

SYNTHESIS OF PLANT-MEDIATED SILVER NANOPARTICLES USING PLANT EXTRACT OF *SONCHUS ASPER*

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ABSTRACT

This paper reports a convenient and extracellular method for the synthesis of silver nanoparticles by reducing silver nitrate with the help of aqueous extract prepared using a weed namely *Sonchus asper*. The effect of various parameters like amount of plant extract, incubation time, incubation temperature, silver nitrate concentration and pH were investigated. The rapid reduction of silver ions was monitored by changing color of plant leaf extracts from green to brown after treatment with AgNO₃ and UV-Vis spectrophotometer. Our results suggest that *Sonchus asper* mediated silver nanoparticles could act as an effective antimicrobial agent and prove as an alternative for the development of new antimicrobial agents to combat resistance problem.

KEYWORDS: Silver Nanoparticles, Antimicrobial Activity, *Sonchus asper*