Title Camu Camu fruit postharvest behavior during low temperature storage

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Citation Abstracts Book, 6th International Postharvest symposium, 8-12 April 2009, Antalya, Turkey. 256 pages.

Keyword Camu-camu; ascorbic acid; temperature

Abstract

Camu-camu is a small and stationary wild berry from the Amazonian river region with high ascorbic acid content. As many other tropical myrtle fruits such as arazá and guava, camu camu suffers quality losses particularly during low temperature storage due to chilling injury and associated decay. To test the chilling sensitivity of camu camu fruit, they were harvested in two stages of maturity (half mature and mature) and stored at 6°C, 10°C and 12°C. Camu camu fruit of both stages of maturity showed a non climacteric ripening pattern with low levels of respiration rate throughout storage. Weight loss and flesh softening were the most limiting quality trait for camu camu fruit during storage irrespective of the maturity stage tested. Camu camu developed chilling injury symptoms during storage such as flesh translucency (only at 6°C), uneven ripening (at 6 or 10 °C, without skin color changes), extreme flesh softening and a severe decrease in ascorbic acid content, particularly in half mature fruit. Decay in the post-storage shelf life periods was particularly noticeable after storage at 6 °C in half mature fruit. The storage of half mature camu camu fruit at 12°C is recommended because this temperature kept better fruit quality by preventing chilling injury and flesh decay .The storage at 12°C also reduced ascorbic acid losses and allowed normal fruit ripening during a post-storage shelflife at 20°C.