

عنوان مقاله:

Nanofibrous chitosan-polyethylen oxide mats containing green tea extract

محل انتشار:

دومین کنفرانس بین المللی یافته های نوین پژوهشی در شیمی و مهندسی شیمی (سال: 1395)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Azam Barzegari - *Department of Chemistry, Amirkabir University of Technology (Tehran Polytechnic), P. O. Box: 15875-4413, Tehran, Iran*

Zahra Shariatinia - *Department of Chemistry, Amirkabir University of Technology (Tehran Polytechnic), P. O. Box: 15875-4413, Tehran, Iran*

خلاصه مقاله:

Nanofibrous CS-PEO mats containing 2% and 4% of green tea (GT) aqueous extract were developed by electrospinning method. The FE-SEM micrographs of the mats exhibited that in both cases very uniform fibers free of any nanobeads and droplets were formed that were about 90 nm in size. The tensile strength analysis revealed that the elongation at break of the mat including 2% GT is slightly higher while its tensile strength is very much smaller than that of the mat loaded by 4% GT. The swelling percent was decreased by increasing the GT percent from 2 to 4% and this may be attributed to the enhanced interaction of the amino NH₂, C(O)NH₂ and OH groups of the chitosan and PEO polymers with the OH groups of GT leading to a less hydrophilic mat surface, thus reducing the attraction by the aqueous medium. Moreover, the swelling was the highest in acidic medium but it was decreased in the neutral environment and it had the least value within the alkaline medium.

کلمات کلیدی:

Nanofibrous mat, Electrospinning, Green tea, Polyethylen oxide, Chitosan, Tensile strength

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/477720>

