

Title Ingredients that inhibit growth of *Listeria monocytogenes* in ready-to-eat meats
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Abstract

Listeria monocytogenes is ubiquitous in the environment and has the ability to colonize food plants and survive under unfavorable conditions; thus, sanitation and hygienic practices, although important and necessary, may sometimes be insufficient to prevent its presence in meat products. Accidental post-processing (during slicing, packaging, etc.) contamination of ready-to-eat (RTE) meats has become an important food safety issue and a major concern for the meat processing industry. The pathogen has been responsible for certain major fatal outbreaks of illness and recalls of potentially contaminated products in recent years. This has led regulatory authorities, the industry, and researchers to undertake efforts for development and application of effective measures and researchers to undertake efforts for development and application of effective measures and procedures for control of the pathogen in RTE meats. The recent United States Dept. of Agriculture Food Safety and Inspection Service final rule for control of *L. monocytogenes* in RTE meat and poultry products, that have the potential to be recontaminated after lethality treatment and may support growth of the pathogen during storage before consumption, provides 3 alternatives to be used by the industry for control of the pathogen. The first 2 of these alternatives allow use of chemical antimicrobials for pathogen reduction or control of growth. Studies in our and other laboratories have evaluated the influence of antimicrobials such as lactates, acetates, diacetates, benzoates, sorbates, nisin, and glucono-delta-lactone on *L. monocytogenes* population changes during storage of various meat products inoculated after pelling of casings and before vacuum packaging, as well as on the resistance to simulated gastric fluid of surviving pathogen cells during product storage. Results have shown that inclusion of antimicrobials in the formulation and/or their application as dipping solutions after product slicing and before packaging are effective in controlling *L. monocytogenes*. However pathogen cells may become more resistant to acid as storage of treatment allowing growth progresses and populations increase.