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ТЕХНОЛОШКИ ФАКУЛТЕТ

A comprehensive approach to chitosan-gelatine edible coating with β -cyclodextrin/lemongrass essential oil inclusion complex — Characterization and food application

Објављен рад

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Biopolymer-based films present an ideal matrix for the incorporation of active substances such as antimicrobial agents, giving active packaging a framework of green chemistry and a step forward in food packaging technology. The chitosan-gelatine active coating has been prepared using lemongrass oil as an antimicrobial compound applying a different approach. Instead of surfactants, to achieve compatibilization of compounds, β -cyclodextrin was used to encapsulate lemongrass oil. The antimicrobial effect was assessed using the dip-coating method on freshly harvested cherry tomatoes artificially contaminated by *Penicillium aurantiogriseum* during 20 days of cold storage. According to the evaluation of the antimicrobial effect of coating formulation on cherry tomato samples, which was mathematically assessed by predictive kinetic models and digital imaging, the applied coating formulation was found to be very effective since the development of fungal contamination for active-coated samples was observed for 20 days.

