Abstract
The objective of this study was to evaluate the effect of controlled atmosphere (CA) on quality preservation of ‘Laetitia’ plums, mainly on internal breakdown, in order to determine the best CA storage conditions. Two experiments were carried out one in 2010, and another in 2011. In 2010, besides cold storage (CS; 21.0 kPa O₂ + 0.03 kPa CO₂ ), the fruits were stored under the following CA conditions (kPa O₂ +kPa CO₂ ): 1+3, 1+5, 2+5, 2+10, and 11+10. In 2011, the fruits were stored under CS and CA of 1+0, 1+1, 2+1, and 2+2. The fruit stored under different CA conditions had lower respiration and ethylene production, better preservation of flesh firmness, texture and titratable acidity, lower skin red color, and lower incidence of skin cracking than the fruit in CS. In 2010, the fruit under CA with 2+5, 1+5, and 1+3 had a pronounced delay in ripening, although it exhibited a high incidence of internal breakdown. In 2011, the CA conditions with 2+1 and 2+2 provided the best delay in ripening and a reduced incidence of internal breakdown. The best CA condition for cold storage (at 0.5°C) of ‘Laetitia’ plums is 2 kPa O₂ + 2 kPa CO₂.

Keywords
Key words, Prunus salicina, postharvest, ripening, physiological disorder.