

Obtaining of low molecular weight chitosan and acetyl-derivatives and investigation their antibacterial properties

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Abstract

Low molecular weight chitosan with high degree of deacetylation and low polydispersity was obtained by acid hydrolysis. Acetyl derivatives with different degree of saturation and with different acetylic chain length were synthesized. The comparative estimation of antibacterial properties of chitosan samples with various molecular weight and acetyl-derivatives has been made. It has been established that antibacterial activity of chitosan depends on molecular weight of polymer and increases at low degree of acetylation of its molecules.