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Naslojavanje TEMPO oksidisanim celuloznim nanofibrilima kao novi pred-tretman za poboljšanje antibakterijskih svojstava viskozne tkanine funkcionalizovane hitozanom

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Osnovni cilj ovog rada je dobijanje viskozne tkanine funkcionalizovane hitozanom sa poboljšanim antibakterijskim svojstvima. Radi poboljšanja interakcija viskozne tkanine sa hitozanom, viskozna tkanina je naslojena TEMPO oksidisanim celuloznim nanofibrilima (TOCN) pre funkcionalizacije sa hitozanom. Tkanina je okarakterisana pomoću elementalne analize, merenjima zeta potencijala, sadržaja funkcionalnih grupa, prekidne jačine i antibakterijske aktivnosti. Naslojavanjenje tkanine TOCN-om je poboljšalo njena mehanička i antibakterijska svojstva.

Coating with TEMPO oxidized cellulose nanofibrils as novel pre-treatment for improving antibacterial properties of viscose fabric functionalized with chitosan

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The main objective of this study was to obtain viscose fabric functionalized by chitosan with improved antibacterial properties. In order to improve interactions between viscose fabric and chitosan, viscose fabric was coated with TEMPO oxidized cellulose nanofibrils (TOCN) before functionalization with chitosan. Fabric was characterized using elemental analysis and zeta potential measurements. Functional group content, breaking strength and antibacterial activity were also evaluated. Coating of fabric with TOCN improved its mechanical and antibacterial properties.

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