



## Technical Specifications for Milk

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*V16.0 is the 1<sup>st</sup> version of WFP specification for milk.*

### 1. SCOPE

This standard prescribes the requirements for **Milk** that WFP receives from donors or purchases then distributes to beneficiaries.

### 2. STANDARDS AND RECOMMENDATIONS

The specification of **Milk** was elaborated after consulting the standards of potential origin and recipient countries.

The following referenced standards are indispensable for the application of this specification. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced standard (including any amendments) applies.

- CAC/MRL 02, Maximum residue limits for veterinary drugs in foods
- CAC/RCP 57, Code of hygiene practice for milk and milk products
- CODEX STAN 1: General standard for the labelling of pre-packaged foods
- CODEX STAN 192, Codex general standard for food additives
- CODEX STAN 193, Codex general standard for contaminants and toxins in foods
- CODEX STAN 206, General Standard for the Use of Dairy Terms
- Milk and Milk products\_ Codex second edition, 2011.

### 3. DEFINITIONS

#### 3.1 Product:

Milk that is covered by the provision of this specification

#### 3.2 Cow milk:

The normal mammary secretion of cow obtained from one or more milkings without either addition to it or extraction from it, intended for consumption as liquid milk or for further processing.

#### 3.3 Homogenization

Process by which milk fat globules are finely divided and interspersed to form a homogeneous product so as to prevent the fat from floating on the surface and adhering to the inside of the container.

### **3.4 Commercial sterilization**

The application of heat at high temperatures for a time sufficient to render milk or milk products commercially sterile, thus resulting in products that are safe and microbiological stable at room temperature.

## **4. PRODUCT SPECIFICATIONS**

### **4.1 General requirements**

#### **4.1.1 Contaminant**

Product shall comply with the Maximum Levels for contaminants that are specified for the product in the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995).

The milk used in the manufacture of product shall comply with the Maximum Levels for contaminants and toxins specified for milk by the *General Standard for Contaminants and Toxins in Food and Feed* (CODEX STAN 193-1995) and with the maximum residue limits for veterinary drug residues and pesticides established for milk by the CAC.

#### **4.1.2 Hygiene**

Product shall be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969), the *Code of Hygienic Practice for Milk and Milk Products* (CAC/RCP 57-2004) and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice. The products should comply with any microbiological criteria established in accordance with the *Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods* (CAC/GL 21-1997).

#### **4.1.3 Food additives**

No additives are allowed.

#### **4.1.4 Fit for human consumption guarantee**

Suppliers shall have to check the quality of the products and guarantee that the products are 'fit for human consumption'.

### **4.2 Specific requirements**

#### **4.2.1 Product type**

Product shall be made from cow milk that is homogenised, standardised to a specific level of fat and processed to be commercially sterile. Please refer to contract requirement for fat level and type of milk (Full fat milk, Fat reduced milk, or Fat free milk).

#### **4.2.2 Characteristics**

Product shall also comply with all requirements from table 1.

#### **4.2.3 Shelf life**

Product shall retain table 1 qualities for at least 6 months from date of manufacture when stored dry at ambient temperatures prevalent in the country of destination.

## **5. PACKAGING**

Product must be packed in appropriate packaging which safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product. The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They should not impart any toxic substance or undesirable odour or flavour to the product.

### **5.1 Primary packaging**

Unless otherwise specified in the contract, product shall be packed in Tetra Pak®, Combibloc®, or equivalent. Please refer to contractual requirement for net weight of the primary pack.

### **5.2 Secondary packaging**

The carton used to pack the primary packaging of product shall be fit for export and multiple-harsh handling. The cartons should meeting the following requirements or something equivalent:

- Number of ply: 5
- Total grammage: MIN. 870 gsm
- Edge Crush Test: MIN. 12 kN/m

Carton must be fully filled and glued. Secondary packaging (e.i. cartons with full product) must pass the drop test as per ISTA 2A standard (after each drop, there shall be no rupture or loss of contents) following appropriate drop test standards.

Two percent empty, marked cartons (included in the price) must be sent with the lot.

Unless fully shrink wrapped pallets are used, dunnage (of strong sheets such as carton, plywood...) should be placed inside each container at every three layers of cartons to provide the required stacking strength. In addition protecting material like air bag, carton, polystyrene, can be used.

*Note: For shipping containers, unless fully shrink wrapped pallet are used, and unless otherwise specified in the contract, kraft paper must be adhered to all internal sides, door, and floor of container. Kraft paper also need to be placed on the top of packaging. Desiccant needs to be placed/laid in container at appropriate location in order to absorb moisture. Supplier needs to use high quality desiccant and calculate the quantity of desiccant based on:*

- Efficiency of desiccant
- Length of time in transit in container
- Container capacity

*Supplier needs to provide in the offer the type of desiccant and quantity to be used for the consignment. If silica gel is used, 15 bags of at least 1 kg each must be placed in each 20 feet container.*

## **6. MARKING**

The making of product shall comply with the provisions of the General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985) and the General Standard for the Use of Dairy Terms (CODEX STAN 206-1999).

Unless otherwise specified in the contract, the products must have below making:

- Name of the product
- Net content
- Name and address of the supplier (including country of origin)
- Production lot
- Production date
- Best use before date
- Recommended storage condition : stored dry at ambient temperatures

Additional marking is as per contractual agreement.

## 7. STORING

Product shall be stored under dry, ventilated and hygienic conditions and far from all source of contaminations.

## 8. ANALYTICAL REQUIREMENTS

As per contractual agreement, WFP will appoint an inspection company that will check that product matches requirements specified in Table 1. Additional tests may be defined in case further quality assessment is required. This will be performed in addition to analysis performed by supplier according to his own sampling plan.

Table 1: List of compulsory tests and reference methods

| No | Tests  | Requirements  |                         |                      | Reference methods (Or equivalent, latest version) |
|----|--|---|-------------------------|----------------------|---|
|    |  | <i>Full fat milk</i>  | <i>Fat reduced milk</i> | <i>Fat free milk</i> |   |
| 1  | Fat (% , m/m)                                | MIN. 3.0  | 0.5 – 3.0               | MAX. 0.5             | ISO 1211  |
| 2  | Milk solids not fat (% , m/m)                | MIN. 8.25   |                         |                      | ISO 1211 and ISO 6731                             |
| 3  | Acidity (expressed in lactic acid) (% , m/m) | MAX. 0.17   |                         |                      | DIN 10316   |
| 4  | Alcohol test (68% ethanol)                   | Negative  |                         |                      |   |
| 5  | Phosphatase test                             | Negative  |                         |                      | ISO 11816-1                                       |
| 6  | Coliforms                                    | Absent in 1g  |                         |                      | ISO 4832  |
| 7  | Salmonella                                   | Absent in 25g   |                         |                      | ISO 6785  |
| 8  | Total Plate Count (cfu/ml)                   | 0   |                         |                      | AOAC 986.32                                       |
| 9  | Aflatoxin M1 (mcg/kg)                        | MAX. 0.1  |                         |                      | AOAC 986.16                                       |
| 10 | Organoleptic characteristics                 | Normal in colour, smell, taste and texture.<br>Homogenous and free from impurities and foreign matters. |                         |                      | Organoleptic examination                          |