

Title Effect of modified atmosphere packaging on quality life and functional properties of broccoli
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Citation Program and Abstract. 2007 Australasian Postharvest Conference. Crowne Plaza Terrigal, NSW, Australia. 12 September 2007. 87 p.
Keywords broccoli; modified atmosphere packaging; MAP

Abstract

Broccoli inflorescences are rich in health-promoting compounds such as vitamin C which may contribute to the high antioxidant capacity found in freshly-harvested broccoli. However, high losses of this essential compound has been reported after harvesting. Modified atmosphere packaging (MAP) is the way that controls respiration rate of product through decrease in O₂ and increase in CO₂ levels to maintain quality and increase in storage life. Broccoli (*Broccoli oleracea* L. var. *premium crop*) were packaged using two type of polymeric films (polyethylene and polypropylene), and then stored at 1°C for 18 days to study the effect of passive and active MAP(1.5%O₂+7.5%CO₂). Fermentation products, ascorbic acid, chlorophyll, rate of ethylene production and some quality attributes were measured and estimated every 3 days. The results indicated that modified atmosphere packaging significantly prolonged storability up to 18 days with high quality attributes and Minimized ascorbic acid losses during the whole period.