

Handling Deli Foods



In August 2008, Maple Leaf Foods, Inc., of Canada deli meats contaminated with Listeria caused 57 illnesses and 22 deaths. Deli meats linked to this outbreak were stored in excess of seven days by institutions, stores, and consumers, allowing Listeria growth to reach dangerous levels.

In July 2002, sliced turkey meat from Pilgrim's Pride Foods caused an outbreak of L. monocytogenes leading to 8 deaths and 3 stillbirths. One unopened package and 25 environmental samples from the Pilgrim's Pride Foods poultry processing plant yielded Listeria spp.

Public Health Reasons

Refrigeration prevents the growth of most bacteria in foods. However, two categories of bacteria, psychrophiles and psychrotrophs, can grow at refrigeration temperatures. While psychrophilic microorganisms grow optimally at 59°F (15°C) and psychrotrophs at approximately 77°F (25°C), both can still multiply slowly at 41°F (5°C) or colder during refrigeration. *Listeria monocytogenes* is a psychrotrophic bacterium that is a public health concern in chilled ready-to-eat foods, especially deli foods. Deli foods include bulk sliced deli meats, prepackaged sliced deli meat, as well as cold salads, like potato salad, ham salad, and egg salad. All deli foods are classified as ready-to-eat foods.

The U.S. Food and Drug Administration and the U.S. Department of Agriculture assessed the risk of *L. monocytogenes* in 23 categories of ready-to-eat foods. They found that deli meats had the highest predicted relative risk of causing listeriosis in the United States. Several studies have shown that *L. monocytogenes* will grow on deli meats at refrigeration temperatures of 40°F to 50°F (4.4°C to 10°C) for up to six weeks. Cross-contamination of deli meats by contact with refrigerator surfaces and hands had little effect on the prevalence of *L. monocytogenes*. Growth was related to time in refrigerated storage. Initial contamination levels of deli meats are believed to be due to contamination during processing and growth during storage.

L. monocytogenes behaves much differently in deli salads. Overall, populations of *L. monocytogenes* decrease in most types of deli salads instead of growing. Deli salads tend to be made with acidic ingredients, such as lemon juice, mayonnaise, and vinegar. These products will lower the overall pH of the salad, thus inhibiting the growth of *L. monocytogenes*. Deli salads have a low predictive risk for causing listeriosis in the United States because of the decrease in *L. monocytogenes* populations and the normally short storage times for deli salads.

Based on the predictive growth curve-modeling program for *L. monocytogenes*, ready-to-eat, potentially hazardous food, such as deli meats, can be kept at 41°F (5°C) for up to seven days. Potentially hazardous food that is prepared in a foodservice establishment, such as a child-care kitchen, and then held or frozen and thawed should be date marked. Deli foods held for more than 24 hours must be clearly labeled with the date by which they must be eaten or discarded. However, if deli meats and deli salads were commercially processed and packaged, they can be held for up to seven days at 41°F (5°C) or colder *after* the package was opened, or used before the expiration date stamped on the package. If deli meats were bought “fresh-sliced,” they can be held for up to seven days at 41°F (5°C) after purchase. All deli salads prepared fresh in a foodservice establishment, including child-care kitchens, must be date-marked. However, deli salads prepared and packaged by a food processing plant contain sufficient acidity, along with the addition of preservatives (e.g., sorbate, benzoates), to prevent the growth of *L. monocytogenes*, so date marking is not necessary.

Practices

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- Never handle deli foods with bare hands. Single-use gloves must be worn or tongs must be used.
- Wash hands before putting on single-use gloves (See “Practicing Good Hand Hygiene for Food Workers” fact sheet). Gloves must never be worn in place of hand washing.
- Change gloves whenever they become damaged or when they come in contact with a heavily contaminated surface, such as raw meat or poultry or garbage.
- Prevent cross-contamination, such as placing deli meat on the same surface that was used to hold raw meat.

Storing Deli Foods

- Keep deli foods for up to seven days at 41°F (5°C) or colder, and discard after seven days.
- In order to keep deli foods at 41°F (5°C) or colder, it is recommended to keep the refrigerator set to 39°F (3.8°C).

Developing a Date Marking System

- Date marking is recommended by the Food and Drug Administration’s Food Code as a method of documenting the amount of time a food is held. Date marking requirements apply to containers of processed food that have been opened and to foods prepared on premises. Date marking is used if food is held for more than 24 hours, and for the duration the food is held under control of the food establishment.
- A date marking system identifies the date or day by which the food must be consumed or discarded.
 - It is important for a date marking system to be established and maintained.
 - Deli foods held for more than 24 hours must be clearly labeled with the date that foods must be eaten or discarded by. This can be up to seven days after the food was opened (for commercially processed and packaged deli meats and salads), purchased (for fresh-sliced deli meats or fresh-made deli salads), or made, as long as the food is kept at 41°F (5°C) and the time limit does not exceed the manufacturer’s use-by date.
 - Calendar dates, days of the week, color-coded marks, or other effective means may be used, but the system must be disclosed to the Regulatory Authority upon request.
 - The label may also indicate what the food is, the time it was prepared, and who prepared it.
- Food workers need to be instructed on how to implement the date marking system properly.

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Published: March 31, 2013 **Revised:** March 1, 2013

This material is based upon work supported by the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture, under Agreement No. 2008-51110-04335, the National Integrated Food Safety Initiative of the Cooperative State Research, Education, and Extension Competitive Grants Program. Any opinions, findings, conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

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