

Title Microbiological quality of shredded endive as affected by pre- washing and chlorinated or ozonated water

Author Encarna Aguayo, Ana Allende, Meriam Ameer and Francisco Artés

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Abstract

The effect of 100 ppm NaOCl chlorinated, 0.4 ppm ozonated, and tap water washed of shredded endive (*Cichorium endivia* L.) on microbial quality up to 11 days at 5°C was examined. In ozone treatment, two different washing procedures, dip or shower, were also tested. Psychotropic, mesophilic pseudomonades, Enterobacteriaceae and fungus were determined. The implementation of a pre-washing step of trimmed endive heads resulted in a 1.5-2 log units reduction of the initial microbial load. An ozonated shower reduced the microbial counts in a 0.5 log units compared to ozonated dip. At the concentration studied, shredded endive washed as in chlorinated and ozonated water kept the similar microbial load. In all treatments time of storage increased the microbial load. Shredded washed with chlorinated and ozone treatments prolonged the shelf-life to 11 days of storage. Microbial growth in control samples exceeded the Spanish bacterial legal limits (7 log units).