

Title Influence of wax coating on the keeping quality of “Tarocco” orange
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Abstract

“Tarocco” oranges (*Citrus sinensis*) are the Italian citrus fruit for which commercial cold storage would be most useful. There is a growing interest in prestorage wax application as a method to reduce shrinkage. Mature fruit from *Citrus sinensis* [L.] Osbeck, “Tarocco” were selected by hand from field bins after harvest, before any commercial postharvest treatments were applied. Samples of blemish-free fruit of uniform size and appearance were placed at random in plastic cases. Fruit were treated with Imazalil fungicide (1000 ppm), and dried before the application of four wax formulations with different amounts of shellac, carnauba and polyethylene coatings or were left uncoated. The fruits were then stored at 6°C and high relative humidity for up to 90 days. After 30, 60 e 90 days of cold storage plus a week of shelf-life, weight loss, decay, physiological disorders, rheological and physicochemical parameters, sensory analysis, ethanol, acetaldehyde and ethylene contents were evaluated. Generally, increased shellac in the wax composition resulted in increased ethanol, acetaldehyde and ethylene. At the end of 60 and 90 days of cold storage plus a week of shelf-life, all treatments, with the exception of shellac plus carnauba, significantly reduced weight loss compared to the untreated control.