
Title 21: Food and Drugs

PART 160—EGGS AND EGG PRODUCTS

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Subpart A [Reserved]

Subpart B—Requirements for Specific Standardized Eggs and Egg Products

§160.100 Eggs.

No regulation shall be promulgated fixing and establishing a reasonable definition and standard of identity for the food commonly known as eggs.

§160.105 Dried eggs.

(a) Dried eggs, dried whole eggs are prepared by drying liquid eggs that conform to §160.115, with such precautions that the finished food is free of viable *Salmonella* microorganisms. They may be powdered. Before drying, the glucose content of the liquid eggs may be reduced by one of the optional procedures set forth in paragraph (b) of this section. Either silicon dioxide complying with the provisions of §172.480 of this chapter or sodium silicoaluminate may be added as an optional anticaking ingredient, but the amount of silicon dioxide used is not more than 1 percent and the amount of

sodium silicoaluminate used is less than 2 percent by weight of the finished food. The finished food shall contain not less than 95 percent by weight total egg solids.

(b) The optional glucose-removing procedures are:

(1) *Enzyme procedure.* A glucose-oxidase-catalase preparation and hydrogen peroxide solution are added to the liquid eggs. The quantity used and the time of reaction are sufficient to substantially reduce the glucose content of the liquid eggs. The glucose-oxidase-catalase preparation used is one that is generally recognized as safe within the meaning of section 201(s) of the Federal Food, Drug, and Cosmetic Act. The hydrogen peroxide solution used shall comply with the specifications of the United States Pharmacopeia, except that it may exceed the concentration specified therein and it does not contain a preservative.

(2) *Yeast procedure.* The pH of the liquid eggs is adjusted to the range of 6.0 to 7.0, if necessary, by the addition of dilute, chemically pure hydrochloric acid, and controlled fermentation is maintained by adding food-grade baker's yeast (*Saccharomyces cerevisiae*). The quantity of yeast used and the time of reaction are sufficient to substantially reduce the glucose content of the liquid eggs.

(c) The name of the food for which a definition and standard of identity is prescribed by this section is "Dried eggs" or "Dried whole eggs" and if the glucose content was reduced, as provided in paragraph (b) of this section, the name shall be followed immediately by the statement "Glucose removed for stability" or "Stabilized, glucose removed".

(d)(1) When either of the optional anticaking ingredients specified in paragraph (a) of this section is used, the label shall bear the statement "Not more than 1 percent silicon dioxide added as an anticaking agent" or "Less than 2 percent sodium silicoaluminate added as an anticaking agent", whichever is applicable.

(2) The name of any optional ingredient used, as provided in paragraph (d)(1) of this section, shall be listed on the principal display panel or panels of the label with such prominence and conspicuousness as to render such statement likely to be read and understood by the ordinary individual under customary conditions of purchase.

(e) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.110 Frozen eggs.

(a) Frozen eggs, frozen whole eggs, frozen mixed eggs is the food prepared by freezing liquid eggs that conform to §160.115, with such precautions that the finished food is free of viable *Salmonella* microorganisms.

(b) Monosodium phosphate or monopotassium phosphate may be added either directly or in a water carrier, but the amount added does not exceed 0.5 percent of the weight of the frozen eggs. If a water carrier is used, it shall contain not less than 50 percent by weight of such monosodium phosphate or monopotassium phosphate.

(c) When one of the optional ingredients specified in paragraph (b) of this section is used, the label shall bear the statement “Monosodium phosphate (or monopotassium phosphate) added to preserve color”, or, in case the optional ingredient used is added in a water carrier, the statement shall be “Monosodium phosphate (or monopotassium phosphate), with _ percent water as a carrier, added to preserve color”, the blank being filled in to show the percent by weight of water used in proportion to the weight of the finished food. The statement declaring the optional ingredient used shall appear on the principal display panel or panels with such prominence and conspicuousness as to render it likely to be read and understood under customary conditions of purchase.

(d) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.115 Liquid eggs.

(a) Liquid eggs, mixed eggs, liquid whole eggs, mixed whole eggs are eggs of the domestic hen broken from the shells and with yolks and whites in their natural proportion as so broken. They may be mixed, or mixed and strained, and they are pasteurized or otherwise treated to destroy all viable *Salmonella* microorganisms. Pasteurization or such other treatment is deemed to permit the adding of safe and suitable substances (other than chemical preservatives) that are essential to the method of pasteurization or other treatment used. For the purposes of this paragraph, safe and suitable substances are those that perform a useful function in the pasteurization or other treatment to render the liquid eggs free of viable *Salmonella* microorganisms, and that are not food additives as defined in section 201(s) of the Federal Food, Drug, and Cosmetic Act; or, if they are food additives, they are used in conformity with regulations established pursuant to section 409 of the act.

(b) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.140 Egg whites.

(a) Egg whites, liquid egg whites, liquid egg albumen is the food obtained from eggs of the domestic hen, broken from the shells and separated from yolks. The food may be mixed, or mixed and strained, and is pasteurized or otherwise treated to destroy all viable *Salmonella* microorganisms. Pasteurization or such other treatment is deemed to permit the adding of safe and suitable substances (other than chemical preservatives) that are essential to the method of pasteurization or other treatment used. Safe and suitable substances that aid in protecting or restoring the whipping properties of liquid egg whites may be added. For the purposes of this paragraph, safe and suitable substances are those that perform a useful function as whipping aids or in the pasteurization or other treatment to render liquid egg whites free of viable *Salmonella* microorganisms and that are not food additives as defined in section 201(s) of the Federal Food, Drug, and Cosmetic Act; or, if they are food additives, they are used in conformity with regulations established pursuant to section 409 of the act.

(b) Any optional ingredients used as whipping aids, as provided for in paragraph (a) of this section, shall be named on the principal display panel or panels of labels with such prominence and conspicuousness as to render such names likely to be read and understood by ordinary individuals under customary conditions of purchase.

(c) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.145 Dried egg whites.

(a) The food dried egg whites, egg white solids, dried egg albumen, egg albumen solids is prepared by drying liquid egg whites conforming to the requirements of §160.140 (or deviating from that section only by not being *Salmonella* free). As a preliminary step to drying, the lysozyme and avidin contents may be reduced. If lysozyme and avidin levels are reduced, cation exchange resins regulated for use under §173.25 of this chapter shall be used. As a further preliminary step to drying, the glucose content of the liquid egg whites is reduced by adjusting the pH, where necessary, with food-grade acid and by following one of the optional procedures set forth in paragraph (b) of this section. If the food is prepared from liquid egg whites conforming in all respects to the requirements of §160.140, drying shall be done with such precautions that the finished food is free of viable *Salmonella* microorganisms. If the food is prepared from liquid egg whites that are not *Salmonella* free, the dried product shall be so treated by heat or otherwise as to render the finished food free of viable *Salmonella* microorganisms. Dried egg whites may be powdered.

(b) The optional glucose-removing procedures are:

(1) *Enzyme procedure.* A glucose-oxidase-catalase preparation and hydrogen peroxide solution are added to liquid egg whites. The quantity used and the time of reaction are sufficient to substantially reduce the glucose content. The glucose-oxidase-catalase preparation used is one that is generally recognized as safe within the meaning of section 201(s) of the Federal Food, Drug, and Cosmetic Act. The hydrogen peroxide solution used shall comply with the specifications of the United States Pharmacopeia, except that it may exceed the concentration specified therein and it does not contain a preservative.

(2) *Controlled fermentation procedures—(i) Yeast procedure.* Food-grade baker's yeast (*Saccharomyces cerevisiae*) is added to the liquid egg whites and controlled fermentation is maintained. The quantity of yeast used and the time of reaction are sufficient to substantially reduce the glucose content.

(ii) *Bacterial procedure.* The liquid egg whites are subjected to the action of a culture of glucose-fermenting bacteria either generally recognized as safe within the meaning of section 201(s) of the Federal Food, Drug, and Cosmetic Act or the subject of a regulation established pursuant to section 409 of the act, and the culture is used in conformity with such regulation. The quantity of the culture used is sufficient to predominate in the fermentation and the time and temperature of reaction are sufficient to substantially reduce the glucose content.

(c)(1) Dried egg whites in which the lysozyme and avidin have been reduced shall not be nutritionally inferior, as defined in §101.3(e)(4)(i) of this chapter, and shall be considered nutritionally equivalent to untreated egg whites if they meet the conditions that the biological quality of the protein contained is equal to or greater than that of untreated egg white from the same batch of liquid egg white.

(2) Compliance with the biological quality of protein requirement of paragraph (c)(1) of this section shall be determined by the analytical method prescribed in "Official Methods of Analysis of the Association of Official Analytical Chemists," 14th Ed. (1984), section 43.253-43.257, "Protein Efficiency Ratio, Rat Bioassay, Final Action," which is incorporated by reference. Copies may be obtained from the AOAC INTERNATIONAL, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html

(d) When the dried egg whites are prepared from liquid egg whites containing any optional ingredients added as whipping aids, as provided for in §160.140(a), the common names of such optional ingredients shall be listed on the principal display panel or panels of the label with such prominence and conspicuousness as to render

the names likely to be read and understood by ordinary individuals under customary conditions of purchase.

(e) The name of the food for which a definition and standard of identity is prescribed in this section is alternatively “Dried egg whites”, “Egg white solids”, “Dried egg albumen”, or “Egg albumen solids”. If the lysozyme and avidin content is reduced as provided in paragraph (a) of this section, the name shall be immediately preceded or followed by the statement “lysozyme and avidin reduced” when the dried egg whites are sold as such. When the dried egg whites are used in a fabricated food, the statement “lysozyme and avidin reduced” may be omitted from any declaration of ingredients required under §101.4 of this chapter.

(f) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 51 FR 11435, Apr. 3, 1986; 51 FR 25362, July 14, 1986; 54 FR 24895, June 12, 1989; 58 FR 2883, Jan. 6, 1993; 63 FR 14035, Mar. 24, 1998]

§160.150 Frozen egg whites.

(a) Frozen egg whites, frozen egg albumen is the food prepared by freezing liquid egg whites that conform to §160.140, with such precautions that the finished food is free of viable *Salmonella* microorganisms.

(b) When frozen egg whites are prepared from liquid egg whites containing any optional ingredients added as whipping aids, as provided for in §160.140(a), the common names of such optional ingredients shall be listed on the principal display panel or panels of the label with such prominence and conspicuousness as to render such names likely to be read and understood by ordinary individuals under customary conditions of purchase.

(c) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.180 Egg yolks.

(a) Egg yolks, liquid egg yolks, yolks, liquid yolks are yolks of eggs of the domestic hen so separated from the whites thereof as to contain not less than 43 percent total egg solids, as determined by the method prescribed in “Official Methods of Analysis of the Association of Official Analytical Chemists,” 13th Ed. (1980), sections 17.006 and 17.007 under “Total Solids, Vacuum Method (3)—Official Final Action,” which is

incorporated by reference. Copies may be obtained from the AOAC INTERNATIONAL, 481 North Frederick Ave., suite 500, Gaithersburg, MD 20877, or may be examined at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html

. They may be mixed, or mixed and strained, and they are pasteurized or otherwise treated to destroy all viable *Salmonella* microorganisms. Pasteurization or such other treatment is deemed to permit the adding of safe and suitable substances (other than chemical preservatives) that are essential to the method of pasteurization or other treatment used. For the purposes of this paragraph, safe and suitable substances are those that perform a useful function in the pasteurization or other treatment to render the egg yolks free of viable *Salmonella* microorganisms, and that are not food additives as defined in section 201(s) of the Federal Food, Drug, and Cosmetic Act; or, if they are food additives, they are used in conformity with regulations established pursuant to section 409 of the act.

(b) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 47 FR 11832, Mar. 19, 1982; 49 FR 10102, Mar. 19, 1984; 54 FR 24895, June 12, 1989; 58 FR 2883, Jan. 6, 1993; 63 FR 14035, Mar. 24, 1998]

§160.185 Dried egg yolks.

(a) Dried egg yolks, dried yolks is the food prepared by drying egg yolks that conform to §160.180, with such precautions that the finished food is free of viable *Salmonella* microorganisms. Before drying, the glucose content of the liquid egg yolks may be reduced by one of the optional procedures set forth in paragraph (b) of this section. Either silicon dioxide complying with the provisions of §172.480 of this chapter or sodium silicoaluminate may be added as an optional anticaking ingredient, but the amount of silicon dioxide used is not more than 1 percent and the amount of sodium silicoaluminate used is less than 2 percent by weight of the finished food. The finished food shall contain not less than 95 percent by weight total egg solids.

(b) The optional glucose-removing procedures are:

(1) *Enzyme procedure.* A glucose-oxidase-catalase preparation and hydrogen peroxide solution are added to the liquid egg yolks. The quantity used and the time of reaction are sufficient to substantially reduce the glucose content of the liquid egg yolks. The glucose-oxidase-catalase preparation used is one that is generally recognized as safe within the meaning of section 201(s) of the Federal Food, Drug, and Cosmetic Act. The hydrogen peroxide solution used shall comply with the specification of the United

States Pharmacopeia, except that it may exceed the concentration specified therein and it does not contain a preservative.

(2) *Yeast procedure.* The pH of the liquid egg yolks is adjusted to the range of 6.0 to 7.0, if necessary, by the addition of dilute, chemically pure hydrochloric acid, and controlled fermentation is maintained by adding food-grade baker's yeast (*Saccharomyces cerevisiae*). The quantity of yeast used and the time of reaction are sufficient to substantially reduce the glucose content of the liquid egg yolks.

(c) The name of the food for which a definition and standard of identity is prescribed by this section is "Dried egg yolks", or "Dried yolks", and if the glucose content was reduced, as provided in paragraph (b) of this section, the name shall be followed immediately by the statement "Glucose removed for stability" or "Stabilized, glucose removed".

(d)(1) When either of the optional anticaking ingredients specified in paragraph (a) of this section is used, the label shall bear the statement "Not more than 1 percent silicon dioxide added as an anticaking agent" or "Less than 2 percent sodium silicoaluminate added as an anticaking agent", whichever is applicable.

(2) The name of any optional ingredient used, as provided in paragraph (d)(1) of this section, shall be listed on the principal display panel or panels of the label with such prominence and conspicuousness as to render such statement likely to be read and understood by the ordinary individual under customary conditions of purchase.

(e) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2883, Jan. 6, 1993]

§160.190 Frozen egg yolks.

(a) Frozen egg yolks, frozen yolks is the food prepared by freezing egg yolks that conform to §160.180, with such precautions that the finished food is free of viable *Salmonella* microorganisms.

(b) *Label declaration.* Each of the ingredients used in the food shall be declared on the label as required by the applicable sections of parts 101 and 130 of this chapter.

[42 FR 14462, Mar. 15, 1977, as amended at 58 FR 2884, Jan. 6, 1993]