

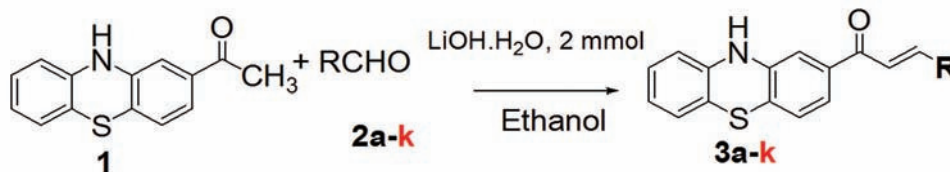
Lithium Hydroxide Monohydrate as a Catalyst for Claisen–Schmidt Reaction: Synthesis and Antioxidant Evaluation of some 1-(2-Phenothiazinyl)-3-aryl-2-propen-1-one

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ABSTRACT An efficient and general method has been developed for the synthesis of 1-(2-phenothiazinyl)-3-aryl-2-propen-1-ones **3a-k** from 2-acetylphenothiazine and aromatic aldehydes using lithium hydroxide monohydrate as an efficient and dual activation catalyst. The antioxidant activity of the synthesized compounds was evaluated using the procedure developed by Lissi *et al.* Compounds **3a**, **3e**, and **3g** were found to be highly potent antioxidant. Furthermore, compounds **3a**, **3e**, and **3g** have an ability to protect DNA from the induced damage by bleomycin.



KEYWORDS Claisen–Schmidt reaction, 2-Acetylphenothiazine, Aromatic aldehydes, Lithium hydroxide monohydrate, 1-(2-Phenothiazinyl)-3-aryl-2-propen-1-one