**Abstract**

A novel green source is opted to synthesize silver nanoparticles using almond peel extract. Almond is rich in bio reduction and the silver nanoparticles are prepared by chemical precipitation method. The synthesized silver nanoparticles (AgNP) are characterized by UV-Visible Spectroscopy (UV –Vis), Fourier Transform Infrared Spectroscopy (FT-IR), X-ray diffraction(XRD), Field emission scanning electron microscopy (FESEM) and Energy Dispersive X-ray (EDX). The observed peaks in XRD pattern corresponds to (111). (200), (220) and (311) planes, which confirms the formation of AgNPs. FT-IR measurement is carried out to identify possible biomolecules responsible for efficient stabilization of silver nanoparticles. The synthesized silver nanoparticles have antibacterial property that shows the effective inhibitory activity against water borne pathogens.