

Title Changes in post-harvest phytochemical qualities of broccoli florets during ambient and refrigerated storage

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Abstract

The effect of ambient and refrigerated storage temperature on post-harvest phytochemical qualities of broccoli florets was investigated during storage. Fresh broccoli florets were packed in polypropylene (PP) micro-perforated film bags and stored, under open ambient storage conditions (15 ± 1 °C, $55 \pm 2\%$ RH), and laboratory refrigerated storage (4 ± 0.5 °C, $50 \pm 2\%$ RH) for a total period of 144 h. Quality of broccoli florets was evaluated in terms of physiological weight loss (PLW), ascorbic acid content, chlorophyll content, β -carotene and total antioxidant activity. Samples packed in PP micro-perforated film showed significantly ($P < 0.05$) lower losses of PLW, ascorbic acid, chlorophyll, β -carotene and total antioxidant activity (5.51%, 4.53%, 18.9%, 4.04% and 16.4%, respectively), during storage for up to 144 h under refrigerated conditions. For better phytochemical retention, the broccoli florets should be packed in PP micro-perforated film bags and stored under refrigerated conditions.