**ABSTRACT**

Silver nanoparticle has attracted much attention in recent years. At low concentration these silver nanoparticles are non-toxic in nature and have a broad spectrum of antibacterial actions. Silver nanoparticles were synthesized by wet chemical synthesis using silver nitrate as a reducing agent. The synthesized silver nanoparticles were then encapsulated with biopolymers like dextran sulphate and chitosan. The biopolymer encapsulated silver nanoparticles were then characterized with different characterization techniques. The presence of silver nanoparticles was confirmed by UV-VIS, XRD, FTIR and SEM spectroscopic techniques. The biocompatibility and the antibacterial activity of synthesized biopolymer encapsulated silver nanoparticles were analysed.