

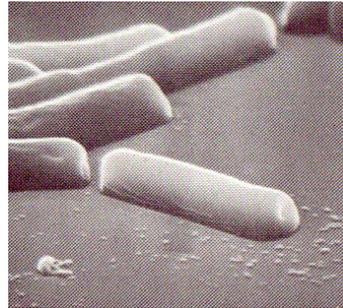


Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – MARCH 2004

Know your enemy: *Listeria monocytogenes*

L. monocytogenes, a gram positive psychrotrophic bacillus, is an opportunistic pathogen infecting primarily pregnant women, the very young and elderly, and immuno-compromised. *L. monocytogenes* typically inhabits the cool, damp areas of processing environments (soiled floor drains, damp floors and floor-wall joints, hard to reach areas of the equipment, overhead platforms and pipes with standing water and condensation, damp coolers) and appear as a post-process contaminant on fully-cooked, ready-to-eat (RTE) poultry products. *L. monocytogenes* can grow at temperatures as low as 3 (37 F) and survive at -20 C (-4 F). Cooking temperatures of 62-70 C (142-158 F) for 2 minutes can achieve 6-8 log reduction in population.



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People and fomites introduce and spread *Listeria* in plants. Given the ample availability of moisture, food and optimum incubation temperatures in processing facilities, *Listeria* grows and starts forming biofilms (excretion of polymeric substance that glues the cells to the surface and form a protective barrier) within 6-12 hours. Once fully established (about 24 hours), it is very difficult to remove biofilms, as they have been shown to resist sanitizers at 500x the normal use concentrations. Cleaning and sanitation frequencies of 6-8 hours will prevent the establishment of biofilms. Any facility that produces RTE meat products must have a HACCP-based *Listeria* testing program that includes sampling (swabbing) the environment, equipment, and product.

What can you do?

1. Keep the organism out of the plant (raw materials, vectors, employee hygiene)
2. Prevent the organism from taking-up residence (proper maintenance of the facility and equipment; well-thought out and timely cleaning and sanitation)
3. Search (sampling plan) and destroy (effective selection and use of sanitizers)



Contact: S. F. Bilgili, Ph.D.

Phone: (334) 844-2612

E-mail: sbilgili@acesag.auburn.edu

Poultry Science Department, Auburn University, Auburn, AL 36849-5416

www.ag.auburn.edu/dept/ph/