

## Abstract

The present study was conducted to evaluate the bactericidal, antioxidant and catalytic activity of biogenic ZnO and Ag nanoparticles synthesized using *Cuminum cyminum*, which were characterized using UV Spectrophotometry, SEM and FTIR. Size of zeera mediated AgNPs and ZnONPs were found to be 77nm and 91nm respectively. Zeera mediated AgNPs being smaller in size showed significant antibacterial activity against the selected strains (*S. aureus*, *E. coli*, *P. aeruginosa* and *B. licheniformis*). Furthermore, results of antioxidant activity revealed that the *Cuminum cyminum* extract has significantly higher antioxidant potential when compared to the NPs synthesized from it. Due to smaller size and greater surface area Zeera mediated AgNPs showed significant dye degrading potential against Methylene Blue.

Present study suggests that Zeera mediated AgNPs and ZnONPs could be potential candidates for the bactericidal, antioxidant and catalytic activity.