

Title Effect of alone or combination treatment with preharvest GA₃ spraying, postharvest HWD and IFW on skin browning of pear (cv. Pinguoli) during storage

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Abstract

Skin browning of pear was a major post-harvest physiological disease and could significantly reduce the appearance of fruit by showing many dark brown spots. Effect of alone and combination treatment with preharvest GA₃ spraying at 50mg/L, postharvest hot water dipping (HWD) (45°C, 10 min) and individual film wrapping (IFW) on skin browning and storage quality of Pinguoli pear stored at ambient temperature (15±5°C) and low temperature (0±1°C) were studied. The results showed that GA₃, HWD and IFW treatment alone or combination all significantly decreased the incidence of skin browning of fruit during ambient and low temperature storage. The lowest incidence of skin browning was found after treatment with GA₃ +HWD, its incidence were 20.9% after 35d during ambient storage and 30.8% after 120d low temperature storage of the control. Moreover the treatments also effectively increased soluble solids content, maintained higher firmness and significantly increased soluble solids content / titratable acid.