

Title Relationship between internal gases, ethanol content and physico-chemical changes of coated tangerine fruit cv. 'Sai Nam Pung'

Author Roongruangsri W, Rattanapanone N and Boonyakiat D

Citation Program and Abstracts, 11th International Citrus Congress (ISC Congress), 26-20 October 2008, Wuhan, China. 333 pages.

Keyword orange; coating agent

Abstract

Tangerine fruit cv. 'Sai Num Pung' were coated with two microemulsions (polyethylene and candelilla in ratios 75:25 and 60:40 (75% PE and 60% PE) and two commercial citrus coatings (commercial 1 and commercial 2). Coated and washed non-coated fruit (control) were stored in plastic baskets at $25\pm 2^{\circ}\text{C}$ and $87\pm 4\%$ RH. The accumulation of ethanol content increased with storage time. Coated fruit with commercial 1 and commercial 2 had ethanol content over 1,500 ppm after 11 and 16 days, respectively and other coatings after 21 days in storage. Non coated fruit had the highest percentage of weight loss and internal O_2 but the lowest ethanol content and internal CO_2 . Addition of candelilla wax to polyethylene decreased the percentage of weight loss and internal O_2 but increased internal CO_2 and ethanol content. Coating treatments did not influence on total soluble solids, titratable acidity, pH or vitamin C content of tangerine juice. However, there were significant changes during storage. Titratable acidity and vitamin C content of all coated fruit decreased and total soluble solids and pH values increased during storage.