

Title Browning of minimally processed pineapple treated with citric acid
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Abstract

This study was conducted to investigate the effect of citric acid treatments on the browning of minimally processed (MP) pineapple stored at 10 and 2°C for 7 and 14 days, respectively. The MP pineapples cut in longitudinal shapes (5 cm) were treated with citric acid concentrations of 1% (T1), 1.5% (T2) and 2% (T3). An untreated sample was used as the control (T0). Samples were evaluated for colour (L*, a*, b* and hue), pH and total titratable acidity (TTA). The activity of polyphenol oxidase (PPO) was monitored to assess its relationship with surface browning of MP pineapple. There were no significant differences in the hue values of the treated and control samples till the end of the storage period both at 10 and 2°C. Lowered pH values were observed for all treated samples both at 10 and 2°C, as compared to the control samples. Fresh-cut pineapple treated with 1.5 and 2% citric acid had significantly ($p < 0.05$) higher TTA than did the 1% citric acid treatment and the control for storage at both 10 and 2°C. The activity of PPO of the samples treated with 1 and 1.5% citric acid was lower than the control for the sample stored at 10°C. However, inconsistent trends were shown in the activity of PPO throughout the 14 days storage at 2°C.