

Title Effect of edible coatings on quality of mango fruit cv. Chok-Anan during storage
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Abstract

Four coating treatments were used for mango fruit cv. Chok-Anan. These were 0.5% chitosan, 1% carboxymethyl-cellulose (CMC) with 2% propyleneglycol, butter emulsion (butter: water ratio 4:1) and non-coated control. After storage at $13 \pm 0.5^\circ\text{C}$, $93 \pm 2\%$ relative humidity for 21 days, the fruits were analyzed and their qualities were determined every 3 days. All three coatings reduced weight loss and respiration rate, delayed firmness, and peel and pulp colour. Total soluble solid (TSS) content, reducing sugar, total sugar, and total titratable acidity (TA) were lower in coated fruits. The respiratory patterns of fruit coated with 0.5% chitosan and 1% CMC showed climacteric rise. Fermentation was induced in fruits coated with butter emulsion. The pectinmethylesterase activity increased at the beginning of storage and subsequently decreased while acid phosphatase activity decreased during the storage. However, they were not significantly different among treatments. Sensory evaluation by panelists showed acceptable color, texture, odor, sweetness, sourness and overall acceptability during storage except with fermented fruits. Texture and overall acceptability were significantly different ($P=0.05$) between coated and uncoated fruits.