

Title Evaluation of refrigerated storage of 'Mikado' fresh persimmon using edible coatings

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Abstract

The Persimmon 'Mikado' has a great potential, but there are problems during their commercialization due to decreased of fruit quality. The objective of this study is the use cold storage associated with edible coatings as an alternative to extending the shelflife of persimmon Mikado. The persimmons were harvested in the Sumidouro-RJ city. Alcohol vapor 70% was used to perform the de-astringency process. Then after sanitization, three treatments followed: T1- distilled water; T2 - cassava starch coating and T3 - carboxymethylcellulose (CMC) coating. The fruits were stored in the cold chamber at 5 °C (\pm 2 °C) and 72.5% (\pm 10%) relative humidity. The analyses of pH, total titratable acidity (TTA), total soluble solids (TSS), total carotenoids (TC), vitamin C and weight loss were performed every 7 days during 41 days. The appearance attributes (colour yellow bark, green bark, wrinkled appearance, presence of streaking and brightness), texture (firmness and juiciness), colour (yellow pulp) and flavour (characteristic of persimmon, sweet, salty and astringent) were also evaluated during the same period. The statistical analyses were performed using the programme Statistica 7.0, analysis of variance (ANOVA) and the Fisher test with $p < 0,05$. There were no significant differences in pH, ATT, TSS, CT and Vitamin C among treatments. It was found that there was weight loss during storage, for all treatments. The CMC treatment presented higher weight loss from the 35th day, also characterized by the wrinkled appearance. During storage, there was significant difference between treatments of starch and CMC for the others appearance and colour attributes. There was also no significant difference between treatments for texture and flavour attributes. The edible coatings did not present better results than the control treatment, indicating that the low temperature alone may be responsible for the increase of shelf life of persimmon.