



Green synthesis of silver nanoparticles using Cymbopogon citratus

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | Characterization, Phytochemical analysis and antioxidant property of silver nanoparticles using Cymbopogon citratus | The aim of this study was green synthesis of silver nanoparticles using leaf extract of Cymbopogon citratus. Silver nanoparticles (AgNPs), having a surface plasmon resonance (SPR) band centered at 406 nm, were synthesized by Cymbopogon citratus leaf extract capping as well as reducing agent with AgNO₃ during a time dependent process at room temperature. A synthesized silver nanoparticle was characterized for their size and shape using scanning electron microscopy (SEM) and transmission electron microscopy (TEM). The total formation of the AgNPs was observed visually with a color change from pale yellow to brownish-black. Fourier transform infrared spectroscopy (FTIR) and energy dispersive x-ray spectroscopy (EDS/EDX) were conducted to determine the various functional groups and the concentration of metal ions in the nanoparticles. The data analysis showed spherically shaped nanoparticles with a size of 25-30 nm in diameter, as revealed by TEM, thereby complementing the result for SEM. | Format: Paperback | Language/Sprache: english | 68 pp.



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