

(2) Enzymes of the animal, plant, or microbial origin may be declared as “enzymes”.

[42 FR 14366, Mar. 15, 1977, as amended at 48 FR 49013, Oct. 24, 1983; 49 FR 10094, Mar. 19, 1984; 58 FR 2893, Jan. 6, 1993]

#### § 133.149 Gruyere cheese.

(a) *Description.* (1) Gruyere cheese is the food prepared by the procedure set forth in paragraph (a)(3) of this section or by any other procedure which produces a finished cheese having the same physical and chemical properties. It contains small holes or eyes. It has a mild flavor, due in part to the growth of surface-curing agents. The minimum milkfat content is 45 percent by weight of the solids and the maximum moisture content is 39 percent by weight, as determined by the methods described in § 133.5. The dairy ingredients used may be pasteurized. The cheese is at least 90 days old.

(2) If pasteurized dairy ingredients are used, the phenol equivalent value of 0.25 gram of gruyere cheese is not more than 3 micrograms as determined by the method described in § 133.5.

(3) One or more of the dairy ingredients specified in paragraph (b)(1) of this section may be warmed and is subjected to the action of lactic acid-producing and propionic acid-producing bacterial cultures. One or more of the clotting enzymes specified in paragraph (b)(2) of this section is added to set the dairy ingredients to a semisolid mass. The mass is cut into particles similar in size to wheat kernels. For about 30 minutes the particles are alternately stirred and allowed to settle. The temperature is raised to about 126 °F. Stirring is continued until the curd becomes firm. The curd is transferred to hoops or forms, and pressed until the desired shape and firmness are obtained. The cheese is surface-salted while held at a temperature of 48° to 54 °F for a few days. It is soaked for 1 day in a saturated salt solution. It is then held for 3 weeks in a salting cellar and wiped every 2 days with brine cloth to insure growth of biological curing agents on the rind. It is then removed to a heating room and held at progressively higher temperatures, finally reaching 65 °F with a relative humidity of 85 to 90 percent, for several weeks,

during which time small holes, or so-called eyes, form. The cheese is then stored at a lower temperature for further curing. One or more of the other optional ingredients specified in paragraph (b)(3) of this section may be added during the procedure.

(b) *Optional ingredients.* The following safe and suitable ingredients may be used:

(1) *Dairy ingredients.* Milk, nonfat milk, or cream, as defined in § 133.3, used alone or in combination.

(2) *Clotting enzymes.* Rennet and/or other clotting enzymes of animal, plant, or microbial origin.

(3) *Other optional ingredients.* (i) Calcium chloride in an amount not more than 0.02 percent (calculated as anhydrous calcium chloride) of the weight of the dairy ingredients, used as a coagulation aid.

(ii) Enzymes of animal, plant, or microbial origin, used in curing or flavor development.

(iii) Antimycotic agents, applied to the surface of slices or cuts in consumer-sized packages.

(c) *Nomenclature.* The name of the food is “gruyere cheese”.

(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, except that:

(1) Enzymes of animal, plant, or microbial origin may be declared as “enzymes”; and

(2) The dairy ingredients may be declared, in descending order of predominance, by the use of the terms “milkfat and nonfat milk” or “nonfat milk and milkfat”, as appropriate.

[48 FR 2744, Jan. 21, 1983; 48 FR 11426, Mar. 18, 1983, as amended at 58 FR 2893, Jan. 6, 1993]

#### § 133.150 Hard cheeses.

(a) The cheeses for which definitions and standards of identity are prescribed by this section are hard cheeses for which specifically applicable definitions and standards of identity are not prescribed by other sections of this part. They are made from milk and the other ingredients specified in this section, by the procedure set forth in paragraph (b) of this section. They contain not more than 39 percent of moisture, and their solids contain not less

than 50 percent of milkfat, as determined by the methods prescribed in §133.5 (a), (b), and (d). If the milk used is not pasteurized, the cheese so made is cured at a temperature of not less than 35 °F for not less than 60 days.

(b) Milk, which may be pasteurized or clarified or both, and which may be warmed, is subjected to the action of harmless lactic-acid-producing bacteria, with or without other harmless flavor-producing bacteria, present in such milk or added thereto. Harmless artificial coloring may be added. Sufficient rennet, rennet paste, extract of rennet paste, or other safe and suitable milk-clotting enzyme that produces equivalent curd formation, singly or in any combination (with or without purified calcium chloride in a quantity not more than 0.02 percent, calculated as anhydrous calcium chloride, of the weight of the milk) is added to set the milk to a semisolid mass. The mass is cut into small particles, stirred, and heated. The curd is separated from the whey, drained, and shaped into forms, and may be pressed. The curd is salted at some stage of the manufacturing process. The shaped curd may be cured. The rind may be coated with paraffin or rubbed with vegetable oil. A harmless preparation of enzymes of animal or plant origin capable of aiding in the curing or development of flavor of hard cheese may be added during the procedure, in such quantity that the weight of the solids of such preparation is not more than 0.1 percent of the weight of the milk used. Harmless flavor-producing microorganisms may be added, and curing may be conducted under suitable conditions for the development of biological curing agents.

(c) For the purposes of this section:

(1) The word "milk" means cow's milk or goat's milk or sheep's milk or mixtures of two or all of these. Such milk may be adjusted by separating part of the fat therefrom, or (in the case of cow's milk) by adding one or more of the following: Cream, skim milk, concentrated skim milk, nonfat dry milk; (in the case of goat's milk) the corresponding products from goat's milk; (in the case of sheep's milk) the corresponding products from sheep's milk; water in a quantity sufficient to

reconstitute any concentrated or dried products used.

(2) Milk shall be deemed to have been pasteurized if it has been held at a temperature of not less than 143 °F for a period of not less than 30 minutes, or for a time and at a temperature equivalent thereto in phosphatase destruction. A hard cheese shall be deemed not to have been made from pasteurized milk if 0.25 gram shows a phenol equivalent of more than 3 micrograms when tested by the method prescribed in §133.5(c).

(d) Safe and suitable antimycotic agent(s), the cumulative levels of which shall not exceed current good manufacturing practice, may be added to the surface of the cheese.

(e) The name of each hard cheese for which a definition and standard of identity is prescribed by this section is "Hard cheese", preceded or followed by:

(1) The specific common or unusual name of such hard cheese, if any such name has become generally recognized therefor; or

(2) If no such specific common or usual name has become generally recognized, therefor, an arbitrary or fanciful name that is not false or misleading in any particular.

(3) When milk other than cow's milk is used, in whole or in part, the statement "made from \_\_\_\_\_", the blank being filled in with the name or names of the milk used, in order of predominance by weight.

(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, except that:

(1) When milk other than cow's milk is used, in whole or in part, the common or usual name of each such milk ingredient shall be declared in order of predominance by weight; and

(2) Enzymes of animal, plant, or microbial origin may be declared as "enzymes".

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