

**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON NUTRITION AND FOODS FOR SPECIAL DIETARY
USES**

**35th Session
4-8th Nov.2013
Bad Soden am Taunus, Germany**

1st DRAFT - eWG 2013 (REP 13/NFSDU)

**PROPOSED DRAFT STANDARD FOR PROCESSED CEREAL-BASED FOODS
FOR INFANTS AND YOUNG CHILDREN
CODEX STAN 074-1981, Rev –I 2006,**

PART B FOR UNDERWEIGHT INFANTS AND YOUNG CHILDREN

Comments to be submitted by : 20th July 2013

DISCUSSION PAPER

Genesis of the proposed amendment of the standard for “Processed Cereal-Based Foods for Infants and Young Children (Codex Stan 74-1981) to include a New Part B for Underweight children”

In the earlier sessions of CCNFSDU, before revision of Codex Stan 74-1981 Rev-I in 2006, India reserved its position (para 92-93 Alinorm 06/29/41) to the revised standard and proposed to address three key issues related to the **low cereal content , lower energy density and not prescribing minimum protein contents in the existing standard** , which would not provide the nutritional requirements of underweight children who constitute a sizeable population.

1. This new work for establishment of part B of CODEX STAN 074-1981, Rev 6I 2006 is as discussed during the 32nd session of Codex Committee of Nutrition and Foods For special Dietary uses (CCNFSDU) held at Santiago, Chile in 2010 (Appendix V, REP 11/NFSDU) focuses on the three key issues i.e. Cereal content, Minimum protein and Energy Density concerning underweight infants and young Children.(Explanation is given in **Annexure I**)
2. The committee after discussion agreed to an electronic Working Group chaired by India, working in English, to prepare a draft New Part B of the Standard for circulation at Step 3 and consideration by the next Session of the Committee, subject to approval by the Commission at the 34th session. (para 115 to 124 , REP 11/NFSDU)
3. The 34th Session of CAC approved the work in July 2011 on Inclusion of a New Part B for Underweight Children in the Standard for Processed Cereal-Based Foods for Infants and Young Children (CODEX STAN 74-1981) (NO4-2011).

4. During the 33rd session of CCNFSU held in 2011 at Bad sodden am Tanus, Germany, the proposed draft for part -Bø could not be considered by the committee due to time constraint and was returned to eWG chaired by India & working in English, circulation for comments at Step 3, and consideration at next session in 2012.(Para 12-129, REP 12/NFSU)
5. The deliberations during the 34th session of CCNFSU held at Bad Soden am Taunus, Germany in 2012 were centered around the Scope mainly whether the draft focuses on stunting and wasting also. As clarified as per para 131, REP 13 NFSU, the proposed amendment does not intend to focus on stunting or wasting as they have special needs. In addition the scope was decided during the 32nd session of CCNFSU held at Santiago , Chile and maintained as it is.
6. The Committee agreed to establish an eWG, chaired by India and co-chaired by Botswana and working in English, to revise the Proposed Draft, especially the Scope, taking into account the comments made during the session and WHO technical note "Food supplementation for children with moderate acute malnutrition". (Para 126-135 REP 13/NFSU)
7. The observations noted in para 130 and 133 of REP 13/NFSU have been taken into consideration and the responses are at **Annexure II**. While drafting the present proposal the some of the comments received during previous e working group have been taken in consideration.

**PROPOSED DRAFT STANDARD FOR PROCESSED CEREAL-BASED FOODS
FOR INFANTS AND YOUNG CHILDREN
CODEX STAN 074-1981, Rev –I 2006,**

PART B FOR UNDERWEIGHT INFANTS AND YOUNG CHILDREN

1. SCOPE

This standard covers processed cereal-based complementary foods intended to meet the dietary requirements of underweight¹ infants after the age of six months and young children , as part of a progressively diversified diet, in accordance with the Global Strategy for Infant and Young Child Feeding and World Health Assembly Resolution WHA54.2 (2001).

2. DESCRIPTION

Processed cereal-based foods should contain minimum 50% cereals on a dry weight basis

2.1. Product Definitions

Two categories are distinguished:

- 2.1.1 Products consisting of cereals which are or have to be prepared for consumption with milk or other appropriate nutritious liquids;
- 2.1.2 Cereals with an added high protein food which are or have to be prepared for consumption with water or other appropriate protein-free liquid;

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 (36 months).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Essential Composition

3.1.1 The two categories listed in 2.1.1 and 2.1.2 are prepared primarily from one or more milled cereal products, such as wheat, rice, barley, oats, rye, maize, millet, sorghum and buckwheat. They may also contain legumes (pulses), or oil seeds in smaller proportions.

¹Using WHO growth standards(2006), Children having weight-for-age below -2 standard deviations (SDs) or weight-for-age z-score [WAZ] <-2, are classified as underweight (http://www.who.int/childgrowth/standards/weight_for_age/en/index.html)

- 3.1.2 The requirements concerning energy and nutrients refer to the product ready for use as marketed or prepared according to the instructions of the manufacturer, unless otherwise specified.

3.2 Energy Density

The energy density of cereal-based foods from 2.1.1 and 2.1.2 should not be less than 4.184 kJ/g (1.0 kcal/g) of the reconstituted food.

3.3 Protein

- 3.3.1 The chemical index of the added protein shall be equal to at least 80% of that of the reference protein casein or the Protein Efficiency Ratio (PER) of the protein in the mixture shall be equal to at least 70% of that of the reference protein casein. In all cases, the addition of amino acids is permitted solely for the purpose of improving the nutritional value of the protein mixture, and only in the proportions necessary for that purpose. Only natural forms of L-amino acids should be used.
- 3.3.2 For product mentioned in point 2.1.2 the added protein content shall not be less than 0.48 g/100 kJ (2 g/100 kcal).
- 3.3.3. For product mentioned at 2.1.2 the total protein content shall not be less than 3g/100 kcal (0.72 g/100kJ)
- 3.3.4. For products mentioned at 2.1.1 and 2.1.2, the protein content shall not exceed 1.3g/100KJ (5.5g/100Kcal)

3.4 CARBOHYDRATES

3.4.1 If sucrose, fructose, glucose, glucose syrup or honey are added to products mentioned in points 2.1.1:

- the amount of added carbohydrates from these sources shall not exceed 1.8 g/100 kJ (7.5 g/100 kcal);
- the amount of added fructose shall not exceed 0.9 g/100 kJ (3.75g /100 kcal).

3.4.2 *retained as Part A (CODEX STAN -074, 1981, Rev I 2006).*

3.5 LIPIDS

3.5.1 *retained as Part A (CODEX STAN -074, 1981, Rev I 2006).*

3.5.2 Product category 2.1.1 shall not exceed a maximum lipid content of 0.8 g /100 kJ (3.3 g/100 kcal).

3.6 MINERALS

3.6.1 The sodium content of the products described in Sections 2.1.1 and 2.1.2 of this Standard shall not exceed 24 mg/100 kJ (100 mg/100 kcal) of the ready-to-eat product.

3.6.2 The calcium content shall not be less than 12 mg/100 kJ (50 mg/100 kcal) for products mentioned in point 2.1.1 manufactured with the addition of milk and presented as such.

3.6.3 The calcium content shall not be less than 20 mg/100 kJ (80 mg/100 kcal) for products mentioned in points 2.1.2.

Sections from 3.7 to Section 5 are retained as Part A (CODEX STAN -074, 1981, Rev I 2006).

6. HYGIENE

The products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Code of Practice ó General Principle of Hygiene (CAC/RCP 1-1969) and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

The product should comply with any microbiological criteria established in accordance with the Principles for the Establishment and application of microbiological Criteria for Foods (CAC/GL 21-1997).

Sections 7 retained as Part A (CODEX STAN -074, 1981, Rev I 2006).

8. LABELLING

Sections from 8.1.to 8.6 have been retained as Part A (CODEX STAN -074, 1981, Rev I 2006) except 8.6.2, which is as follows:

8.6 INFORMATION FOR UTILIZATION

8.6.2 For products covered by 2.1.1, directions on the label shall state òMilk or other appropriate nutritious liquid but no water shall be used for dilution or mixingö or an equivalent statement.

8.7 ADDITIONAL REQUIREMENTS

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

Section 9 is retained as Part A (CODEX STAN -074, 1981, Rev I 2006).

Annexure I

Complementary foods have a composite density ranging from 1.07 to 1.46 kcal/g, (cooked food) (Complementary feeding: family foods for breastfed children, WHO, 2000). This translates into around 4-5 kcal per gram on dry weight basis. Energy density also depends on the number feeds the infant is given. If the baby is taking less number of feeds or fed less quantity than mentioned per feed, the energy density has to be accordingly higher to satisfy the energy and nutrient requirements of the child. Considering that the normal dietary intake of all underweight children is much below the desired level, the energy density needs to be sufficiently high so as to meet the energy and protein needs of the child.

In a paper titled "Update on Technical Issues concerning Complementary Feeding of Young Children in Developing countries and Implications for Intervention Programmes" by Kathyryne G. Dewey and Kenneth H. Brown published in Food and Nutrition Bulletin Vol. 24, No.1, 2003, revised summary information for adequately nourished children receiving low (mean -2SD), average, or high (mean +2SD) amounts of breast milk energy has been provided. Extracts concerning minimum dietary **energy density** (kcal/g) required to attain the level of energy needed from complementary foods in 2 meals/day by children in developing countries with low level of Breast Milk Energy (BME)^a intake are as under:

Energy	6-8 months	9-11 months	12-23 months
	LOW BME	LOW BME	LOW BME
Total energy required + 2SD (kcal/day) ^b	769	858	1,118
BME (kcal/day)	217	157	90
Energy required from complementary foods (kcal/day)	552	701	1,028
Minimum energy density (kcal/g) 2meals/day	1.11	1.23	1.49

- a. Assumed functional gastric capacity (30g/kg reference Body Weight) as 249g/meal at 6-8 months, 285 g/meal at 9-11 months, and 345 g/meal at 12-23 months.
- b. Total energy requirement is based on new US longitudinal data averages plus 25% (2SD).

The consumption of commercial infant foods constitutes <40% of the total food intake of children in this age group. (Donald Study, from Germany, J ped. Gastroenterology NS nutrition, 1998, 547-52, Food and Nutrition Bulletin, March 2003, Page 11). In most of the developing countries the commercial infant foods form only a part of their regular feeding.

Hence, the calorie density and the protein quantity and quality of cereal based foods for infants and young children are very important since the rest of the home foods in poor households are not energy dense and also lack quality protein.

Minimum protein content at 12% for cereal based foods for infants and young children in the context of developing countries for feeding underweight is for the following reasons:

- Milk intake is low
- Animal Protein as well as total protein intakes are low
- Infection rate is high, and hence
- Prevalence of under nutrition in preschool children is high
- Protein requirements are high and nearly 60% of this has to be met from commercial/complementary infant foods.

REP 13/NFSDU

Para 130. The Representative of WHO stated the need for further clarification of the scope of the proposed standard for which these foods are intended. Underweight, whether it is to cover ± 1 SD and above or -2 SD and above, is a combination of stunting and wasting and stunted and wasted children do not have the same dietary needs. In addition, the scope stated in CX/NFSDU 12/34/10 includes those at risk of becoming underweight which would include all children in a certain setting and that could be covered by the existing Standard. The Representative suggested that perhaps what the Delegation of India would like to address would be moderate acute malnutrition in children which is measured by weight-for-height between -3 and -2 Z-scores of the median of the WHO child growth standards.

Para 133. The Committee agreed to establish an eWG, chaired by India and co-chaired by Botswana and working in English, to revise the Proposed Draft, especially the Scope, taking into account the comments made during the session and WHO technical note on Food supplementation for children with moderate acute malnutrition.

Response: The draft proposal has key requirements i.e. to raise minimum cereal content, minimum energy density and to define minimum protein content for the processed cereal based foods (PCBF). It was clearly mentioned in the previous committees that the proposed draft is neither addressing moderate malnutrition or stunting through part B, as detailed under para 131. It is an established fact that in stable non-emergency situations with endemic malnutrition, moderate acute malnutrition (MAM) can often present in combination with stunting¹. Therefore, it would not be prudent to address MAM through products for which standards are being envisaged in this proposal.

Keeping in view of above mentioned responses it is to reiterate that the scope in proposed part B cannot be changed to include management of stunting or moderate acute malnutrition and to go forward the proposed draft would concentrate on issues of cereal content, minimum energy density and protein content.

¹ Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A, Black RE; The Lancet Nutrition Interventions Review Group, and the Maternal and Child Nutrition Study Group. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? Lancet. 2013 Jun 5. doi:pii: S0140-6736(13)60996-4. 10.1016/S0140-6736(13)60996-4. [Epub ahead of print]