

Effect of chitosan coatings on the physicochemical characteristics of Eksotika II papaya (Carica papaya L.) fruit during cold storage

ABSTRACT

The effect of chitosan on the physicochemical characteristics of Eksotika II papaya fruit stored at 12 ± 1 °C and 85–90% relative humidity, was investigated. Chitosan provided an effective control in reducing weight loss, maintained firmness, delayed changes in the peel colour and soluble solids concentration during 5 weeks of storage. The titratable acidity declined throughout the storage period, though at a slower rate in the chitosan coated fruit as compared to the control. Sensory evaluation results also confirmed the efficacy of chitosan. Consequently, the internal gaseous concentrations of CO₂ and O₂ also proved the usefulness of chitosan. These findings suggest that chitosan can be used commercially for prolonging the storage life of Eksotika II papaya fruit.

Keyword: Chitosan, Gaseous exchange, Papaya, Postharvest quality, Sensory evaluation