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Synthesis, Characterization and Cytotoxic Estimation of Cobalt Nanoparticles Against Pathogenic Bacteria

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Abstract : In this investigation cobalt nanoparticles have used as antibiotic to inhibit the growth of bacteria. The size depend property is the key issue that the antimicrobial nanoparticles relaying on, as well as the size of these submicron nanoparticles compared with the volume ratio. Many researchers in the time being focusing on the use of the innovated property of nanoparticles to inhibit the growth of various types of bacteria due to their stability, easiness to synthesis and its high efficiency compare with the others antimicrobials. Cobalt nanoparticles were synthesis by reduction method .the size and morphology of the nanoparticles were characterized by Uv- visible, AFM and SEM and which showed size ranging between 10-30 nm in diameter. Staphylococcus aureus and E-coil were used to examine the cytotoxicity of cobalt nanoparticles, both bacteria have shown significant zone inhibition 14 and 15 mm consecutively after 24 hours incubation. That indicate the high efficient of cobalt nanoparticles to inhibit the growth of such pathogenic microorganisms.

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