

# Effect of surface coating on alleviating chilling injury and physico-chemical changes in jujube fruit

S. Promyou , S. Supapvanich

Acta Horticulturae 1024: 347-353. (2014)

---

## Abstract

Jujube fruit (*Zizyphus mauritiana* Lam.) is an important commercial fruit in world trade. However, the quality of jujube is very limited due to the physicochemical changes and chilling injury during storage. The purpose of this study was to investigate the effect of surface coating on the alleviation of chilling injury and physicochemical changes in jujube fruit during refrigerated storage. Jujube fruit were harvested at 120 days after flowering. The fruit were coated with 100% of KU Shellac wax and Natural Fresh wax then stored at 4°C for 20 days. The results showed that the application of KU Shellac wax gave highest reduction in weight loss and electrolyte leakage and lowest chilling injury symptom. Moreover, total phenolic content and antioxidant capacity of the jujube fruit coated with KU Shellac wax were higher than those of other treatments. Malondialdehyde content, polyphenol oxidase (PPO) and lipoxygenase (LOX) activity of the fruit coated with KU Shellac wax were lower than that of the uncoated fruit. These were accompanied by reduced chilling injury symptom in jujube fruit during refrigerated storage.