

Effects of storage temperature on postharvest quality of Malaysian grown fig (*Ficus carica* L.) cv. Ipoh Blue Giant

ABSTRACT

Fresh fig (*Ficus carica* L.) is delicate and perishable with short postharvest life. Generally, refrigeration is often used to prolong fruits' shelf life. However, fruits from the tropical region are temperature-sensitive with an adverse impact on quality if stored below their critical temperature. Thus, this study was carried out to determine optimal storage temperature for Malaysian grown figs cv. Ipoh Blue Giant. Varying temperatures (5, 10 and 15 °C) were used to observe the responses of the fruit quality during zero, three, six, nine, 12 and 15 storage days. Results showed that respiration and ethylene production rates, weight loss, pH, titratable acidity and antioxidant activities (as assayed using 1,1-diphenyl-2-picrylhydrazyl and 2,2'-azino-bis[3-ethyl-benzothiazoline-6-sulfonic acid]) of fresh figs were affected significantly by the interaction between storage temperatures and days. Fresh figs stored at 5 °C showed the lowest respiration rate among three storage temperatures during nine and 12 days of storage. Fresh figs kept at 5 °C experienced the least firmness and water loss compared with the ones stored at 10 and 15 °C indicating that 5 °C was beneficial in retaining the eating quality and prolonging the postharvest life of the fruit.

Keyword: Antioxidant; Firmness; Soluble solids concentration; Total phenolic content; Water loss