

Title Physiology and postharvest conservation of umbu-caja fruit in different maturity stages under modified atmosphere

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Abstract

The purpose of this work was to evaluate the respiratory pattern and the postharvest changes in umbu-caja fruit, harvested in the stages of maturity green-yellowish and yellow-greenish. Fruits of both maturity stages were harvested early in the morning and separated into two groups. The first group was used for respiratory rate measurements. The second group was placed (≈ 300 g/tray) in polystyrene trays (15×20 cm²) and stored under modified atmosphere (MA) by a 12 μ thick PVC film, and under ambient atmosphere (AA) at $10 \pm 1^\circ\text{C}$, during 12 days. The experiment was carried out in a completely randomized design, in a 2×5 factorial arrangement, with 3 replications. The use of MA resulted in lower mass loss, as compared with fruits under AA. Total vitamin C was higher and general appearance (1-inacceptable; 9-excellent) kept above the critical limit (score 4) during 12 days, for fruit harvested as green-yellowish and stored under MA. Soluble solids increased during storage for fruits maintained under AA, independent on maturity stages. Modified atmosphere by PVC film enhanced shelf-life and kept the quality of umbu-caja, mainly for fruit harvested in the maturity stage green-yellowish.