Thesis Title	Effects of maturity, low temperature and relative humidity on chilling injury of jujube (*Zizyphus mauritiana* L.) cv. Bombay
Thesis Credits	12
Candidate	Miss Dusadee Visutiphat
Supervisors	Associate Professor Dr. Gavit Vanichkul
	Mr. Chalemchai Wongaree
Degree of Study	Master of Science
Department	Postharvest Technology
Academic Year	1998

Abstract

The objective of the study is to analyse the effects of maturity, low temperature, and relative humidity on chilling injury (CI) on jujube fruit cv. Bombay and to determine the relationship between those three factors on some physiological disorders and changes. A 3x3x2 factorial in Completely Randomized Design was applied to the jujube at three levels of maturity mature green, color break, and ripe; three levels of temperature at 1, 5, and 9 °C and two levels of relative humidity at 85 and 95 %. The results show that there is a three factors interaction between maturity, temperature, and relative humidity on chilling injury (CI) score, ion leakage, weight loss, fruit firmness, amount of total soluble solid (TSS), titratable acidity (TA) TSS/TA, pH, and vitamin C content. At mature green maturity, the jujube shows the highest CI score, weight loss, and fresh firmness. Whereas low temperature integrated with low relative humidity produced more CI score. All stages of the maturation at 1 °C in combination with 85 % relative humidity show the higher ion leakage. At all levels of ripeness both factors of temperature and relative humidity could give the lowest fruit firmness which differs significantly from the other stages of maturity. On the other hand, TSS, TA, and TSS/TA remain in higher levels during storage period. In addition, mature green stage of jujube shows the highest pH and ripe stage at 9 °C in all levels of humidity show the highest vitamin C content.

Keywords : Jujube 'Bombay'/Maturity/Low temperature/Relative humidity/Chilling injury