

**EVALUATING THE POTENTIALITY OF LEAVES OF *MANILKARA ZAPOTA* (L)
P.ROYAN AND *MIMUSOPS ELENGI* L. IN THE SYNTHESIS OF SILVER
NANOPARTICLES**

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ABSTRACT

The present study is aimed to evaluate the potentiality of leaves of two different higher plants, *Manilkara zapota* and *Mimusops elengi* in the synthesis of silver nanoparticles. The exposure of these leaf broths separately into aqueous silver nitrate solution changed their color from pale yellow to brown and finally became dark brown colour. It indicates the reduction of silver nitrate into silver nanoparticles. The synthesized silver nanoparticles were characterized by the UV-Visible spectroscopy, Fourier Transform Infrared spectroscopy, X-ray Diffraction (XRD) analysis, Scanning Electron Microscopy (SEM), Energy Dispersive X-Ray (EDX) spectroscopy, Transmission Electron Microscopy (TEM) and Atomic Absorption Spectroscopy analysis. On evaluation, it is revealed that the leaf broth of reaction medium of *M. zapota* produces more silver nanoparticles with much smaller in size than the leaf broth of reaction medium of *M. elengi*. This is due to more availability of reducing and capping agents in the leaf broth of *M. zapota* than that in the leaf broth of *M. elengi*.

KEYWORDS: *Manilkara zapota*, *Mimusops elengi*, Biomaterial, Reaction Medium, Silver Nanoparticles