

Nanang Nurul Hidayat, 2012, "Synthesis and Macroscopic Characterization Nano-Composit Hydroxyapatite/Chitosan (n-HAp/CS) for Bone Implant Application", Thesis, Supervised by Drs. Siswanto M.Si dan Dyah Hikmawati S.Si., M.Si, Physics Departement, Fakultas of Science and Technology. Airlangga University, Surabaya.

ABSTRAK

Nano-composite hydroxyapatite/chitosan (n-Hap/CS) has been synthesized by a solution chemical methodology with varying n-HAp contents from 10 % to 60 %. It was revealed that the inorganic phase in the composite was bioceramic n-HAp with low crystallinity, the n-HAp crystallites had typical size about 20 nm. The characterization of macroscopic of the composite are found to be improved significantly with increase in nanoparticle n-HAp contents. Although the compressive strength and porosity are decreased significantly with increase in nanoparticle contents. The synthesis of nano composite n-HAp/CS may be used in bone dental application.

