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Microwave Assisted Synthesis of Heterocycles- Green Chemistry Approaches

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Abstract :Green Chemistry is an approach to the synthesis, processing and use of chemicals that reduces risks to humans and the environment. The green chemistry involve use of techniques that contributions to achieve efficient, safe and clean conversions that are becoming general synthetic procedures. Present study focus on application of Microwave in synthesis of heterocycle compounds. The study shows that microwave assisted synthesis is one of the emerging tool with efficiency, time and cost effectiveness in organic synthesis. The compounds obtain in good yield as compared to the conventional method. Time required for synthesis is also reduced significantly by microwave irradiation. Compounds like Benzimidazole, Hanzsch dihydropyridine, coumarine and quinoxaline obtain in good yield with less time as compared to conventional synthesis.

Key Words: Microwave Assisted Synthesis, Green Chemistry, Benzimidazole, Hanzsch dihydropyridine, Biginelli Reaction.

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