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Eco-Friendly Synthesis of Silver Nanoparticles using *Ventilagomaderaspatana*(GAERTN), their Morphological Characterization

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Abstract:In the present study,silver nanoparticles were synthesized by using ethanol extract of leaves of *V. maderaspatana*. The characterization of AgNPs was done by UV-Vis Spectrophotometer and FT-IR spectroscopy. The morphology and size of the AgNPs was analyzed using SEM and TEM and the elements present in the sample were analyzed by EDAX study. UV-Visible spectra given absorption peak at 431nm confirmed that the particles at nano scale range. FT-IR spectra of AgNPs revealed that the complex nature of the biological materials involved in the synthesis of nanoparticles. SEM analysis of AgNPs showed spherical shaped silver nanoparticles. TEM analysis showed particles within the size of 20 to 50 nm range and EDAX study revealed that presence of elements like C, Cu and Ag. From the result it is concluded that that *V. maderaspatana* leaf extract may be used for eco-friendly synthesis of silver nanoparticles.

Key words:Green synthesis;Silver nanoparticles, *Ventilagomaderaspatana*.

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