

**Title** Controlled atmosphere conservation of pitahaya fruits (*Hylocereus undatus Haworth.*)

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#### **Abstract**

Pitaya or pitahaya (*Hylocereus undatus Haworth.*) it is a tropical fruit with high future potential market, but its shelf-life is short, thus an increase of this one would allow to facilitate its marketing. One of the benefits of the controlled atmosphere storage is to reduce the rate of deterioration of fruits and vegetables and its use normally increase their shelf-life. The objective of this work was to study the effects of the storage at low oxygen atmospheres in the production of ethanol, acetaldehyde, acidity, vitamin C, firmness, total soluble solids and shelf-life of pitaya fruits. The fruits were stored in hermetic plastic containers (6 fruits inside each one) at 12°C during 35 days. The treatments studied were: continuous flows of mixtures of Oxygen in Nitrogen at 1 and 3 %, and control fruits storage in normal air at same temperature. The results indicate the advantage of the use of low oxygen atmospheres in the maintenance of the quality of pitayas in comparison with the control group, being the atmosphere with 3 % of Oxygen those that maintained best firmness, acidity, vitamin C and soluble solids through more days, those pitayas contain ethanol and acetaldehyde in low concentrations. This treatment allowed to increase the shelf-life up to 30 days.