
Eco-friendly synthesis of Silver nanoparticles functionalized with *Flueggea leucopyrus* (Willd) bark extract

V.P. Bulugahapitiya* and M.M.A.B. Munasinghe

Department of Chemistry, Faculty of Science, University of Ruhuna, Matara, Sri Lanka

Currently nanoparticles get much attention due to their wide range of applications in various fields such as electronics, catalysis, energy and medicine. This work presents a simple and eco-friendly synthesis of silver nanoparticles (AgNps) using Silver nitrate and plant extract, *Flueggea leucopyrus* (Willd.) as the reducing agent. The aqueous solution of 1 mM silver nitrate was shaken with aqueous extracts of bark of *F. leucopyrus* and silver nanoparticles were obtained in average diameter of 109.4 nm. They were characterized using UV–Visible absorption spectroscopy, Fourier Transfer Infra Red (FTIR) and Particle size analysis. As there are no drastic conditions and toxic chemicals used in this synthesis, the method can be explained as eco-friendly synthesis. These nanoparticles will be investigated to see the possibility of use as the career for transferring *F. leucopyrus* (willd.) to cancer cells.

Key words: Silver nanoparticle, *Flueggea leucopyrus* (Willd.), Eco-friendly synthesis

Acknowledgement: Financial assistance from TURIS grant (Ru/DVC/Pro 136) of University of Ruhuna, and Prof. Nalin De Silva and Ms. Ranodhi Udangawa, at SLINTEC (Pvt) Ltd. for their support in analyzing nanoparticles are greatly acknowledged.

*vajira@chem.ruh.ac.lk