Technical Specifications for

DRIED WHOLE MILK

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Developed: **Van Hoan NGUYEN, OSPFQ- WFP**
Reviewed: **Van Hoan NGUYEN, OSPFQ- WFP**
Approved**: Shane PRIGGE, OSPFQ- WFP**

1. INTRODUCTION

1.1 Scope

This standard prescribes the requirements for **Dried Whole Milk** purchased and distributed by WFP.

1.2 Standards and recommendations

Dried Whole Milk shall comply, except when specified otherwise in the contract, with the following guidelines or standards:

- CAC/MRL 02-2006, 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 192-1995, Codex general standard for food additives.
- CODEX STAN 193, Codex general standard for contaminants and toxins in foods.
- CODEX STAN 207-1999, Codex standard for milk powder and cream powder.
- COMMISSION REGULATION (EC) No 273/2008 of 5 March 2008.

2. DEFINITIONS

Milk is the normal mammary secretion of milking animals 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.
Milk powder is milk product which can be obtained by the partial removal of water from milk.

3. PROCESSING

3.1 Method of processing

Whole milk powder is obtained by the spray method.

3.2 Food safety and risk assessment at manufacturing premises

For compliance with Codex standards the processor must be able to demonstrate by principle and practice the adoption, implementation and recording of:

- Good Manufacturing Practice

- Hazard Analysis Critical Control Point program

In this context an appointed WFP Inspector / Quality Surveyor is entitled to visit the factory without prior notice during any period when WFP product is being manufactured to check that the GMP and HACCP systems are in place. The Inspector / Quality Surveyor may request to see:

- **Records** (i.e. names of people in charge of the process and quality control, temperatures of the process, cleaning schedules, etc).
- **Procedures** (e.g. cleaning, personnel hygiene, HACCP, sampling and analysis).
- **Instructions** (e.g. process instructions, cleaning instructions).
- The **quality manual** for the process or factory.

The processor must be ***registered under national food law*** as a processor of foods for human consumption.

4. PRODUCT SPECIFICATIONS

4.1 General requirements

Appearance: white or slightly yellow, no impurities or coloured particles.
Taste and smell: Typical.

4.2 Specific requirements

Dried Whole Milk must also comply with other requirements specified in table 1.

4.3 Additives

Only food additives listed in Codex Stand 207-1999 may be used and only within the limits specified.

4.4 Contaminants

Dried Whole Milk shall be free from objectionable matter; not contain any substances originating from micro-organisms or any other poisonous or deleterious substances such as anti-nutritional factors, heavy metals or pesticide residues, in amounts which may represent a hazard to health.

The products covered by this specification 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 the products covered by this Standard 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.

4.5 Hygiene

It is recommended that the products covered by the provisions of this standard 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).

4.6 Shelf life

It shall retain above qualities for at least 24 months from date of manufacture when stored dry at ambient temperatures prevalent in the country of destination. **Dried Whole Milk** must have been manufactured not more than one month before shipment date.

4.7 Fit for human consumption guarantee

Suppliers shall have to check the quality of their products and guarantee that **Dried Whole Milk** is '**fit for human consumption'**.

5. PACKAGING

Dried Whole Milk can be packed in multi-ply (4/5 ply) paper bags with a separate inner polyethylene bag, fit for export and harsh handling, of a net content of 25 kg. Inner liner must be heat sealed.
Bags must withstand to the breakage up to 6 drops (one drops each side of bags) following the standard drop test method (EN 277, ISO 7965-2 or equivalent).

Two (2%) spare bags printed as per requested marking must be shipped along with the cargo and included in the price.

Note: About 15-20 bags of silica gel of at least 1 kg each should be placed in each container in order to absorb moisture. In addition, craft paper should be laid to all sides of the container.

6. MARKING

As per contractual agreement

7. STORING

Dried Whole Milk must be stored under dry, ventilated and hygienic conditions.

8. ANALYTICAL REQUIREMENTS

The principal tests in table 1 must be performed in order to check if the quality **Dried Whole Milk** meets above requirements. Additional analyses shall be defined in case of further quality assessment is required.

Table 1: List of compulsory tests and reference methods

No	**Tests**	**Requirements**	**Reference methods** *(Or equivalent)*
1	Organoleptic characteristic	White or slightly yellow, no impurities or coloured particles. Typical smell and taste.	Sensorial examination
2	Moisture	Max. 3.0%	ISO 5537:2004
3	Protein in milk solids-non-fat*	Min. 34.0%	ISO 8968-1:2014
4	Fat	26.0- 42.0%	ISO 1736:2008
5	Titratable acidity (ml- 0.1 N NaOH)	Max. 18 ml/10 g solids-non-fat	ISO 6091:2010
6	Lactates (in non-fat dry matter)	Max. 150mg/100g	ISO 8069:2005
7	Phosphatase test	Negative	ISO 11816-1:2013
8	Insolubility index	Max. 0.5 ml (at 24 °C)	ISO 8156:2005
9	Scorched particles	Max. 15 mg (i.e. at least disc B)	ISO 5739:2003
10	Total bacterial count	Max. 50000 cfu/g	ISO 4833-1:2013
11	Coliforms	Negative in 1 g	ISO 4831:2006
12	Melamine	Max. 1.0 mg/kg	

** The water content does not include water of crystallization of the lactose; the milk solids-not-fat content includes water of crystallization of the lactose*