عنوان مقاله:

Effect of chitosan coatings on some quality indices of apricot (Prunus armeniaca L.) during cold storage

محل انتشار:

مجله علوم زیستی خاورمیانه, دوره 8, شماره 1 (سال: 1389)

تعداد صفحات اصل مقاله: 9

نویسندگان:

M. Ghasemnezhad - Dept. of Horticulture, Faculty of Agriculture, University of Guilan, Rasht, Iran. Corresponding author&#۰۳۹;s E-mail: ghasemnejad@guilan.ac.ir

.M. A. Shiri - Department of Horticultural Sciences, Faculty of Agriculture, University of Guilan, Rasht, Iran

.M. Sanavi - Department of Horticultural Sciences, Faculty of Agriculture, University of Guilan, Rasht, Iran

خلاصه مقاله:

In this study, the effectiveness of chitosan coating treatment to control weight loss and maintaining fruit quality of apricot was investigated. Fruits were coated with ۰.۲۵%, ۰.۵% and ۰.۷۵% chitosan as well as distilled water (control). Following treatments, fruits were stored at ۰?C and ۸۰ ? ۲% relative humidity for ۲۵ days. The weight loss, total soluble solids (TSS), titratable acidity (TA), TSS/TA, pH, vitamin C, total phenolics and antioxidant activity (DPPHsc%) were followed at an interval of ۵ days up to ۲۵ days. Weight loss from all treated and untreated fruits increased over storage time. The weight loss of chitosan coated fruits was increased in comparison to untreated samples. There was no significant difference for total soluble solids (TSS), titratable acidity (TA), TSS/TA, pH, vitamin C in coated and uncoated fruits storage. Chitosan coatings significantly increased the content of total phenolics and antioxidant activity, as ۰.۵% chitosan showed maximum total phenolics (۸۲.۶۵ mg GAE/۱۰۰g) and antioxidant activity (۲۳.۷۷ DPPHsc%). The chitosan coatings proved to induce the antioxidant capacity and also to sustain the total phenolic content. REFERENCES Agar, T. and Polate, A. (۱۹۹۵). Effect of different packing materials on the storage quality of some apricot varieties. Acta Hortic., ۳۸۴: ۶۲۵-۶۳۱. Aherne, S.A. and ÓBrien, N.M. (۲۰۰۲). Dietary flavonols: Chemistry, food content, and metabolism. Nutr, ۱۸: ۷۵-۸۱. Arts, C.W., Vande Putte, B. and Hollinan, P.C.H. (۲۰۰۰). Catechin contents of foods commonly consumed III the Netherlands. ۱. Fruits, vegetables, staple foods and processed foods. J. Agric. Food. Chem., ۴۸: ۱۷۴۶-۱۷۵۱. Bai, R.K., Huang, M.Y. and Jiang, Y.Y. (۱۹۸۸). Selective permeabilities of chitosan-acetica acid complex membrane and chitosan-polymer complex membrane for oxygen and carbon dioxide. Polym. Bull., ۲۰: ۸۳-۸۸. Bautista-Baños, A.N., Hernández-Lauzardo, M.G., Velázquez-del Valle, M., Hernández-López, E., Ait Barka, E., Bosquez, M. and Wilson, C.L. (۲۰۰۶). Chitosan was a potential natural compound to control pre and postharvest diseases of horticultural commodities. Crop Protect., ۲۵: ۱۰۸-۱۱۸. Benhamou, N. (۱۹۹۶). Elicitor-induced plant defence pathways. Trends Plant Sci., ۱: ۲۳۳-۲۴۰. Benhamou, N. and Thé riault, G. (۱۹۹۲). Treatment with chitosan enhances resistance of tomato plants to the crown and root pathogen Fusarium oxysporum f. sp. radicislycopersici. Physiol. Mol. Plant Pathol. ۴۱: ۳۳-۵۲. Carlos, H. and Adel, K.A. (۱۹۹۹). Apricot postharvest quality maintenance guidelines, California, ... Dept. of Pom, pp: ۱-۵. Debeaufor

کلمات کلیدی:

Chitosan coating, Apricot, Cold storage, Phenolic content, antioxidant capacity

لینک ثابت مقاله در پایگاه سیویلیکا: