Synthesis, Characterization and Swelling Behavior of Acrylic Polymer-Grafted Polysaccharides

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Abstract

This study reports the grafting of acid acrylic onto agar agar (PAAc-g-Ag) via a conventional free-radical polymerization method employing ammonium persulfate as the initiator. The synthesized hydrogels were characterized by ATR spectroscopy and thermogravimetric analysis (TGA), confirming successful grafting. Their swelling performance was further investigated in distilled water and saline solution to evaluate their responsiveness in different media.

Keywords

Graftting, polyacylamide, Agar-Agar, Swelling, Hydrogels, drug delivery.