

## **SUBCHAPTER 09K - SAMPLING AND TESTING OF MILK AND CREAM: FROZEN DESSERTS**

### **SECTION .0100 - SAMPLING AND TESTING OF MILK AND CREAM**

#### **02 NCAC 09K .0101 DEFINITIONS**

- (a) "Automated Method" means the test for determining the percent of butterfat in raw, un-homogenized milk using an automated method set forth in either the Official Methods of Analysis of the AOAC, incorporated by reference in 02 NCAC 09B .0116(a), or the Standard Methods for the Examination of Dairy Products, incorporated by reference in 02 NCAC 09B .0116(j).
- (b) "Tester" means a person conducting the Babcock test, Automated Method, or other methods approved by the Commissioner for testing butterfat, whether such test is to be used as a basis for payment or for the purpose of an official dairy inspection.
- (c) "Bulk milk hauler/sampler" means any person who meets the definition of a bulk milk hauler/sampler in the PMO.
- (d) "Producer Payment Period" means the interval between payments made to a producer by a buyer for milk or other dairy product.
- (e) "Officially designated laboratory" means a commercial laboratory authorized to do official work by the Regulatory Agency, or a milk industry laboratory officially designated by the Regulatory Agency for the examination of producer samples of Grade "A" raw milk for pasteurization, ultra-pasteurization, aseptic processing and packaging, or retort processed after packaging and commingled milk tank truck samples of raw milk for drug residues and bacterial limits.

*History Note:* Authority G.S. 106-139; 106-267; 106-267.2;  
Eff. February 1, 1982;  
Amended Eff. January 1, 1985; December 31, 1983;  
Readopted Eff. May 1, 2017.

#### **02 NCAC 09K .0102 GENERAL SAMPLING PROCEDURES**

- (a) Raw milk for producer payment shall be sampled as set forth in the Standard Methods for the Examination of Dairy Products, incorporated by reference in 02 NCAC 09B .0116(j).
- (b) Milk sampling and hauling procedures shall be conducted as set forth in the Pasteurized Milk Ordinance Appendix B, Milk Sampling Hauling and Transportation, incorporated by reference in 02 NCAC 09G .2001.

*History Note:* Authority G.S. 106-139; 106-267; 106-267.2;  
Eff. February 1, 1982;  
Amended Eff. June 1, 1988; January 1, 1985; January 1, 1984;  
Readopted Eff. March 1, 2017.

#### **02 NCAC 09K .0103 APPROVAL OF TESTING PROCEDURE USED**

- (a) A person shall request approval from the North Carolina Department of Agriculture and Consumer Services, Food and Drug Protection Division, prior to using any method for determining the percent of butterfat in milk or cream other than methods outlined in Rule .0101(b) of this Section.
- (b) Approval for use of any method other than those outlined in Rule .0101(b) of this Section shall be obtained in writing 30 days prior to its use.

*History Note:* Authority G.S. 106-267; 106-267.2;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.

#### **02 NCAC 09K .0104 PLACE OF TESTING**

Unless written permission of the Commissioner is received a tester shall test a sample only at the plant or place where the sample is received.

*History Note:* Authority G.S. 106-267; 106-267.2;  
Eff. February 1, 1982;  
Readopted Eff. March 1, 2017

**02 NCAC 09K .0105      RESPONSIBILITY FOR TEST**

The tester, sampler, producer, and buyer of milk or cream shall be jointly responsible for the integrity of all test reports, including, the proper care, handling, and storage of all samples, and for proper recording of all test results.

*History Note:      Authority G.S. 106-267; 106-267.2;  
                         Eff. February 1, 1982;  
                         Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0106      TEST READING**

The test reading of milk shall be either conducted as set forth in the Official Methods of Analysis of the AOAC, incorporated by reference in 02 NCAC 09B .0116(a), or the Standard Methods for the Examination of Dairy Products, incorporated by reference in 02 NCAC 09B .0116(j).

*History Note:      Authority G.S. 106-139; 106-267; 106-267.2;  
                         Eff. February 1, 1982;  
                         Amended Eff. January 1, 1985;  
                         Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0107      TEST REPORTING**

- (a) A tester shall report all tests conducted on milk or cream for each producer payment period and shall maintain a permanent record, in duplicate, of the test results.
- (b) A tester shall supply both individual sample butterfat test results and monthly average butter fat results to the persons responsible for making butter fat premium payments to each individual producer.
- (c) The payee of the butterfat premium payments to each individual milk producer shall submit the monthly averages for each individual milk producer to the North Carolina Department of Agriculture and Consumer Services, Food and Drug Protection Division, no later than the 15<sup>th</sup> day of the following month.

*History Note:      Authority G.S. 106-267; 106-267.2;  
                         Eff. February 1, 1982;  
                         Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0108      INCORRECT TESTS**

- (a) If the Commissioner determines that tests of milk or cream have been made erroneously by a tester, he shall notify in writing the manager of the plant from which the samples were collected that the test results are in error and inform the manager of the correct test results.
- (b) A manager of a plant shall cause payments to be made to all producers on the basis of the corrected test.

*History Note:      Authority G.S. 106-267; 106-267.2; 106-267.5;  
                         Eff. February 1, 1982;  
                         Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0109      SAMPLING AND TESTING FOR FRESH MILK SAMPLES**

- (a) The fresh sampling method shall be utilized as the exclusive method for sampling milk and cream.
- (b) Fresh samples shall be collected from every producer's shipment of milk and delivered to the buyer.
- (c) Fresh samples shall be tested within 48 hours after collection.
- (d) Fresh samples shall be at least two ounces in volume.
- (e) Fresh samples shall be held for 24 hours after testing.

*History Note:      Authority G.S. 106-267; 106-267.2;  
                         Eff. February 1, 1982;  
                         Amended Eff. June 1, 1984; December 31, 1983;  
                         Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0110      SAMPLING AND TESTING FOR COMPOSITE SAMPLES GENERALLY  
02 NCAC 09K .0111      SAMPLING FOR SPECIFIC COMPOSITE METHODS**

*History Note:* Authority G.S. 106-267; 106-267.2;  
Eff. February 1, 1982;  
Repealed Eff. December 31, 1983.

**02 NCAC 09K .0112 SAMPLING CREAM**

- (a) Cream samples shall be obtained by following the same procedure as in sampling milk.
- (b) A sampler shall obtain at least a two-ounce sample of cream.

*History Note:* Authority G.S. 106-267; 106-267.2;  
Eff. February 1, 1982;  
Amended Eff. December 31, 1983;  
Readopted Eff. March 1, 2017.

**02 NCAC 09K .0113 PROCEDURE FOR TESTING CREAM**

Cream shall be tested as set forth in either the Official Methods of Analysis of the AOAC, incorporated by reference in 02 NCAC 09B .0116(a), or the Standard Methods for the Examination of Dairy Products, incorporated by reference in 02 NCAC 09B .0116(j).

*History Note:* Authority G.S. 106-139; 106-267; 106-267.2;  
Eff. February 1, 1982;  
Amended Eff. January 1, 1985; August 1, 1982;  
Readopted Eff. May 1, 2017.

**02 NCAC 09K .0114 REFERENCE METHOD**

The automated method shall be calibrated as set forth in the Official Methods of Analysis of the AOAC, incorporated by reference in 02 NCAC 09B .0116(a), or the Standard Methods for the Examination of Dairy Products, incorporated by reference in 02 NCAC 09B .0116(j). Other methods may be used as a reference upon approval by the Commissioner of Agriculture. Written notification of the reference method shall be sent to the Commissioner of Agriculture prior to the installation or the first use of an automated tester. A subsequent change in the reference method used shall be made only with specific approval from the Commissioner.

*History Note:* Authority G.S. 106-267; 106-267.2;  
Eff. February 1, 1982;  
Amended Eff. April 1, 1985; January 1, 1985;  
Readopted Eff. May 1, 2017.

**SECTION .0200 - FROZEN DESSERTS**

**02 NCAC 09K .0201 SPECIFIC REQUIREMENTS**

The requirements in the rules of this Section shall apply in addition to the regulations set out in Title 21, Code of Federal Regulations, parts of 110 and 135 as adopted by reference in 02 NCAC 09B .0116(o)(49) and (61).

*History Note:* Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Readopted Eff. March 1, 2017.

**02 NCAC 09K .0202 DEFINITIONS**

- (a) "Wholesale Frozen Dessert Manufacturer" means any owner or operator of an establishment where frozen desserts are made or stored for disposal at wholesale to retail dealers for resale in this State.
- (b) "Retail Frozen Dessert Manufacturer" means any owner, operator, or proprietor of a retail frozen dessert dispenser or a mobile frozen dessert manufacturing unit.
- (c) "Retail Frozen Dessert Dispenser" means any device that dispenses a frozen dessert at retail. Retail Frozen Dessert Dispenser shall not include the conventional spindle-type milkshake mixers, but shall include other dispenser milkshake machines.
- (d) "Mobile Frozen Dessert Manufacturing Unit" means a retail frozen dessert dispenser that is mounted on or connected to any vehicle from which frozen desserts are sold.

- (e) "Wholesale Cheese Manufacturer" means any owner or operator of an establishment where cheese is produced for disposal at wholesale to retail dealers for resale in this State.
- (f) "Retail Cheese Manufacturer" means any owner or operator of an establishment where cheese is produced for disposal at retail only in this State.
- (g) "Wholesale Butter Processing Manufacturer" means any owner or operator of an establishment where butter is manufactured or processed for disposal at wholesale to retail dealers for resale in this State.
- (h) "Frozen Dessert" means ice cream, ice milk, milkshake, milkshake base, milkshake mix, milk sherbet, sherbet, water ices, and other similar frozen or semi-frozen food products including yogurt, ice milk, and frozen custard.
- (i) "Frozen Dessert Mix" means any mixture or compound in liquid or dry form from which a frozen dessert is made.
- (j) "Rerun" means frozen dessert mix which has been drawn through a retail frozen dessert dispenser.
- (k) "Dispenser Milkshake Machine" means any fountain type or similar type machine dispensing a semi-frozen milkshake or imitation milkshake with a minimum temperature of 25 degrees F. in a retail establishment.
- (l) "Imitation Frozen Dessert" means any substance, mixture, or compound which is made in imitation of, or does in fact imitate, any frozen dessert or frozen dessert mix for which a standard of identity has been established in 21 CFR 135 or these Rules, and which does not conform to said standard of identity.
- (m) "Milk Products" includes cream, dried cream, plastic cream (sometimes known as concentrated milk fat), butter, butter oil, milk, concentrated milk, evaporated milk, sweetened condensed milk, superheated condensed milk, dried milk, skim milk, concentrated skim milk, evaporated skim milk, condensed skim milk, sweetened condensed part-skim milk, nonfat dry milk, sweet cream buttermilk, condensed sweet cream buttermilk, dried sweet cream buttermilk, skim milk that has been concentrated and from which part of the lactose has been removed by crystallization, skim milk in concentrated or dried form which has been modified by treating the concentrated skim milk with calcium hydroxide and disodium phosphate, lactose (pure milk sugar), concentrated cheese whey, and dried cheese whey.

*History Note:* Authority G.S. 106-253; 106-267;  
 Eff. February 1, 1982;  
 Readopted Eff. March 1, 2017.

**02 NCAC 09K .0203 INSPECTION CERTIFICATES**

- (a) A person shall not operate as a wholesale or retail frozen dessert manufacturer, a wholesale or retail cheese manufacturer, or a wholesale butter processing manufacturer without first obtaining an inspection certificate issued by the Commissioner of the North Carolina Department of Agriculture.
- (b) Inspection certificates shall be issued upon:
  - (1) a determination by the Commissioner that the manufacturer is operating in a clean and sanitary manner in compliance with statutory requirements and these Rules and is producing a product that is pure, wholesome, and non-deleterious to health; and
  - (2) payment of the appropriate fee as set out in G.S. 106-254.
- (c) All inspection certificates shall expire on June 30 of each year and shall be non-transferable.

*History Note:* Authority G.S. 106-253; 106-254; 106-267;  
 Eff. February 1, 1982;  
 Readopted Eff. May 1, 2017.

**02 NCAC 09K .0204 SUSPENSION OF INSPECTION CERTIFICATE/PENALTIES**

- (a) If, during the period for which an inspection certificate is in effect, the Commissioner determines that a retail frozen dessert freezer, dispenser milk machine, or mobile frozen dessert unit does not comply with G.S. 106, Article 26 or these Rules, he shall summarily suspend the inspection certificate.
- (b) Any person, firm, or corporation operating any of the equipment listed in Paragraph (a) of this Rule without a valid inspection certificate shall be guilty of a misdemeanor.

*History Note:* Authority G.S. 106-252; 106-253; 106-254; 106-267;  
 Eff. February 1, 1982;  
 Readopted Eff. May 1, 2017.

**02 NCAC 09K .0205 STANDARDS FOR MOBILE FROZEN DESSERT UNITS**

- (a) Mobile frozen dessert units shall operate out of a stationary depot, which shall provide storage, cleaning, and toilet facilities.
- (b) Floors, walls, and ceilings of mobile frozen dessert units shall be constructed of impervious material.
- (c) Openings for serving shall not be larger than necessary for their intended purpose.
- (d) Machinery shall be constructed to facilitate cleaning and avoid contamination of the product. All valves, piping and fitting shall be constructed of sanitary milk piping and shall be dismantled and thoroughly washed after each day's use.

*History Note:* Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.

#### **02 NCAC 09K .0206 FROZEN DESSERT MIX/STANDARDS FOR USE**

- (a) No person shall use rerun in any retail frozen dessert dispenser.
- (b) Dry frozen dessert mixes shall be reconstituted with potable water or a pasteurized Grade A product and the resulting product shall be cooled to a temperature of between 33 degrees F and 45 degrees F within four hours of reconstitution.
- (c) Liquid frozen dessert mixes shall be stored at a temperature between 33 degrees F and 45 degrees F.
- (d) Frozen dessert mixes may be frozen at the point of manufacture. Prior to transferring a frozen mix to a retail outlet, the distributor shall thaw the frozen mix under refrigeration temperatures of 35 degrees F to 40 degrees F. Nothing herein shall be deemed to prohibit the department from considering a retail outlet to be a distributor if such outlet has sufficient and adequate refrigeration equipment to properly thaw the frozen mixes as required by this Section.

*History Note:* Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Amended Eff. April 1, 1987; May 1, 1986;  
Readopted Eff. May 1, 2017.

#### **02 NCAC 09K .0207 FROZEN DESSERT MIX/STANDARD OF IDENTITY**

A product shall not be labeled as "frozen dessert mix" unless the product resulting from the frozen dessert mix conforms to the standards of identity established for that product.

*History Note:* Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.

#### **02 NCAC 09K .0208 DIETARY FROZEN DESSERT STANDARDS**

- (a) Dietary frozen dessert is the food prepared by freezing while stirring a pasteurized mix containing one or more of the following ingredients:
  - (1) optional dairy ingredients permitted by 21 CFR 135;
  - (2) safe, suitable stabilizers;
  - (3) emulsifiers;
  - (4) non-nutritive sweeteners; or
  - (5) any optional, non-adulterated ingredients.
- (b) The finished dietary frozen dessert product shall:
  - (1) contain less than two percent by weight of milk fat;
  - (2) contain not less than seven percent by weight of total milk solids;
  - (3) contain not less than 1.1 pounds nor more than 1.45 pounds of food solids per gallon; and
  - (4) weigh not less than 4 1/2 pounds per gallon.
- (c) Notwithstanding the provisions of Subparagraph (b)(3) of this Rule, if the optional ingredient micro-crystalline cellulose is used, the quantity of food solids shall not be less than 1.1 pounds per gallon exclusive of the weight of the micro-crystalline cellulose.

*History Note:* Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;

*Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0209 QUIESCENTLY FROZEN DAIRY CONFECTIONS**

(a) Quiescently frozen dairy confections shall contain:

- (1) water;
- (2) not less than 13 percent by weight of total milk solids;
- (3) not less than 33 percent by weight of total food solids;
- (4) not more than one-half of one percent by weight of stabilizers;
- (5) not more than one-fifth of one percent by weight of emulsifier;
- (6) sugar; and
- (7) flavoring.

(b) Quiescently frozen dairy confections may contain coloring.

(c) Quiescently frozen dairy confections shall be manufactured in the form of servings, individually packaged, bagged or otherwise wrapped, and purveyed to the consumer in its original factory-fill packages.

(d) In the production of these frozen confections, no processing or mixing prior to the complete freezing shall be used that develops in the finished confection mix any physical expansion or overrun in excess of 10 percent.

*History Note: Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0210 QUIESCENTLY FROZEN CONFECTIONS**

(a) Quiescently frozen confections shall contain:

- (1) water;
- (2) sugar;
- (3) flavoring; and
- (4) not less than 17 percent by weight of total food solids.

(b) Quiescently frozen confections may contain:

- (1) milk solids;
- (2) coloring;
- (3) harmless organic acid; and
- (4) not more than one-half of one percent by weight of stabilizer composed of wholesome, edible material.

(c) The quiescently frozen confections shall be manufactured in the form of servings bagged or otherwise wrapped, and purveyed to the consumer in its original factory-filled package.

(d) In the production of quiescently frozen confections, no processing or mixing prior to complete freezing shall be used that develops in the finished confections mix any physical expansion or overrun in excess of 10 percent.

*History Note: Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0211 IMITATION FROZEN DESSERT STANDARDS**

(a) A person who sells or offers for sale any imitation frozen dessert at the retail level, shall make this fact clear to the public by posting a sign near the product.

(b) A person shall display all signs and notices required in Paragraph (a) of this Rule in a manner conspicuous to the public and in letters easily read under normal conditions of purchase.

(c) A person shall not sell any imitation frozen dessert by dipping or scooping the imitation frozen dessert from packages or containers.

(d) A person shall not sell or offer for sale any frozen dessert containing any ingredient(s) not recognized as safe by the Federal Food and Drug Administration.

*History Note: Authority G.S. 106-253; 106-267; 106-138;  
Eff. February 1, 1982;  
Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0212 BACTERIAL PLATE COUNT AND COLIFORM COUNTS**

Ice cream, other frozen milk products, water ices, and all mixes in dry form shall at no time after pasteurization and until delivery for consumption show a bacterial plate count in excess of 50,000 bacteria per gram; provided that frozen yogurt mix products are not subject to the 50,000 bacteria per gram. Coliform counts shall not exceed 10 colonies per gram for plain or 20 colonies per gram for chocolate, fruit, nut, or other flavors; and coliform count for all sherbet shall not exceed 10 colonies per gram.

*History Note: Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Amended Eff. January 1, 1987; May 1, 1986;  
Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0213 STANDARDS OF IDENTITY FOR MILKSHAKES AND RELATED PRODUCTS**

(a) A person shall label a product milkshake, milkshake mix, or milkshake base only if the product complies with the criteria established in these Rules.

(b) Milkshake is a food product which consists of Grade A pasteurized whole milk with the addition of:

- (1) flavoring;
- (2) ice cream;
- (3) milkshake base; or
- (4) ice milk, except as provided in Paragraph (c) of this Rule.

(c) Milkshakes may be made entirely from milkshake mix or ice milk mix as provided in these Rules.

(d) Milkshake mix is a food product which:

- (1) consists of a combination of two or more of the following ingredients:
  - (A) milk products;
  - (B) flavoring;
  - (C) sugar;
  - (D) stabilizer; or
  - (E) water.
- (2) contains not less than two percent milk fat;
- (3) contains not less than 11 percent by weight of total milk solids; and
- (4) contains not more than one-half of one percent stabilizer.

(e) Milkshake base is a frozen product which:

- (1) consists of a combination of two or more of the following ingredients:
  - (A) milk products;
  - (B) eggs;
  - (C) water; and
  - (D) sugar;
- (2) contains not less than two percent nor more than five percent, by weight, of milk fat;
- (3) contains not less than 30 percent by weight of total solids;
- (4) contains no flavoring or coloring; and
- (5) contains not more than one-half of one percent by weight of stabilizer.

*History Note: Authority G.S. 106-253; 106-267;  
Eff. February 1, 1982;  
Amended Eff. August 1, 1982;  
Readopted Eff. May 1, 2017.*

**02 NCAC 09K .0214 STANDARDS OF IDENTITY FOR FROZEN YOGURT**

Frozen yogurt means a food that is prepared by freezing while stirring a pasteurized mix of the ingredients provided for in ice cream and which may contain other ingredients permitted under the Federal Food, Drug, and Cosmetic Act (21 USC 321 et seq.). All dairy ingredients in frozen yogurt shall be cultured after pasteurization by one or more strains of *Lactobacillus bulgaricus* and *Streptococcus thermophilus*, provided; however, fruits, nuts, or other flavoring materials may be added before or after the mix is pasteurized or cultured. Frozen yogurt, exclusive of any flavoring, shall contain not less than 3.25 percent milk fat and not less than 8.25 percent non-fat milk solids, except that when bulky characterizing ingredients are used the percentage of milk fat shall not be less than 2.5 percent. The finished frozen yogurt shall weigh not less than five pounds per gallon. The titratable acidity of frozen yogurt shall

not be less than 0.5 percent, calculated as lactic acid, unless the frozen yogurt primary flavor is a non-fruit characterizing ingredient. This characteristic acidity is developed by the bacterial activity and no heat or bacteriostatic treatment, other than refrigeration, which may result in destruction or partial destruction of the organisms shall be applied to the product after culturing. The product, when in package form, shall be labeled according to applicable sections of 21 CFR Part 101, incorporated by reference in 02 NCAC 09B .0116(o)(41).

*History Note: Authority G.S. 106-128; 106-253; 106-267;  
Eff. December 1, 1985;  
Amended Eff. July 1, 2000;  
Readopted Eff. May 1, 2017.*