ABSTRACT

Aqueous extract of *Aloe vera* leaf have been utilized in the syntheses of silver-copper bimetallic nanoparticles (Ag/Cu-NPs). The synthesized nanoparticles have been characterized by using Uv-Visible, Fourier-Transform Infrared Spectroscopy (FTIR), and Scanning Electron Microscopy (SEM/EDX). The SEM reveals uniform spherical shape and Size 40 to 70 nm for Ag/Cu-NPs. The antibacterial activity of biogenically synthesized Ag/Cu-NPs was analyzed through agar well diffusion method against the test pathogens *i.e., P. aeruginosa*, *B. subtilis B. licheniformis* and *E. coli.* Biogenically synthesized (Ag/Cu-NPs) showed significant antibacterial activity against human pathogenic strains such as *P. aeruginosa*, *B. subtilis B. licheniformis* and *E. coli.* Ag/Cu-NPs showed highest zone of inhibition against *P. aeruginosa*. The maximum ZOI (20 mm) was observed against *P. aeruginosa.* The minimum ZOI (14) was observed against *E. Coli.* The One-way ANOVA showed that all the Ag/Cu-NPs activity was significant as compared to control.