

ICS
C



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

GB xxxx-xxxx

Replace GB19644-2005、GB5410-2008

Milk Powder

(Draft for proposal)

Issued onxx-xx-xxxx

Implemented on xx-xx-xxxx

**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 safety index of GB 19644-2005 Milk Powder Hygiene Standard and GB/T 5410-2008 Milk Powder

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 adjusted
- The limit of “Acidity” is added for ovine milk
- The limits of contaminants is directly cited from GB2762 “Maximum Levels of Contaminants in Food”
- The limits of mycotoxins is directly cited from GB2761 “Maximum levels of mycotoxins in Food”
- The “labeling” contents in chapter 8 is adjusted
- The expressing way of microbiology parameters is changed

This standard is proposed and interpreted by Ministry of Health of P.R. China.

This standard replaces all previous standard as follows:

- GB 5410-1985, GB 5410-1999, GB/T 5410-2008;
- GB 5411-1985;
- GB 5412-1985;
- GB 19644-2005.

Milk Powder

1. Scope

The standard stipulates the requirement of term and definition of milk powder for direct consumption or further processing, technical requirements, food additive or nutrition enhancer, production process, package, labels, storage & transportation, test method. This standard applies to the production, circulation and supervision of milk powders.

2. Normative Cited Documents

The clauses in the following documents became clauses of this standard through the quotation in this standard. For cited documents with date, all their subsequent modification (corrected contents are not included) or revision do not apply to this Standard. However, parties having reached an agreement based on cited standards with date are encouraged to study whether the latest versions of the cited documents with date are applicable. For cited documents without date, the latest version applies to this Standard.

GB 2760-1996	Hygienic standard for uses of food additives
GB 2761	Maximum levels of mycotoxins in Food
GB 2762	Maximum levels of contaminants in Food
GB 4789.2	Microbiological examination of foods, Determination of Aerobic Plate Count
GB 4789.3	Microbiological examination of food, Enumeration of Coliforms
GB 4789.4	Microbiological examination of food, Examination of Salmonella
GB 4789.18	Microbiological examination of food, Examination of milk & milk product
GB 4789.37	Microbiological examination of food, Enumeration of Staphylococcus aureus
GB 5009.5	Determination of protein in food
GB xxxx	Determination of fat in milk product and foods for Infant and young children
GB xxxx	Determination of acidity in milk and milk product
GB xxxx	Determination of impurity in milk and milk product
GB 5009.3	Determination of moisture in food
GB 7718	General Standard for the labeling of prepackaged foods
GB 12693	Good manufacturing practice for dairy product factory
GB 13432	General standard for the labeling of prepackaged foods for special dietary uses
GB 14880	Hygienic Standard for uses of food nutrient fortifier
GB 19301	Raw milk

3. Terms & Definitions

The following terms and definition apply to this standard.

3.1 milk powder: powder product produced from fresh bovine milk(or ovine milk)

3.2 formulated milk powder: powder produced using fresh bovine milk or ovine milk or its processed products as the major ingredient, with addition of other ingredients. The content of milk solids is not less than 70% in final products.

4. Technical Requirements

4.1 Raw material requirements

4.1.1 Fresh milk: should comply with GB 19301

4.1.2 Other materials: should comply with the corresponding safety standard and related regulation.

4.2 Sensory requirements

No foreign matters, no strange odor, no lump.

4.3 Physical- chemical requirements

Should comply with Table 1.

Table 1 Physical-chemical requirements

Item	Limits	
	Milk powder	Formulated milk powder
Protein/(%) ≥	34 of MSNF ^a	16.5
Fat ^b /(%)≥	26.0	—
Acidity of reconstituted milk/(T)		
Bovine milk ≤	18	—
Ovine milk ≤	7~14	—
Impurity/ (mg/kg) ≤	16	—
Moisture content/(%) ≤	5.0	
a. Milk Solids Non Fat=100-milk fat- moisture		
b. Not apply to skimmed milk and partial skimmed milk product		

4.4 Microbiology requirements

Should comply with regulations in Table 2.

Table 2 Microbiology requirements

Item	Sampling programs and limits
Aerobic Plate Count ^a	n=5,c=2,m=50000 cfu/g,M=200000 cfu/g
Coliforms	n=5,c=2,m=10cfu/g,M=100cfu/g
Salmonella	n=5,c=0,m=0cfu/25g
Staphylococcus aureus	n=5,c=2,m=10 cfu/g,M=100 cfu/g
a: Not include the products added with active bacteria (Aerobic and facultative anaerobic probiotics)	

4.5 Limits of Contaminants

Should comply with GB 2762.

4.6 Limits of Mycotoxins

Should comply with GB 2761.

5. Food Additives and Nutrient Fortifier

5.1 The quality of food additives and nutrient fortifier should comply with corresponding standards and related regulations.

5.2 The varieties and dosage of food additives and nutrient fortifier should comply with GB 2760 and GB 14880.

6. Processing

Should comply with GB 12693.

7. Packaging

The packaging container and material of product should comply with corresponding standard and related regulations.

8. Labeling

The labeling of prepackaged product should comply with GB 7718, GB 13432 or related state regulations.

9. Storage and Transportation

9.1 Storage

The product should be stored at dry, well-ventilated place, and should not be stored with poisonous, harmful, peculiar smelled, volatile, corrosive substances in same place.

9.2 Transportation

During transportation, product should avoid exposure to sun and rain. And transportation shouldn't be mixed with poisonous, harmful, peculiar smelled substances or with substances that affecting product quality.

10. Testing methods

10.1 Sensory requirements

Put appropriate amount of sample in a white flat plate, observe the color and organization state in natural light, then hear the smell, gargle with warm water, and then taste the flavor of the sample.

10.2 Physical-Chemical requirements

10.2.1 Protein: testing according to GB 5009.5.

10.2.2 Fat: testing according to GBxxxx.

10.2.3 Acidity: testing according to GBxxxx.

10.2.4 Impurity: testing according to GBxxxx.

10.2.5 Moisture: testing according to GB 5009.3.

10.3 Microbiology requirements

The apparatus and material for microbiology testing, sampling programs and handling of testing sample should accord with GB 4789.18.

10.3.1 Aerobic Plate Count:: according to testing method in GB 4789.2.

10.3.2 Coliforms: according to direct counting method in GB 4789.3.

10.3.3 Salmonella: according to testing method in GB 4789.4.

10.3.4 *Staphylococcus aureus*: according to testing method in GB 4789.37.