

**Title** Gene expression and activity of enzyme related to ascorbate metabolism in cut and whole spinach leaves

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**Citation** Abstracts Book, 6<sup>th</sup> International Postharvest symposium, 8-12 April 2009, Antalya, Turkey. 256 pages.

**Keyword** Spinach leave; gene expression; ascorbate metabolism

### **Abstract**

Spinach leafy vegetables during postharvest stage undergo several mechanical processes that may induce tissue damage. The membrane disruption may activate several postharvest problems with involvement of ascorbic acid production. The ascorbic metabolism was studied in spinach leaves kept at 8°C or 20°C in plastic bags. Spinach leaves were harvested at commercial stage. Leaves were cut in four pieces and control was composed by whole leaves. The ascorbic acid was measured in spinach leaves stored in both temperatures. Gene expression and enzymes activity of ascorbate peroxidase were determined in different sampling points. Results observed showed an increase of ascorbic acid immediately after wounding. However, the ascorbic acid content declined during storage. The gene expression analysis and enzyme activity were also affected by wounds and temperature.