

**Title** Preliminary study on qualitative and microbiological changes in fresh-cut broccoli raab during cold storage

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**Citation** ISHS Acta Horticulturae 858:301-304. 2010.

**Keyword** *Brassica rapa* L.; modified atmosphere; packaging; sensorial attributes; shelf-life

#### **Abstract**

Changes in atmosphere composition and colour, tissue browning, decay, microbial viable cell count and sensorial attributes of fresh cut broccoli raab were studied. Broccoli raab heads and young leaves were placed in polystyrene trays, covered with polyvinyl chloride (PVC) and polyamide/polyethylene (PA/PE) laminated films and then stored under self controlled atmosphere (SCA) at 4°C for 16 d. Viable cell counts of packaged fresh-cut vegetables were lower than the legal limit for safe consumption until the 12<sup>th</sup> day of storage in both PA/PE and PVC covered trays. However, after 8 and 12 d of storage, microbial counts of broccoli raab stored in PVC were approx. 2 log cfu g<sup>-1</sup> higher than those in PA/PE. Browning was only significant in samples packaged in PA/PE, probably due to high CO<sub>2</sub> concentration inside the package. The results showed that PVC packaging was the best solution for fresh broccoli raab heads and young leaves stored at 4°C in SCA, leading to a shelf life of 12 d compared to 7 d if vegetables were stored in PA/PE.