Listeria
Resources for Industry

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Overview

- Provide resources to be used in the work environment for Listeria control
- Provide employee training resources related to Listeria control

Florida Department of Agriculture and Consumer Services

Listeria monocytogenes (*Lm*)

Lm is a bacteria found in moist environments, soil, and decaying vegetation. It causes the foodborne illness, listeriosis.

Transfer of *Lm* from the environment, equipment, employees, or raw food is a particular hazard of concern in retail delis.

It can cross-contaminate food contact surfaces and foods. Improper sanitation, product handling, and employee practices can lead to the transfer of *Lm* to RTE meat and poultry products at retail.

Lm forms biofilms (thin layers of microorganisms that stick to product contact surfaces) that are difficult to remove from equipment and other surfaces.

Listeriosis

Serious infection can result from eating food contaminated with *Lm*.

Infection is rare, but could result in a high fatality rate (16% compared to 0.5% for *Salmonella* or *E. coli* O157:H7).

It affects everyone, with older adults, pregnant women and fetuses, newborns, children, and adults with weakened immune systems being at higher risk.

Flu-like symptoms can begin a few days after consuming contaminated products. However, invasive listeriosis, which can affect the central nervous system and may cause stillbirth or result in death, can begin up to 2 months after eating food contaminated with *Lm*.

There are an estimated 1,600 illnesses, 1,500 hospitalizations, and 260 deaths in the U.S. each year.

Product Handling

It is important to adopt practices that protect RTE product from contamination with *Lm* (see bullets below on ways to prevent or limit the growth of *Lm* in deli products).

- Use products that contain antimicrobial agents or have received other treatments to eliminate or prevent the growth of *Lm* in RTE products.
- Monitor and limit the shelf life of an RTE product that is opened, prepared, and held in a retail setting for more than 24 hours.
- Do not pre-slice products - product should be sliced at the time it is requested by consumers.
- Remove products that are filthy, putrid, decomposed, slimy, rancid, or in off-condition from the deli area as soon as possible and thoroughly clean and sanitize areas that were contacted by such product to prevent any cross-contamination.
- Promptly return RTE products to refrigerated units (at or below 41°F), after slicing, to slow pathogen growth.
- Store and handle RTE products in separate areas from raw products. RTE products that are prepared, held, or stored near raw products can become contaminated (e.g., because of aerosolization or dripping).

A number of food safety practices are needed to control *Lm* contamination of retail foods.

Cleaning and Sanitizing

- Develop written sanitation procedures that describe how utensils and equipment (e.g., slicers) will be cleaned and sanitized prior to use.
- Clean and sanitize utensils and equipment used to handle, prepare, and store RTE products frequently (e.g., at least every 4 hours).
- Disassemble RTE food-processing equipment when cleaning and sanitizing to ensure that hard to reach areas where *Lm* can hide are addressed.
- Scrub surfaces during cleaning to prevent biofilms from occurring.
- Follow the manufacturer's recommendations for sanitizer strength and application, including exposure time, to ensure it is effective.
- Consider rotating sanitizers to provide more effective bacterial control.
- Develop a procedure to sanitize cleaning aids (e.g., cloths and scrub brushes) or have single-use items that are discarded after use.
- Use low water pressure when cleaning in the deli areas to minimize splashing and overspray.
- Use separate sinks for hand washing and cleaning product or equipment.
- Eliminate or remove unnecessary items (e.g., supplies and equipment) from the deli area.

Employee Practices

- Train employees in sanitation practices and safe food handling procedures.
- Ensure that employees wear gloves and change them as needed to prevent cross-contamination of RTE products.
- Provide adequate facilities, including soap and running water, and post instructions for employees to wash their hands.
- Implement a policy to ensure that ill employees do not work with open food items, including RTE foods.
- Limit employee traffic in the deli area and develop traffic-flow plans for product, employees, and other items to prevent contamination by consumers and employees.
- Develop practices to prevent outer clothing from spreading contamination, such as wearing disposable aprons.

For more information and a checklist of practices for your deli, go to *FSIS Best Practices Guidance for Controlling* Listeria monocytogenes *(Lm) in Retail Delicatessens* at http://www.fsis.usda.gov/wps/wcm/connect/29d51258-0651-469b-99b8-e986baee8a54/Controlling-LM-Delicatessens.pdf?MOD=AJPERES

See the FDA Food Code, 2013, at: http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/ucm374275.htm

Additional information on *Listeria* is at http://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/listeria

Facility and Equipment Controls

- Do not allow conditions in the retail facility that could cause the product to become contaminated.
- Ensure that walls, floors, drains, and overhead structures in the RTE deli and cooler areas are smooth, durable, easily cleanable, and in good repair.
- Do not perform construction (e.g., replacing floors, walls, or ceilings) when exposed RTE product is present in the deli. Thoroughly clean/sanitize the equipment and facilities after construction and before handling product.
- Maintain tables, slicers, and other food contact surfaces so that they are easily cleanable.
- Clean overhead structures as often as necessary to keep them free of condensation and ensure that sanitary conditions are maintained.
- Keep water from pooling on the floor or other surfaces within the deli area.
- Clean and sanitize surfaces between different types of RTE items (for example ham, seafood, and vegetables) when using the same equipment.
- Ensure that grinders, dicers, scoops, or other equipment are maintained in sanitary condition.
- Maintain product cases and storage at or below 41°F to slow *Lm* growth.

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USDA United States Department of Agriculture Food Safety and Inspection Service

Guidance for Controlling *Listeria monocytogenes* (Lm) in Retail Delicatessens

Best practice tips for deli operators

The information in this brochure is taken from *FSIS Best Practices Guidance for Controlling* Listeria monocytogenes *(Lm) in Retail Delicatessens*. **These are suggestions and not requirements.**

Retailers should be aware that the recommendations in this guidance, especially those based on the 2013 Food Code may be requirements in State, local, or tribal regulations.

https://www.fsis.usda.gov/wps/wcm/connect/706237dc-da95-4ad1-849a-3570ed163ca4/LM-at-Retail-Brochure.pdf?MOD=AJPERES

Florida Department of Agriculture and Consumer Services

FOOD FACTS   U.S. FOOD & DR ADMINISTRATION

Preventing Listeria Infections: *What You Need to Know*

Pregnant women are about 10 times more likely than the general population to get a listeria infection.

Pregnant hispanic women are even more likely than non-hispanic pregnant women to get a listeria infection. This is probably caused by eating traditional soft cheese, such as "queso fresco," and other traditional foods made with milk that is unpasteurized. Brands of these traditional foods made with pasteurized milk are available in stores and online.

The Risk

Certain foods – including ready-to-eat refrigerated foods, unpasteurized (raw) milk, and foods made with unpasteurized milk – often may be contaminated with *Listeria monocytogene* (LM), the third leading cause of death from food poisoning. Th foodborne bacteria can grow at refrigerator temperatures and can cause an illness that in most healthy people is unpleasant but not serious. But in people who are at high risk, LM can cause an illness called listeriosis which can be severe and eve lead to death. The people at high risk include pregnant wome and their unborn babies, newborns, older adults, and other persons with weakened immune systems, such as those with HIV/AIDS, cancer, diabetes or kidney disease, and transplant patients.

While a pregnant woman may have only a mild, flu-like illness, may not feel sick at all, listeriosis can lead to miscarriage, dea of the unborn baby, a low-birth weight infant, health problems for the newborn, or even infant death. That's why reducing ris from *Listeria* is so important.

How to Reduce Your Risk from *Listeria*: 3 Easy Steps

There are three very simple things you can do to help prevent illness from *Listeria*:

1. **Chill at the Right Temperature:** The right temperatures sl the growth of *Listeria*.

   Put a refrigerator thermometer in the refrigerator and adjust the refrigerator temperature control, if necessary. Put a second thermometer in the freezer.

   Your refrigerator should register at 40°F (4°C) or below and y freezer at 0°F (-18°C).
2. **Use Ready-to-Eat Foods Quickly!**

   Use ready-to-eat, refrigerated foods by the *Use By* date on t package. The longer they're stored in the refrigerator, the mo chance *Listeria* has to grow.
3. **Keep the Refrigerator Clean**

   Clean your refrigerator regularly.

   Wipe up spills immediately. This is particularly important, so *Listeria* doesn't have a place to grow and then spread to oth foods.

   Clean the inside walls and shelves with hot water and a mild liquid dishwashing detergent, rinse, then dry with a clean clo or paper towel.

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Temperature Check!

Use an appliance thermometer for your refrigerator and, if possible, one in your freezer:

Put the thermometer in the middle of the refrigerator. After 5 to 8 hours, if the temperature is above 38° to 40°F (3° to 4°C), adjust the refrigerator temperature control to a lower setting. Check again after 5 to 8 hours.

Put the thermometer between frozen food packages in the freezer. After 5 to 8 hours, if the temperature is above 0° to 2°F (-18° to -17°C), adjust the freezer temperature control to a lower setting. Check again after 5 to 8 hours.

To Eat or Not to Eat?

Choosing the right foods and preparing them safely helps reduce the risk illness from *Listeria* for at-risk people.

High Risk Foods	Lower Risk Foods
Hot dogs and luncheon meats – *unless they're thoroughly reheated*	Hot dogs and luncheon meats that are heated to an internal temperature of 165°F measured with a food thermometer.
Soft cheeses, such as Feta, Brie, Camembert, "blue-veined cheeses," or "queso blanco," "queso fresco," or Panela – *that are made with unpasteurized milk.*	Soft cheeses labeled "Made with pasteurized milk"
Refrigerated pâtés or meat spreads	Canned or shelf-stable* pâtés or meat spreads
Refrigerated smoked seafood – unless it's in a cooked dish, such as a casserole. (Refrigerated smoked seafood, such as salmon, trout, whitefish, cod, tuna, or mackerel is most often labeled as "nova-style," "lox," "kippered," "smoked," or "jerky." These types of fish are found in grocery store refrigerator sections or deli counters or sold at delicatessens.)	Canned or shelf-stable* smoked seafood.
Unpasteurized milk or foods that contain unpasteurized milk	Pasteurized milk and foods made with pasteurized milk.

*Foods that can be safely stored at room temperature, or "on the shelf," are called *shelf* stable.

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Follow These Steps For Food Safety:

CLEAN **Clean:** Wash your hands before, during and after handling food. Wash utensils, cutting boards, and any surfaces that food touches after each use. Wash fruits and veggies—but not meat, poultry, or eggs.

SEPARATE **Separate:** Use separate cutting boards, plates, and utensils for raw (uncooked) produce and for raw (uncooked) meat, poultry, seafood, and eggs. Keep meat, poultry, seafood, and eggs separate from all other foods while shopping and in the refrigerator.

COOK **Cook:** Only a food thermometer can make sure meat, poultry, fish, and casseroles are cooked to a safe internal temperature. For example, internal temperatures should be 145°F for whole meats (allow the meat to rest after cooking for 3 minutes) and fish, 160°F for ground meats, and 165°F for all poultry. Eggs should be cooked until the yolk is firm.

CHILL **Chill:** Use appliance thermometers to be sure your refrigerator is at or below 40°F and your freezer is 0°F or below. Between 40°F and 140°F is the Danger Zone, when bacteria can multiply rapidly. Generally, the more bacteria, the more likely someone will get sick. Most refrigerators have just a colder/warmer adjustment, so the only way to know is to put a thermometer inside.

About Foodborne Illness

Know the Symptoms

Consuming dangerous foodborne bacteria will usually cause illness within 1 to 3 days of eating the contaminated food. However, sickness can also occur within 20 minutes or up to 6 weeks later. Although most people will recover from a foodborne illness within a short period of time, some can develop chronic, severe, or even life-threatening health problems. Foodborne illness can sometimes be confused with other illnesses that have similar symptoms. The symptoms of foodborne illness can include:

- Vomiting, diarrhea, and abdominal pain
- Flu-like symptoms, such as fever, headache, and body ache

Take Action

If you think that you or a family member has a foodborne illness, **contact your healthcare provider immediately.** Also, **report** the suspected foodborne illness to FDA in either of these ways:

- Contact the Consumer Complaint Coordinator in your area. Locate a coordinator here: **http://www.fda.gov/Safety/ReportaProblem/ConsumerComplaintCoordinators**
- Contact MedWatch, FDA's Safety Information and Adverse Event Reporting Program: By Phone: **1-800-FDA-1088** Online: File a voluntary report at **http://www.fda.gov/medwatch**

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For more information, contact the U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition's Food and Cosmetic Information Center at **1-888-SAFEFOOD** (toll free), Monday through Friday 10 AM to 4 PM ET (except Thursdays from 12:30 PM to 1:30 PM ET and Federal holidays). Or, visit the FDA website at **http://www.fda.gov/educationresourcelibrary**

https://www.fda.gov/media/72308/download

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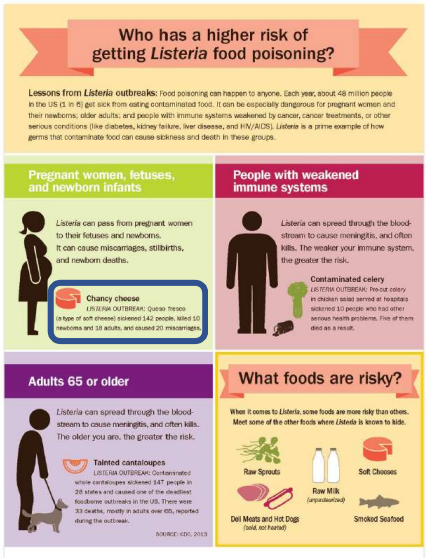
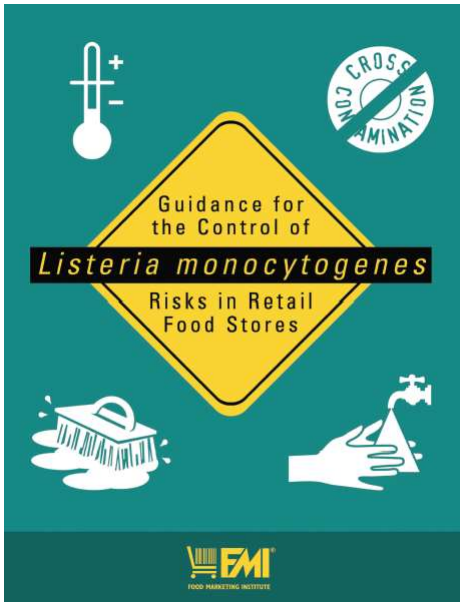


https://www.cdc.gov/vitalsigns/listeria/infographic.html



https://www.fmi.org/docs/food-safety/listeria-guidance.pdf?sfvrsn=4

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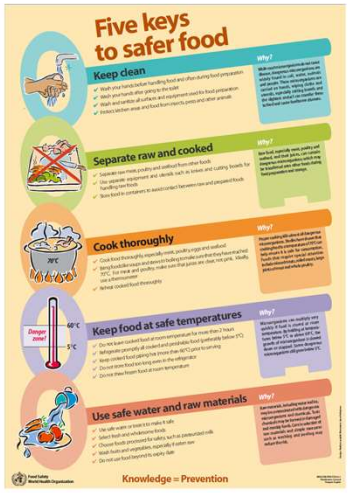

https://www.who.int/foodsafety/publications/consumer/en/5keys_en.pdf?ua=1

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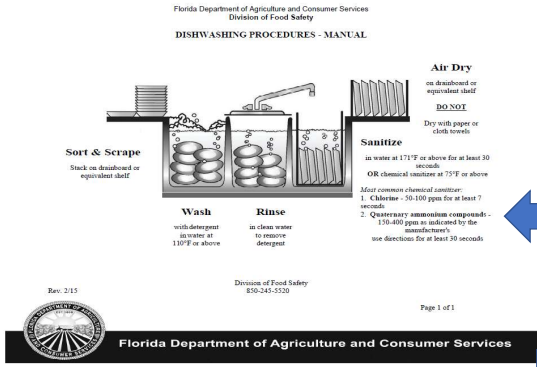

https://waterandhealth.org/wp-content/uploads/2019/12/Kitchen-Cleanup-Surfacesstamp_Letter_COLOR.pdf

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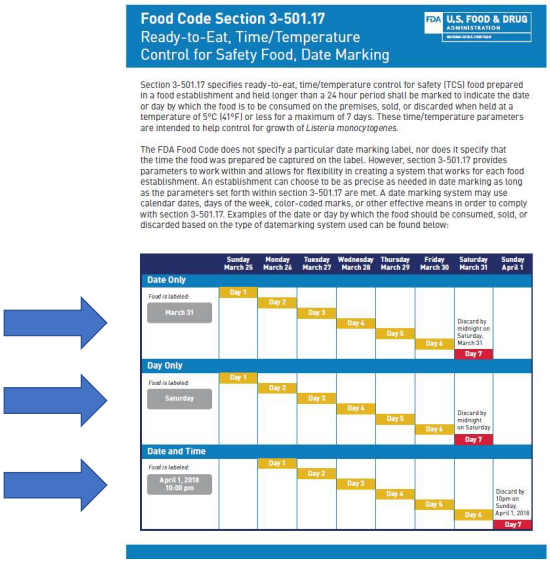

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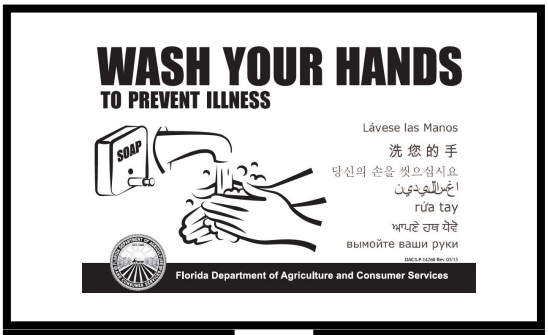
https://www.cdc.gov/handwashing/pdf/wash-your-hands-poster-english-508.pdf



https://extension.psu.edu/food-safety-poster-wash-hands

https://www.cdc.gov/handwashing/pdf/wash-your-hands-steps-8x11.pdf

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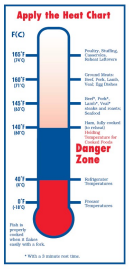
https://epublication.fda.gov/epub/ePubHome.xhtml?faces-redirect=true



https://www.fda.gov/food/people-risk-foodborne-illness/heat-chart-food-safety-moms-be

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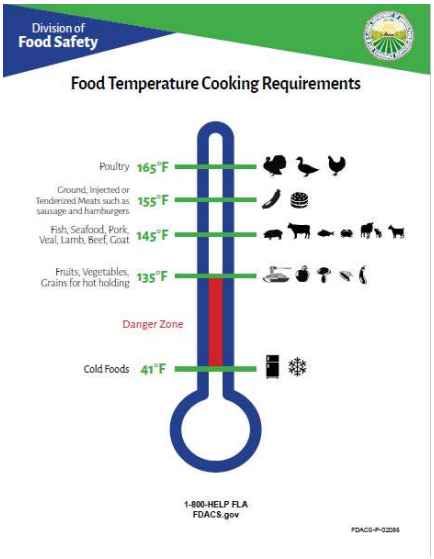
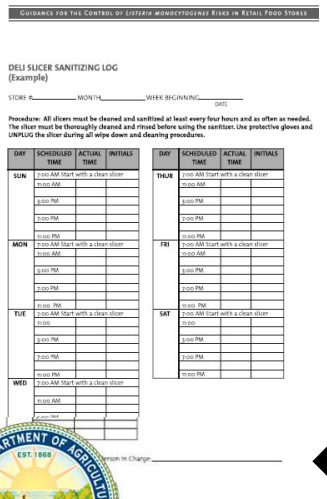




GUIDANCE FOR THE CONTROL OF *LISTERIA MONOCYTOGENES* RISKS IN RETAIL FOOD STORES

DELI SLICER SANITIZING LOG
(Example)

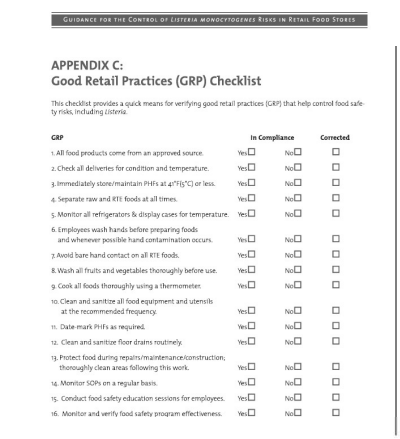
STORE #_____ MONTH_____ WEEK BEGINNING: _____ DATE

Procedure: All slicers must be cleaned and sanitized at least every four hours and as often as needed. The slicer must be thoroughly cleaned and rinsed before using the sanitizer. Use protective gloves and UNPLUG the slicer during all wipe down and cleaning procedures.

DAY	SCHEDULED TIME	ACTUAL TIME	INITIALS
SUN	7:00 AM Start with a clean slicer		
	11:00 AM		
	3:00 PM		
	7:00 PM		
	11:00 PM		
MON	7:00 AM Start with a clean slicer		
	11:00 AM		
	3:00 PM		
	7:00 PM		
	11:00 PM		
TUE	7:00 AM Start with a clean slicer		
	11:00		
	3:00 PM		
	7:00 PM		
	11:00 PM		
WED	7:00 AM Start with a clean slicer		
	11:00 AM		
	3:00 PM		
	7:00 PM		
	11:00 PM		

DAY	SCHEDULED TIME	ACTUAL TIME	INITIALS
THUR	7:00 AM Start with a clean slicer		
	11:00 AM		
	3:00 PM		
	7:00 PM		
	11:00 PM		
FRI	7:00 AM Start with a clean slicer		
	11:00 AM		
	3:00 PM		
	7:00 PM		
	11:00 PM		
SAT	7:00 AM Start with a clean slicer		
	11:00		
	3:00 PM		
	7:00 PM		
	11:00 PM		

Person in Charge: _____

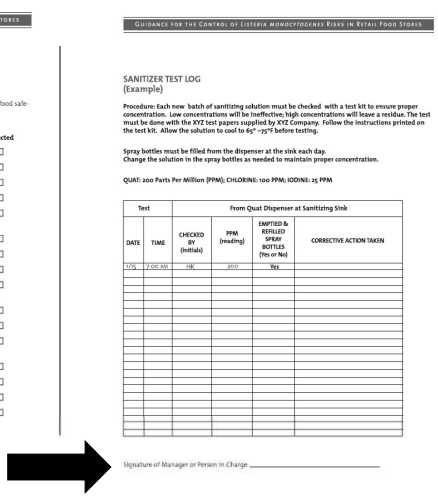


GUIDANCE FOR THE CONTROL OF *LISTERIA MONOCYTOGENES* RISKS IN RETAIL FOOD STORES

APPENDIX C:
Good Retail Practices (GRP) Checklist

This checklist provides a quick means for verifying good retail practices (GRP) that help control food safety risks, including *Listeria*.

GRP	In Compliance	Corrected
1. All food products come from an approved source.	Yes☐ No☐	☐
2. Check all deliveries for condition and temperature.	Yes☐ No☐	☐
3. Immediately store/maintain PHFs at 41°F(5°C) or less.	Yes☐ No☐	☐
4. Separate raw and RTE foods at all times.	Yes☐ No☐	☐
5. Monitor all refrigerators & display cases for temperature.	Yes☐ No☐	☐
6. Employees wash hands before preparing foods and whenever possible hand contamination occurs.	Yes☐ No☐	☐
7. Avoid bare hand contact on all RTE foods.	Yes☐ No☐	☐
8. Wash all fruits and vegetables thoroughly before use.	Yes☐ No☐	☐
9. Cook all foods thoroughly using a thermometer.	Yes☐ No☐	☐
10. Clean and sanitize all food equipment and utensils at the recommended frequency.	Yes☐ No☐	☐
11. Date-mark PHFs as required.	Yes☐ No☐	☐
12. Clean and sanitize floor drains routinely.	Yes☐ No☐	☐
13. Protect food during repairs/maintenance/construction; thoroughly clean areas following this work.	Yes☐ No☐	☐
14. Monitor SOPs on a regular basis.	Yes☐ No☐	☐
15. Conduct food safety education sessions for employees.	Yes☐ No☐	☐
16. Monitor and verify food safety program effectiveness.	Yes☐ No☐	☐



GUIDANCE FOR THE CONTROL OF *LISTERIA MONOCYTOGENES* RISKS IN RETAIL FOOD STORES

SANITIZER TEST LOG
(Example)

Procedure: Each new batch of sanitizing solution must be checked with a test kit to ensure proper concentration. Low concentrations will be ineffective; high concentrations will leave a residue. The test must be done with the XYZ test papers supplied by XYZ Company. Follow the instructions printed on the test kit. Allow the solution to cool to 65°–75°F before testing.

Spray bottles must be filled from the dispenser at the sink each day.
Change the solution in the spray bottles as needed to maintain proper concentration.

QUAT: 200 Parts Per Million (PPM); CHLORINE: 100 PPM; IODINE: 25 PPM

Test		From Quat Dispenser at Sanitizing Sink			
DATE	TIME	CHECKED BY (Initials)	PPM (reading)	EMPTIED & REFILLED SPRAY BOTTLES (Yes or No)	CORRECTIVE ACTION TAKEN
1/15	7:00 AM	HK	200	Yes	

Signature of Manager or Person in Charge: _____

https://www.fmi.org/docs/food-safety/listeria-guidance.pdf?sfvrsn=4

Florida Department of Agriculture and Consumer Services

Division of **Food Safety**

Food Temperature Log
(Registro de Temperatura de Alimento)

_____**Holding Log (Registro de mantenimiento de temperatura)** _____**Cooking Log (Registro de Cocción)**

Cold foods must be held at 41°F or below and **hot foods** must be held at 135°F or above at all times.
(Alimentos fríos tienen que ser mantenidos a una temperatura de menor de 41° F y **alimentos calientes** que ser mantenidos a una temperatura de mayor de 135°F todo el tiempo.)

Date (Fecha)	Type of Food (Tipo de Comida)	Time (Hora)	Temperature (Temperatura)	Corrective Action (Que fue Corregido)	Initials (Iniciales)

1-800-HELP FLA
FDACS.gov

FDACS-P-02098

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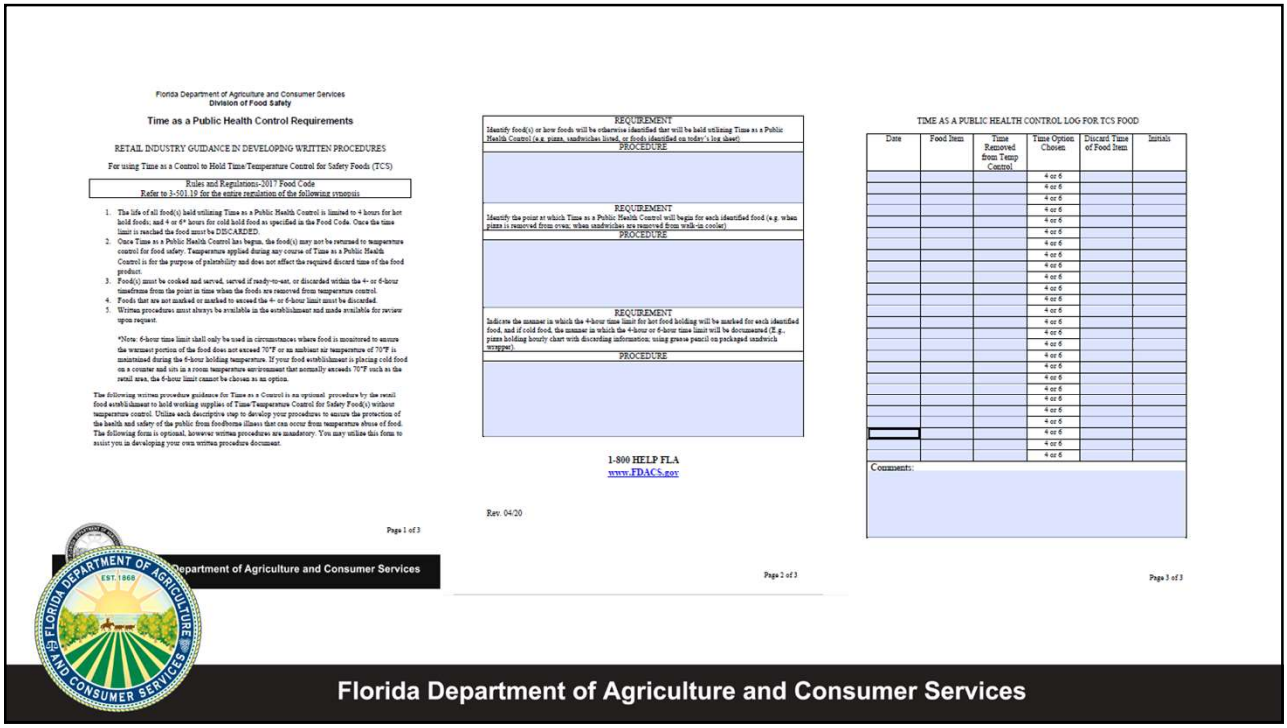

Florida Department of Agriculture and Consumer Services
Division of Food Safety

Time as a Public Health Control Requirements

RETAIL INDUSTRY GUIDANCE IN DEVELOPING WRITTEN PROCEDURES

For using Time as a Control to Hold Time/Temperature Control for Safety Foods (TCS)

Rules and Regulations-2017 Food Code
Refer to 3-501.19 for the entire regulation of the following synopsis

1. The life of all food(s) held utilizing Time as a Public Health Control is limited to 4 hours for hot hold foods; and 4 or 6* hours for cold hold food as specified in the Food Code. Once the time limit is reached the food must be DISCARDED.
2. Once Time as a Public Health Control has begun, the food(s) may not be returned to temperature control for food safety. Temperature applied during any course of Time as a Public Health Control is for the purpose of palatability and does not affect the required discard time of the food product.
3. Food(s) must be cooked and served, served if ready-to-eat, or discarded within the 4- or 6-hour timeframe from the point in time when the foods are removed from temperature control.
4. Foods that are not marked or marked to exceed the 4- or 6-hour limit must be discarded.
5. Written procedures must always be available in the establishment and made available for review upon request.

*Note: 6-hour time limit shall only be used in circumstances where food is monitored to ensure the warmest portion of the food does not exceed 70°F or an ambient air temperature of 70°F is maintained during the 6-hour holding temperature. If your food establishment is placing cold food on a counter and sits in a room temperature environment that normally exceeds 70°F such as the retail area, the 6-hour limit cannot be chosen as an option.

The following written procedure guidance for Time as a Control is an optional procedure by the retail food establishment to hold working supplies of Time/Temperature Control for Safety Food(s) without temperature control. Utilize each descriptive step to develop your procedures to ensure the protection of the health and safety of the public from foodborne illness that can occur from temperature abuse of food. The following form is optional, however written procedures are mandatory. You may utilize this form to assist you in developing your own written procedure document.

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REQUIREMENT
Identify food(s) or how foods will be otherwise identified that will be held utilizing Time as a Public Health Control (e.g. pizza, sandwiches listed, or foods identified on today's log sheet):
PROCEDURE
REQUIREMENT
Identify the point at which Time as a Public Health Control will begin for each identified food (e.g. when pizza is removed from oven, when sandwiches are removed from walk-in cooler)
PROCEDURE
REQUIREMENT
Indicate the manner in which the 4-hour time limit for hot food holding will be marked for each identified food, and if cold food, the manner in which the 4-hour or 6-hour time limit will be documented (E.g., pizza holding hourly chart with discarding information; using grease pencil on packaged sandwich wrapper).
PROCEDURE

1-800 HELP FLA
www.FDACS.gov

Rev. 04/20

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TIME AS A PUBLIC HEALTH CONTROL LOG FOR TCS FOOD

Date	Food Item	Time Removed from Temp Control	Time Option Chosen	Discard Time of Food Item	Initials
			4 or 6		
			4 or 6		
			4 or 6		
			4 or 6		
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Comments:

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Websites

- https://www.cdc.gov/listeria/index.html
- https://www.fda.gov/animal-veterinary/animal-health-literacy/get-facts-about-listeria
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QUESTIONS?

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