?-TCP SCAFFOLDS REINFORCED WITH PHOSPHATE BIOGLASS WITH VARYING ZIRCONIA AMOUNTS FOR BONE TISSUE REGENERATION

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In this research tricalcium phosphate scaffolds reinforced with phosphate bioglass showed excellent results of ranges pore size distribution, they were obtained between 20-1000 microns besides they were interconnected; The volume percentages were between 47 and 52%, these values were corroborated by microtomography (?-CT), FE-SEM and ImageJ software. Cell adhesion was excellent it allowed that the hydroxyapatite formation on the surface of the scaffolds (FT-IR and DRX ). This study suggests that the surface area of the scaffold plays an important role in the cell adhesion and cell proliferation in which the AlamarBlue testing was used; it assay indicated that the V1, VZ0.5 and VZ1.0 scaffolds compositions showed better results due to cell proliferation allowed to triple cell proliferation in a time of 36h. The scaffolds are an effective alternative for bone tissue engineering.

Keywords: SCAFFOLD, HYDROXYAPATITE, B-TCP

References:


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