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Abstract

[ACCORSI-MENDONCA, Thais](#) et al. Physicochemical characterization of two deproteinized bovine xenografts. *Braz. oral res.* [online]. 2008, vol.22, n.1, pp. 5-10. ISSN . doi: 10.1590/S1806-83242008000100002.

Calcium phosphate salts, or more specifically hydroxyapatite, are products of great interest in the fields of medical and dental science due to their biocompatibility and osteoconduction property. Deproteinized xenografts are primarily constituted of natural apatites, sintered or not. Variations in the industrial process may affect physicochemical properties and, therefore, the biological outcome. The purpose of this work was to characterize the physical and chemical properties of deproteinized xenogenic biomaterials, Bio-Oss (Geistlich Biomaterials, Wolhuser, Switzerland) and Gen-Ox (Baumer S.A., Brazil), widely used as bone grafts. Scanning electron microscopy, infrared region spectroscopy, X-ray diffraction, thermogravimetry and degradation analysis were conducted. The results show that both materials presented porous granules, composed of crystalline hydroxyapatite without apparent presence of other phases. Bio-Oss presented greater dissolution in Tris-HCl than Gen-Ox in the degradation test, possibly due to the low crystallinity and the presence of organic residues. In conclusion, both commercial materials are hydroxyapatite compounds, Bio-Oss being less crystalline than Gen-Ox and, therefore, more prone to degradation.

Keywords : Dental implantation; Hydroxyapatite; Chemical analysis; Physical analysis.

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