**Title** Hot air treatment delays senescence and maintains quality of fresh-cut broccoli florets during refrigerated storage

**Author** M. Laura Lemoine, Pedro Civello, Alicia Chaves and Gustavo Martínez

**Citation** LWT - Food Science and Technology, Volume 42, Issue 6, July 2009, Pages 1076-1081

**Keywords** Broccoli; Postharvest; Fresh cut; Heat treatment; Senescence

**Abstract**

A postharvest treatment with hot air (48 °C during 3 h) was applied to fresh-cut broccoli to investigate its effect on quality and senescence during storage at 0 °C. The treatment delayed yellowing as evidenced by lower decrease of Hue values during storage. After 21 days of storage, treated broccoli had chlorophyll content approximately 40% higher than controls. The treatment did not affect either weight loss or respiratory activity but induced lower electrolyte leakage, indicating that treated samples conserved higher tissue integrity. Heating reduced phenolic content and antioxidant capacity during the first two weeks, but the samples recovered after 3 weeks reaching values similar to controls. Finally, after 3 weeks of storage, treated samples had higher levels of total sugars, and total and soluble proteins. The results suggest that a short postharvest heat treatment may reduce senescence, tissue damage and contribute to maintain a better quality of the product during storage at 0 °C.