

عنوان مقاله:

Anti-Staphylococcus aureus Augmentation of Propolis by Incorporating in PVA Nanofibrous mat

محل انتشار:

سومین کنفرانس ملی و اولین کنفرانس بین المللی پژوهش های کاربردی در علوم شیمی و مهندسی شیمی و سومین کنفرانس ملی و اولین کنفرانس بین المللی پژوهش های کاربردی در زیست شناسی (سال: 1395)

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نویسندگان:

Farideh Zeighampour - *Department of Textile Engineering, Isfahan University of Technology, Isfahan, Iran*

Farzaneh Alihosseni - *Department of Textile Engineering, Isfahan University of Technology, Isfahan, Iran*

Mohammad Morshed - *Department of Textile Engineering, Isfahan University of Technology, Isfahan, Iran*

خلاصه مقاله:

In this study the possibility of using the propolis in a more expedient way, by incorporating the active compound in the nanofibrous mat was investigated. Polyvinyl alcohol (PVA) as a biodegradable and electrospinnable material along with good biocompatibility character was chosen as the substrate. 40% w/w of hydroalcoholic extract of propolis (HEP) in PVA solution was electrospun. Scanning electron microscopy (SEM) analysis showed that nanofibrous with 158.9 nm diameter have been produced. Fourier transform infrared spectroscopy (FTIR) confirmed the existence of active compounds inside the nanofibrous mats. Agar diffusion test method result showed 19mm inhibition zone against S.aureus for nanofibrous mats containing HEP which was as good as the antibacterial effect of strong antibiotic, vancomycin standards discs. It was also found that using nanofibrous mat had positive effect on antibacterial activity of the produced mat compared to microfibrous mat and film.

کلمات کلیدی:

nanofibrous mat, Propolis, antibacterial wound dressing, polyvinyl alcohol

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