

Title Effect of coating and intermittent warming on enzymes, soluble pectin substances and ascorbic acid of *Prunus persica* (Cv. Zhonghuashoutao) during refrigerated storage

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Citation Food Research International, Volume 38, Issue 3, April 2005, Pages 331-336

Keywords *Prunus persica* fruits; Chitosan coating; Intermittent warming; Enzyme; Ascorbic acid

Abstract

The effect of 1% chitosan coating + polyethylene (PE) package, 1% chitosan + 0.5% CaCl₂ coating + PEpackage, and 1% chitosan + 0.5% CaCl₂ coating + PEpackage + intermittent warming on the enzymes and quality of Zhonghuashoutao fruits (*Prunus persica*) was studied during refrigerated storage (1 °C). The results showed that, compared to the control (CK) of water dip + PEpackage, all treatments had positive effectiveness on the inhibition of polyphenol oxidase, peroxidase (POD), ascorbic acid oxidases (ASA-POD) and polygalacturonase (PG) activities to some extent, and reduced the increase of soluble pectinefic substance. Results also showed that 1% chitosan + 0.5% CaCl₂ + PEpackage + intermittent warming treatment significantly inhibited ASA-POD and PG activities, kept vitamin C at a high level, and reduced fruit sensitivity to chilling injury at the later stage of storage.