ABSTRACT

The Influence of Chloro Subsituents on 3 And 4 Positions of Benzoyl Chloride on The Synthesis of *N*'-(3,4-dichlorobenzoyl)isonicotinohydrazide

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In this research, *N*'-benzoylisonicotinohydrazide and *N*'-(3,4-dichlorobenzoyl)isonicotinohydrazide were synthesized from isoniazid with benzoyl chloride and 3,4-dichlorobenzoyl chloride respectively, through acyl nucleophilic substitution mechanism. The aim of this research was to determine the influence of chloro substituents on 3,4-dichlorobenzoyl chloride on the synthesis of *N*'-(3,4-dichlorobenzoyl)isonicotinohydrazide. The structure of the synthesized compounds were confirmed by UV spectrophotometry, Infrared spectrometry, and ^{1}H-NMR Spectrometry. The synthesis of *N*'-benzoylisonicotinohydrazide produced pale yellow crystals with 94% yields and the melting point is 198-201^{0}C. The synthesis of *N*'-(3,4-dichlorobenzoyl)isonicotinohydrazide produced white crystals with 84% yields and the melting point is 239-241^{0}C. Because the synthesis of both compunds were carried out with different conditions, the yields cannot be statistically analysed. However, from the reaction time of both compunds it can be concluded that *N*'-(3,4-dichlorobenzoyl)isonicotinohydrazide was more reactive due to shorter reaction time than *N*'-benzoylisonicotinohydrazide.

Keywords : Synthesis, isoniazid derivates, chloro substituent, acyl nucleophilic substitution