

Title Control of microorganism and keeping quality of fresh-cut fruit and vegetables treated with electrolyzed acidic water

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Abstract

Electrolyzed acidic water has been recognized as a food additive in Japan since 2002; the process has a strong bactericidal effect and leaves little residue on the product. It is widely used in the food industry for kitchen equipment disinfection and other purposes, and has been demonstrated to be an effective disinfection for agricultural materials and seeds. The efficacy of electrolyzed acidic water for controlling microorganisms and maintaining quality of fresh-cut fruits and vegetable was evaluated. Immersion treatment of fresh-cut cabbage, bananas or mixed salads in electrolyzed acidic water for 30 seconds successfully reduced microbial densities and left on residue. On fresh-cut carrots, a suction treatment using electrolyzed acidic water reduced microbial densities more effectively than the immersion treatment. On fresh-cut cabbage, a combined treatment of ultrasonic with electrolyzed acidic water was very successful in eliminating bacteria.