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**ABSTRACT**

A study was conducted to evaluate the efficacy of electrolyzed acidic water, 200-ppm chlorine water, and sterile distilled water in killing *Escherichia coli* O157:H7, *Salmonella*, and *Listeria monocytogenes* on the surfaces of spot-inoculated tomatoes. Inoculated tomatoes were sprayed with electrolyzed acidic water, 200-ppm chlorine water, and sterile distilled water (control) and rubbed by hand for 40 s. Populations of *E. coli* O157:H7, *Salmonella*, and *L. monocytogenes* in the rinse water and in the peptone wash solution were determined. Treatment with 200-ppm chlorine water and electrolyzed acidic water resulted in 4.87- and 7.85-log10 reductions, respectively, in *Escherichia coli* O157:H7 counts and 4.69- and 7.46-log10 reductions, respectively, in *Salmonella* counts. Treatment with 200-ppm chlorine water and electrolyzed acidic water reduced the number of *L. monocytogenes* by 4.76 and 7.54 log10 CFU per tomato, respectively. This study’s findings suggest that electrolyzed acidic water could be useful in controlling pathogenic microorganisms on fresh produce.

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