

Title Effect of storage temperature on post-harvest physiology of Jack fruit (*Artocarpus heterophyllus*)
Author L.M. Rios, B. Tovar, H.S. Garcia and M. Mata
Citation Book of Abstracts, 2004 IFT (Institute of Food Technologists) Annual Meeting and Food Expo, 13-16 July 2004, Las Vegas, Nevada, USA. 321 pages.
Keyword jack fruit; physiological property

Abstract

Production of Jack fruit is relatively recent in Mexico. This fruit brought from Asia grows in a robust tree that can reach a height of 9-21 m, and it has been considered as the largest fruit of the world, with specimens reaching 50 kg. Jack fruit has been well accepted in Mexico due to its distinctive pulp color and flavor. It also has an important market in the Asian-American communities of the US; however, very few reports are available on its post-harvest physiology. The objective of this work was to study the effect of storage temperature on post-harvest compositional changes in Jack fruit. Physiologically mature Jack fruits from a local grower were stored at 25, 19 or 13 °C. Fruit stored at 13 °C were kept for one or two weeks and then transferred to 25 °C for ripening. Respiration rate, ethylene production rate, physiological weight loss, acidity, pH values, textural firmness and soluble solids were monitored during storage. Jack fruits showed a respiratory peak (140 mL CO₂ /kg-h) three days post-harvest when stored at 25 °C. Peak height was smaller in fruits kept at 13 °C (60 ml CO₂/kg-h), Ethylene production rate was maximal two days after the respiratory peak. Storage temperature affected other physico-chemical parameters. Storing Jack fruit at 19 °C can extend its post-harvest life for 5 d and normal ripening was noted. However, fruits maintained at 13 °C developed symptoms of chilling injury.