

عنوان مقاله:

Effect of freeze-thawing cycles on the swelling behaviour of starch-g- (NIPAAm-co-IA) nanohydrogels

محل انتشار:

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

تعداد صفحات اصل مقاله: 1

نویسندگان:

.Karim Poorjamal - *Laboratory of Polymer, Faculty of Chemistry, University of Tabriz, Tabriz, Iran*

.Marziyeh Fathi - *Laboratory of Polymer, Faculty of Chemistry, University of Tabriz, Tabriz, Iran*

.Ali Akbar Entezami - *Laboratory of Polymer, Faculty of Chemistry, University of Tabriz, Tabriz, Iran*

خلاصه مقاله:

Physically crosslinked hydrogels are formed spontaneously under appropriate conditions. They do not require introduction of external crosslinking agents, which are usually nondegradable and may prevent degradability of the entire hydrogel. Moreover, the crosslinking agents are often toxic agents [1]. The freeze-thawing method is one of the best ways for physical crosslinking. The hydrogels so produced were porous, spongy, rubbery and elastic and displayed good mechanical strength [2]. In this work, we synthesised starch-g- P(NIPAAm-co-IA) nanohydrogel via free radical copolymerization and were characterized by FT-IR and thermal gravimetric analysis (TGA). We investigated the effect of freeze-thawing on swelling behavior of synthesised nanohydrogels. The water sorption capacity decreased with an increase in the number of freeze-thawing cycles.

کلمات کلیدی:

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/579485>

