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Eucalyptol as a Sustainable Solvent for Synthesis of Heterocycles

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Abstract: *Eucalyptus is a species of plant that has affected researchers and preservationists' observations across the globe since it is a rapidly expanding source of tree wood and a source of oil used for a variety of applications. Eucalyptol is the primary and most important oil component. This viewpoint summarises the literature that indicated the need for eucalyptol therapy for disorder. The recycling of eucalyptus oil as a catalyst for the synthesis of O, S, and N-heterocycles was another effort we described. A crucial component of the ecological performance of processes in commercial and theoretical laboratories is the catalyst employed in chemical synthesis. It is impossible to ignore their impact on prices, protection, and health. Green chemicals, like biogenic systems, have a significant advantage in that they can lessen the negative effects of organic synthesis on the environment. The first section lays out the steps that eventually led to the discovery of an unrivalled catalyst and its acquisition in the initial reactions. This section continues with a discussion of its characteristics and reuse, as described in the many managed studies. The employment of eucalyptol in a series of reactions that produce O,S,N-heterocycles is another high point of the segment. As we outline the development procedure used to create the ideal circumstance. We also demonstrate that eucalyptol can function admirably as a replacement to produce heterocycles containing O, S, and N. These studies enabled us to assess the viability and potential of the bio catalyst.*

Keywords: eucalyptol, 1,8-cineole, green synthesis, heterocyclic chemistry, bio-based solvent. O,S, N-heterocycles

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