

عنوان مقاله:

Preservative Effect of Chitosan Coating on Shelf Life and Sensory Properties of Chicken Fillets during Chilled Storage

محل انتشار:

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خلاصه مقاله:

Background: Chicken fillets contain essential amino acids besides many minerals and vitamins, which are necessary for maintaining life and promoting growth. Moreover, it is low in calories and cholesterol; therefore, it can be used for feeding infants, young children, and some patients. Methods: Chicken fillets were initially coated by dipping in different concentrations of chitosan (1.0%, 1.5%, and 2.0%), and then the shelf life of coated samples was investigated under refrigeration storage (4 ± 1 °C) for 15 days. The control (uncoated) and coated samples were analyzed periodically for bacteriological, pH value, and sensory characteristics. Results: The sensory evaluation results correlated with the microbial analyses. Chitosan-coated samples achieved a shelf-life extension of 12 days at chilled storage temperature (4 ± 1 °C) whereas the non-coated samples had a shelf life of 3 days at the same storage temperature. There were no significant organoleptic changes within the chitosan-coated samples ($P > 0.05$). The pH values of all coated samples were significantly lower than the control group ($P < 0.05$). However, the obtained data revealed that chicken fillets samples coated with chitosan (1.0%, 1.5%, and 2.0%) led to a significant reduction ($P < 0.05$) of the total aerobic bacterial count (TBC), total Enterobacteriaceae, and total Staphylococcus counts along the storage period. Conclusion: The present study established that application of chitosan coating on chicken fillets could have a potential .for preserving the microbiological quality and enhancing sensory attributes during chilled storage

کلمات کلیدی:

Chicken fillets, Chilled storage, Chitosan coating, Microbiological quality, Shelf life

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