

Green Synthesis of Dihydropyrimidinone Derivatives and Study of Physicochemical Properties and Antimicrobial Activity

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Abstract: Versatile biological activity of dihydropyrimidinone (DHPM) derivatives makes it more interesting in medicinal chemistry. In present work green synthesis method was used to prepare a series of DHPM derivative by Biginelli reaction at room temperature in common fruit juice. Spectroscopic methods were used to characterize structures of all synthesized compounds. The viscometric and surface tension measurements have been carried out in different percentage solvent system. Viscosity increases with increases in concentration for all the tested derivatives may be attributed to the increases in solute – solvent interactions. Study was extended to find conductivity of synthesized derivative in different solvents. The data obtained was used to evaluate nature and magnitude of ion-solvent and ion-ion interactions. The primary purpose of this study to evaluate antibacterial activity against some Gram-positive and Gram-negative pathogens. It was observed that the compounds show poor or good activity which depend upon electronic factor of the phenyl ring of DHPM

Keywords: DHPM Derivatives; Physicochemical Properties, Antimicrobial Study

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