



Synthesis of Silver Nanoparticle from *Curcuma longa* Leaves Extract and its Antibacterial Activity against *E. coli* and *S. aureus*

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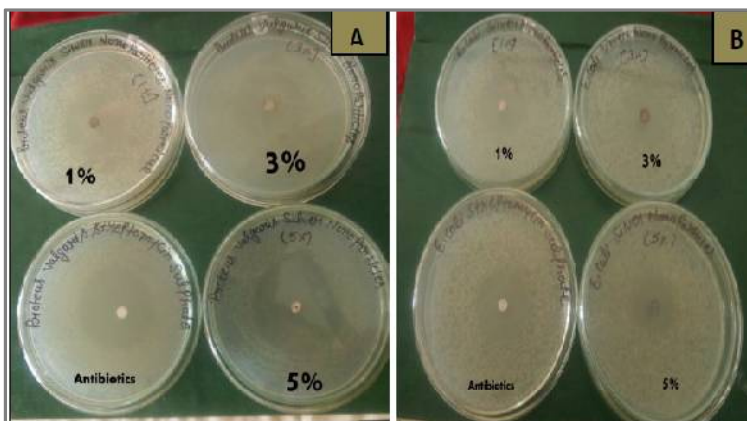
ABSTRACT

In this present study, silver nanoparticles were synthesized using hydroalcoholic extract of *Curcuma longa* leaves. Synthesized silver nanoparticles were characterized using UV-Visible spectroscopy (300-600 nm), SEM, TEM and XRD analysis. The comparative characterization analysis reveals that the synthesized nanoparticles were spherical in shape with the size of 31.07 nm. The antibacterial activities against different pathogens (*E. coli*, *S. aureus*) were reported. The zone of inhibition was observed both in gram positive and gram negative bacterial strains. They were found to have considerable inhibitory action against the mentioned microorganisms.

Graphical Abstract



Curcuma Plant



Antibacterial activity of silver Nanoparticle a) 1% b) 3% c) 5% d) antibiotics, A) *S. aureus* and B) *E. coli*

Keywords: *Curcuma longa*, Silver nanoparticle, Hydroalcoholic extract.