FABRICATION AND CHARACTERIAZATION OF SrO MODIFIED BIOACTIVE GLASS NANO PARTICLE BY QUICK ALKALI MEDIATED SOL GEL METHOD

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ABSTRACT

FABRICATION AND CHARACTERIZATION OF SrO MODIFIED BIOACTIVE GLASS NANO PARTICLE

The fabrication and characterization of SrO modified bioactive glass nano particle is investigate focusing on the synthesizing bio active glass nanoparticle by quick alkali mediated sol gel method. It is also to evaluate the physical and structural properties of the synthesized bioactive glass nano particle. The bio active glass was assessed by immersion study of Simulated Body Fuid (SBF) and the immersion time of the bio active glass. The bio active glass was also had an alteration of the material used by using new element which was Strontium into the composition of bio active glass. The Strontium co doped in the composition was measure by weight % (wt%) as 1, 3 and 5 wt %. The sol gel quick alkali mediated method was used to shorten procedure time. The sample was characterized by Scanning Electron Microscope-Energy Dispersive X-ray (SEM-EDX), Fourier Transform Infrared Spectroscopy (FTIR) and X-Ray Diffraction (XRD). An amorphous and weakly crystalline Hydroxyapatite (HA) layer was formed to develop on the surface of the soaked SBF bio active glass after in particular time immersion in SBF. While the morphology of the sample was fine and cohesion of the developed layer, the presence of CaO phase accelerate the formation of HA in the glass.