

Title Effects of chitosan coating enriched with cinnamon oil on qualitative properties of sweet pepper (*Capsicum annuum* L.)

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Abstract

Effect of chitosan–oil coating on qualitative properties of sweet pepper (*Capsicum annuum* L.) stored at 8 °C for 35 days was investigated. The chitosan-oil coating treatment exhibited the best control effect on decay (below 5%). At the end of storage, samples treated with chitosan-oil coatings maintained good sensory acceptability, whereas the sensory quality of control samples became unacceptable. The higher activities of scavenger antioxidant enzymes, including superoxide dismutase (SOD), peroxidase (POD) and catalase (CAT), in treated peppers at the 35th day should be contributed to the chitosan-oil coating. Malondialdehyde (MDA) and electrolyte leakage contents in chitosan-oil-coated peppers were increased but were still lower than in control samples. Atomic force microscopy images showed that the surface of sweet pepper without coating treatment was rougher than that of peppers treated with chitosan-oil coating. Our study suggests that chitosan-oil coating might be a promising candidate for enhancing the keeping quality of sweet peppers.