

Ripening of kiwi fruits by ethylene treatment

ZS. Albert, M. Beh, L. Kuznyák, I. Papp

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Abstract

The goal of the experiments was testing artificial ripening conditions in order to accelerate postharvest processes of the ethylene sensitive kiwi fruits. Installations were tested allowing gas exchange with the environment in different degrees, as well as a set of ethylene treatment regimes were evaluated. In order to determine the ripeness level we made several tests, before and after ripening, including acoustic substance inspections as non-destructive measurement and destructive measurements, by content monitoring of fruits: pH, acidity, dry matter and antioxidants. Appropriate controls were used in order to evaluate results. Among the box / isolation combinations examined a completely closed, gas impermeable box showed no significant ripening effect. The experiments proved that a partially gas permeable polypropylene box with appropriate ventilation, loaded with ethylene gas at approx. 500 ppm concentration could reliably accelerate the ripening of kiwi fruits.