



## **EFFICIENT AND GREEN SYNTHESIS OF 2-ARYL- BENZOTHAZOLES BY USING ECOFRIENDLY CATALYST**

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The microwave-assisted synthesis is one of the important tools of Green Synthesis. This is an eco friendly technology and helps to prevent pollution. We were therefore interested in developing a rapid, microwave-assisted protocol of various substituted benzothiazoles.

Benzothiazole contains a benzene ring fused to a thiazole ring. Benzothiazoles comprise a novel class of therapeutic compounds. 2-Arylbenzothiazoles are an important class of compounds owing to their potent utility as antitumor agent, antituberculotics, antiparasitics, calcium channel antagonists, chemiluminescent agents and also as photo sensitizes. So, we planned the synthesis of substituted benzothiazoles by using green synthesis technique. The ecofriendly catalyst Zirconyl Chloride and Zinc acetate are used. In the present work 2-aminothiophenol reacted with different substituted aldehydes in solid phase, in presence of ecofriendly catalyst zirconyl chloride, which is water-soluble and helps for the cyclo condensation, to obtain benzothiazoles in a one pot neat synthesis. The same products were also obtained with zinc acetate as catalyst, which is also a cheaper and water soluble catalyst. The structures of newly synthesized compounds are supported by spectral analysis. The newly synthesized compounds were screened for anti-inflammatory activity using Paw-edema method and have shown very promising activities.