

**Title** Characteristics of ripe papaya stored at low temperature  
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**Citation** ISHS Acta Horticulturae 738:183-188. 2007.  
**Keywords** *Carica papaya* L.; chilling injury; skin pitting; free radicals; water soluble antioxidants; fruit quality

#### **Abstract**

Low storage temperatures promote longer postharvest life of fresh produce. However, tropical fruits are generally highly sensitive to low temperature, which can induce oxidative stress by generating free radicals in plant cells. Ripe papaya (*Carica papaya* L.) exhibits chilling injury symptoms when stored below 10°C. 'Kheak Dum' papaya fruit at half-yellow stage were kept at 5 and 13°C with 95 ±2% relative humidity for 25 days. The respiration rate of fruit quickly declined after storage at both temperatures, but fruit stored at 13°C lost firmness more quickly than those at 5°C. Papaya peel contains higher levels of antioxidants, namely ascorbic acid, dehydro-ascorbic acid, and glutathione, compared to pulp. Ascorbic acid continuously reduced while dehydro-ascorbic acid increased in both peel and pulp, and glutathione remained stable throughout low temperature storage. Pitting on the peel occurred after 15 days of storage at 5°C. Further work is required to determine expression of enzymes involved in oxidative scavengers.