

Abstract:

Fresh-cut diced (1 cm^3) 'Kompliment F1' kohlrabi washed with chlorinated water (100 ppm) was stored in modified atmosphere packaging (MAP) up to 14 days at 0°C . Samples were packed in $35 \mu\text{m}$ oriented polypropylene bags or in plastic trays heat-sealed with unperforated or perforated (control) PP film. Changes in respiratory rate, ethylene emission rate, sensory attributes (visual appearance, aroma, flavor, and texture), browning, microbial growth and decay were monitored. Cutting resulted in increased CO_2 production compared with the whole stem, ranging from 2-fold immediately after cutting to 8-fold at day 4. The equilibrium atmospheres within bags and trays were 6% O_2 plus 13% CO_2 and 13% O_2 plus 8 - 9% CO_2 respectively. In both MAP treatments, microbial development was delayed compared with the control. The total aerobic counts were lower than $7.7 \log \text{CFU/g}$, which has been defined as a recommended limit criteria. No physiological disorders, decay or off-flavor developed. Therefore, sensory quality attributes were suitable for commercial purposes. Fresh-cut kohlrabi stored in MAP had better visual appearance and microbiological quality than control.