

Reference Number: 025418/0045

Title of the Invention

A TISSUE SCAFFOLD PRODUCTION METHOD

Invention

The present invention relates to a production method of a biodegradable and biocompatible tissue scaffold, which is designed to support cell proliferation by being implanted to the tissue during tissue regeneration after defect of a cartilage and/or bone tissue, and which comprises the steps of synthesizing polypropylene fumarate (PPF) pre-polymer , mixing PPF with vinyl phosphonic acid (VPA) or vinyl phosphonic acid ester (VPES), curing the mixture by heating it in the presence of a radical initiator, obtaining the porous or nonporous biopolymer that will be used as tissue scaffold

Advantages

Additionally, use of polypropylene fumarate (PPF) and vinyl pyrrolidone (VP) together for construction of scaffold is known. PPF is an unsaturated polyester. Radical polymerization of PPF in the presence of VP gives a cross-linked, biocompatible and biodegradable thermoset polymer. A porous form is provided to these polymers by means of techniques such as salt leaching. In the recent years, various studies have been conducted on compositions of PPF with VP or different comonomers and on composites thereof with inorganic additives. Positive results have been obtained in biocompatibility, biodegradability and mechanical properties regarding use of these materials as bone tissue scaffold and these studies have been published.

Current Status

TURKEY: Registered

GERMANY: Registered

ENGLAND: Registered

FRANCE: Registered

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Keywords

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