

Title Antioxidant responses in minimally processed celery during refrigerated storage
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Abstract

This work studies the effect of storage temperature (0, 4 and 10 °C) and time on the antioxidant capacity of cut celery packaged in polystyrene trays sealed with PVC film. Samples were taken at 0, 7, 14, 21 and 28 days of storage to determine total phenols, chlorogenic acid and ascorbic acid. The browning potential and antioxidant capacity of the product were also evaluated. The antioxidant power presented similar behaviour for the three temperatures tested, decreasing after the first 7 days and then increasing up to day 14. Such increase coincided with an elevation of the ascorbic acid content, which was stronger for higher temperatures. As a general conclusion, minimally processed celery retained its initial antioxidant capacity for a period of 21 days at 0 °C, showing the lowest levels of browning potential at this temperature.