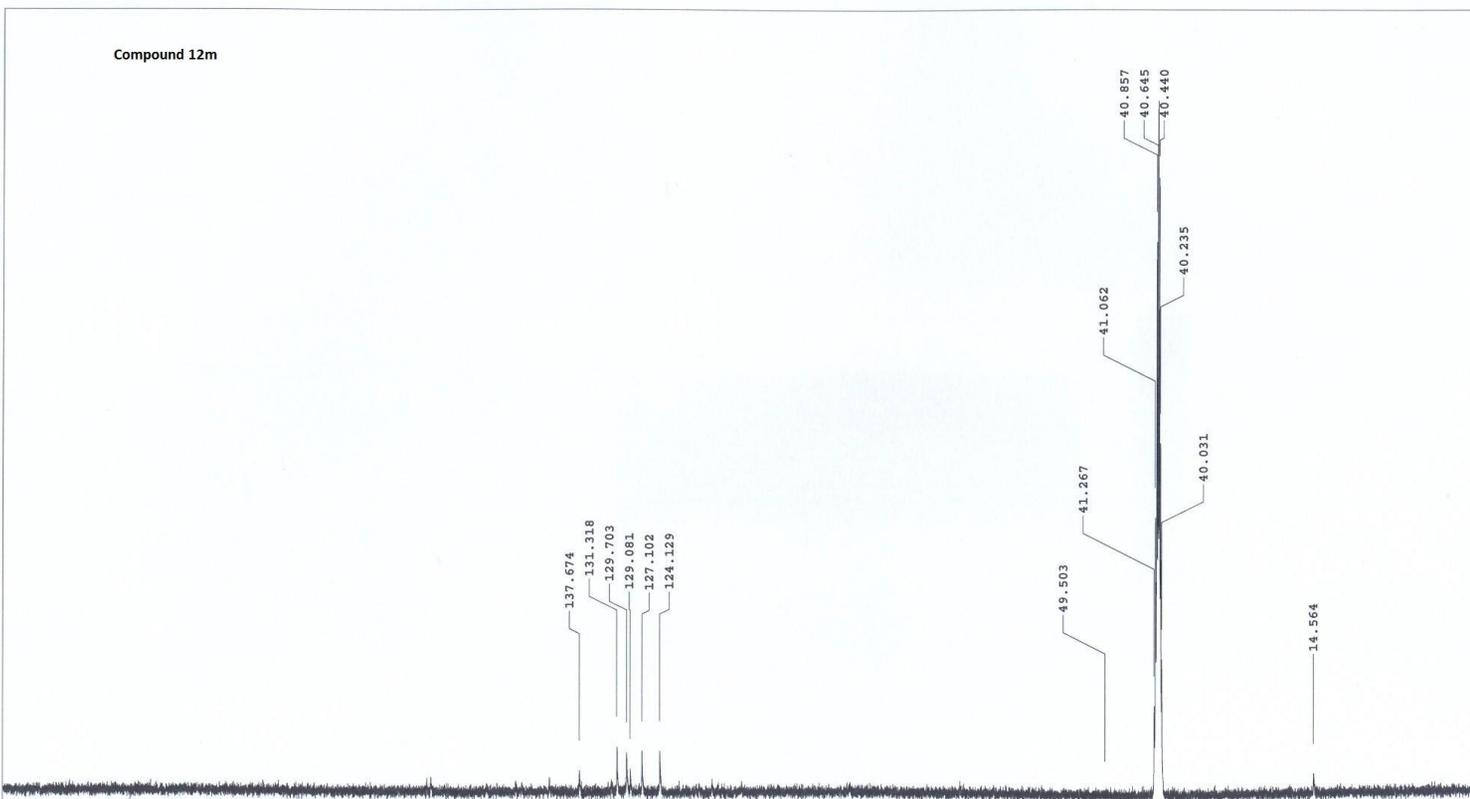
Agilent Technologies

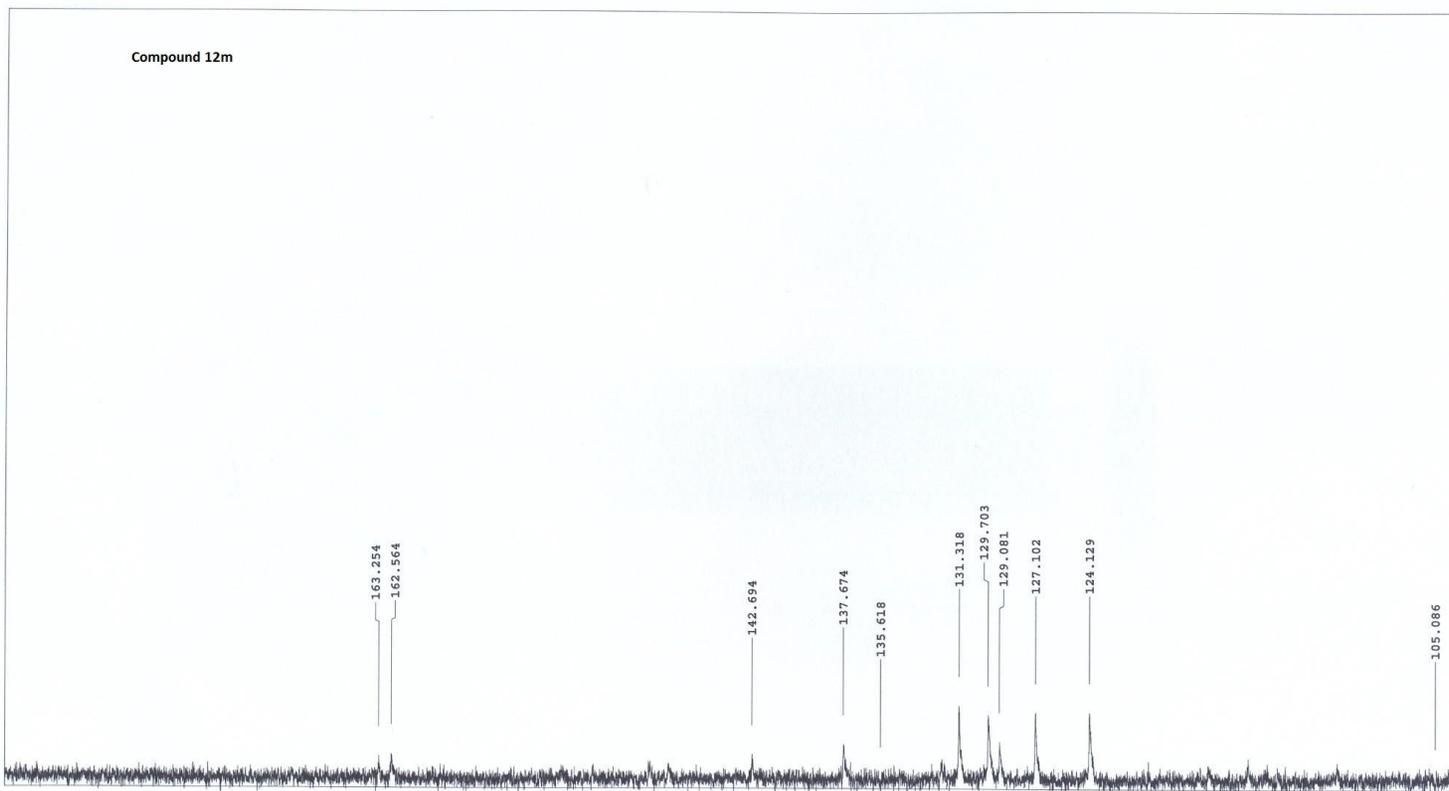
Compound 12m



Compound 12m

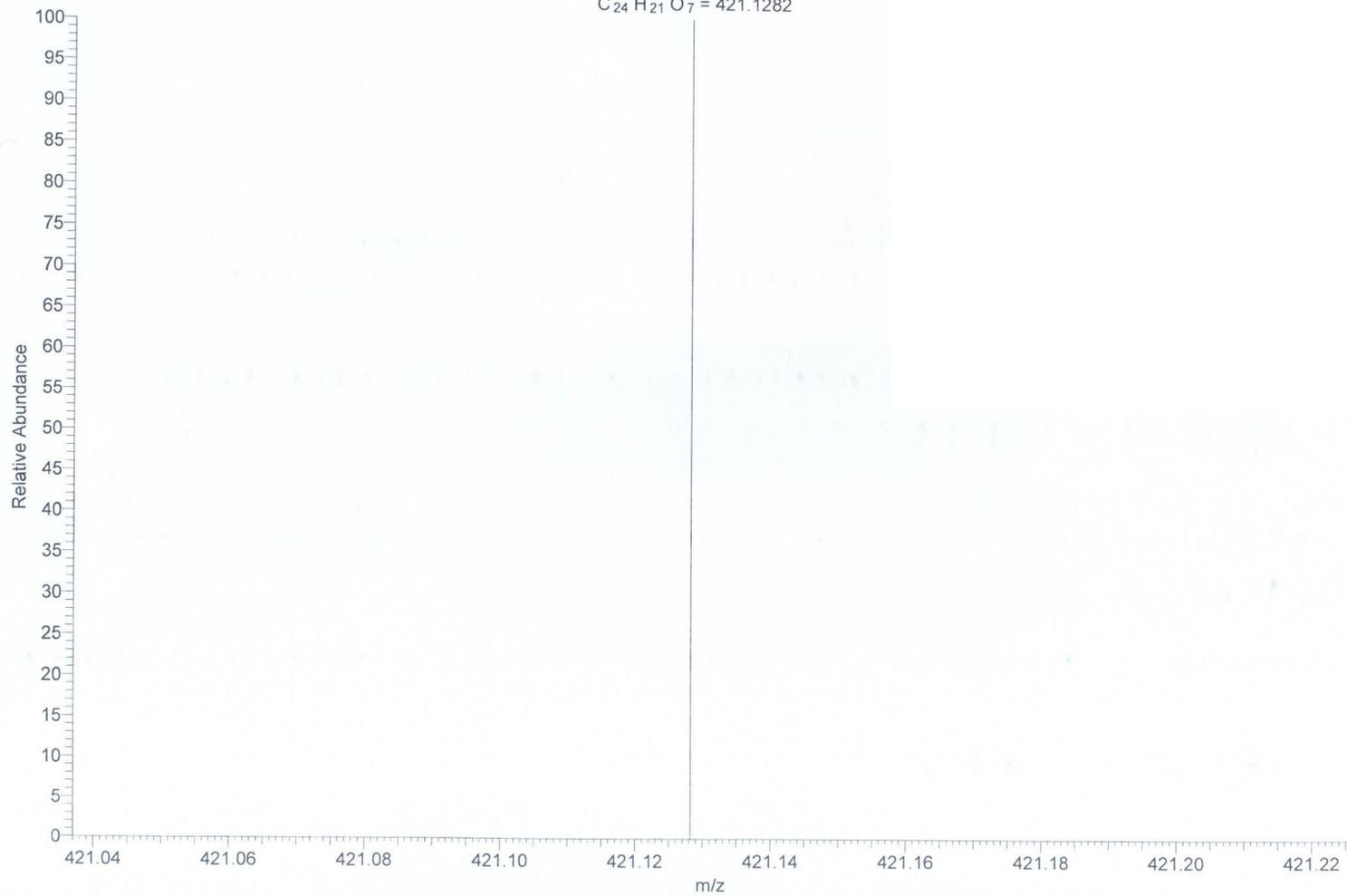




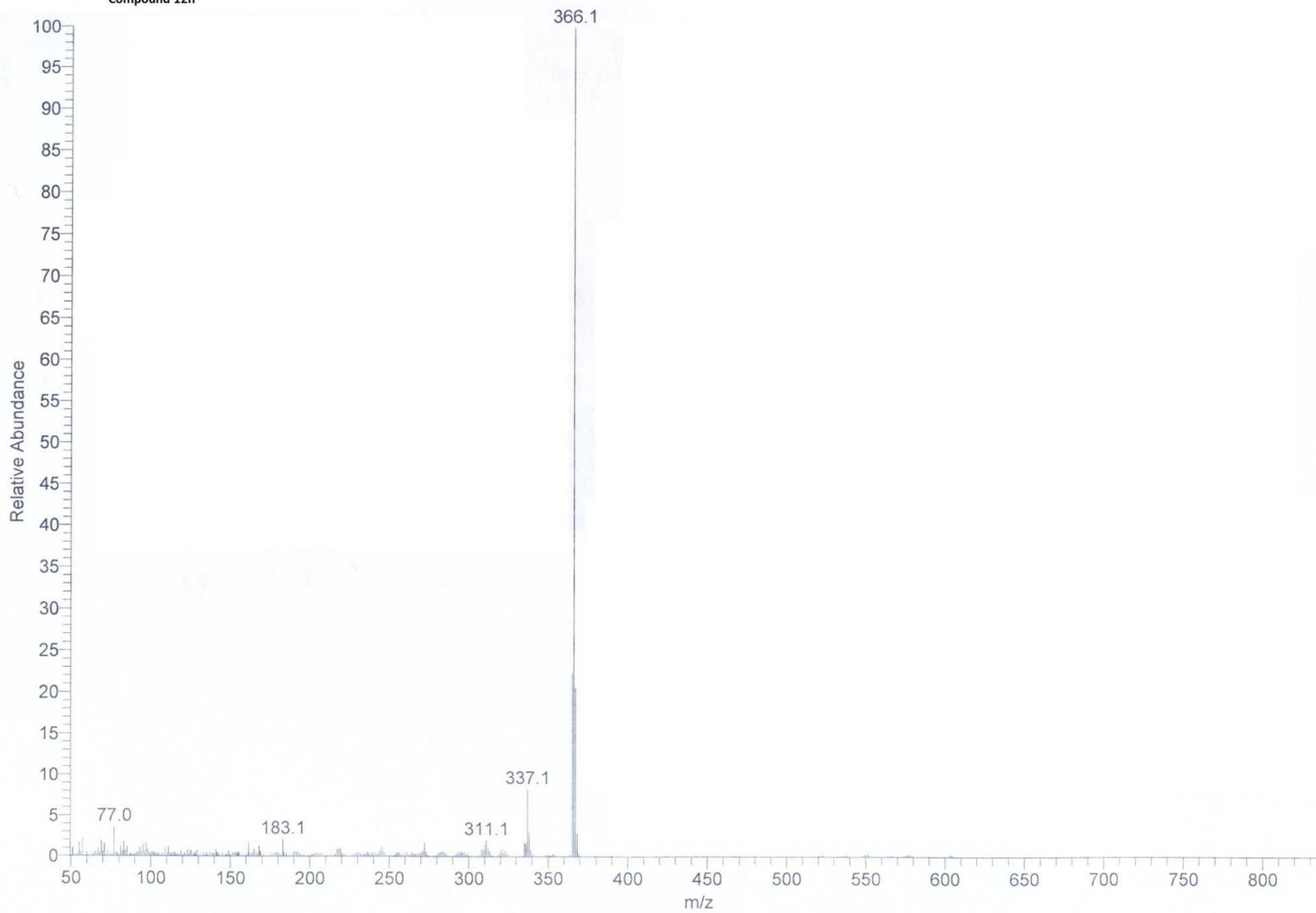


Compound 12m

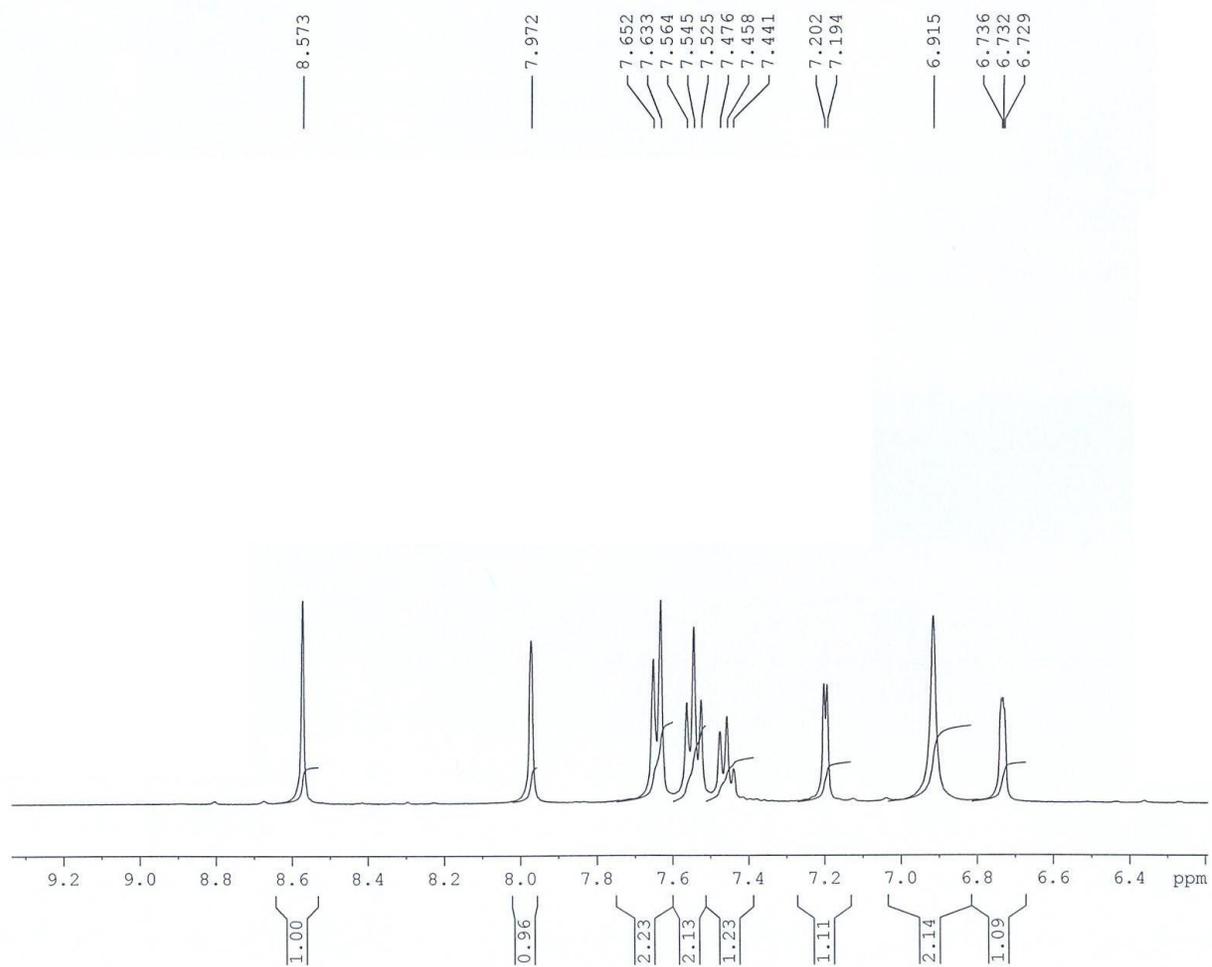
421.1282
 $C_{24}H_{21}O_7 = 421.1282$



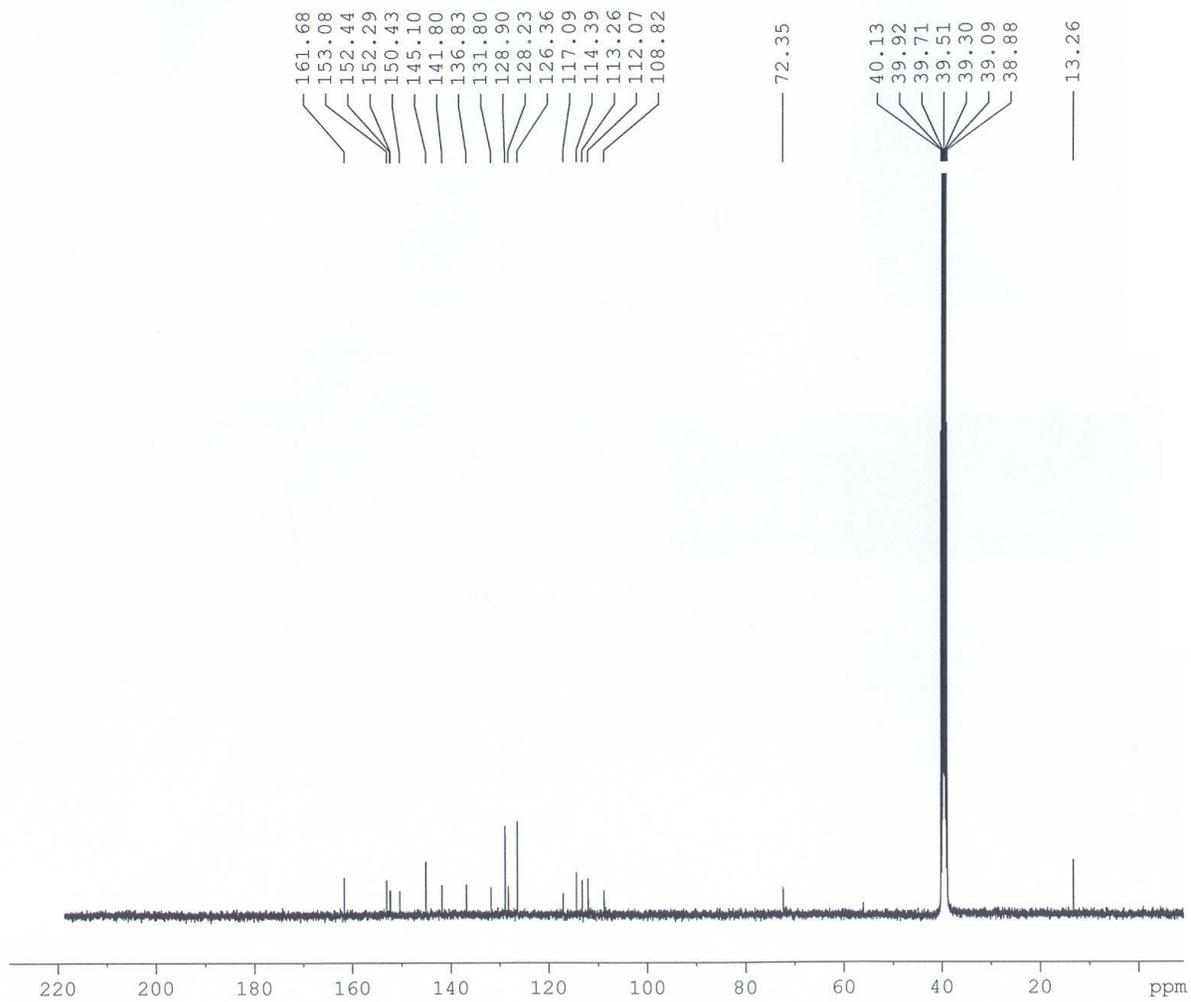
Compound 12n



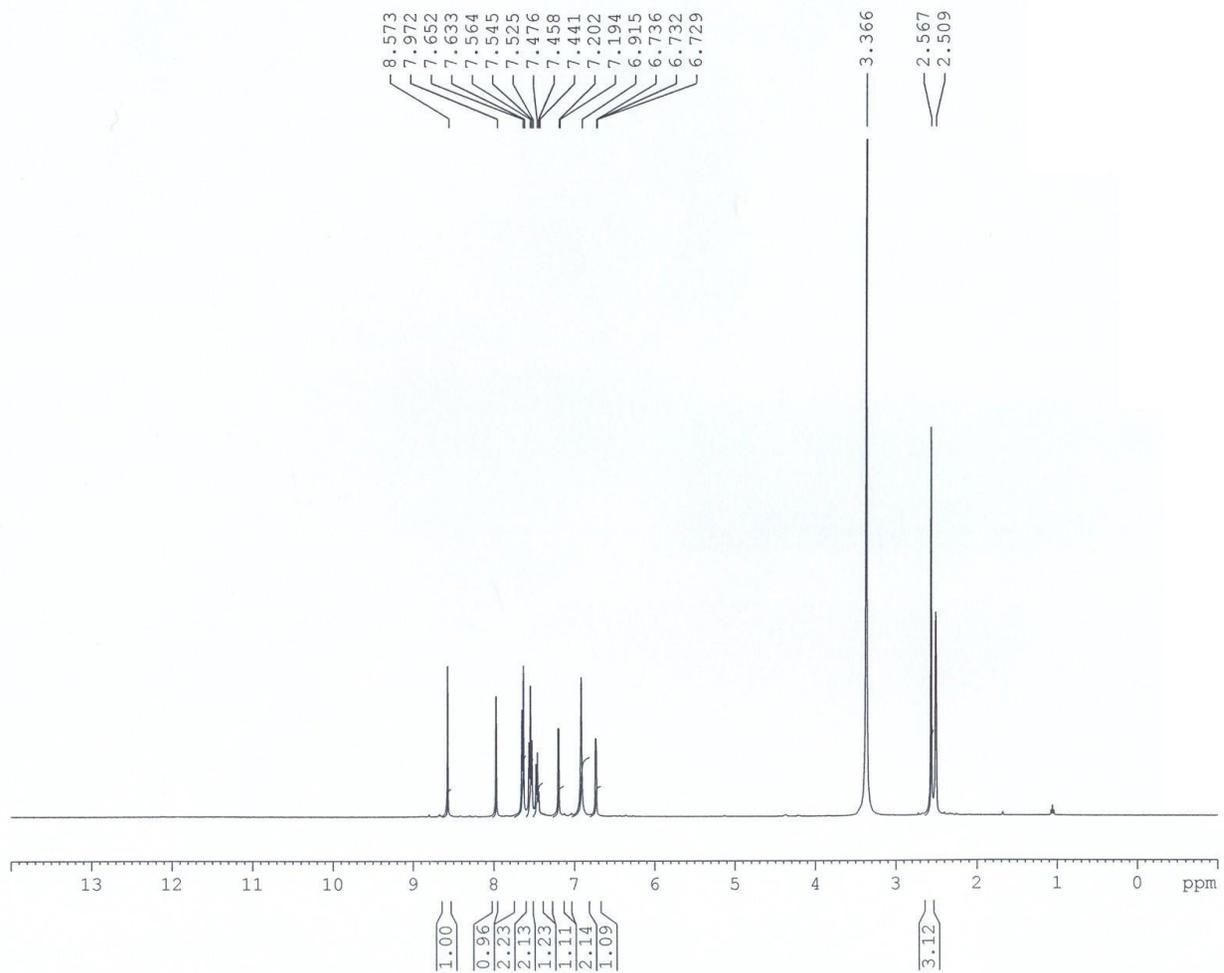
Compound 12n



Compound 12n



Compound 12n



Compound 12n

