

LISTERIA

Action Plan for Retailers



Listeria control is an ongoing challenge for retailers in the deli and all departments where fresh foods are stored and foods are prepared. FMI and our members are committed to finding ways to control the growth and if possible, eliminate the presence of *Listeria* at retail to reduce the risk in the retail environment. Retail delis provide an ideal environment for *Listeria* growth due to the type of foods (ready to eat [RTE] meats, cheeses, and salads), the moist environment, and temperatures that support growth of *Listeria*. As retailers increase the RTE and prepared foods they offer to customers, *Listeria* control plans need to be in place to offer the appropriate food safety controls. For the purposes of this document, the organism we are concerned about is *Listeria monocytogenes* which we will abbreviate as *Listeria*. It is commonly found in the environment and when ingested, it can cause serious disease in humans and has been associated with a significantly higher hospitalization and fatality rate than other foodborne pathogens.

Food safety professionals from FMI's Food Protection Committee have expanded upon the advice and recommendations of our 2012 *Listeria* Action Plan for Retail Delis to include additional recommendations in this document in order to assist retailers in developing food safety plans to help control the growth of *Listeria*, beyond the deli.

Recommendations

1. Product handling to limit *Listeria* growth

Time and temperature are the two most fundamental factors in bacterial growth.



Listeria is one of very few bacteria that can grow at cold temperatures. However; the lower the temperature, the slower the growth. Maintaining temperatures of refrigerated foods to 41°F or below is essential to minimize the growth of *Lm*. Since many display cases are not designed to lower the temperature of food, all food that supports the growth of *Listeria* should be cooled prior to being placed in the display case or being merchandized. The FDA *Food Code* requires ready-to-eat foods that support the growth of *Listeria* be held at a temperature of 41°F or below. The FDA *Food Code* also requires date marking for RTE products that are Time/temperature Control for Safety Food (TCS). This helps control *Listeria* growth by limiting the shelf life of the product. Holding products below 41°F will also extend the shelf life and could improve the quality of the product.

ACTION

Maintain all coolers, display, and storage cases to keep product temperatures below 41°F at all times.

- ◆ If possible, adjust cooler set temperatures to allow for busy times of the day when the cooler and case doors may be opened more frequently.
- ◆ Employees and management should monitor the holding units and internal product temperatures to verify that the products are being maintained at the correct temperature.
- ◆ Air flow should not be blocked and cases should not be overstocked in order to maintain temperatures below 41°F.
- ◆ Precool products before placing in display cases.
- ◆ Properly date mark items to meet regulatory requirements and to limit time temperature exposure.

2. Control Product and People Flow to Reduce the Risk of Cross Contamination

Delis, bakeries and other retail grocery departments with RTE food are open environments with multiple employees who have access to the departments. The production volumes are high and traffic flows can be high. To minimize the risk of cross contamination, it is strongly encouraged to map the traffic flow to determine if some of the potential for cross contamination can be eliminated. This should

include the elimination of any and all non-departmental employee access to this area, unless there is justifiable need for access. Retailers should evaluate if some higher risk operations can be moved to other departments to minimize the risk for cross contamination of product. For example, raw meat preparation should be moved away from RTE products to avoid cross contamination.

Equipment maintenance, remodels and construction are activities that increase the risk of contamination of *Listeria* due to environmental contamination. Food safety professionals should be assigned on all equipment procurement; remodel and design work in retail settings to reduce the risk of contamination.

The goal is to think differently about people flow and product flow when it comes to the food preparation areas and determine if changing a practice might reduce the risk of *Listeria* contamination.

ACTION

Evaluate traffic patterns and product flow.

- ◆ Consider ways to prevent/eliminate the potential for cross contamination by mapping the process flow and by shifting tasks based on risk.
- ◆ Reduce the traffic in food preparation area by limiting entry to authorized individuals only.
- ◆ Assign food safety professionals to remodel, construction and equipment evaluation projects to evaluate the food safety hazards and minimize risks.

3. Training and execution of proper cleaning and sanitation as well as employee practices

Training employees on proper food safety practices particularly related to personal health and hygiene, open food handling, avoiding cross contamination, proper chilling, and proper sanitation are essential, including but not limited to the use of Sanitation Standard Operating Procedures (SSOPs) to address high risk areas in retail food grocery departments with ready to eat foods. Retail team members should be trained on what to do and why they should do it. Store management teams should be trained on the importance of supporting team members in this process. Training should be a top down approach in that senior management should support the allocation of resources and labor necessary to execute this critical training at the appropriate frequency.

Improper execution of cleaning and sanitation procedures will not be effective at reducing *Listeria*. A proactive food safety culture, which provides sufficient training allowing for the proper execution of cleaning and sanitation, will be the ultimate driver of success. Senior management commitment is essential to this process.



ACTION

Train employees on the essentials of food safety focusing on proper cleaning and sanitation of food contact surfaces, touch points (scale trays, keypads, door handles), and non-food contact surfaces.

- ◆ Apply additional focus on areas that have been identified as higher risk with SSOPs or with specific protocols in your stores. Make sure that daily cleaning and sanitation procedures are being executed properly.
- ◆ Involve retail management with this training to reinforce expectations and create senior management support for the sanitation programs.
- ◆ Employees should have access to the proper tools, chemicals, and time along with education and training to be successful with their cleaning and sanitation program.
- ◆ Training should include information about *Listeria* and why it is important to control this foodborne pathogen in retail environments.

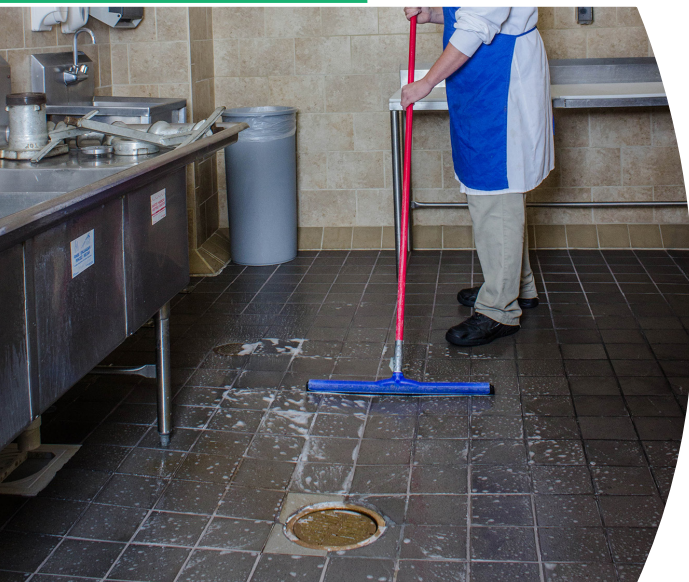
4. Cleaning and Sanitizing

Following ongoing and daily cleaning procedures is fundamental in the proper sanitization of a surface. Cleaning involves the removal of visible soil from

surfaces. Cleaning is essential to disrupt biofilms that might exist. (A biofilm is an invisible buildup of soil and bacteria over time.) More intensive cleaning might be necessary in delis and other retail departments with increased food preparation activities. Take care to not re-contaminate the environment during the cleaning process. Cleaning tools should be in good condition and should not be a source of contamination. Floors and drains should be cleaned and sanitized on a daily basis. They should also be maintained in good repair and not have any standing water. Pools of water should be removed. *Listeria* thrives in wet environments and floors that remain wet provide a perfect home for *Listeria* to grow, in particular, in hard to reach areas such as under equipment. Floor drains can be a harborage point for *Listeria* because they collect debris and remain wet for long periods of time. Some cleaning and chemical service providers have developed specially

formulated cleaning and sanitizing foaming agents for use on floor drains to break down the organic material and more effectively clean and sanitize the drain.

Evaluate current cleaning/sanitizing processes and frequency of cleaning for food contact, non-food contact surfaces and the retail environment. Thoroughly clean all food preparation areas paying close attention to harborage areas (niches) where food debris and residues are difficult to reach. Senior management support is critical to ensure that the necessary allocation of labor resources is considered to ensure proper training and execution of these processes.



There are some items that deserve extra attention.

- a.** Thorough cleaning of floors and drains is necessary to remove debris and reduce biofilms. Pay special attention to floor-wall junctures.
- b.** Eliminate standing water. Flooring that is not sloped properly to a drain should be repaired.
- c.** Sanitize the floor properly and allow for adequate contact time according to the sanitizer label instructions.
- d.** Maintain a clutter free environment to allow for thorough cleaning.
- e.** Sanitize cleaning tools and make sure cleaning tools are not a source of contamination.

5. Environmental Monitoring Plans

After robust cleaning and sanitation procedures have been implemented and employees trained properly, some retailers are verifying their plans with environmental monitoring plans. There are a number of methods and sampling procedures available to verify that sanitation programs are effective. It is best to consult with a food safety professional or a microbiologist. It is generally recommended that indicator organisms be used in any sampling in food production areas.

Rapid sanitation tests include Adenosine triphosphate (ATP) and glucose tests to identify the presence of organic matter, debris or sugars. A variety of microbiological tests are available ranging from rapid testing to culture methods.

With all tests, a detailed plan should be in place prior to testing outlining the SOPs including the corrective actions if the desired results are not obtained.

Regulatory sampling plans

In addition to monitoring as a verification step, some regulatory jurisdictions are sampling for pathogens including *Listeria* to determine regulatory compliance. In this case, FMI recommends working closely with the regulatory agency and understanding the sampling plans, the methodology and the actions that will be taken pending the results. In some cases changes to production schedules might be necessary after samples are taken for regulatory purposes.

ACTION

Have a plan for sampling before starting an environmental monitoring program.

- ◆ Make sure that monitoring as a verification step meets your intended goals.
- ◆ Have a recall plan in place.



- ◆ Have a deep clean remediation plan in place.
- ◆ If a regulatory agency is performing regulatory sampling, have a plan in place for dealing with positive samples and discuss the action steps with the regulatory officials in advance.

6. Incoming Ingredient Management

Retailers often have thousands of suppliers. Managing suppliers and their food safety programs is an enormous challenge. With recent food safety regulations, the task is becoming easier, but small business exemptions place the burden of food safety on retailers. It is imperative that retailers know who they are purchasing from and that food safety programs are in place for all suppliers.



The following are some best practices for supplier programs for retailers:

- ◆ Only buy from approved sources that have food safety programs in place.
- ◆ Have a policy for direct purchases at the store level.
- ◆ Food safety should be part of supplier specifications and requirements and the purchasing requirements.
- ◆ Changes in formulations, ingredients, labeling should be immediately communicated by suppliers.
- ◆ FMI recommends that retailers work with suppliers to have food safety programs in place and continually improve the programs to work to SQF certification.

ACTION

Have supplier verification programs in place for all foods purchased by corporate and stores. Food safety is an essential part of supplier programs and should be communicated by the procurement department.

References and Resources for Additional Information

Baking Industry Sanitation Standards Committee

<http://www.bissc.org/about.html>

Conference for Food Protection Guidance Documents

<http://www.foodprotect.org/guides-documents/>

FDA *Food Code*

<http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm374275.htm>

FMI *Listeria* Action Plan for Retail Delis, November 2012

<http://www.fmi.org/docs/food-safety-best-practice-guides/Listeria-action-plan-for-retail-delis.pdf?sfvrsn=9>

Meat Institute, January 2014. Sanitary Equipment Design Principles

<https://www.meatinstitute.org/index.php?ht=a/GetDocumentAction/i/97261>

United Fresh Produce Association Guidance, January 2014

<http://www.unitedfresh.org/new-food-safety-guide-helps-fresh-produce-operations-safeguard-Listeria/>

USDA FSIS Resources

<http://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/Listeria>

This document will be updated as science advances.



THE VOICE OF FOOD RETAIL

Feeding Families  Enriching Lives