Title The influence of hot water treatment on durability of fresh-cut pepper

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Abstract

The aim of the study was the assessment of influence of hot water treatment on quality and nutritional value of fresh cut pepper during short term storage. The microscopic analysis led to evaluate the type of changes in epidermal laver and parenchyma cells of pepper under thermal stress and disruption of tissue structure. The microbiological tests are important in estimation of sanitary condition (bacterial and fungal contamination) of stored fresh cut pepper. The pepper strips from three varieties: Yecla F_1, Sunny F_1, and Blondy F_j were subjected to hot water dipping for 10 minutes at 45°C, 5 minutes at 50°C, 3 minutes at 53°C, 12 seconds at 55°e. Treated strips were cooled to ambient temperature and then packed to PE bags with perforation. Fresh-cut pepper was stored for 6 days at temperatures: 3°C, 5°C and g0e. The quality during short storage of red fruit cut pepper (Yecla F_1) was not significantly affected by hot water treatment. The results obtained for yellow fruit pepper (Sunny F_1) and white fruit pepper (Blondy F_1) showed that treated strips maintained better firmness as well as better quality during short term storage and following shelflife. It was found that the best treatment for 'Sunny F_1 was dipping in water of temperature 55°C for 12 seconds but for Blondy F I: 53°C for 3 minutes and 50°C for 5 minutes.The storage temperature influenced also on quality of fresh cut pepper. Significantly better quality after 6 days of storage was found for pepper stored at 3°C and 5°C than at g0e. After 4 days of storage the decrease of phenolics content was noted for fresh cut pepper Yecla F I, but the contents of vitamin C and total carbohydrates were on the same level as before cutting.