ABSTRACT

Copper nanoparticles were prepared by using green method using chalcopyrite as source of metal. The metal was extracted from ore as copper sulphate by electrolytic process. Copper sulphate was used as precursor for the preparation of nanoparticles, while melia azedarach leaf extract was antioxidant as well as capping agent. 0.1 M copper sulphate solution was made to mix with azedarach leaf extract; color changes to greenish brown confirm the formation of copper nano particles. Characterization was made by UV Visible spectroscopy and SEM analysis. UV Visible spectra show an absorption peak of 571 nm. SEM images show that nano particles are spherical in shape of the average size of nano range. The antibacterial activity was studied by using S. aureus and E-coli. The antibacterial activity of copper nanoparticle show that copper nanoparticles has a great antibiotic resistance and toxic to bacteria. It was also examined that copper nanoparticles on interaction with DNA production created the deleterious effect such as destruction of cell, degradation and inhibition of DNA replication.