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ANTIBACTERIAL PERFORMANCE OF CHITOSAN BASED MEMBRANES LOADED WITH TETRACYCLINE FOR WOUND HEALING APPLICATIONS[2]

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Abstract: *In this study, the possibility of immobilizing an antibiotic (tetracycline) onto chitosan (CS) and chitosan/zeolite (CSZ) composite membranes for wound healing applications was investigated. To study the loading capacity of tetracycline onto the CS/CSZ membranes UV-spectroscopy was employed. The main challenge was to provide antibacterial properties through a local delivery of antibiotics in order to prevent infection in wounds during the wound treatment procedures. The antibacterial activity against Escherichia coli ATCC 25922 and Staphylococcus aureus ATCC 29213 strains of the developed membranes was assessed trough disk-diffusion method by means of Mueller-Hinton agar. The obtained results showed that chitosan/zeolite membranes loaded with tetracycline exhibited better antimicrobial properties compared to other studied objects.*

Keywords: *Chitosan, Chitosan/zeolite composite membranes, Zeolite, Tetracycline, Escherichia coli, Staphylococcus aureus.*

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