

CALCIUM PHOSPHATE GLASS-COATED HYDROXYAPATITE

Charussri Lorprayoon

Abstract

Calcium phosphate glass-coated hydroxyapatite (HA) has been developed as bone replacement. The coating glass serves two purposes : to accelerate the bonding between the implant and the bone tissue and to enhance the strength of hydroxyapatite.

In this study, a silica-free phosphate glass with suitable characteristics was coated on HA ceramic by dipping the specimens in the molten phosphate glass at the temperature of 1000-1100°C and cooled in the furnace. After coating, SEM observation confirmed a good adherence between the glass and the HA substrate. No surface crack was observed and the mechanical strength has also been improved.