

Effect of the Hardness of Spacer Agent on Structural Properties of Metallic Scaffolds

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Abstract : Pore size and morphology plays a crucial role on mechanical properties of porous scaffolds. In this research, titanium scaffold was prepared using space holder technique. Sodium chloride and ammonium bicarbonate were utilized as spacer agent separately. The effect of the hardness of spacer on the cell morphology was investigated using scanning electron microscopy (SEM) and optical stereo microscopy. Image analyzing software was used to interpret the microscopic images quantitatively. It was shown that sodium chloride, due to its higher hardness, maintain its morphology during cold compaction, and cause better replication in porous scaffolds.

Keywords : Spacer, Titanium Scaffold, Pore Morphology, Space Holder Technique

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