

## EXTRACELLULAR SYNTHESIS OF COPPER NANOPARTICLES USING DIFFERENT PLANT EXTRACT

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### ABSTRACT

Present approach for synthesizing copper nanoparticles using plant extract is important plant based bio-resource which eliminates the use of synthetic reducing and capping agents. These biocompatible nanoparticles were nontoxic. The plant extracts of *Azadiracta indica*, *Lantana camera*, *Calotropis procera* and *Tridax procumbens* was successfully used for Synthesis of copper nanoparticles. The synthesized copper nanoparticles from plant extracts showed the signatory colour then optical absorbance was recorded by UV Visible spectrophotometer in 24 and 48 hrs. It clearly showed that the *Lantana camera* expressed the highest absorbance value compared to other three plants and demonstrated that the smaller particle sizes of synthesized copper nanoparticles and *Lantana camera* and *Tridax procumbens* showed maximum zone of inhibition having diameter 10mm while the neem showed the 5mm and the *Calotropis procera* shows the 6mm zone against *E.coli*.

**KEYWORDS:** Copper Nanomaterial, Zone of Inhibition, Spectral Analysis, Medicinal Plant, UV-Vis Analysis