Abstract

The influence of cube, ribbon, and slice cuts in 'Requena' pepper for minimally fresh processing under MAP conditions was assayed. The respiratory activity for these cuts was also studied and compared to that registered for the intact fruit. An oriented polypropylene (OPP) and a polyethylene-polyamide (PE-PA) film were used to generate the MAP while a micro-perforated (mPP) film was applied as control. 200 g of product were disposed into the packages before sealing and were cold stored during 12 days at 5°C. The main quality attributes were analyzed at harvest and after shelf life which included physical (color, firmness) chemical (total soluble solids content, pH and titratable acidity) microbiological (microbial growth) and sensorial parameters (visual appearance, flavor, aroma and dehydration). MAP treatments increased pH and slightly decreased acidity after shelf life, while pH decreased for control treatment. No relevant differences were found in the respiratory behavior for the three kinds of cut while it was higher than that registered for the intact pepper (approx 6 mg $CO_2 \cdot kg^{-1} \cdot h^{-1}$). A partial pressure of 2-4 kPa O_2 and 16-18 kPa CO_2 was reached for PE-PA while OPP registered 5-7 kPa O_2 and 11-13 kPa CO_2. After 12 days at 5°C all the sensorial attributes decreased its value at harvest, without differences among them according to the kind of the cut. However slight differences were registered depending of the film applied for the MAP. Control fruits reached the lowest sensorial quality. The best results were obtained with the OPP film. Food safety was preserved at any moment due to the microbial growth was under the maximum permitted.