

Title Effect of chitosan and heat treatment on postharvest quality of shredded green papaya

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Abstract

Green papaya salad is the famous of Thai and Laos food which ingredients are shredded green papaya. Due to the popular in health-food dishes consumption at present, Shredded green papaya is one of the most popular minimally processed in Thailand. However, shredded green papaya have relatively short shelf due to rapidly loss of freshness surface color, texture and contamination of microorganism. Therefore, this work was focused on the effectiveness of 0.25% chitosan dipping for 1 min and heat treatment at 50°C for 1 min and then wrapped by laminated film storage at 4°C on the physiological responded and extending shelf life of shredded green papaya. Shredded papaya dipped in 0.25% chitosan had storage life for 15 d while as heat treatment and non treatment (control) had storage life 12 d and 9 d, respectively. Dipped in 0.25% for 1 min was the best condition for maintaining the quality of shredded green papaya especially the color quality. The firmness of heat treatment was highest following by 0.25% chitosan treatment and non-treatment, respectively. Heat treatment had respiration rate and ethylene production lowest. Moreover, chitosan and heat treatment decreased ethylene production than non-treatment. Moreover, the trained consumers mostly satisfied in dipped shredded green papaya with 0.25% chitosan and non treatment. The 0.25% chitosan treatment and heat treatment of shredded green papaya reduced the microbial growth within 6 days of storage life.