

Title Postharvest conservation of cubiu (*Solanum sessiliflorum* Dunal) fruits in response to passive modified atmosphere associated with refrigeration

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Citation ISHS Acta Horticulturae 864:439-444. 2010.

Keyword Amazon fruit; Solanaceae; polyphenoloxidase activity; weight loss; chemical composition

Abstract

Cubiu (*Solanum sessiliflorum* Dunal) is a fruit with high potential for being used in food industry in Manaus, Amazonas, Brazil. This work was carried out to verify the effect of modified atmosphere associated with refrigeration on postharvest conservation of cubiu fruits. Ripe fruits, except the control ones, were stored on polystyrene trays under passive modified atmosphere (polyvinyl chloride film coverage) and stored under refrigeration (7°C and ±85% relative humidity) for 16 days. Every three days they were analysed regarding weight loss, acidity, pH, soluble solids, total sugars, ascorbic acid, phenolic compounds, polyphenoloxidase activity, alcohol insoluble solids and pectin. Neither atmosphere nor storage time produced difference on most chemical compounds, but in both cases, the ascorbic acid content only lowered in the first eight days (yet the decrease was sharper in environmental atmosphere). Concentrations of phenolic compounds and polyphenoloxidase activity were higher in mesocarp tissues. Weight loss reduction in the fruit as a whole, lack of wrinkling in the surrounding area of stem insertion, and superficial darkening right in the stem insertion, were the major benefits provided by the passive modified atmosphere in the postharvest conservation of very ripe cubiu fruits stored for sixteen days under refrigeration.