

## **Fabrication and characterization of porous F-75 for potential application in tissue engineering**

### **Abstract**

Porous F-75 (Co-Cr-Mo) was produced by powder metallurgy technique. F-75 powder was mixed with space holder and compacted using different pressures (300 MPa, 350 MPa, 400 MPa, 450 MPa). The green samples were sintered at 1150°C in a tube furnace under argon atmosphere. Sintered samples were examined in terms of bulk density, porosity, hardness and pore size. Microstructural analysis was carried out using a scanning electron microscope (SEM). Microstructure analysis showed that pore sizes and pore shape were influenced by different compaction pressure. The hardness of the samples increased as compacting pressure increased. Density and porosity remained constant at certain level.

### **Keywords**

Cobalt; Porous; Powder metallurgy; Sintering; Tissue engineering