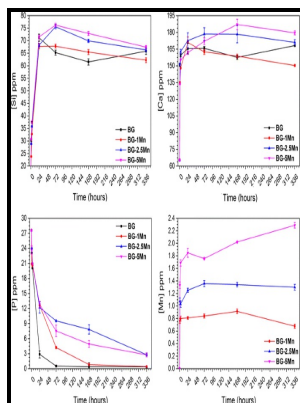


Significance of the silica-rich layer in the response of bone-derived cells to bioglass in vitro

University of Birmingham - Surface modification of bioactive glasses



Description: -

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The effect of magnesium content on in vitro bioactivity, biological behavior and antibacterial activity of sol

The first bioactive glass 45S5 Bioglass[®], 46. It combines high bioactivity with desirable mechanical properties and has been successful in the load-bearing spinal area of the body. The concentration of calcium can be adjusted if substitution for calcium e.

Surface modification of bioactive glasses

In these aspects, biodegradable polymeric biomaterials offer the advantages of being able to be eliminated from the body after fulfilling their intended purposes. The termed was coined by Larry Hench in 1971, when he and his colleagues, at the University of Florida, invented Bioglass[®], the first material that formed a strong bond to bone.

Effect of pre

Phys Rev B Condens Matter Mater Phys. Incorporation of wollastonite and bioactive glasses also resulted in a decrease of the water contact angle from 66° to 16° and 65° to 32°, respectively, indicating the possibility of tailoring the hydrophobicity of the composite by addition of the inorganic phase.

The significance of the silica

These HA are not pure but contain some of the minor and trace elements originally present in the coral or in the bone. In tensile and bend tests the load is perpendicular to crack, and Mode I is most frequently encountered for ceramic materials. The advances in materials science, engineering, cell and molecular biology, and medicine will be able to offer new solutions.

The effect of magnesium content on in vitro bioactivity, biological behavior and antibacterial activity of sol

A secondary phase of -TCP also forms during the hydrothermal conversion. The presence of Ca and P ions in SBF accelerated the repolymerisation of silica on the glass, the formation of an amorphous Ca, P layer and the crystallisation to hydroxycarbonate apatite HCA.

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