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Environmentally Benign and Efficient Synthesis of 4-substituted-2-(1-substituted-1*H*-Imidazol-5-yl) Naphthalen-1-ol and their antimicrobial Study

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Abstract: New classes of substituted imidazole were efficiently synthesized by using chief, easily available and cost effective iodine as a catalyst. 4-Substituted-2-(1-Substituted-1*H*-Imidazol-5-yl)naphthalen-1-ol (2) and synthesis of other different substituted imidazole were carried out by cyclising 1-[2-(1-hydroxy-4-Substituted naphthalen-2-yl)-2-oxoethyl]-3-substituted thiocarbamide (1) in an environmentally benign PEG 400 solvent medium using molecular iodine as an efficient cyclising agent. The reaction completed in short period of time and isolation of product becomes very easy in PEG 400 medium. The scheme outlined above comes under green chemistry parameter. Structure of all the synthesized compounds have been characterized by C, H, N elemental analysis, IR, ¹H NMR and Mass spectral analysis.

Keywords: Iodine, PEG 400, environmentally benign, efficient, cost effective, cyclising agent..

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