

20/01

Production and evaluation of technological properties of ceramic specimens based of mixed clay with plaster of residues

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The industry of the building site is responsible for 15% to 50% of the consumption of the extracted natural resources and, consequently, it is one of the largest generators of residues [1]. The covering plaster is one of those main residues, where of the applied total in the constructions, it waste can arrive to 45% in mass [2]. In this work they were incorporate different percentile of plaster (5,10,15 and 20%) to the ceramic mass used in the production of bricks, with the intention of verifying the influence of this percentile one added on: the compression tension, absorption of water and the lineal retraction. Characterizations of it composition were accomplished by diffraction of ray X, of it morphology for MEV and the distribution of size of the particles for classification. The results indicated that as larger the tenor of plaster, minor is resistance the compression, smaller the lineal retraction, however with an increase of the absorption of water Key words: Plaster of residues, Recycling, Composites

20/02

Crystalline Phases Identification In Biomaterials

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Brazilian granulated bone grafting products derived from bovine bone structure, were analyzed by WDXRF e DRX techniques. The major crystalline phases appears like perfect hydroxylapatite and that one with less calcium. Some others calcium and phosphorous compounds appear in significant percentages that vary from product to product, what can makes the grafting functional differences of each other.

20/03

Sintering of Commercial Leucite-Based Dental Porcelains

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The aim of this work was to study the effect of temperature and heating rate on the densification of two leucite-based dental porcelains: one low-fusion and one high-fusion commercial leucite porcelains (Dentsply-Ceramco). Porcelain powders were characterized by differential thermal analysis (DTA), X-ray diffraction (XRD), particle size distribution, and helium pycnometry. Bar samples were sintered from 650 to 1050oC, using heating rate of 55oC and 10oC/min. Sintered samples were characterized in terms of bulk density, measured by the Archimedes method in water, and fractured surface microstructure by scanning electron microscopy (SEM). The results show that densification increases with increasing temperature and the increase in heating rate has no effect on the densification of the porcelains studied. Keywords: Porcelain, Sintering, Thermal Analysis, Dentistry, Dental Materials

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