



Microwave Assisted Synthesis and Biological Screening of Dihydro pyrimidine Derivatives Using DABCO: An Efficient Catalyst

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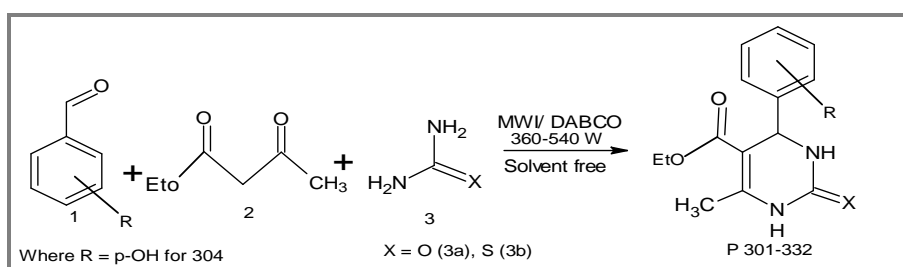
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ABSTRACT

The simple and green synthetic method proposed for the synthesis of biologically active multi functional dihydropyrimidin-2-(1H)-one/thione derivatives of series (5-phenyl-5,8-dihydropyrimido [4,5-d]pyrimidine-2,4,7(1H,3H, 6H) -trione) by the use of highly efficient DABCO as Catalyst under microwave assisted method . The multicomponent condensation of three carried out with the yield of new derivatives in high yield within desired time period. The catalyst can be reused and recovered easily at mild reaction condition and MWI technique always guarantees desired results with eco-friendly output. Further, the structural features of newly synthesized compounds were confirmed by their characterized by IR, ¹HNMR, ¹³CNMR, Mass spectroscopic techniques and their biological screening were done activities against gram +ve bacteria and gram -ve bacteria and anti-fungal activities using cup-plate diffusion method.

Graphical Abstract



Biginelli Reaction(SP₁-SP₂₈)

Keywords: Dihydropyrimidines, Biginelli reaction, DABCO Catalyst, Microwave Assisted method, Anti-microbial activities.