

Abstract:

Three different commercially available polymeric films were studied to determine their effect on the sensory properties of fresh broccoli (*Brassica oleracea* L. var. *Italica* cv. 'Marathon'). The polymer materials investigated were oriented polypropylene (OPP), polyvinyl chloride (PVC) and one low density polyethylene (LDPE) which contained an ethylene absorber. The fresh broccoli was packaged and stored for one week at 10°C or 3 days at 4°C followed by 4 days at 10°C. The oxygen and carbon dioxide concentrations inside the packages were monitored during storage. After storage the broccoli was evaluated according to sensory analyses, i.e. triangle test and quantitative descriptive analysis, by an analytical panel. The panel judged the broccoli according to smell, taste, texture and appearance. The triangle test showed significant differences between the smell of the broccoli samples, stored in the different packaging materials, when cooked. However, no differences between the raw broccoli, stored in the different packaging materials could be detected. The quantitative descriptive analysis showed that the following attributes; fresh smell and taste, chewing resistance, and crispness, differed significantly between the packaged broccoli when cooked. The appearance was shown to be the sensory property of broccoli most affected by the storage conditions, i.e. packaging material used and storage temperature. The results indicated the importance of the packaging material for maintaining the broccoli quality. However, one packaging material that was able to maintain all the studied sensory properties could not be identified.