عنوان مقاله:

Modification of the freeze-drying process as a method of the scaffold fabrication for use in the skin tissue engineering

محل انتشار:

دهمین سمینار بین المللی علوم و تکنولوژی پلیمر (سال: 1391)

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خلاصه مقاله:

Tissue engineering scaffolds are extensively used as threedimensional analogs for the extracellular matrix (ECM). The engineered scaffolds may provide suitable pore structurewithin a three-dimensional structure. Adequate pore size as well as a uniformly distributed, interconnected pore structureand sufficient porosity are needed for cell adhesion and ECM regeneration. To create such a porous structure, diverse methods of fabrication such as freeze-drying, electrospinning, emulsion templating and rapid prototyping have been applied [1]. Freeze-drying has been utilized as a popular method tofabricate gelatin-chitosan scaffolds for the skin regeneration [2]. However, the conventional freeze-drying methodproduces a gross heterogeneous microstructure. In this work, we seek to obviate the drawbacks of the freeze-drying method to reach a uniform and homogeneous porous microstructure

کلمات کلیدی: