Title Effect of ultra low oxygen storage and postharvest treatments on quality of 'Fuyu' persimmon

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Abstract

'Fuyu' persimmons were held for three months at -0.5°C in air and controlled atmosphere (CA) storage at 0.5 kPa O_2 + 5.0 kPa CO_2 associated with phosphite or phosphite and calcium chloride applications, or combined to low relative humidity (LRH) aiming to reduce loss of flesh firmness, decay incidence and skin browning. After three days at 20°C, soluble solids content and skin color were not significantly influenced by treatments. Fruit stored at 0.5 kPa O_2 + 5.0 kPa CO_2 + LRH had the higher flesh firmness. On the other hand, the higher skin browning index was observed on fruits cold stored at the chamber opening and after three days at 20°C. The fruit kept at 0.5 kPa O_2 + 5.0 kPa CO_2 + LRH and those stored in 0.5 kPa O_2 + 5.0 kPa CO_2 and 0.5 kPa O_2 + 5.0 kPa CO_2 + phosphite showed lower decay incidence after three months at -0.5°C. The fruit stored in 0.5 kPa O_2 + 5.0 kPa CO_2 + phosphite + calcium chloride had the higher firm consistence in relation to cold stored fruits. Conversely, after three days of shelf life, the highest proportion of fruits judged to be firm, among all treatments tested, were those stored in 0.5 kPa O_2 + 5.0 kPa CO_2. The association of CA storage with ultra low oxygen plus postharvest dips of fruit into phosphite or calcium chloride solutions did not influence skin browning during the shelf life of fruits.