

### Abstract:

The market of fresh-cut vegetable products is increasing in Brazil. Mechanic injuries, caused by cutting, increase the respiration rate and biosynthesis of ethylene, stimulating chemical and biochemical reactions responsible by changing sensory characteristics. Therefore, the storage of fresh-cut products is critical in maintaining quality. This paper evaluated the storage of fresh-cut lettuce (*Lactuca sativa* L.) of cultivar Lorca, a kind of iceberg lettuce grown in Brazil, stored 15 days at 5°C in different controlled atmospheres: 5%O<sub>2</sub> + 10%CO<sub>2</sub>; 3%O<sub>2</sub> + 10%CO<sub>2</sub>; 3%O<sub>2</sub> + 12%CO<sub>2</sub> and atmosphere air, called control. The samples were chemically and sensory analysed. A panel consisting of eight selected and trained judges evaluated the attributes: green intensity; turgidity; midrib browning; edge browning; cooked appearance; dark spots; overall appearance impression. Midrib browning was the main problem in the storage studied. It must be considered as the principal limiting attribute to extend the shelf life of fresh-cut lettuce. The treatments 3%O<sub>2</sub> + 10%CO<sub>2</sub> and 3%O<sub>2</sub> + 12%CO<sub>2</sub> were found to conserve best the sensory characteristics during the used storage time due their efficiency to retain turgidity and overall appearance, and to retard midrib browning. These conditions induced only minor chemical changes in acidity and chlorophyll levels. Russet Spotting was not a limiting factor for the fresh-cut 'Lorca' lettuce quality.