

Title Shelf life of fresh-cut Cime di rapa (*Brassica rapa* L.) as affected by packaging
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Abstract

In this work, the effectiveness of different packaging in prolonging the shelf life of fresh-cut *Cime di rapa* (*Brassica rapa* L.) was addressed. Two subsequent experimental trials were run to investigate first the ability of different packaging materials (an oriented polypropylene, a blend of biodegradable polyesters and a nylon/polyethylene multilayer) in delaying the quality loss and then to assess the efficacy of modified atmosphere packaging (MAP). Two different combinations of gas were investigated, oxygen 10%, carbon dioxide 2% and nitrogen 88%, noted as MAP1 and oxygen 8%, carbon dioxide 2% and nitrogen 90%, noted as MAP2. Headspace gas concentration, weight loss, spoilage microbial growth, pH and sensorial quality were monitored in both sets of experiments. The results demonstrated that the best performances under ordinary atmosphere were recorded with the oriented polypropylene-based film, justifying the choice of this polymeric material in the second set-up. The tested MAPs exerted somewhat different results on product quality: the samples packaged under MAP1 recorded a shelf life of 14 days limited by visible moulds, whereas, fresh-cut leaves sealed under MAP2 highlighted a shelf life less than 9 days, due to a high proliferation of total mesophilic bacteria.