

**هيئة التقييس لدول مجلس التعاون لدول الخليج العربية**  
**GCC STANDARDIZATION ORGANIZATION (GSO)**

Final draft standard

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**CANNED BABY FOODS**

**Prepared by:**

Gulf technical committee for sector standard of food and agricultural products

This document is a draft Gulf Standard circulated for comments, it is therefore, subject to Alteration and modification, and may not be referred it as a Gulf Standard, until it approved by the Board of Directors of GSO.

## Foreword

GCC Standardization Organization (GSO) is a regional organization which consists of the National standards Bodies of GCC member states. One of GSO main functions is to issue Gulf Standards / Technical regulations through specialized technical committees (TCs).

GSO through the technical program of committee TC NO (5) "**Gulf technical committee for standards of food and agriculture product**" has updated the GSO standard NO 355/1994 "**CANNED BABY FOODS**". The draft standard has been prepared by state of Kuwait.

This standard has been approved as a Gulf Technical Regulation by GSO Board of Directors in its meeting NO ( ), held on h ( G). The approved standard will replace and supersede the GSO standards NO (355/1994).

## CANNED BABY FOODS

### 1- Scope

This Standard Specification specifies baby foods which are intended primarily for use during the normal infant's weaning period (from 6 months), and also for the progressive adaptation of infants and children to ordinary food. They may be either in ready-to-eat form or in dry form requiring reconstitution with water only. They do not include infant foods based on milk (GSO 354) or processed cereal-based foods for infants and children (GSO 677).

*NOTE: Baby foods in ready-to-eat form are processed by heat before or after being sealed in their containers and Baby foods in dry form are processed by physical means, in each case so as to prevent spoilage.*

### 2- Complementary References

- 2.1 GSO 9 "Labeling of prepackaged food stuffs"
- 2.2 GSO 21 "Hygienic regulation for food plants and their personnel"
- 2.3 GSO 150 "Expiration periods of food products"
- 2.4 GSO 287 "Microbiology – general guidance on methods for the detection of salmonella"
- 2.5 GSO 590 "Microbiological methods of food examination – commercial sterility test for canned food"
- 2.6 GSO ISO 4832 "Microbiology – general guidance for the enumeration of coliforms colony count technique"
- 2.7 GSO ISO 4833 "Microbiology – general guidance for the enumeration of micro-organisms – colony count technique at 30°C"
- 2.8 GSO 382, GSO 383 "Maximum limits of pesticide residues in agricultural and food product – parts 1 and 2"
- 2.9 GSO 180 "Methods of sampling for plant baby foods"
- 2.10 GSO 181 "Chemical methods of test for plant baby foods"
- 2.11 GSO 22 "Methods of test for colouring matter used in food stuffs"
- 2.12 GSO 1300 "Methods of determination of minerals in plant baby foods"
- 2.13 GSO ..... "Detecting methods of Hormones and antibiotics in foods" which will be adopted by Gulf Standardization Organization
- 2.14 GSO 988 "Limit of radioactivity levels permitted in foodstuffs – Part
- 2.15 GSO 998 "Detecting methods of limits of radioactivity levels permitted in agricultural and food products"

- 2.16 GSO 1016 " Microbiological criteria for foodstuffs"
- 2.17 GSO 1791 "Three piece steel round cans used for canning food stuffs"
- 2.18 GSO 1794 "The two pieces steel round cans used for canning food stuffs"
- 2.19 GSO ..... "Food additives" which will be adopted by Gulf Standardization Organization
- 2.20 GSO 841 "Maximum limits of mycotoxins permitted in foods and animal feeds – Aflatoxins"

### 3- Definitions

#### 3.1 Canned food:

Food treated by heat before or after being sealed. It is processed or prepared from any suitable food like vegetables, fruits, meat, poultry, singly or mixed with each other. It includes food ready-to-eat form of a fairly uniform with small particle size and does not require chewing, or food contains particles with an easy chewing. It also, includes dried food processed by natural means, which reconstitute with water or other liquids before eating.

#### 3.2 Infant

It means the child not more than 12 months of age.

#### 3.3 Children

It means young children from the age of more than 12 months up to the age of three years.

#### 3.4 Calorie

It means a kilocalorie or "large calorie" (1 kilo joule is equivalent to 0.239 kilocalories).

### 4- Requirements

All the requirements listed below are mandatory, and has been divided into two sections:

#### 4.1 Essential Composition and Quality Factors

##### 4.1.1 Composition

4.1.1.1 Baby foods may be prepared from any suitable nutritive material that is used, recognized or commonly sold as an article or ingredient of food, including spices.

4.1.1.2 Vitamins and minerals may only be added in accordance to GSO standards

4.1.1.2.1 The amount of sodium derived from the added vitamins and/or minerals shall be within the limits indicated for sodium in section 4.1.1.3

**4.1.1.3** The total sodium content of the products shall not exceed 200mg Na/100g calculated on the ready-to-eat basis in accordance with directions for use. The addition of salt (NaCl) to fruit products and desert products based on fruit is not permitted.

#### **4.1.2 Consistency and Particle Size**

**4.1.2.1** Ready-to-eat baby foods are homogeneous or comminuted in the following forms:

- (a) **Strained** food of a fairly uniform, small particle size which does not encourage chewing before being swallowed;
- (b) **Junior** food that ordinary contains particles of a size to encourage chewing by infants and children, and must be formulated and manufactured to a consistency that minimizes the risk of choking especially for infants.

**4.1.2.2** Dry baby foods, after reconstitution with water or other suitable liquid, approximate to the consistency and particle size of strained or junior foods under 4.1.2.1

#### **4.2 General Requirements**

The canned baby foods shall include the following requirements:

**4.2.1** The product shall be totally free of pork products and its derivatives.

**4.2.2** The raw material used in the manufacturing shall be clean, of good quality and suitable for digestion in infants and children in conformity with its GSO specification standards.

**4.2.3** The components of meat, poultry, and fish shall be free from bones and its parts, skins and shells

**4.2.4** The product shall be free from excessive fibers where is necessary.

**4.2.5** The product shall be manufactured and packed according to the hygienic regulations stated in GSO standard mentioned in clause 2.2

**4.2.6** It shall be free of synthetic materials and artificial sweeteners.

**4.2.7** It shall be free of foreign materials according to the mean of good manufacturing.

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

**4.2.9** The product and its components shall be free from the effects of hormones and antibiotics.

**4.2.10** The proportion of contamination minerals elements in foods of ready-to-eat form shall not exceed the following (ppm):

HEAVY METALS	MAXIMUM LIMIT (ppm)
Arsenic	0.03
Cadmium	0.05
Lead	0.02
Tin	150
Mercury	0.02

- 4.2.11** Pesticides residues in the product shall not exceed the maximum limits stated in the GSO standards no. 382, 383 mentioned in clause 2.8
- 4.2.12** The limits of radioactivity shall not exceed the maximum limits stated in the GSO standard mentioned in clause 2.14.
- 4.2.13** Microbiological limits:
- 4.2.13.1** The microbiological limits shall not exceed the limits stated in the GSO standard mentioned in clause 2.16.
- 4.2.13.2** Other canned products:
- It must pass the test of commercial sterilization according to the GSO standard no. 590 mentioned in clause 2.5
- 4.2.14** Food additives
- It shall be in conformity with the GSO standard mentioned in clause 2.19
- 4.2.15** The Aflatoxins levels shall be in conformity with the gulf standard (GSO 841) mentioned in clause 2.20.

## **5 Packaging and storage**

The following shall be in consideration when filling out, transfer and store the canned baby foods:

- 5.1** The product shall be packed in containers of clean, dry and sterilized before packing and are free from any strange smell and impermeable to oxygen or moisture and maintain product quality and safety.
- 5.2** If in ready-to-eat form, it shall be packed in hermetically sealed containers; nitrogen and carbon dioxide may be used as packing media, where the fill of the container shall be:
- 5.2.1** not less than 80% v/v for products weighing less than 150g (5<sup>1</sup>/<sub>2</sub> oz);
- 5.2.2** not less than 85% v/v for products in the weighing ranges 150-250g (9 oz);
- 5.2.3** not less than 90% v/v for products weighing more than 250g (9 oz)
- 5.3** In case of using steel cans, it shall be painted from inside with appropriate coating and in conformity with its Gulf Standards mentioned in clause 2.17 and 2.18.
- 5.4** The containers shall be transferred in appropriate transportation to avoid damage and pollution.
- 5.5** The containers shall be stored in good ventilation stores away from heat sources, pollution and direct light, and maximum temperature of 25°C.

## **6- labeling**

Without prejudice to the provisions of the Gulf Standards (GSO 9, 150) mentioned in clauses 2.1 and 2.3, the following information shall be declared on the label:

- 6.1 The amount of energy expressed in kilo joule (or calorie) and the number of grams of protein, carbohydrates, and fat per 100g of the product and its condition when used.
- 6.2 The amount of vitamins, and mineral elements added per 100g of the product and its condition when used.
- 6.3 Instruction on how to store the product before and after opening the package and how their preparation and use.

## 7- Sampling

Samples shall be taken according to the Gulf Standard (GSO 180) mentioned in clause 2.9.

## 8- Testing Methods

- 8.1 The chemical tests shall be carried out according to the Gulf Standard (GSO 181) mentioned in clause 2.10.
- 8.2 Artificial coloring shall be detected according to the Gulf standard (GSO 22) mentioned in clause 2.11.
- 8.3 Determination of minerals shall be carried out according to the Gulf Standard (GSO 1300) mentioned in clause 2.12.
- 8.4 Determination of pesticide residues shall be carried out according to the Gulf Standard which will be adopted by Gulf Standardization Organization.
- 8.5 Radioactive contamination shall be detected according to the Gulf Standard (GSO 998) mentioned in clause 2.15.
- 8.6 Hormones and antibiotics shall be detected according to the Gulf Standard which will be adopted by Gulf Standardization Organization.
- 8.7 Microbiological Tests shall be carried out according to Gulf standards (GSO 287, 590, 4832, 4833) mentioned in clauses 2.4, 2.5, 2.6, and 2.7.

## **REFERENCES**

CODEX Standard for CANNED BABY FOODS – CODEX Stan 73-1981  
amendments 1983, 1985, 1987, 1989