

Title Effect of packing system on the quality of fresh-cut pineapple stored at 2 °C

Author M. N. Latifah, M. P.Nuraida, M. R., Bizura., O. Fauziah, M. Hairiyah, I. Ab Aziz., O. Azlan

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Abstract

Effect of packing systems on the quality of fresh-cut pineapples was evaluated during storage at 2°C. For fresh-cut processing, the pineapples were mechanically sliced into semicircle shape and immersed in the treatment solutions (calcium chloride, citric acid and sodium chloride) for 1 min before mechanically drip drying for 2 minutes. Two packing systems were used for the study; round polypropylene container with seal on lid and shrink wrapping square polypropylene container with clip on lid. Storage study was conducted at 2 °C for 12 days. Weight loss, surface colour (lightness and hue value), total soluble solids (TSS), pH, total titratable acidity (TTA), gases inpackage (O₂, CO₂ and ethylene), microbial counts and sensory evaluation were monitored during the evaluation day (1, 2, 5, 6, 7, 8, 9 and 12). No significant changes were observed to the TSS value (15.5-15.6% Brix) on day 12. However significant changes was observed to the pH value as higher value was noted to the seal packing 3.68 as compared to the shrink wrap packing (3.5). Gas composition remained stable with 2% CO₂, 15% O₂ and 5% C₂H₄ as noted on day 12. Yellow colour development increases with duration of storage as shown with the decreasing trend of the L values and increasing trend of the b values. No significant different was shown to the microbial counts (VRBA, PDA and PCA) of fresh-cut pineapple in different packing systems. Consistent lowered values (2-3 cfu/cm²) were observed to all samples throughout storage period. No significant difference in the panellist acceptance between the seal and shrink wrap packing as noted with day of storage.