



Review Article

**MICROWAVE ASSISTED ORGANIC SYNTHESIS: A GREEN
CHEMICAL APPROACH**

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Received: 08 August 2013,

Revised and Accepted: 14 August 2013

ABSTRACT

Green chemistry is a revolutionary approach in the field of organic synthesis. It utilizes a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products. Microwave assisted organic synthesis is the noble technique which can be utilized to reach to green chemistry approach. In microwave heating, electromagnetic waves ranging from 0.01 m to 1 m wavelength of frequency 30 GHz to 0.3 GHz are used to generate heat in the material. The region of Microwaves in the electromagnetic spectrum is between I.R. and Radio wave. This technique has numerous advantages over the traditional methods for organic synthesis. The basic mechanisms observed in microwave assisted organic synthesis are dipolar polarization (dielectric polarization) and conduction. Microwave assisted organic synthesis leads us in having synthetic procedures with increased speed, better yield with less time. These are some of the important aspects which explain tremendous use of microwave assisted organic synthesis now days. It has great applications in organic reactions; heterocyclic nucleus synthesis; microwave assisted extraction, drying, sintering, ashing etc.

KEYWORDS: Green Chemistry, Microwave Assisted Organic Synthesis.