

Title Respiration rate of minimally processed lettuce as affected by packaging
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Abstract

A comparative study on the influence of films with different water and gas permeability on the quality decay of fresh processed lettuce is presented. The study was conducted by packaging two lettuce cultivars, Iceberg and Romaine, with three different plastic films, two commercially available polyolefines (PF1 and PF2) and a biodegradable film (BF), and storing the packages at 5 °C. The package headspace composition, in terms of oxygen and carbon dioxide concentration, as well as the lettuce color were monitored for 10 days. The film barrier properties (oxygen, carbon dioxide and water permeability coefficients) were measured. Results showed that over the period of observation the lowest respiration activity was found for lettuces packed with PF1, whereas lettuces packed using PF2 and BF films showed a similar respiration activity. On the other hand, no substantial differences in the color variation kinetics due to the packaging with the three investigated films were detected.