

Title Evaluation of packaging associated with edible coating in post-harvest strawberry *Fragaria x ananassa*

Author Tamara de Souza Jorgel, Antonio Gomes Soares, Marcos José De Oliveira Fonseca, Henriqueta Talita Guimarães Barboza, Agnelli Holanda Oliveira, Luiz Carlos do Carmo Motta, Gil Fernandes da Cunha Brito, Marcos Henrique Garamvolgyi e Silva, Welida José Barbosa

Citation Abstracts of 7th International Postharvest Symposium 2012 (IPS2012). 25-29 June, 2012. Putra World Trade Centre (PWTC), Kuala Lumpur, Malaysia. 238 pages.

Keywords strawberry; edible coating

Abstract

The strawberry fruit is considered very delicate and highly perishable. The most important problems are in packaging, transportation and storage. The demand for new packaging and technologies that minimize damage to the environment has increased considerably. Biodegradable coatings are inserted in this context due to their gelling properties in the presence of polyvalent cations. In fact, several polysaccharides and derivatives have been tested as edible coatings. The objective of this study was to evaluate a new design of the packaging with the association of edible coatings on postharvest storage of strawberry fruits. Fresh strawberries, Albion variety, were harvested in Nova Friburgo/RJ and split in two lots. The first lot was immersed in water and second lot was immersed in alginate film solution. Both treatments were stored in common packing and in new design packaging in cold chamber at 5 °C (\pm 1°C). The following analyzes were performed: total titratable acidity (TTA), pH, total soluble solids (TSS), weight loss, instrumental colour (L, a * and b *), instrumental texture and total anthocyanins with three samples per treatment in duplicate. The samples were analyzed on the day of harvest, 3rd, 7th, 10th and 15th days of storage. The statistical analyses were performed using the programme Statistica 7.0, analysis of variance (ANOVA) and the Fisher test with $p < 0.05$. The pH, TTA, TSS and total anthocyanins indicated significant differences ($p < 0.05$) among the different packaging used for the storage of 15 days. The sodium alginate coating was the main factor for the fruits reach 15 days of shelf life. There were significant differences for the results of colour "L", "a*", texture and weight loss, both between the different packages and between days of storage. The packaging designed for strawberry showed 87% mass loss less than that of conventional packaging used.