

GREEN SYNTHESIS OF ZINC OXIDE NANOPARTICLE OF *THYMUS VULGARIS* L. LEAVES AND ITS ANTIBACTERIAL ACTIVITY

Sudhir Joshi, Deepak Patel, Harish Chandra* and S.C. Bhatt

¹Department of Physics

²Department of Chemistry

³Department of Medicinal and Aromatic Plants, HAPPRC

H. N. B. Garhwal University (A Central University), Srinagar, Garhwal-246174, Uttarakhand

Email: hreesh5@gmail.com

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Abstract: In the present study, the green method was used for the synthesis of zinc oxide nanoparticle from the dried leaves of *Thymus vulgaris* L. The synthesized ZnO NPs was characterized by UV-Vis spectrophotometer, XR Diffractometer, Scanning Electron Microscopy (SEM) and EDX (Energy Dispersive X-ray) spectrophotometer. The result suggests that the synthesized nanoparticles are crystalline in nature and in the nanorange. The average sizes of nanoparticle are 13.06 nm. The synthesized ZnO NPs was screened for the antibacterial activity against six pathogenic bacteria. Out of six bacterial strains tested, the ZnO NPs was found active against *Salmonella typhi*, *Klebsiella pneumoniae*, *Staphylococcus aureus* and *Bacillus cereus* but it does not have shown activity against *E. coli* and *Enterococcus spp.*

Keywords: Thymus vulgaris L., ZnO NPs, Antibacterial activity

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*Corresponding Author