



Synthesis of Poly Amide Based On Heterocyclic Rings

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Accepted on 20th April 2015

ABSTRACT

This research included preparation of a two heterocyclic triazole compounds, where prepared the 3,5-diamino-1-phenyl-1,2,4-triazoles and 3,5-diamino-1-carbamyl-1,2,4-triazoles from reaction of N-cyanoguanidine with phenyl hydrazine hydrochloride and semicarbazide hydrochloride respectively. Then synthesis of poly amide compounds by the reaction of these triazoles diamine compounds with dicarboxylic acid (oxalic acid, malonic acid and adipic acid) after converting to their acid chlorides (oxalic chloride, malonic chloride and adipic chloride) by reaction these carboxylic acids with thionyl chloride. The compounds were purified and characterized with the analytical and spectral data such as FT-IR spectrum ($400-4000\text{ cm}^{-1}$), and $^1\text{HNMR}$ spectrum (300MHz).

Keywords: Polyamide, 1,2,4-triazole, polymer, acid chlorides.
