

Title The effect of postharvest treatments with sodium bicarbonate or acetic acid on storage ability and quality of fig fruit

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Abstract

The objective of this work was to study the effect of postharvest treatments with sodium bicarbonate (BCS) and acetic acid (AAc) on the quality preservation of breba fig fruit (*Ficus carica* L.) cv. Lampa Preta during storage. Fruits were dipped for 2 min. in SBS and AAc solutions at two concentrations (0.5 and 1%) and left to dry at ambient temperature. No treatment was applied to control fruits. Then, fruits were stored at 2°C and relative humidity at about 85-90%. After 8, 14 and 20 days storage, fruits were analysed for firmness, total soluble solids content, titrable acidity, humidity, and latter, with stored juice, glucose and the organic acids citric, malic, fumaric and piruvic. Organoleptic evaluation was done at harvest, after 14 and 20 days storage. The treatments with BCS gave a better effect on firmness, titrable acidity and moisture content. Total soluble solids content on fruits treated with 1% AAc registered the higher values on this study. Glucose was in major quantity in figs treated with AAc after 20 days. The organic acids identified were in major quantity citric, followed by malic, fumaric and piruvic. Loss of fruits from diseases was higher in control than in the other treatments. AAc treated fruits were preferred by panellists. Results indicated that treatments with 1% sodium bicarbonate gave better results on preserving fruit quality characteristics (higher firmness and moisture and lower °Brix). However, treatments with acetic acid were more efficient on reducing fruit loss and were preferred by consumers. Overall fig fruits could be stored in good conditions up to 3 weeks at 2°C.