Abstract:

Avocado fruit is sensitive to chilling injury (CI), which limits its postharvest life. ‘Hass’ avocados were exposed to hot air at 38ºC and 50% or 95% RH for 6 h and stored at 5ºC for up to 56 days. The best external quality was displayed by the non-heated fruits and fruit heated at 50% RH. Fruit heated at 50% RH exhibited the best internal quality and the lowest incidence of CI. Fruits that were not heated and those heated at 95% RH displayed greater deterioration of their internal color, compared to fruits heated at 50% RH. Respiration rate was initially higher in fruits heated at 95% RH compared with the non-heated fruits and fruits heated at 50% RH. In addition, the maximum respiration intensity was always higher in fruit heated at high RH. Fruit firmness decreased to less than 20N at the end of the storage period in the 3 lots of fruits. The most abundant triglyceride was the 1,2-Dilinoleil-3-Oleil-Glicerol (LLO) followed by trilinolein (LLL) and triolein (OOO). There were more α-tocopherol than the other 2 forms. The content of the tocopherols decreased during storage, and α-tocopherol was significantly lower in heated fruits than in non-heated fruits. In general, fruit heated at 50% RH presented better internal quality, less incidence of CI, less deterioration of external and internal color, less reduction in the 3 triglycerides, but a slight heat injury, as well as higher weight loss and lower tocopherol content compared to the non-heated fruit or fruit heated at 95% RH.