Title Potential use of nanosilver packaging to maintain antioxidant activity in minimally processed chilli during storage at 2°C

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Abstract

Nanosilver is a new packaging material introduced into the market. This study was conducted to evaluate the effectiveness ofnanosilver packaging materials compared with other packaging materials in maintaining the antioxidant activity of chilli (*Capsicum annuum* var. Kulai). The experiment was carried out by packing the fresh cut chilli at commercial maturity using rectangular polypropylene (PP) nanosilver (2%) container with lid without nanosilver (NC) and round PP nanosilver container with nanosilver lid (NCNL). Chilli packed with rectangular PP container without nanosilver (C) was used as a control. Antioxidant activities, ascorbic acid content, total phenolic content and visual appearance were observed during storage at 2°C for 4 weeks. Minimally processed chilli in packing C and NC were maintained their quality during storage at 2°C until 2 weeks storage, presenting slight variation of chemical-physical parameters analyzed. However, chilli in nanosilver package NCNL conserved their quality very well for 3 weeks of storage at 2°C without showing noticeable changes in the total phenols, ascorbic acid and antioxidant capacity.