

Title Chilling injury in fruit of three mango cultivars and their relation to hydrogen peroxide content and total antioxidant capacity

Author Sutin Kunyamee and Jingtair Siriphanich

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

Keyword Mango; Chilling injury; CI

Abstract

Fruit of three mango cultivars representing severe, moderate and slight chilling injury (CI) susceptibility, were stored at 5C (chilling temperature) and 13C (recommended storage temperature) for up to 3 weeks. CI symptoms, hydrogen peroxide content and total antioxidant capacity (T AC) were determined both in the peel and the pulp near the endocarp, Namdokmai mango developed CI in both the peel and the pulp. Chokanan developed CI only on the peel. No CI was found in Hongsawadee. Mangoes stored at 5 C developed more CI symptoms on the peel than those stored at 13 C. However CI symptom in the pulp was higher at 13C than at 5C. From the beginning of the experiment, hydrogen peroxide was found to be higher in the peel of Chokanan than the other two cultivars. In the pulp, hydrogen peroxide could not be detected. Total antioxidant content in the peel was highest in Namdokmai. However, the content in the pulp was highest in Hongsawadee. No clear relationship between hydrogen peroxide content or TAC level in the three mango cultivars and chilling injury could be established.