

**Title** Postharvest CO<sub>2</sub> and ethylene production and quality of rocket (*Eruca sativa* Mill.) leaves as affected by leaf age and storage temperature

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#### **Abstract**

This work investigates the effect of leaf age (young, fully expanded and mature leaves) as well as storage temperature (0, 5 and 10 °C) on color, chlorophyll content, yellowing, composition, CO<sub>2</sub> and ethylene production of rocket (*Eruca sativa* Mill.) leaves. Leaf age had a significant effect on the levels of soluble solids, total soluble phenols and nitrates and on the metabolic activity (CO<sub>2</sub> and ethylene production) of rocket at harvest as well as on the postharvest ethylene production. However, this last effect was not important for the postharvest quality of rocket leaves. Chlorophyll degradation was the most serious postharvest alteration in rocket leaves resulting in yellowing. This process was significantly retarded at the lower storage temperatures, probably due to reduced overall metabolic activity. It is concluded that rocket leaves can be stored successfully at 0 °C with a maximum storage life of 16 days, while at 5 °C slight quality deterioration was observed and shelf-life was reduced by 3 days. At 10 °C, rocket leaves deteriorated rapidly and their shelf-life was only 8 days.