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Solvent and Catalyst Free Acylation of Anilines with Acetic Acid

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Abstract: An efficient and green microwave assisted protocol to prepare amide fromamine via acylation without using catalyst provides quantitative yields in short reaction times. Synthesis of Acetanilide under microwave irradiation was described, in which Aniline was directly reacted with glacial acetic acid without any catalytic agents. The reaction took place in 40−50 min in the frequency range of 160 MHz, with almost quantitative yields. By applying green synthesis method, we avoid use of any hazardous or toxic materials. Quantitative yields are produced in a short amount of time by an effective and environmentally friendly microwave assisted approach that produces amide from amine via acylation without the need for a catalyst. Aniline and glacial acetic acid were directly combined during the synthesis of acetanilide under microwave irradiation, without the use of anycatalytic agent.The reaction occurs in the frequencybond of 160 MHz in 40 - 50 min. with almost quantitative yields. We don't employ any harmful or toxic components by using the Green synthesis techniques.

Keywords: Acylation,microwaveirradiation,amide,amine,aniline,acetanilide,greensynthesis.

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