Opening remarks

Highlight what we will cover and how it will be covered

Listeria monocytogenes

- Widely distributed in the environment
  - plants, soil, animal, water, dirt, dust
  - may be present in slaughter animals

- Continuously introduced into the processing environment
  - cross-contaminate food contact surfaces, equipment, floors, drains, standing water and employees

widely distributed in the environment such as plants, soil, animal, water, dirt, dust, and silage. Because *L. monocytogenes* may be present in slaughter animals and subsequently in raw meat and poultry as well as other ingredients, it can be continuously introduced into the processing environment. The pathogen can cross-contaminate food contact surfaces, equipment, floors, drains, standing water and employees

Listeria monocytogenes

- Other characteristics
  - heat and salt tolerance
  - ability to grow at refrigeration temperatures
  - survive at freezing temperatures
- Lethality treatment of ready-to-eat (RTE) meat and poultry products generally eliminates

Other characteristics of *L. monocytogenes* that makes it a formidable pathogen to control are its heat and salt tolerance and its ability to grow at refrigeration temperatures and survive at freezing temperatures

The lethality treatment received by processed ready-to-eat (RTE) meat and poultry products generally eliminates *L. monocytogenes*;.

Listeria monocytogenes

- Re-contaminated after the lethality treatment during peeling, slicing, repackaging.
- Consumed without further cooking, if they are contaminated, there is a possibility of the occurrence of foodborne illness.

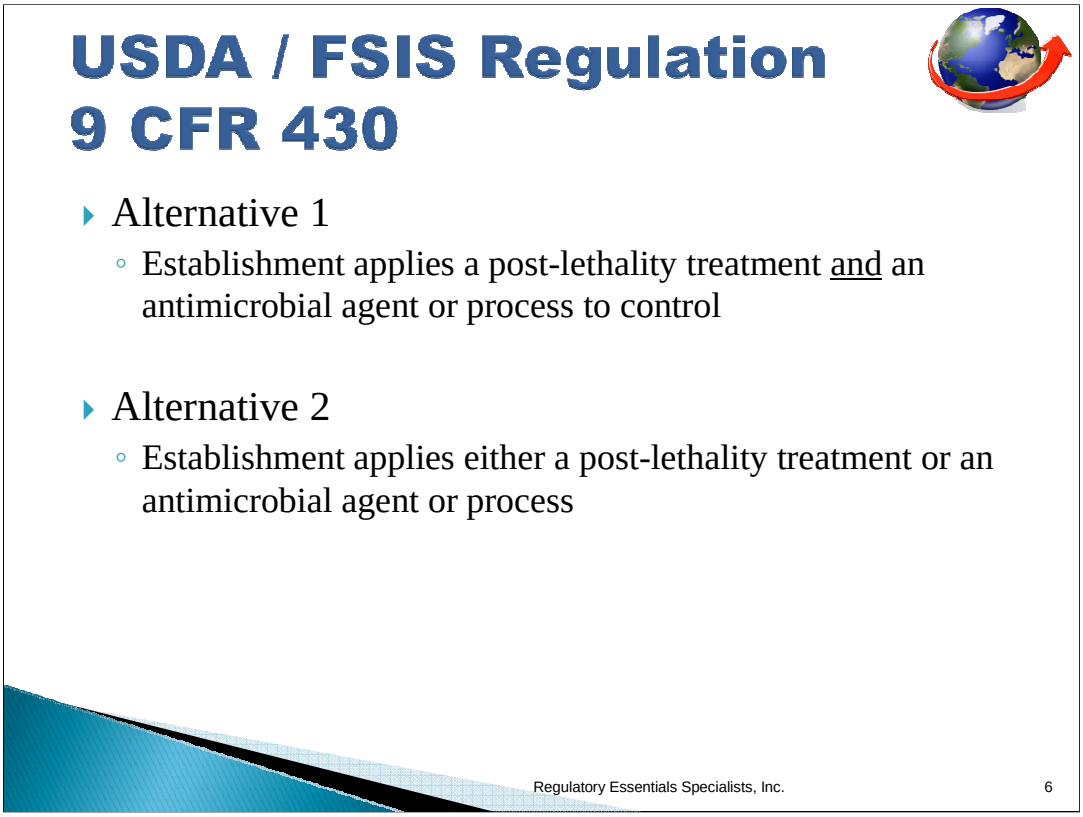
however products can be recontaminated by exposure after the lethality treatment during peeling, slicing, repackaging, and other procedures

RTE products are consumed without further cooking, if they are contaminated, there is a possibility of the occurrence of foodborne illness.

Listeria monocytogenes

- RTE plants must include control in their
  - HACCP plans
  - Sanitation SOP (SSOP)
  - Prerequisite programs
- To prevent growth and proliferation in the plant environment and equipment, and prevent the cross-contamination of RTE products.

RTE meat and poultry processing plants must include control programs for *Listeria monocytogenes* in their HACCP plans, Sanitation SOP or prerequisite programs to prevent its growth and proliferation in the plant environment and equipment, and prevent the cross-contamination of RTE products.



(9 CFR 430) includes three alternative approaches that establishments can take in the processing of RTE meat and poultry products during post-lethality exposure. Under Alternative 1, an establishment applies a post-lethality treatment and an antimicrobial agent or process to control *L. monocytogenes*. Under Alternative 2, an establishment applies either a post-lethality treatment or an antimicrobial agent or process. In Alternative 3, the establishment does not apply any post-lethality treatment or antimicrobial agent or process. Instead, it relies on its sanitation program. Products produced under Alternative 1 and 2 are formulated and processed to eliminate *L. monocytogenes* and/or limit its growth if it is present. That means the number of organisms shall not increase during the product's shelf life to detectable levels, or levels which may result in a public health hazard. These alternatives provide greater control compared to Alternative 3 which involves only sanitation to control *L. monocytogenes*. Consequently, the rigor or stringency of the control methods decreases from Alternative 1 to 3. An establishment must identify which alternative their RTE product falls into based on its control program for *L. monocytogenes*. An establishment can choose to apply new control methods and subsequently move from one alternative to another; however, it must apply the control methods required for the specific alternative that it moved into. Each alternative has specific requirements with which the establishment must comply.

USDA / FSIS Regulation 9 CFR 430

- Alternative 3
  - Establishment does not apply any post-lethality treatment or antimicrobial agent or process
  - Instead, it relies on its sanitation program

In Alternative 3, the establishment does not apply any post-lethality treatment or antimicrobial agent or process. Instead, it relies on its sanitation program. Products produced under Alternative 1 and 2 are formulated and processed to eliminate *L. monocytogenes* and/or limit its growth if it is present. That means the number of organisms shall not increase during the product's shelf life to detectable levels, or levels which may result in a public health hazard. These alternatives provide greater control compared to Alternative 3 which involves only sanitation to control *L. monocytogenes*. Consequently, the rigor or stringency of the control methods decreases from Alternative 1 to 3. An establishment must identify which alternative their RTE product falls into based on its control program for *L. monocytogenes*. An establishment can choose to apply new control methods and subsequently move from one alternative to another; however, it must apply the control methods required for the specific alternative that it moved into. Each alternative has specific requirements with which the establishment must comply.

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- Alternative 3
  - Testing food contact surfaces (FCS) in the post-lethality processing environment for *Lm* or an indicator organism
  - Indicate testing frequency
  - Identify size and location of sites to be tested
  - Explain why testing frequency is sufficient **to control** *Lm* or an indicator organism

Testing food contact surfaces (FCS) in the post-lethality processing environment for *Lm* or an indicator organism

Indicate testing frequency

Identify size and location of sites to be tested . Explain why testing frequency is sufficient **to control** *Lm* or an indicator organism. Identify conditions for Hold-and-Test, when FCS (+) for *Lm* or an indicator organism. **Additional Sanitation Program Requirements2** Follow-up testing to verify corrective actions are effective after 1st FCS (+) for *Lm* or an indicator organism. Includes testing of targeted FCS as most likely source and additional testing of the surrounding area. If follo w -up test ing yi elds a 2n d FC S (+), hold pr oducts that ma y be conta minate d until probl em is corrected as sho w n by FCS (-) in follo w -up testing. Hold and test product lots using a sampling plan that will ensure that the lots are not adulterated with *Lm* and document the results of this testing. Alternately, rework the product with a process destructive of *Lm* or an indicator organism.

Testing Frequency

	Food Contact Surface Testing	
	Higher Frequency	Lower Frequency
Alternative 1	> 2/year/line	2/year/line
Alternative 2	> 4/year/line	4/year/line
Alternative 3		
Non-deli, non-hotdogs	> 1/month/line	1/month/line
Deli, hotdogs:		
Very Small volume plant	> 1/month/line	1/month/line
Small volume plant	> 2/month/line	2/month/line
Large volume plant	> 4/month/line	4/month/line

USDA / FSIS Regulation 9 CFR 430

- Alternative 3
  - Identify conditions for Hold-and-Test, when FCS (+) for *Lm* or an indicator organism

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- Alternative 3
- **Additional Sanitation Program Requirements**
  - Follow-up testing to verify corrective actions are effective after 1st FCS (+) for *Lm* or an indicator organism
  - Includes testing of targeted FCS as most likely source and additional testing of the surrounding area

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- Alternative 3–continued
- Additional Sanitation Program Requirements
  - If follow–up testing yields a 2nd FCS (+) hold products that may be contaminated until problem is corrected as shown by FCS (-) in follow-up testing
  - Hold and test product lots that will ensure lots of product are not adulterated with *Lm*

If follow -up testing yields a

2n d FCS (+), hold products that may be contaminated until problem is corrected as shown by FCS (-) in follow -up testing. Hold and test product lots using a sampling plan that will ensure that the lots are not adulterated with *Lm*

USDA / FSIS Regulation 9 CFR 430

- Alternative 3–Continued
  - Document the results of this testing.
  - Alternately, rework the product with a process destructive of *Lm* or an indicator organism.

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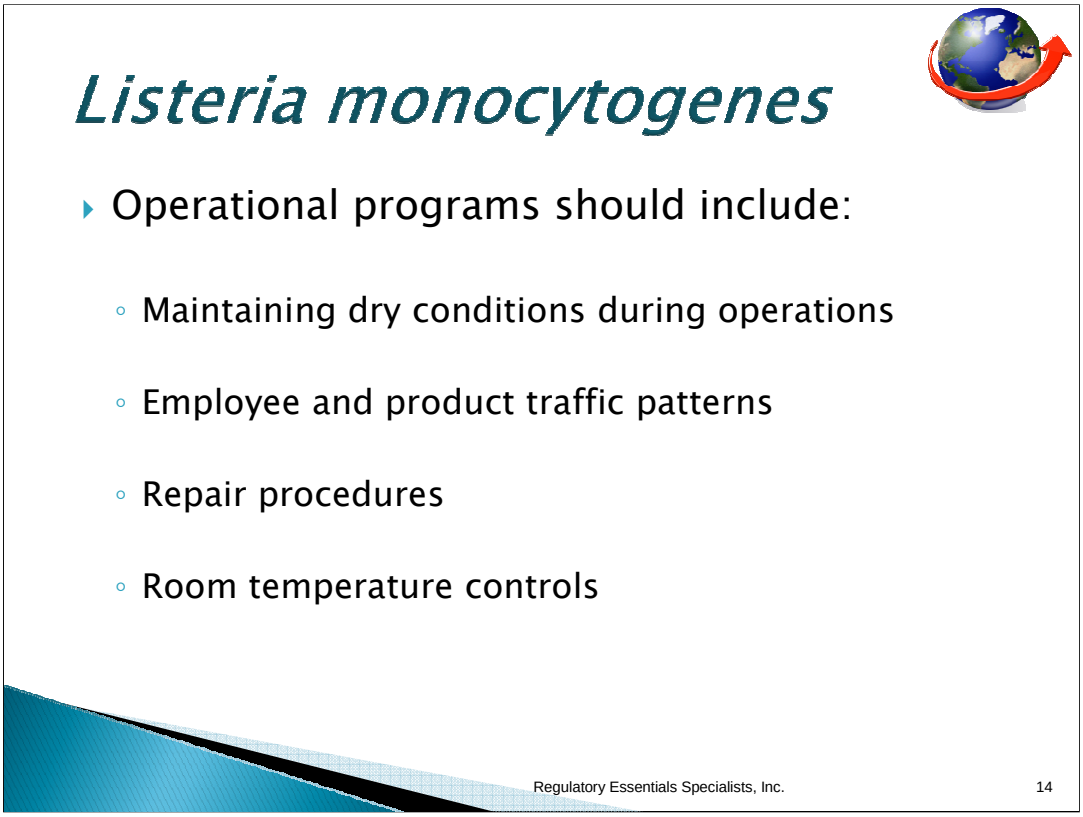


Operational prerequisite programs should include

maintaining dry conditions during operations,

control of employee and product traffic,

maintenance repair procedures,

Room temperature controls

sanitizing programs,

trash and debris removal, rework management, lot designation and tracking systems,

and control of the use of any jacks or forklifts. During operation use only dedicated utensils, carts, waste containers, maintenance tools, tanks, tubs, V mags, and other daily use items for RTE products.

All tools and equipment introduced into the RTE environment must undergo strict cleaning and sanitizing

procedures. Pallets and boxing operations should be restricted or tightly controlled in the

RTE areas.

Verification of Sanitation

- Food Contact Surface and Environmental Testing
  - Samples should be taken at least 3 hours after the start of operation
  - Sample at least 1 square foot area for each surface, if possible
  - Record the test results

Highly recommended that product is in hold and test mode

Verification of Sanitation

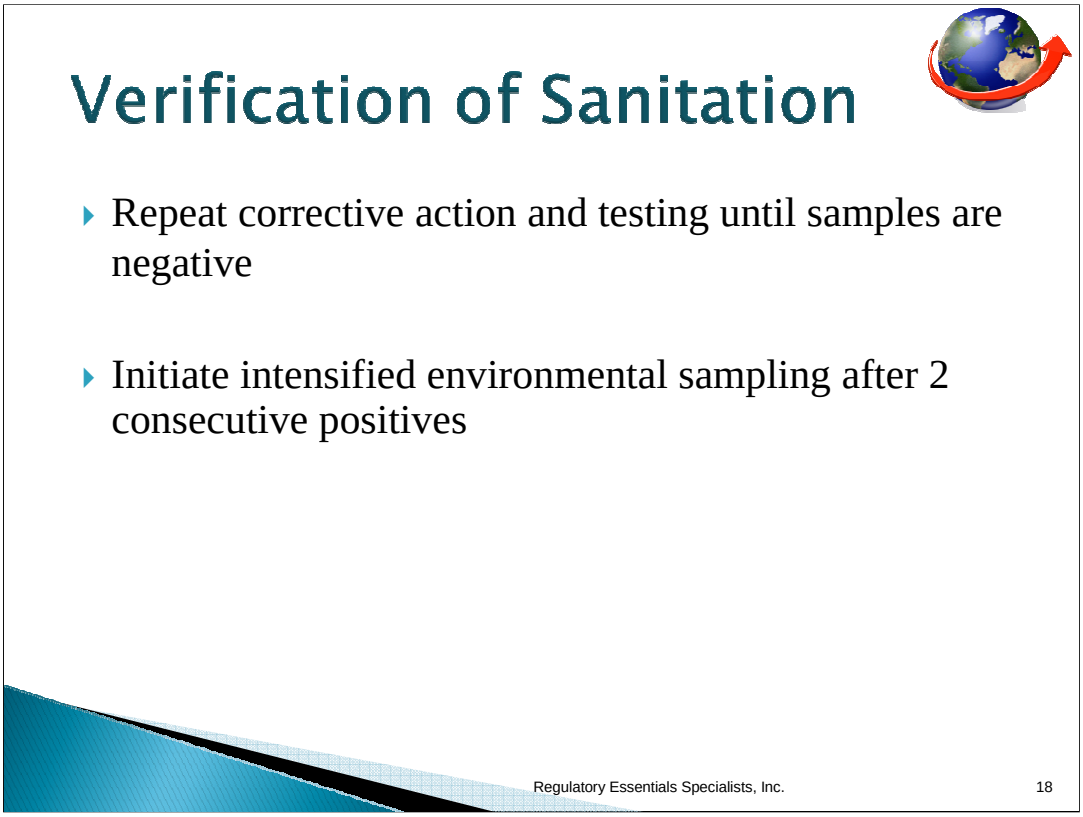
- If test results are positive for *L. monocytogenes*, *Listeria* spp. or *Listeria*-like organisms
  - Take corrective action
  - Which should include intensified cleaning and sanitizing
- Record the corrective actions taken.
- Retest the food contact surface

If test results are positive for *L. monocytogenes*, *Listeria* spp. or *Listeria*-like organisms: (a) Take corrective action (as specified in the HACCP plan, Sanitation SOP or prerequisite program), which should include intensified cleaning and sanitizing.

(b) If the FCS test is positive for *L. monocytogenes*, the product that came in direct contact with a food contact surface would not summarily be considered adulterated, because the post-lethality treatment should have been validated and thus shown to be effective in eliminating or reducing *L. monocytogenes*, and documented in the establishment's HACCP plan.

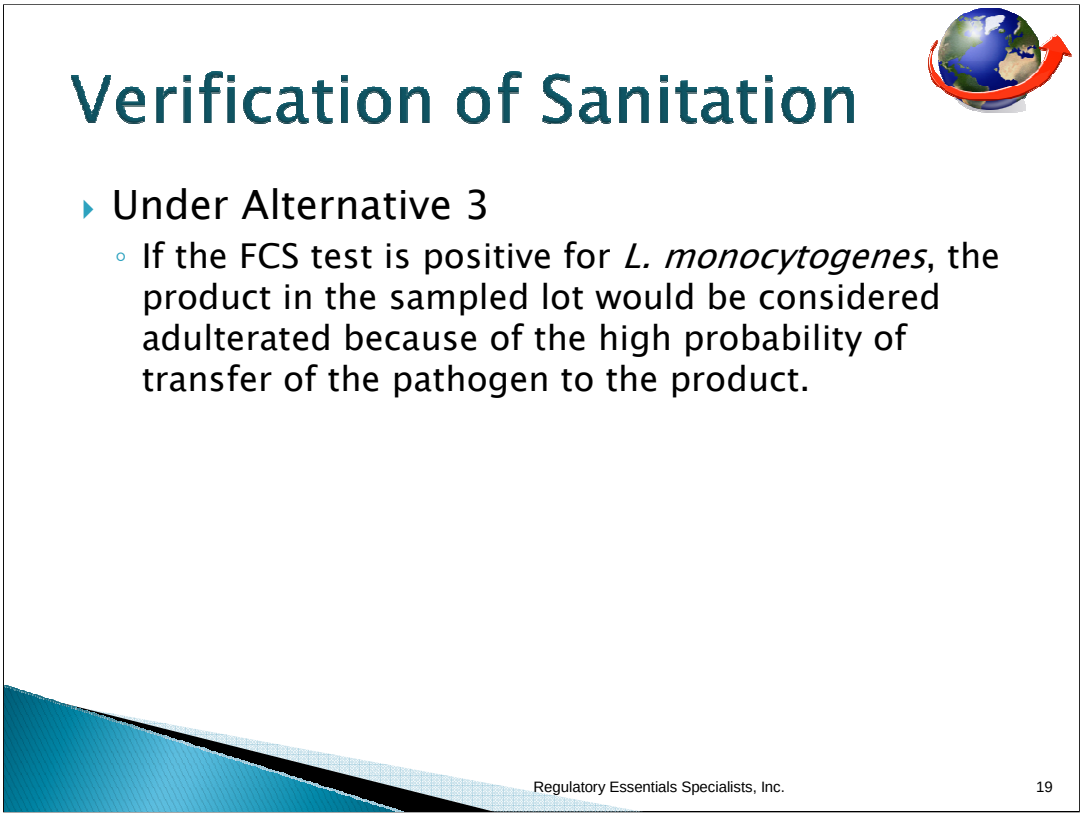
(c) Record the corrective actions taken.

(d) Retest the food contact surface.



(e) Repeat corrective action and testing until samples are negative for *L. monocytogenes*, *Listeria* spp., or *Listeria*-like organisms.

(f) Initiate intensified environmental sampling after 2 consecutive positives, because this shows that the contamination was not eliminated by the corrective actions, and that there might be some other serious problems. FSIS will likely be looking at the support documentation following the first positive to see what the establishment did to justify that the product was not adulterated, particularly if there is evidence of harborage. Establishments should be on the preventive and reactive mode



If the FCS test is positive for *L. monocytogenes*, the product in the sampled lot would be considered adulterated because of the high probability of transfer of the pathogen to the product.

Questions

Thank you