

ILLINOIS DEPARTMENT OF PUBLIC HEALTH  
OFFICE OF HEALTH PROTECTION  
DIVISION OF FOOD, DRUGS AND DAIRIES

TECHNICAL INFORMATION BULLETIN

NUMBER: Technical Information Bulletin/ Food #22

SUBJECT: Ambient Temperature Display of Pumpkin Pies and Similar Custard-like Pastries

EFFECTIVE: November 15, 1989

SUPERCEDES:

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General Information

This interpretive guideline is presented to assist you in determining whether pumpkin pies and similar custard-like pastries may be displayed at ambient room temperature in retail stores. The resulting statement was formulated with the advice of representatives from the retail and wholesale baking industry as well as a standing subcommittee of the "Ad Hoc" Food Committee.

Guidelines

While ingredients of pumpkin pies and similar custard-like pastries, such as egg and cream/milk, are typically considered potentially hazardous food, the interaction of certain processing ingredients and conditions may alter the final product to a non-potentially hazardous category. Approved processing methods to allow ambient temperature display of these products include the following:

1. Adjustment of the pH of the product to 4.5 or lower, or a sugar to water ratio of not less than 2.1 to 1 (to produce a water activity ( $a_w$ ) of .85 or less), or
2. Final heating of the product to an internal product temperature of at least 190°F in addition to other safety measures (listed below), or
3. Any other final process of equally demonstrated efficiency which demonstrates that rapid and progressive growth of infectious and toxigenic microorganisms does not occur.

PAGE: 2  
NUMBER: Technical Information Bulletin/ Food #22  
EFFECTIVE: November 15, 1989

For pumpkin pies and other similar custard-like pastries in which pH and/or  $a_w$  are not sufficiently low to inhibit enteropathogenic microbial growth, exemption from refrigeration requirements must be justified by other means. The baking process must destroy enteropathogenic bacteria contained in the raw pie. In addition, restrictive post-baking handling is necessary to prevent post-baking recontamination. Such pies should be excluded from refrigeration requirements only if the following conditions are satisfied:

1. The bakery shall be inspected under good manufacturing practices as described in Code of Federal Regulations, Title 21, Part 110, "Manufacturing, Processing, Packaging and Handling Human Foods."
2. The internal temperature of each particle of the product must reach at least 190°F.
3. Pies must be properly cooled so that water condensate does not accumulate inside the packaging or on the pie surface after packaging or during storage and display.
4. Raw pies, prior to baking at a retail store, must be received and stored at 0°F or below before baking.
5. Packaging under strict sanitary guidelines and using durable packaging materials, must be conducted at the location where the pie is baked to prevent post-baking contamination.

A "tamper evident" seal or tape must be placed across the closure that must be torn or removed in order to open the lid so the consumer can be alerted if the integrity of the product may have been violated.

6. The product must be labeled properly on each individual package:
  - a. name of the product
  - b. name and address of the manufacturer; if baked at the retail store, this store's name and address is to be included
  - c. list of ingredients in descending quantities
  - d. weight of the product
7. The statement "REFRIGERATE AFTER OPENING" must be prominently displayed on the product package.
8. A "SELL-BY" date, which includes the bake-day plus one additional day, must be prominently displayed on the package in a way that is understandable to the general public. All pies not sold at the end of this period must be discarded.

PAGE: 3  
NUMBER: Technical Information Bulletin/ Food #22  
EFFECTIVE: November 15, 1989

9. If the product is baked at the retail level, it is strongly recommended that the bakery operation be under the supervision of an Illinois Certified Food Service Sanitation Manager who is familiar with the concepts of HACCP and quality control.

Certain products do not meet the above criteria and are not exempted from the refrigeration requirement:

1. Any pumpkin pie or similar custard-like pastry that has been cut or cracked.
2. Any product where the formulation and processing is done completely at the retail store. (Diverse preparation techniques and conditions characteristic of a retail store environment are not conducive to a blanket statement of approval.)
3. Any pumpkin pie or similar custard-like pastry whose processing procedure is not known.

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