

Physico-chemical properties of modified wound coatings based on chitosan in the experiment

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Our research work is dedicated to producing a new and improved wound covering by synthesizing and modifying biocompatible material based on chitosan. In vivo experiments were conducted to study wound-healing properties of chitosan specimens in a rat model. Experimental results showed that the all studied specimens have high biocompatibility, biodegradability, bioadhesiveness and absorptive capacity of wound exudate, however, the degree of adhesion and biodegradation depended on the molecular weight and the features of the internal orientation of the chitosan pores. Modification of the spatial structure and changes in the degree of polymeric cross-linking open the possibility of programming the physico-chemical properties of chitosan. The uniqueness of the properties of chitosan and the possibility of modifying its basic physico-chemical characteristics allow us to conclude that the development of new wound coatings based on chitosan is promising in a future.