

Title Effect of semi-active modified atmosphere on internal browning of cold stored pineapple
Authors H. Nimitkeatkai, V. Srilaong and S. Kanlavanarat
Citation ISHS Acta Horticulturae 712: 649-654. 2006.
Keywords *Ananas comosus* L.; ascorbic acid; internal browning; polyphenol oxidase; semi-active modified atmosphere

Abstract

Pineapple fruit (*Ananas comosus* L.) were packaged in a polyethylene bag (45 μ m) and flushed with 5% O₂ + 5% CO₂, 5% O₂ + 10% CO₂, 10% O₂ + 5% CO₂ and 10% O₂ + 10% CO₂ and stored 10°C, 90-95% RH. Changes of peel color, internal browning, ascorbic acid content and polyphenol oxidase (PPO) activity were investigated. Semi-active MA significantly reduced internal browning of pineapple fruit and also reduced the changes of hue angle. Fruit stored under the combination of 10% O₂ and 5% CO₂ gave the best result in reducing of internal browning, PPO activity and maintaining a highest ascorbic acid content than that of other semi-active MA conditions. Semi-active MA treatments extended storage life of pineapple fruit up to 5 weeks, compared to the control fruit. However, the fruit stored in 10% O₂ + 10% CO₂ developed the off-odor after 4 weeks of storage.