

**Title** Salinity effects on enzymatic browning and antioxidant capacity of fresh-cut baby Romaine lettuce (*Lactuca sativa* L. cv. Duende)

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**Citation** Food Chemistry, Volume 119, Issue 4, 15 April 2010, Pages 1502-1506

**Keywords** Browning; Polyphenol oxidase; Peroxidase; Baby lettuce; Hydric stress; ORAC

### Abstract

Enzymatic browning is a main problem encountered in minimal processing and further storage of leafy vegetables, leading to shorter shelf-life of products. Changes in the two oxidative activities, polyphenol oxidase (PPO) and peroxidase (POD), as well as in total phenolic content, colour parameters and antioxidant capacity (assayed with ORAC method), were monitored during 10 days of storage at 4 °C of minimally processed baby Romaine lettuce (*Lactuca sativa* L. cv. Duende) cultivated under three different salinity conditions (2.8, 3.8 and 4.8 dS m<sup>-1</sup>), in order to determine the most suitable condition for further processing. Increasing levels of salinity reduced both oxidases activities immediately after cutting and throughout 7 days of storage. Samples cultivated under high salinity had also the lowest change in colour, expressed as  $\Delta E^* [(\Delta L^{*2} + \Delta a^{*2} + \Delta b^{*2})^{1/2}]$ , and showed the lowest reduction in total phenolic content and antioxidant capacity after 3 days of storage.