

Title Effect of Hot Water Treatment on Appearance of Harvested Litchi Fruit

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Abstract

Application of hot water dipping (HWD) to postharvest litchi fruit has the potential to retard pathogen development, provide quarantine security, and serve as the pretreatment of pericarp color retention. In the present study, the effect of HWD at different temperatures and with different dipping durations on temperature of aril, pericarp color, cracking and the activities of browning related enzymes in ‘Huaizhi’ fruit were investigated. The results showed that HWD caused rapid decrease in value of red pericarp color and following acid dipping regained the red pericarp color when the interval time from HWD to acid dipping was less 3 hours. An increase in temperature of 3-6°C was detected for the aril of the HWD-treated fruit. The fruit cracking rate after HWD combined with acid dipping treatment was positively correlated with the water content of pericarp. HWD treatment alone increased the activities of PPO and anthocyanase, and decreased those of POD and LOX. However, PPO activity was strongly inhibited by HWD combined with acid dipping treatment.