

**Title** Metabolic activity and quality changes of whole and fresh-cut kohlrabi (*Brassica oleracea* L. *gongylodes* group) stored under controlled atmospheres

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#### **Abstract**

The effect of different controlled atmospheres (CA) on the metabolic activity and the quality of kohlrabi stems and slices was studied. Gas compositions of 5 kPa O<sub>2</sub> + 5 kPa CO<sub>2</sub>, 5 kPa O<sub>2</sub> + 15 kPa CO<sub>2</sub>, and 21 kPa O<sub>2</sub> + 0 kPa CO<sub>2</sub> (as control) were applied. Kohlrabi stems were stored for 28 days at 5 °C with 95% RH in CA followed by 3 days at 15 °C and 60–70% RH in air. Sliced kohlrabi was stored under the same gas compositions for 14 days at 5 °C. For both whole and fresh-cut kohlrabi, the respiration rates, ethylene production, sugar and organic acid contents, and sensory attributes (appearance, taste, and texture) were evaluated. The respiratory activity of whole and fresh-cut kohlrabi was quite similar. For slices, ethylene production decreased throughout storage. In stems and slices, storage at 5 kPa O<sub>2</sub> + 5 or 15 kPa CO<sub>2</sub> slightly delayed the decline in sugars and organic acids. For whole and fresh-cut kohlrabi, 5 kPa O<sub>2</sub> + 15 kPa CO<sub>2</sub> was the most appropriate gas composition to assure good commercial quality.