

Title Effects of ripening stage and environment conditions on stored postharvest camu-camu (*Myrciaria dubia* Mc Vaugh) fruits

Author J.S. Andrade, J.S. Silveira, S.A.N. Ferreira and J.E.B. Brasil

Citation ISHS Acta Horticulturae 864:423-429. 2010.

Keyword Amazon fruit; Myrtaceae; chemical composition; weight loss; fruit conservation

Abstract

Camu-camu is an Amazon native fruit raising much interest for its content in ascorbic acid. Since the major regional problems on camu-camu production lie in the lack of ripening fruit uniformity and high temperatures during haulage and storage at the end of the fruit process, the aim of this study was to assess the effects of different ripening stages together with different storage periods under defined environments on the conservation ability of camu-camu. Fruits from plants grown in floodplain environment at the Instituto Nacional de Pesquisas da Amazônia (INPA), Manaus, Brazil, were collected in two periods of ten days in the “commercial harvesting stage”, at different ripening stages. After selection, the remaining ones were washed and graded according to their ripening stage and/or epicarp color stage (S), as follows: S1 (25% red-colored); S2 (50% red-colored); S3 (75% red-colored); S4 (100% red-colored); S5 (100% purple red-colored and stored on polystyrene trays). Fruits from the first collection were stored on shelves at room temperature (28°C) and relative humidity (87%) for eight days. Fruits from the second collection were stored under 21°C temperature and 80% relative humidity environmental conditions for eight days as well. Every two days they were assessed to evaluate weight loss and chemical composition. Anthocyanins increased in immature stages and decreased in ripe stages. The ascorbic acid content in camu-camu remained highly stable and constant. Considering the incipient pulp color and wrinkling symptoms of greener fruits, as well as the lighter stains and release of anthocyanins from endocarp from fruits in 100% purple red-colored stage, 100% of fruits in S3 and S4 intermediary stages presented better conservation ability.