Changes in major physiocochemical components of cantaloupe melones during post-harvest storage

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Summary

Cantaloupe melons (Cucumis melo L. subsp. melo var. cantalupensis Naudin) cv. ‘Chianti’ were evaluated for quality traits during 14 days of storage at three different temperatures i.e., 2, 10 and 18°C with 85-95% relative humidity. The weight loss of fruits slightly increased during the stored period studied, as well as insignificant differences between the temperatures. Whereas significant texture was lost more rapidly in the samples stored at 18°C and 10°C than those stored at 2°C. TSS were also affected by storage time and temperature. The TSS (total soluble solids) content of fruit at 2°C increased and then remained constant over storage. At higher temperatures and at every stage of storage time TSS increased as storage time increased. The predominant carotenoid in all samples was β-carotene. The carotenoids components were increased and then decreased with the time; however, the decrease processes were delayed by low temperature. The alpha form was the predominant tocopherol fraction. The level of tocopherol isomers significantly (α-tocopherol) and gradually (γ- and δ-tocopherol) increased during the 7 days, but after 1st week of storing for all isomers a significant decrease was measured. High temperature storage at 18°C in comparison to 10°C and 2°C promoted γ- and δ-tocopherol level.

Keywords: Cantaloupe melons, storage, weight loss, texture, soluble solids, carotenoids, tocopherols