

Title Comparison of active and passive modified atmospheres on quality of shredded green papaya
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Abstract

Effects of active modified atmosphere packaging (active MAP) and passive modified atmosphere packaging (passive MAP) were investigated with shredded green papaya 'Kaek Dum'. The shredded papayas were packed in a polyethylene (PE) bag with heated seal for passive MAP treatment and in a nylon laminated PE bag flushed with 2.5 and 5% O₂ for active MAP treatment. Control treatment was a shredded papaya in a PE bag without sealing. Both active and passive MAP maintained better firmness and colour (Hue value) of shredded papaya compared with the control. Respiration rate of shredded papaya was reduced by both active and passive MAP. However, active MAP with 2.5 and 5% O₂ suppressed the respiration rate of shredded papaya to a lower level than that of passive MAP and control. The preference score from untrained panelist showed that the consumer disliked the shredded papaya from control treatment while those from active MAP had a higher score than that of other treatments. The accumulation of acetaldehyde was detected in the tissue of papaya after day 6 and day 8 of storage in active and passive MAP. Active MAP with 2.5 and 5% O₂ was most effective in maintaining the visual quality and in reduction of respiration and colour change but it should be noted that this condition may generate off-flavour during long term storage.