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National Standard of Food Safety of the People's Republic of China

GB 19644-2010

National food safety standard

Milk powder

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Issued by Ministry of Health
of the People's Republic of China

Preface

This standard is corresponding to the standard of CAC: Codex Stan 207-1999 Codex Standard for Milk Powders and Cream Powder. The consistency degree of this standard with Codex Stan 207-1999 is non-equivalent.

This standard replaced the part index of GB 19644-2005 Milk Powder Hygiene Standardand and GB/T 5410-2008 Milk Powder. In case of the index involved in GB/T 5410-2008 Milk Powder, this standard shall prevail.

In comparison with GB 19644-2005, the major changes of this standard are as follows:

— The name of standard is changed to “Milk powder”

— The application scope of this standard is modified;

— “Terms and definitions” is specified;

— The sensory requirement is modified;

— The requirement for whole milk powder added sugar is cancelled;

— The fat requirements for skimmed milk powder and partial skimmed milk powder are cancelled;

— The limit of “remade milk acidity” is added for milk powder products produced from ovine milk as raw material;

— The impurity requirement is added;

— The limits of contaminants is directly cited from the requirement of GB2762;

— The limits of mycotoxins is directly cited from the requirement of GB2761;

— The expressing way of microbiology parameters is modified;

— The requirement for nutrition enhancers is added;

This standard replaces all previous standards, those issued editions are:

— GB 19644-2005.

National food safety standard

Milk Powder

1. Scope

This standard applies to whole milk powder, skimmed milk powder, partial skimmed milk powder and formulated milk powder.

2. Normative reference

The following normative documents are absolutely necessarily for the application of this standard. For dated references, only the dated edition of the normative document referred to applies. For undated references, the latest edition including all the modified notes of the normative document referred to applies.

3. Terms and Definitions

3.1 milk powder

Milk powder means powder product produced from raw bovine milk (or ovine milk) as raw material.

3.2 formulated milk powder:

Formulated milk powder means powder product that produced from raw bovine milk or ovine milk or its processed products as the major ingredient, with addition of other ingredients, with or without addition of food additives and nutrition enhancers, and the content of milk solids is not less than 70% in final product.

4. Technical Requirements

4.1 Raw material requirements

4.1.1 Raw milk:

Raw milk shall be in accordance with the requirement of GB 19301.

4.1.2 Other raw materials:

Other raw materials shall be in accordance with the corresponding safety standard and related regulation.

4.2 Sensory requirements

Sensory requirements shall be in accordance with the requirements in Table 1.

Table 1 sensory requirements

Item	Requirement	Test method

	Milk powder	Formulated milk powder	
Color	Well-proportioned ivory yellow	The color it should have	Add moderate test sample into a 50ml beaker, and observe the color, structure and appearance of the test sample with nature daylight. Smell and taste after gargling with warm water
Taste and aroma	Natural milk aroma, no abnormal flavor	The taste and flavor it should have	
Structure and appearance	Dry and proportioned powder		

4.3 Physical- chemical requirements

Physical-chemical requirements should comply with Table 2.

Table 2 Physical-chemical requirements

Item	Limits		Test method
	Milk powder	Formulated milk powder	
Protein/(%) ≥	34%of MSNF[a]	16.5	GB 5009.5
Fat [b]/(%)≥	26.0	—	GB 5413.3
Remade milk acidity/(T) Bovine milk ≤ Ovine milk ≤	 18 7~14	 — —	GB 5413.34
Impurity/ (mg/kg) ≤	16	—	GB 5413.30
Moisture content/(%) ≤	5.0		GB 5009.3
a. Milk Solids Non Fat (%)=100%-milk fat(%)- moisture(%) b. Only apply to whole milk powder			

4.4 Limits of Contaminants

The limits of contaminants shall be in accordance with GB 2762.

4.5 Limits of Mycotoxins

The limits of mycotoxins shall be in accordance with GB 2761.

4.6 Microbiology requirements

The microbiology requirements should comply with regulations in Table 3.

Table 3 Microbiology requirements

Item	Sampling programs and limits(if not appointed, described as CFU/g)				Test method
	n	c	m	M	
Aerobic Plate Count [b]	5	2	50000	200000	GB4789.2
Coliforms	5	1	10	100	GB 4789.3 method of agar plate count
Staphylococcus aureus	5	2	10	100	GB 4789.3 method of agar plate count
Salmonella	5	0	0/25g	-	GB 4789.4
[a]: analysis and treatment of sample shall be in accordance with GB 4789.1 and GB 4789.18. [b]: does not apply to the products added active bacteria (aerobe and facultative anaerobe).					

4.7 Food additives and nutrition enhancers

4.7.1 The quality of food additives and nutrition enhancers shall be in accordance with corresponding standards and related regulations.

4.7.2 The using of food additives and nutrition enhancers shall be in accordance with GB 2760 and GB 14880.