

Abstract

It has been known that longan fruit is easily deteriorated at ambient temperature. Longan pulp, translucent aril, generally contains high amount of sugars while the longan peel, yellowish-brown pericarp, contains high phenolic substances. We reported chilling injury of longan fruit in this study. Longan fruits were kept at low temperature (4 °C, 90% RH) and changes of pulp and peel properties were monitored. It was found that longan peel was obviously malformation as a result of increase in an electrolyte leakage, hardness and discoloration. The dry peel rapidly reabsorbed water that caused swelling and disintegrating. The pulp color altered from translucent white to light yellow while the polyphenol oxidase activity dramatically increased. The pulp also contained more juice after a longer storage. However, it was still difficult to identify the symptom of chilling injury on longan peel. One factor could be membrane disintegrated involved as the electrolyte leakage increased during storage.