Elaboration of Natural Hydroxyapatite Using Calcination at Various Temperatures

A. Azzi, L. Bahloul, L. Alimi, H. REZZAG, S. Guerfi, M. Mokhtari

Abstract: The use of hydroxyapatite HA as fillers, spacers, and bone graft substitutes have received considerable attention, primarily because of their biocompatibility, bioactivity and osteoconduction as regards the characteristics to host tissues. We developed hydroxyapatite subjected at different calcination temperature (900, 1200 °C) for ninety minutes with respect to their chemical and structural properties. Simultaneous thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC) was performed for our powder using a Q600 SDT equipment, 20 mg of this powder was heated in an alumina crucible at a rate of 10 °C / min.

Keywords: Calcinations, hydroxyapatite, Chemical and structural properties