

Title Microbiological quality of fresh-cut pineapple with an in-package oxygen absorbent
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Abstract

Fresh-cut pineapple is perishable with a shelf life that is mostly dependent on storage conditions, including oxygen concentration. Oxygen is required for the growth of most spoilage and many pathogenic organisms, including moulds, which shorten the shelf life of the product. Oxygen absorbents remove oxygen from the environment through a chemical or enzymatic reaction and do not require the atmosphere in the package to be altered prior to closure. This study was conducted to determine the effect of an in-package oxygen absorbent on the microbiological quality (total plate count, coliform count, and yeast and mould count) of fresh-cut 'Josapine' pineapple stored at 2 and 10°C. Fresh-cut pieces of fruit were packaged in polypropylene clip-on containers with or without oxygen absorbent, sealed with parafilm and stored at 2°C for up to 15 days or at 10°C for up to 8 days. There was no significant difference ($p>0.05$) in total plate counts of bacteria or yeast and mould counts between treated and control samples stored at either temperature. The coliform count in treated and control samples stored at 2°C were not significantly different. However, the coliform count was significantly reduced, relative to the control, when an in-package oxygen absorbent was present with fruit stored at 10°C.