

## CHARACTERIZATION OF NEWLY SYNTHESIZED SILVER NANOPARTICLE USING UV – VISIBLE SPECTROSCOPIC TECHNIQUE

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### ABSTRACT

*Nanotechnology in present era gaining value due to capability of modulating metals in to their nanoparticles. There are few studies which are paying attention on the effects and mechanisms of nanomaterials on plants. The present research prominence on the biological synthesis of silver nanoparticle using herbal extract a natural biopolymer, acting as a reducing and stabilizing agent. In green synthesis we used natural reducing agents to synthesize nanoparticles (in this case silver nanoparticles). The leaves were found to be a good reducing as well as capping agent which can rapidly reduces silver ions ( $Ag^+$  to Ag). The characteristic color changes from pale yellow to dark brown in the reaction due to their specific properties (Surface Plasmon Resonance). Characterization of newly synthesized silver nanoparticle was made using UV – Visible spectroscopic technique. The UV-Vis spectrum of green synthesized silver nanoparticle from *Jasminum grandiflorum* and *Cymbopogon citrullus* have maximum absorbance peaks at 206.50 and 199.00 respectively. This study focus on a cost efficient ecofriendly and safe technique for the synthesis of silver nanoparticle using leaves of important medicinal plants.*

**KEYWORDS:** Silver Nanoparticles, Medicinal Plant, Bioreduction, Green Synthesis

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