

Abstract

The metabolic activity and the effect of different controlled atmosphere (CA) conditions on the quality of fresh-cut kohlrabi were studied. Atmospheres with 95% RH: 5 kPa O₂ + 5 kPa CO₂, 5 kPa O₂ + 15 kPa CO₂ and 21 kPa O₂ + 0 kPa CO₂ (as control) were applied. Sliced kohlrabi was stored for 14 days at 5°C. The respiration rate, ethylene emission, sugar and organic acids content, and sensorial attributes (appearance, flavor, and acceptability) were evaluated. The respiratory activity of fresh-cut kohlrabi was quite similar during the storage period. Fresh-cut kohlrabi showed a respiration rate of 6 to 10 mg CO₂ kg⁻¹ h⁻¹ under air condition. Using CA of 5 kPa O₂ + 5 kPa CO₂ the respiration were reduced to 2 to 4 mg CO₂ kg⁻¹ h⁻¹. A decrement in the ethylene emission throughout storage, especially under low O₂ and high CO₂ levels was found. Sliced kohlrabi stored under CA of 5 kPa O₂ + 5 or 15 kPa CO₂ showed only a slight delay the sugar and organic acid consumption compared with air condition. For fresh-cut kohlrabi 5 kPa O₂ + 15 kPa CO₂ was the most appropriated atmosphere to assure a good commercial quality. Studies on fresh-cut kohlrabi are firstly reported here.