

Title Postharvest shelf-life extension of avocados using methyl cellulose-based coating
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Abstract

Edible coatings regulate water vapor, oxygen and carbon dioxide transfer in or out of the produce thereby influencing the ongoing respiratory activity and produce quality. The objective of this study was to evaluate the effect of a methyl cellulose-based coating on the respiration rate, color and texture of avocados stored at room temperature. Avocados were initially surface disinfected, washed and air-dried. They were then immersed in the coating solution for 1 min at 20 °C, air-dried for 10 min and stored at 20 °C in an open box. At 2-day intervals, fruits were removed and evaluated for respiration rate, color and texture. Respiration rate was evaluated by measuring the rate of CO₂ produced from a given quantity of fruits per unit time. Color and texture of avocados were measured using instrumental techniques. Coated avocados demonstrated lower respiration rates, greener color and higher firmness as compared with the uncoated control during the entire storage. The appearance of brown spots and mesocarp discoloration normally associated with fruit ripening were delayed in the coated fruits.