

Title Effect of harvest time, processing and packaging on the quality of 'ready to use' artichokes
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Citation ISHS Acta Horticulturae 681: 629-636. 2005
Keywords cold storage, plastic film, modified atmosphere, polyphenols, sugars, inulin, browning

Abstract

Different preparation techniques of minimally processed ('ready to use') artichokes were tested and compared in winter and springtime. Artichoke heads cv. Violetto di Provenza were cooled in air to 3°C, trimmed and differently treated: (a) washed in cold water immediately after harvest with NaOCl (80 mg/L active chlorine), drained and dried in cold air; (b) treated as (a) except that the water was added with 0.5 % citric acid; (c) left unwashed as control. Heads were packed in expanded polystyrene (EPS) trays wrapped with MRX film and stored at 3°C. Evaluation for general appearance and browning were performed at 4 and 8 days. Changes in glucose, fructose, sucrose, inulin and polyphenols were detected. Microbiological tests were performed in order to verify the safety of the product during the shelf-life. In the winter trials, after 8 days in storage samples (a) and (b) showed very good quality with natural flavour and taste. No significant change in biochemical parameters or bacterial growth was detected. In the spring trials, artichokes showed higher bacterial contamination and higher susceptibility to browning than in the winter tests. Glucose, fructose, sucrose and caffeoylquinic acids did not change significantly during that time, while inulin and apigenin-7-glucoside content decreased by about 50% compared to the fresh product in both treated and untreated artichokes. External appearance and nutritional quality resulted lower than in the winter product; however, both (a) and (b) were still marketable after 8 days of shelf life.