

INTRODUCTION

The Codex Standard for Processed Cereal-Based Foods for Infants and Children was adopted by the Codex Alimentarius Commission at its 11th Session in 1976. In 1983, the 15th Session adopted amendments to the Section on Labelling and in 1985 the 16th Session adopted an amendment to the definition of children. The Section on Food Additives was amended in 1987 by the 17th Session. In 1989, the 18th Session adopted a further amendment to the Labelling Section and in 1991 the 19th Session adopted an amendment respecting cocoa amounts.

This Standard has been submitted to all Member Nations and Associate Members of FAO and WHO for acceptance in accordance with the General Principles of the Codex Alimentarius.

CODEX STANDARD FOR PROCESSED CEREAL-BASED FOODS FOR INFANTS AND CHILDREN ¹ CODEX STAN 74-1981 (amended 1985, 1987, 1989, 1991)

1. SCOPE

Processed cereal-based foods for infants and children are intended to supplement the diet of infants and children.

2. DESCRIPTION

2.1. Product Definitions

2.1.1 *Dry cereals* for infants and children are foods based on cereals and/or legumes (pulses), processed to a low moisture content and so fragmented as to permit dilution with water, milk or other suitable liquid or, as in the case of preparations such as pasta, used after cooking in boiling water or other liquids.

2.1.2 *Simple or composite cooked flours of cereals* are products which have been cooked in a way that distinguishes them as follows:

2.1.2.1 Partially cooked flours - which require a second short cooking before use.

2.1.2.2 Cooked flours as such or for immediate use - which need no further cooking before use.

2.1.2.3 Dextrinized flours - which are flours in which the starch has been partially transformed into dextrin by heat treatment.

2.1.3 *Enzyme-treated flours of cereals* are flours prepared with enzymes, the starch of which has been transformed into dextrin, maltodextrin, maltose and glucose.

2.1.4 *Pasta* are foods prepared from milled cereal products suitable for the weaning period.

2.1.5 *Rusks and biscuits* are cereal-based foods for infants and children, produced by baking process, which may be used either directly or, after pulverization, with the addition of water, milk or other suitable

¹ Formerly CAC/RS 74-1976.

liquids. "Milk biscuits" consist primarily of cereals and contain milk solids.

2.2 Other Definitions

2.2.1 The term *infant* means a person not more than 12 months of age.

2.2.2 The term *young children* means persons from the age of more than 12 months up to the age of three years.

2.2.3 The term *calorie* means a "kilocalorie" or "large calorie" (1 kilojoule is equivalent to 0.239 kilocalories).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Composition

3.1.1 Dry cereal, rusk, biscuits and pasta are prepared primarily from one or more milled cereal products, such as wheat, rice, barley, oats, rye, maize, millet, sorghum and buckwheat and/or legumes (pulses) and also, sesame, arachis and soybean.

3.1.2 Where the product is intended to be mixed with water before consumption, the minimum content of protein shall not be less than 15% on a dry weight basis and the quality of the protein shall not be less than 70% of that of casein.

3.1.3 Milk biscuits are prepared from one or more milled cereal products with the addition of not less than 10% m/m milk proteins.

3.1.4 The sodium content of the products described in Sections 2.1.1 to 2.1.4 of this Standard shall not exceed 100 mg/100 g of the ready-to-eat product.

3.1.5 The sodium content of the products described in Section 2.1.5 of this Standard shall not exceed 300 mg/100 g of the product as sold.

3.2 Optional Ingredients

3.2.1 In addition to the raw ingredients listed under 3.1, the following ingredients may be added:

- protein concentrates and other high protein ingredients suitable for consumption by infants and children. Essential amino acids may be added to improve protein quality, only in amounts necessary for that purpose. Only natural L forms of amino acids shall be used;
- salt (sodium chloride);
- milk and milk products;
- eggs;
- meat;
- fats and oils;
- fruits and vegetables;
- sugars (nutritive carbohydrate sweeteners);

- malt;

- honey;
- cocoa (only in products to be consumed after nine months of age, and at the maximum level of 1.5% m/m in the ready-to-eat product);
- potatoes;
- starches, including enzyme modified starches and starches treated by physical means.

3.2.2 The addition of vitamins, minerals and iodized salt shall be in conformity with the legislation of the country in which the product is sold.

3.2.2.1 Vitamins and/or minerals added in accordance with Section 3.2.2 should be selected from the Advisory Lists of Mineral Salts and Vitamin Compounds for Use in Foods for Infants and Children (CAC/GL 10-1979).

3.2.2.2 The amounts of sodium derived from the added vitamins and/or minerals shall be within the limits indicated for sodium in Sections 3.1.4 and 3.1.5 as appropriate.

3.3 Quality Factors

3.3.1 All ingredients, including optional ingredients, shall be clean, safe, suitable and of good quality.

3.3.2 All processing and drying should be carried out in a manner that minimizes loss of nutritive value, particularly protein quality.

3.3.3 The moisture content of the products shall be governed by good manufacturing practice for the individual product categories and shall be at such a level that there is a minimum loss of nutritive value and at which microorganisms cannot multiply.

3.4 Consistency and Particle Size

3.4.1 When reconstituted according to the label directions for use, dry cereal is of a soft, smooth texture, free of lumps and chewable particles and is suitable for spoon feeding of infants and children.

3.4.2 Rusks and biscuits may be used in the dry form so as to permit and encourage chewing or they may be used and promoted for use in a liquid form, by mixing with water or other suitable liquid, that would be similar in consistency to dry cereals.

3.5 Specific Prohibition

The product and its components shall not have been treated by ionizing radiation.

4. FOOD ADDITIVES

The following additives are permitted in the preparation of processed cereal-based foods for infants and children, as described in Section 2.1 of this Standard:

| | | In 100 g of product, on a dry weight basis (unless otherwise indicated) |
|--------------------------------|--|--|
| 4.1 Emulsifiers | | |
| 4.1.1 | Lecithin | 1.5 g |
| 4.1.2 | Mono- and diglycerides | 1.5 g |
| 4.2 pH Adjusting Agents | | |
| 4.2.1 | Sodium hydrogen carbonate | Limited by good manufacturing practice and within the limits for sodium in Sections 3.1.4 or 3.1.5 |
| 4.2.2 | Potassium hydrogen carbonate | } Limited by good manufacturing |
| 4.2.3 | Calcium carbonate | } practice |
| 4.2.4 | L(+) Lactic acid | 1.5 g |
| 4.2.5 | Citric acid | 2.5 g |
| 4.3 Antioxidants | | |
| 4.3.1 | Mixed tocopherols concentrate | } 300 mg/kg fat, singly or in |
| 4.3.2 | Alpha-tocopherol | } combination |
| 4.3.3 | L-Ascorbyl palmitate | 200 mg/kg fat |
| 4.3.4 | L-Ascorbic acid and its sodium and potassium salts and within the limits for Na in | 50 mg, expressed as ascorbic acid Sections 3.1.4 and 3.1.5 |
| 4.4 Flavours | | |
| 4.4.1 | Vanilla extract | Limited by good manufacturing practice |
| 4.4.2 | Ethyl vanillin | } 7 mg on an as consumed basis |
| 4.4.3 | Vanillin | } |
| 4.5 Enzymes | | |

4.5.1 Malt carbohydrates Limited by good manufacturing practice

4.6 Leavening Agents

4.6.1 Ammonium carbonate } Limited by good manufacturing
4.6.2 Ammonium hydrogen carbonate } practice

4.7 Carry-Over Principle

Section 3 of the "Principle relating to the Carry-over of Food Additives into Foods", as set forth in Codex Alimentarius Volume 1, shall apply.

5. CONTAMINANTS

5.1 Pesticide Residues

The product shall be prepared with special care under good manufacturing practices, so that residues of those pesticides which may be required in the production, storage or processing of the raw materials or the finished food ingredient do not remain, or, if technically unavoidable, are reduced to the maximum extent possible.

5.2 Other Contaminants

The product shall be free from residues of hormones, antibiotics as determined by means of agreed methods of analysis and practically free from other contaminants, especially pharmacologically active substances.

6. HYGIENE

6.1 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

6.2 When tested by appropriate methods of sampling and examination, the product:

- (a) shall be free from pathogenic microorganisms;
- (b) shall not contain any substances originating from microorganisms in amounts which may represent a hazard to health; and
- (c) shall not contain any other poisonous or deleterious substances in amounts which may represent a hazard to health.

6.3 The product shall be prepared, packed and held under sanitary conditions and should comply with the Recommended International Code of Hygienic Practice for Foods for Infants and Children (CAC/RCP 21-1979).

7. PACKAGING

7.1 The product shall be packed in containers which will safeguard the hygienic and other qualities of the food.

7.2 The containers, including packaging material, shall be made only of substances which are safe and suitable for their intended use. Where the Codex Alimentarius Commission has established a standard for any such substance used as packaging material, that standard shall apply.

8. LABELLING

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985 (Rev. 1-1991), Codex Alimentarius Volume 1), the following specific provisions apply:

8.1 The Name of the Food

The name of the food shall be "Dry Cereal for Infants (and/or Children)", "Rusks for Infants (and/or Children)" or "Biscuits (or "Milk Biscuits") for Infants (and/or Children)" or "Pasta for Infants (and/or Children)", or any appropriate designation indicating the true nature of the food, in accordance with national legislation.

8.2 List of Ingredients

8.2.1 A complete list of ingredients shall be declared on the label in descending order of proportion except that in the case of added vitamins and minerals, these shall be arranged as separate groups for vitamins and minerals, respectively, and within these groups the vitamins and minerals need not be listed in descending order of proportion.

8.2.2 The specific name shall be declared for ingredients and food additives. In addition, appropriate class names for these ingredients and additives may be included on the label.

8.3 Declaration of Nutritive Value

The declaration of nutrition information shall contain the following information in the following order:

- (a) The amount of energy, expressed in calories (kcal) or kilojoules (kJ), and the number of grammes of protein, carbohydrate and fat per 100 grammes of the food as sold as well as per specified quantity of the food as suggested for consumption;
- (b) in addition to any other nutritional information required by national legislation, the total quantity in the final product of each vitamin and mineral added according to Section 3.2.2 shall be declared per 100 g as well as according to the serving size of the food suggested for consumption.

8.4 Date Marking and Storage Instructions

8.4.1 The date of minimum durability (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three

months, the month and year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only, and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

8.4.2 In addition to the date, any special conditions for the storage of the food shall be indicated if the validity of the date depends thereon.

Where practicable, storage instructions shall be in close proximity to the date marking.

8.5 Information for Utilization

8.5.1 Directions as to the preparation and use of the food, and its storage and keeping before and after the container has been opened, shall appear on the label or on the accompanying leaflet.

8.5.2 When the product contains less than 15% protein and the quality is less than 70% that of casein, directions on the label shall state "Milk or formula but no water shall be used for dilution or mixing" or an equivalent statement.

8.5.3 When the product contains more than 15% protein, the instructions for dilution on the label shall state that water, milk or formula may be used for dilution or mixing, in accordance with medical advice or the legislation of the country in which the product is sold.

8.6 Additional Requirements

The products covered by this standard are not breast-milk substitutes and shall not be presented as such.

9. METHODS OF ANALYSIS AND SAMPLING

See Codex Alimentarius Volume 13.