

New one-pot four-component synthesis of barbituric acid and thiobarbituric acid derivatives

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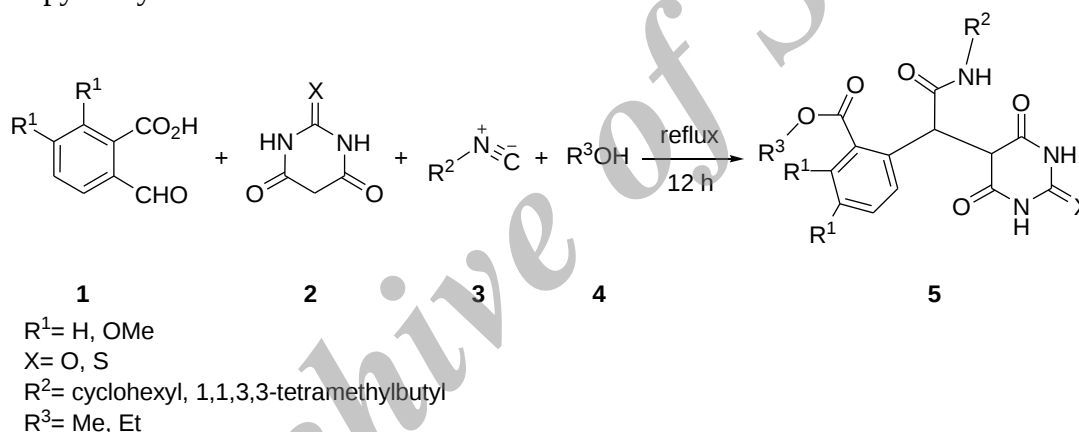
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Multicomponent reactions (MCRs) are an important class of convergent organic reactions, in which three or more starting materials react to form a product that contains atoms derived from all starting materials and often has a high atom economy. Because of existence of this important ability, in these decade research on this area has rapidly grown [1-2].

Here in we wish to report the Four-component reaction of 2-formylbenzoic acids, barbituric acid/thiobarbituric acid, isocyanides and MeOH/EtOH in which proceeded to give new barbituric acid and thiobarbituric acid derivatives in high yields in the absence of any catalyst under reflux condition. The structure of products were deduced from the IR, ¹H NMR, and ¹³C NMR spectroscopy analysis.



References

- [1] A. Shaabani,, M.B. Teimouri and H. Bijanzadeh. Tetrahedron Letters 43, (2002), 9151-9154.
- [2] T. S.,Yuuki Kojima and Y. U.,Katsuhicko Inomata.Tetrahedron Letters 52, (2011) , 2557-2559.