

Title Effects of postharvest heat-treatments on vitamin C content and quality of 'Fortune' mandarin (*Citrus reticulata*, Blanca)

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Abstract

The effect of two conditions of heat-conditioning treatments (curing (Q): 3 days at 34°C and pre-conditioning (PA):5 days at 15°C) on vitamin C content and quality attributes of 'Fortune' mandarin during cold storage was evaluated. After heat-conditioning treatment fruit were stored at 4°C up to 45 days. Periodically fruit were transferred from cold storage to 20°C for 7 days simulating shelf-life period. Non-conditioned fruit were used as Control. During cold storage and posterior shelf-life period, control fruit maintained similar contents of total ascorbic acid (TAA), ascorbic acid (AA), and dehydroascorbic acid (DHAA) to the harvest levels. The heat-conditioning treatments presented lower TAA contents than control, without difference between PA and Q. This effect was also observed in AA content; however DHAA levels were maintained in the harvest levels. The heat-conditioning treatments did not affect other quality parameters such as external color, firmness, total soluble solids and titratable acidity.