

Abstract:

The aim of this research was to evaluate the conservation of mango (*Mangifera indica* L.) cv. Rosa, at different maturity stages, treated with calcium chloride after harvest. Fruits were harvested from an orchard in Areia, Paraíba State, Brazil, at the mature-green (green-yellowish) and pre-climacteric (yellow-greenish) maturity stages. Calcium chloride (CaCl₂) was applied by 15-cm deep fruit immersion during two hours in solutions containing 0.0 (control); 4.0; and 8.0 %. Fruits were stored at 10 ± 1 °C and 85% RH during 20 days, followed by a 5-day storage at room temperature (24 ± 2 °C). Fruit firmness, weight loss, skin color (scores 1 to 7), external and internal appearances (scores 1 to 6), total soluble solids (TSS), and total titratable acidity (TTA) were evaluated. Calcium chloride was notably more effective when applied to pre-climacteric fruits. However, fruits treated with 4.0 % CaCl₂ showed fruits presented skin black spot, soaked areas, and decay especially pre-climacteric mangoes. As compared to controls, 8.0 % CaCl₂ treatment provided a five-day increase in shelf-life of mature-green 'Rosa' mango stored at 10 ± 1 °C. Upon transference to room temperature, 8.0% CaCl₂ provided lowest weight losses, while maintaining TSS, TTA, fruit firmness, and best internal and external appearances, even though, no significant delay on skin color development was detected.