

## **Sintering effects on mechanical properties of Co-HA composite prepared by modified electroless deposition**

### **Abstract**

Co-HA composite produced using electroless deposition without conventional sensitization and activation treatment was studied with varying sintering temperature (1100°C, 1200°C and 1250°C). The particles size, bulk density, porosity, hardness measurements and the flexural strength are performed in order to find the optimum sintering temperature. After the electroless process for 1 H, the particle size of HA increase to 3.9% and finally the value bulk density percentage of 93.08%, percentage porosity of 6.89%, hardness value of 291.8HV and flexural strength value of 42.4MPa have been achieved after pressing and sintering Co-HA composite at 1250°C. Observations were supporting the idea that Co-HA produced by modified electroless method was improving the mechanical properties with increasing the sintering temperature.

**Keywords;** Cobalt, Deposition, Electroless, Hydroxyapatite (HA), Sintering