



Potassium 1, 2, 3, 6-Tetrahydrophthalimide Catalyzed Multi-Component Reaction for Efficient Synthesis of 4-arylmethylidene-3-substituted-isoxazol-5(4H)-ones as Potential Pesticides

Arvind Kumar Pandey¹, Nawseen Fatima Ansari¹, Akhilesh Kumar¹,
Kamal Pratap Singh¹, I.R. Siddiqui^{1*} and Manoj Kumar Shrivash²

1. Department of Chemistry, University of Allahabad, Allahabad-211002, **INDIA**

2. Centre of Biomedical Research, SGPGIMS, Lucknow-226014, **INDIA**

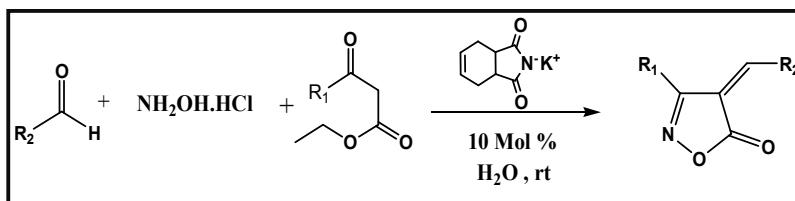
Email: arvind010pandey@gmail.com

Accepted on 7th June, 2018

ABSTRACT

A series of 4-arylmethylidene-3-substituted-isoxazol-5(4H)-ones were synthesized by efficient, operationally improved method via one-pot three-component reaction between various aromatic aldehydes, hydroxylamine hydrochloride, ethyl 3-oxobutanoate/ethyl 3-oxo-3-phenylpropanoate in good yields. This one-pot three component reaction was performed in Potassium 1,2,3,6-Tetrahydrophthalimide (PTHP) as an organocatalyst in water at room temperature. The advantages of this methodology is good yields easy workup simple reaction condition, easily available organocatalyst, relatively shorter reaction time, efficiency of reaction, easily synthesized catalyst, and environmentally benign water solvent.

Graphical Abstract



Keywords: Potassium 1,2,3,6-Tetrahydrophthalimide (PTHP), Hydroxylamine hydrochloride, Water, Potential Pesticides, Organocatalyst.