

## **02 NCAC 09C .0507      PROCESSES AND CONTROLS**

### **(a) Raw materials**

- (1) Upon receipt, fresh fish shall be inspected and washed before processing. Only fish free from adulteration and organoleptically detectable spoilage shall be processed.
- (2) Upon receipt, every lot of fish that has been partially processed in another plant, including frozen fish, shall be inspected, and only fish free from adulteration and organoleptically detectable spoilage shall be processed.
- (3) Fresh or partially processed fish, except those to be immediately processed, shall be iced or otherwise refrigerated to an internal temperature of 38 degrees fahrenheit or below upon receipt and shall be maintained at 38 degrees fahrenheit until the fish are to be processed.
- (4) All fish received in a frozen state shall be either thawed promptly and processed, or stored at a temperature that will maintain it in a frozen state.

### **(b) Defrosting of frozen fish**

- (1) Defrosting shall be carried out in a sanitary manner and by such methods that the wholesomeness of the fish is not adversely affected. Frozen fish shall be defrosted:
  - (A) in air at 45 degrees fahrenheit or below until other than hard frozen; or
  - (B) in air so that the temperature in any part of the fish does not exceed 45 degrees fahrenheit; or
  - (C) in a continuous water-overflow thaw tank or spray system in such a manner that the temperature in any part of the fish does not exceed 45 degrees fahrenheit.
- (2) When a thaw tank is used, fish shall not remain in the tank longer than one-half hour after they are completely defrosted.
- (3) Fish entering the thaw tanks shall be free of exterior packaging material and free of liner material.
- (4) After thawing, fish shall be washed with a water spray or a continuous waterflow system.

### **(c) Presmoking operation**

- (1) Evisceration of fish shall be performed with minimum disturbance of intestinal tract contents.
- (2) After evisceration, the fish (including the body cavity) shall be washed with a water spray or a continuous waterflow system.
- (3) All fish shall be dry-salted at a temperature not to exceed 38 degrees fahrenheit throughout the fish, or shall be brined in such a manner that the temperature of the fish and the brine:
  - (A) does not exceed 60 degrees fahrenheit at the start of brining;
  - (B) if between 38 degrees fahrenheit and 50 degrees fahrenheit at the start of brining, is continuously lowered to 38 degrees fahrenheit or below within 12 hours;
  - (C) if between 50 degrees fahrenheit and 60 degrees fahrenheit at the start of brining, is continuously lowered to 50 degrees fahrenheit or below within 2 hours and to 38 degrees fahrenheit or below within the following 10 hours; and
  - (D) does not rise above 38 degrees fahrenheit after reaching that temperature or below either prior to or during the brining operation.
- (4) Fish shall be rinsed with fresh water after brining.

### **(d) Heating, cooking, smoking operation**

- (1) A point-sensitive, continuous temperature-recording device shall be used to monitor both the internal temperature of the fish and the ambient temperature within the oven. Each recording-device record shall be identified as to the specific oven load and date processed.
- (2) Hot-process smoked or hot-process smoke-flavored fish shall be heated by a controlled heat process that provides a monitoring system positioned in as many locations in the oven as necessary to assure a continuous temperature throughout each fish.
- (3) The process selected by the processor shall be at least equivalent to a process established by a competent processing authority to achieve a safe product.

### **(e) Packing**

- (1) The finished product shall be handled only with clean, sanitized hands, gloves, or utensils.
- (2) Manual manipulation of the finished product shall be kept to a minimum.
- (3) The finished product shall be cooled to a temperature of 50 degrees fahrenheit or below within three hours after cooking and further cooled to a temperature of 38 degrees fahrenheit or below within 12 hours after cooking, and 38 degrees fahrenheit shall be maintained during all subsequent storage and distribution.

- (4) The shipping containers, retail packages, and shipping records shall indicate by appropriate labeling the perishable nature of the product and shall specify that the product shall be shipped, stored, and held for sale at 38 degrees fahrenheit or below until consumed.
- (5) Permanently legible code marks shall be placed on the outer layer of every finished product package and master carton. Such marks shall identify the plant where packed, the date of packing, and the oven load. Records shall be so maintained as to provide positive identification;
  - (A) of the process procedures used for the manufacture of hot-process smoked or hot-process smoke-flavored fish; and
  - (B) of the distribution of the finished product.
- (f) Testing. Microbiological and chemical examination of in-line and finished product samples shall be conducted with sufficient frequency to assure that processing steps and sanitary procedures are adequate.

*History Note: Authority G.S. 106-139;  
Eff. January 1, 1985;  
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