

## **Response of functionality graded hydroxyapatite/F-75 in saline solution 0.9% NaCl**

### **Abstract**

Functionally graded hydroxyapatite (HAP) /F-75 was fabricated using powder metallurgy technique. Samples fabricated were tested inside 0.9% NaCl to check their bioactivity reaction. After immersed, samples were analyzed using Fourier Transform Infrared (FTIR) and mass change. Result showed that mass gain decreased as the percentage of HAP in the intermediate layer increased. Mass gain obtained after immersion test because of the passive layer formation on the F- 75 surface. Dissolution of HAP was occurred as the FTIR analysis detected the existence of phosphate, and hydroxide ions bands inside the solution. The dissolution process is the part of the mechanism of apatite formation. The apatite layer formation is important to encourage the formation of new bone.

### **Keywords**

Corrosion; F-75; Functionally graded materials; Hydroxyapatite; In vitro