

Title Effect of low temperature storage on physical and physiological characteristics of eggplant fruit
(*Solanum melongena* L.)

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Abstract

Eggplant (*Solanum melongena* L.) is a perishable and chilling-sensitive tropical fruit. The chilling injury (CI) symptoms as well as some physical and physiological implications were studied in eggplants Money Maker No. 2 stored at 0 and 10 °C for 15 days. Eggplants stored at 10 °C were not damaged by temperature, whereas fruit stored at 0 °C suffered CI. Eggplant stored at 0 °C exhibited a decrease in L_0 (lightness) and ΔL (oxidation potential), increase of pH and electrolyte leakage after CI symptoms are manifested. At this temperature, flesh tissue revealed ultrastructural damage. On the other hand, skin from upper fruit section showed more lightness, reddish colouration, and lower content of anthocyanins than the central fruit section at harvest and over the entire storage period at 0 °C. In fruit stored at this temperature and in upper section, changes of anthocyanin content with time were closely proportional to the Chroma evolution (lower content of anthocyanin, lower saturation of colour).