Bio Synthesis and Characterization of Silver Nanoparticles using Bacillus Cereus

Dr. R. Ajaz Haja Mohideen¹, Dr. M.I. Zahir Hussain²

Abstract: Biosynthesis of nanoparticles by using living organisms or material of biological origin, for example, nanoparticles may be synthesized from living bacteria or fungi, or using plant extracts. These techniques provided advantages over more traditional methods of synthesizing nanoparticles and focused on the bacterial synthesis of silver nanoparticles and confirm the characters of AgNO₃ by using UV-Visible spectrophotometer, X-ray diffraction (XRD). The bacteria Bacillus cereus was applied for synthesis of Silver nanoparticles by confirmation of MIC against AgNO₃ particles. The Surface Plasmon Resonance (SPR) property of synthesized nanoparticle was studied with the peak of the spectra at 421 nm by UV-Vis spectroscopy. The physiochemical properties of silver nanoparticles using XRD concluded that the nanoparticle form in the process is crystalline with miller index of diffraction at 32⁰

¹ Assistant Professor, Department of Zoology, Sadakathullah Appa College, Tirunelveli, India
² Assistant Professor, Department of Zoology, Sadakathullah Appa College, Tirunelveli, India