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Characterization and Antibacterial Activity of Hydroxyapatite nanoparticles

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Abstract: Nanoparticles are tiny materials with different properties as compared to their bulk material of the same composition. Their particular physiochemical and biochemical properties make them significant for commercialization. Nano Hydroxyapatite (HAP) is an ideal biomaterial that has the potential to facilitate strong bone conduction. It can hence be used for bone grafting, dentistry and for blocking cancerous cell proliferation. In this study, commercial hydroxyapatite nanoparticles were characterized using particle size, Fourier Transform Infrared Spectroscopy and Scanning Electron Microscopy. Their antimicrobial activities were also tested against nine standard MTCC cultures and also against normal skin flora by administering a specific concentration of HAP nanoparticles to check the zone of inhibition using well diffusion method.

Key words: Hydroxyapatite nanoparticles, particle size analyses, SEM, antibacterial activity.

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