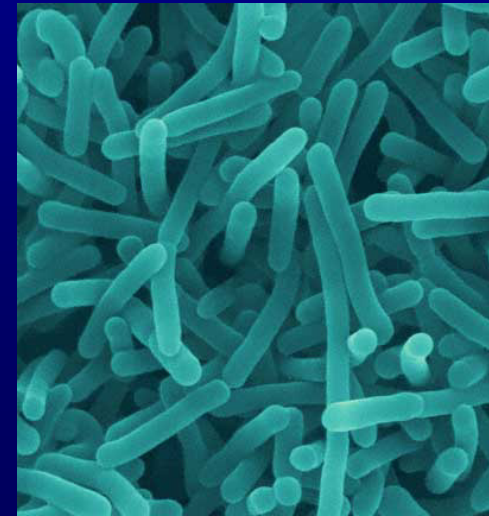


Controlling *Listeria monocytogenes* with Sanitation

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Sanitation as a Control

- **Small vs. Large Processors**
- **Assumptions:**
 - Contamination with *Listeria monocytogenes* occurs after the lethality process (cooking).
 - A clean facility will prevent product contamination.
- **All plants have Sanitation Standard Operating Procedures (SSOPs).**

Ensuring Sanitation

- **SSOPs may not ensure a *Listeria* free room or Food Contact Surfaces.**
- **Therefore:**
 - **Verification of the Sanitation program by sampling is necessary.**

Alternative 3

- Is based on sanitation
- Hot Dogs and Deli Meats:
 - What verification testing procedures should be used?



FSIS Compliance Guidelines

- i. Facility would identify all of the food contact surfaces for a production line for possible sampling.**

Conveyor belts

Tables

Peelers

Slicers

Packaging machines

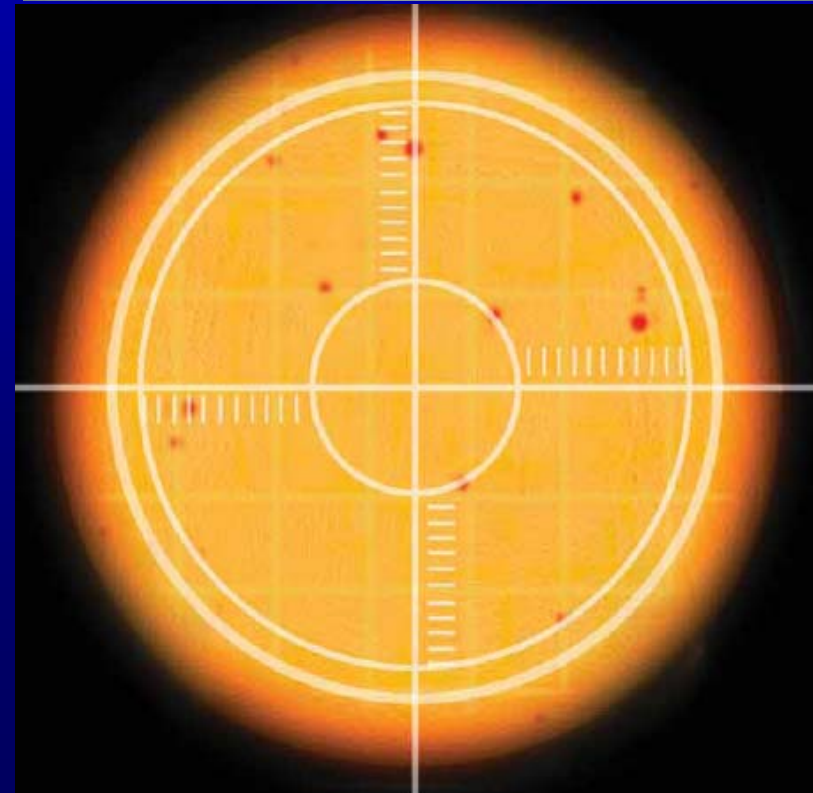
FSIS Compliance Guidelines

ii. Tests for *L. monocytogenes*, *Listeria* spp., or *Listeria*-like organisms should be conducted at least

- 4X / month per line for large volume
- 2X / month per line for small volume
- 1X / month per line for very small volume.

Testing

- iii. Sample at least 1 square foot area for each surface, if possible.
- iv. Record the test results.



Corrective Actions

v. If the first test result of a food contact surface is positive take corrective actions and test again.

Product Implications

- vi. If the FCS test is positive for *L. monocytogenes*, the product is considered adulterated.

Test and Hold

- vii. Each time a FCS tests positive, take corrective action, including intensified cleaning and sanitizing, and retest FCS area.
- viii.if the **second** test result of a food contact surface is positive then....

Test and Hold

- (1) Take corrective action, which should include intensified cleaning and sanitizing.
- (2) If the FCS test is positive for *L. monocytogenes*, the product is adulterated.
- (3) Record the corrective actions taken.
- (4) Hold the product.

Test and Hold

- (5) Test product for *L. monocytogenes* at a rate that provides a level of statistical confidence that the product is not adulterated.**
- (6) Conduct follow-up test of the food contact surface each day until the test result is negative.**
- (7) Continue to hold each day's production lot until the test results for the FCS are negative.**

Test and Hold

(8) If the test results for the product are positive for *L. monocytogenes*,

(a) Destroy the product, or

(b) Re-work the product with a process that is destructive to *L. monocytogenes*.

Corrective Actions for Repeated FCS Positives

- 1. Review the cleaning and sanitizing procedures, including the types of cleaning agents.**
- 2. Review traffic control patterns, equipment layout and adherence to employee hygiene procedures.**
- 3. Locate niches**

Locating the Niche

1. Increase testing of the positive site.
2. Thoroughly clean and sanitize the individual parts.
3. Intense scrubbing to remove biofilms.
4. A change of cleaning or sanitizing solutions.
5. Fogging or cooking equipment.
6. Reassemble and test again.
7. Change equipment design

Summary

- **Testing is verification of sanitation.**
- **Testing a proactive approach to control *Listeria*.**
- **Testing can identify niches.**
- **Testing of FCS helps ensure product is not contaminated with *Listeria*.**