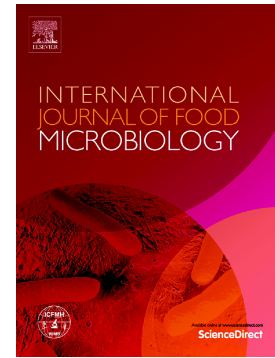


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**Characterization of spoilage markers in modified atmosphere packaged iceberg lettuce**

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Keywords: fresh-cut iceberg lettuce; spoilage; volatile organic compounds; selected ion flow tube mass spectrometry; modified atmosphere packaging; metagenomics

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**Abstract**

Fresh cut iceberg lettuce spoilage was studied considering the microbial and biochemical activity, the formation of volatile organic compounds (VOC) and consumer acceptability. Lettuce was packaged under three different packaging conditions and stored at 4°C for 10 days: anaerobic packaging (ANAER), equilibrium modified atmosphere packaging with 3% O<sub>2</sub> (EMAP) and perforated packages (AIR).

Results indicated a clear distinction between packaging conditions. EMAP and AIR resulted in a short shelf life ( $\leq 5.6$  days) which was limited due to browning, leading to consumer rejection as assessed

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