

**Title** The effect of different browning inhibitor on physico-chemical and enzymatic attributes of Dokong Kering (*Lansium domesticum correa*) during storage for 12 days at 15°C

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### **Abstract**

Dokong (*Lansium domesticum correa*) is a tropical fruit with a limited postharvest life due to pericarp browning. Currently, there is a high demand for dokong in Malaysia and abroad. A study was carried out to determine the effects of browning inhibitors on dokong 'Kering' fruits. The dokong, with and without the fruit stalks, were treated with various types of browning inhibitors: ascorbic acid, citric acid, chitosan and oxalic acid at 1% concentration, while water acted as the control. Then, the fruits were packed in modified atmosphere packaging and stored at 15°C for 12 days. The physicochemical and enzymatic attributes such as firmness, pericarp color, pH value, soluble solids concentration (SSC), titratable acidity, PPO activity and total phenolic compound contents were examined. Citric acid and ascorbic acid retained firmness, color and titratable acidity, reduced PPO activity and rate of total phenolic compound production. Chitosan also reduced the effect of pericarp browning in dokong fruits and retained the dokong firmness. Dokong with stalks attached showed better physicochemical and enzymatic properties after storage compared to dokong without stalks ( $P < 0.05$ ). Thus, citric acid, chitosan and ascorbic acid were able to reduce the browning of dokong kering fruits and enhance some of the postharvest quality attributes, resulting in increased storage life.