

**Title** Effect of passive and active modified atmosphere packaging on quality changes of fresh endives

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#### **Abstract**

Quality changes of fresh endives were related to packaging condition and development of the internal atmosphere composition. Three packaging conditions were tested at 20 °C: a macroperforated oriented polypropylene (OPP) pouch considered as “unmodified atmosphere packaging” (UAP) and a low density polyethylene (LDPE) pouch with or without an individual oxygen scavenger sachet to create active or passive modified atmosphere packaging (MAP), respectively. With a steady modified atmosphere composed of 3 and 4.5 kPa of O<sub>2</sub> and CO<sub>2</sub>, respectively, the effect of passive MAP on colour changes in endives was similar to that of UAP. Benefit of MAP of endives was obtained by using an O<sub>2</sub> scavenger, i.e. active MAP, that did not change O<sub>2</sub> and CO<sub>2</sub> partial pressure during the steady state period, compared to passive MAP, but induced a 50% reduction of the transient period. This reduction led to an important delay in greening and browning of endives.