Reducing the Incidence of *Listeria* on Ready-to-Eat Meat and Poultry Products – Three Alternatives

The U.S. Department of Agriculture's Food Safety and Inspection Service has issued a rule requiring that establishments producing certain ready-to-eat (RTE) meat and poultry products take meaningful steps to further reduce the incidence of *Listeria monocytogenes* (LM). All establishments producing RTE products which are exposed to the environment after lethality treatments will be required to develop written programs: Hazard Analysis and Critical Control Point (HACCP) systems, Sanitation Standard Operating Procedures (Sanitation SOPs), or other prerequisite programs, to control *Listeria*.

Establishments must verify the effectiveness of these steps through testing and must share the results with FSIS. To ensure that establishments effectively control this pathogen, FSIS will conduct its own verification activities for each establishment’s *Listeria* control program. There are three alternatives, listed below, for complying with this system.

**Alternative 1**: Use a post-lethality (post-cooking) treatment that reduces or eliminates LM AND an antimicrobial agent or process that suppresses or limits LM growth throughout shelf-life.

In this approach, the processor destroys any LM that might be present on the product as a result of contamination of the product after cooking (post-lethality treatment) and incorporates an antimicrobial agent or process to prevent growth of LM that might have somehow survived the post-lethality treatment. The post-lethality treatment must be included in the HACCP plan and be validated for effectiveness. The post-lethality treatment would almost certainly be a Critical Control Point (CCP). The antimicrobial agent or process used to suppress growth can be in the HACCP plan, SSOP, or other prerequisite program. It must be documented as effective. Under Alternative 1, plants are not required to have a microbiological testing program.

**An Example of Alternative 1** would be a product containing sodium lactate and/or sodium diacetate (antimicrobial agent) that also receives a heat treatment after packaging.

**Alternative 2**: Use EITHER a post-lethality (post-cooking) treatment that reduces or eliminates LM OR an antimicrobial agent or process that suppresses or limits LM growth throughout shelf-life.

Under Alternative 2, the processor uses either a treatment to kill LM (post-lethality treatment) or uses an antimicrobial agent or process to prevent LM growth. Note that one, but not both options are used. Where Alternative 2 differs is in the consequences of using only an antimicrobial agent or a process to suppress LM growth. If this approach is taken, the plant must have a program of testing food contact surfaces in the post-lethality processing environment for LM or indicator organisms (typically *Listeria* species). The testing plan is part of a sanitation program (SSOP or a separate SOP) and must specify what surfaces are tested, how often surfaces are tested, and what action the plant will take if a food contact surface tests positive for LM or *Listeria* spp. Flow chart-based guidance is available to help plants develop their testing plan. Processors should be aware that government regulators will do more verification testing of establishments under Alternative 2 than for those under Alternative 1.

**An example of Alternative 2** would be a product that receives a heat treatment after packaging or contains an antimicrobial agent such as sodium lactate.
Alternative 3: Use only sanitation measures to prevent LM contamination.
In some situations, processors may be unable or unwilling to choose Alternative 1 or Alternative 2. These processors must then take steps to control LM using only sanitation measures. Because this approach provides the least certainty of success, the processor must have a program of testing food contact surfaces in the post-lethality processing environment for LM or indicator organisms. As for Alternative 2, the testing plan is part of the plant’s sanitation program (SSOP or separate SOP). Under the testing programs required for Alternatives 2 and 3, positive test results must lead to corrective actions, and follow-up testing to verify that the source of contamination has been eliminated. If follow-up testing of food contact surfaces or products detects LM, then the affected product must be re-worked to ensure safety, or it must be destroyed. Plants using Alternative 3 will get the most frequent verification testing attention from government regulators.

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