Title Quality maintaining of ´Daw´ longan using chitosan coating

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Abstract

Postharvest loss of longan (*Dimocarpus longan* Lour.) occurs very quick associated with pericarp browning and hardening, and disease decay. Chitosan as an edible coating containing a positive ionic charge has been reported to inhibit growth of some microorganisms and to reduce browning disorder in some fruits. 'Daw' longan fruit were coated with 0, 0.5, 1.0 and 1.5% (w/v) chitosan C and 90-95%RH after air-drying. Chitosan° (low molecular weight) and stored at 4 treatments slightly reduced weight loss from stored longan relating to a reduction of pericarp hardening. Polyphenol oxidase (PPO) activities monitored in the pericarp dramatically increased during storage (20 days). Although chitosan at all concentrations reduced increasing activities of PPO, chitosan slightly reduced the pericarp browning. L values (Hunter scale) of longan pericarp declined gradually throughout storage period related to an increase of browning. Chitosan coating at 1.0 and 1.5% revealed an effective retardant of disease growth on stored longan with less than 4% disease incidence at day 20. Longan coated with chitosan exhibited less respiration and maintained amounts of ascorbic acid in aril pulp. Fruit coated with chitosan at 1.0 and 1.5% had storage life of 16 days.