

901:11-3-05

**Pasteurization.**

(A) Frozen desserts shall be pasteurized by holding the mixture continuously at or above the following temperatures for not less than the corresponding time:

Temperature	Time
155 degrees F (69 degrees C)-	30 minutes
175 degrees F (80 degrees C)-	25 seconds
180 degrees F (83 degrees C)-	15 seconds
191 degrees F (89 degrees C)-	1.0 second
194 degrees F (90 degrees C)-	0.5 second
201 degrees F (94 degrees C)-	0.1 second
204 degrees F (96 degrees C)-	0.05 second
212 degrees F (100 degrees C)-	0.01 second

The equipment used and the operation of the equipment shall comply with part II, section 7, ~~items 16p(A), 16p(B), 16p(D) and 16p(E)~~ item 16p of the PMO-, as adopted in chapter 901:11-1 ~~rules 901:11-1-01 to 901:11-1-05~~ of the Administrative Code.

(B) All milk and milk products, eggs, egg products, cocoa, cocoa products, emulsifiers, stabilizers, vitamins, and liquid sweeteners shall be added to the frozen dessert before it is pasteurized. ~~These ingredients, except for dairy products may be added after pasteurization only if~~ in cases where:

- (1) The processor demonstrates to the director's satisfaction that the addition of these ingredients prior to pasteurization will negatively impact the ability to produce the product or the quality of the product; and;
- (2) Records are maintained to the director's satisfaction showing the science proving the ingredients which are added after pasteurization are safe and suitable; and
- (3) The ingredients are safely and sanitarily added to the frozen dessert product.

(C) Flavoring and coloring ingredients may be added after pasteurization when:

- (1) The ingredient has been subjected to a prior heat treatment sufficient to destroy pathogenic microorganisms; or,

- (2) The ingredient has 0.85 per cent water activity ( $a_w$  of 0.85) or less when the water activity is calculated by dividing the water vapor pressure of the ingredient by the vapor pressure of pure water when at the same temperature as the ingredient; or
  - (3) The ingredient has a high acid content (pH level of 4.6 or below when measured at seventy-five degrees Fahrenheit (twenty-four degrees Celsius)) or high alkalinity (pH level greater than eleven when measured at seventy-five degrees Fahrenheit (twenty-four degrees Celsius)); or,
  - ~~(4) The ingredients are roasted nuts, fruits and vegetables added at the freezer; or,~~
  - ~~(5)~~(4) There is an alcohol content in the ingredient sufficient to assure that pathogenic microorganisms will not be transferred to the final product; or,
  - ~~(6)~~(5) The ingredients consist of safe and suitable bacterial cultures; or enzymes; or,
  - ~~(7)~~(6) The ingredients are dry sugars and salts; or,
  - ~~(8)~~(7) The ingredients are subjected to any process acceptable to the director which will assure that the ingredient is free of pathogenic microorganisms.
- (D) Frozen desserts may be pasteurized at a milk plant other than the milk plant where it is packaged for retail sale provided it is transported to the packaging milk plant in a tote using a single service liner which complies with the following specifications:
- (1) Totes used to transport frozen dessert mix shall be:
    - (a) Constructed and managed to protect their contents from sun, freezing, and contamination;
    - (b) Constructed for ease of cleaning;
    - (c) Constructed of smooth, impervious, corrosion-resistant, nontoxic material;
    - (d) Kept in good repair;
    - (e) Kept clean; and,
    - (f) Constructed to be fully enclosed when in transport. Provided, totes of five gallon capacity or less are not required to be fully enclosed.
  - (2) The single service liner used to transport frozen dessert mix shall:

- (a) Be fabricated from material complying with (2007) 21 C.F.R. parts 175 to 178;
  - (b) Be nontoxic;
  - (c) Be free from deleterious substances;
  - (d) Be free of coliform organisms; and,
  - (e) Have a residual bacteria count not to exceed fifty per container, when the rinse test is used, or not over fifty colonies per eight square inches (one per square centimeter) of product contact surface, when the swab test is used. Testing procedures shall be in substantial compliance with the standard methods as defined in rule 901:11-3-01 of the Administrative Code.
- (3) No substance capable of contaminating the frozen dessert mix shall be transported with the product.

Effective:

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Certification

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Date

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