

Title Microbiological quality of fresh-cut pineapple with application of oxygen absorbent in packaged

Author M. Nur ilida, M.P. Nur Aida, A.S. Asiah and M. Hairiyah

Citation Souvenir Programme, 7th International Pineapple Symposium 2010. 13-15 July, 2010, Persada Johor International Convention Centre, Johor Bahru, Johor, Malaysia. 126 p.

Keyword Oxygen absorbent; fresh-cut pineapple; microbiology; packaging; shelf life

Abstract

Fresh-cut pineapple is one of the perishable packaged foods. Their shelf life is mostly dependent on storage conditions including oxygen concentration. Oxygen is necessity for the growth of most spoilage and many pathogenic organisms including moulds thus shorten the shelf life of the product. This study was conducted to see the effect of the usage of oxygen absorbent in packaged on the microbiological quality (total plate count, coliform count, and yeast & mould count) of fresh-cut pineapple from the Josapine cultivar during storage at 2°C and 10°C, respectively. After pre-cooling at 10°C for overnight, fruits were peeled manually, immersed in chilled water and cut into longitudinal shapes. Pineapple slices were then dipped into solution containing 1% of calcium chloride and 1% of sodium chloride. After drip drying, the fruits were packaged in polypropylene clip-on container, either with oxygen absorbent or without oxygen absorbent (control). The containers were wrapped with stretch-film before storage at 2°C for up to 15 days and 10°C for up to 8 days, respectively. Results showed that no significant difference ($p>0.05$) in the total plate count of bacteria and yeast & mould count between oxygen absorbent and control samples stored at 2°C and 10°C. The coliform count for both samples stored at 2°C also showed no significantly different. However, the amount of coliform stored at 10°C with application of oxygen absorbent in packaged shown to be significantly ($p<0.05$) reduced throughout the storage period for 8 days as higher counts was noted to the control samples.