



# National Standard of the People's Republic of China

GB 19302-2010

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## National Food Safety Standard

### Fermented Milk

食品安全国家标准

发酵乳

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*DISCLAIMER: The English version is an unofficial translation of the original in Chinese for information and reference purposes only. In case of a discrepancy the Chinese original standard will prevail.*

## Foreword

This standard is based on Codex Stan 243-2003 (Revision 2008) Codex Standard for Fermented Milks. However, it is not equivalent to Codex Stan 243-2003 (Revision 2008) in conformity.

This standard supersedes GB 19302-2003 Hygienic Standard for Yoghurt and its first amendment, as well as some indexes in GB 2746-1999 Yoghurt.

For indexes that are included both in this standard and GB 2764-1999, this standard will take precedence.

Compared with GB 19302-2003, main changes are listed as below:

- The title is changed to “Fermented Milk”;
- The description of application scope is modified;
- The terms and definitions are further specified;
- The sensory index is revised;
- Requirement for fat in skimmed and partly skimmed products is deleted;
- Index of non-fat solids in flavored fermented milk is deleted;
- Requirement for total solid content is deleted;
- Limits of contaminants will directly refer to GB 2762;
- Limits of mycotoxins will directly refer to GB 2761;
- Representation of microorganism index is revised;
- Requirement for Shigella of pathogenic bacteria is deleted;
- Requirement for Lactobacilli count in products is revised;
- Requirement for nutrition enhancer is added.

This standard supersedes all earlier versions, including:

- GB 19302-2003

## **National Food Safety Standard**

### **Fermented Milk**

#### **1. Scope**

This standard applies to whole milk, skimmed and partly skimmed fermented milk.

#### **2. Normative references**

The normative references contain provisions which, through reference in this text, constitute provisions of this standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated reference documents, the latest version (including all its amendments) is applicable to this standard.

#### **3. Terms and definitions**

##### **3.1 Fermented milk**

Products made of raw cow or goat milk or milk powder as its main ingredient with reduced pH value, that is produced through the processes of sterilization and fermentation.

##### **3.1.1 Yoghurt**

Products made of raw cow or goat milk or milk powder as main ingredient produced through the processes of sterilization and fermentation, by the use of specific lactic acid bacteria, i.e. *S. thermophilus* and *L. bulgaricus* (*L. delbrueckii* subsp. *Bulgaricus*).

##### **3.2 Flavored Fermented Milk**

Products made of over 80% or more of raw cow or goat milk or milk powder as main ingredient with reduced pH value that is produced through the processes of sterilization and fermentation. The remaining composition may consist of other raw materials e.g. food additives, nutritional supplements, fruits, vegetables, grains and others, which can that can be added before or after the fermentation process.

##### **3.2.1 Flavored Yoghurt**

Products made of over 80% or more of raw cow or goat milk or milk powder produced through the processes of sterilization and fermentation, by the use of specific lactic acid bacteria, i.e. *S. thermophilus* and *L. bulgaricus* (*L. delbrueckii* subsp. *Bulgaricus*). The remaining composition may consist of other raw materials e.g. food additives, nutritional supplements, fruits, vegetables, grains and others, which can that can be added before or after the fermentation process.

#### 4. Technical requirements

##### 4.1 Ingredients requirements

4.1.1 Raw milk: Should comply with GB 19301.

4.1.2 Other Ingredients: Should comply with relevant safety standards and/or regulations.

4.1.3 Fermentation strains: Bacteria strains used in fermentation process should be listed in the positive list authorised by the State Council's administrative department for health and hygiene issues. This include *Lactobacillus bulgaricus* (*Lactobacillus delbrueckii* subsp. *Bulgaricus*), *Streptococcus thermophilus* and other cultures.

##### 4.2 Sensory requirements: Should comply with requirements in Table 1.

**Table 1 Sensory requirements**

Item	Requirement		Test method
	Fermented milk	Flavored fermented milk	
<b>Color</b>	Uniform milky white or light yellow color	Possesses the supposed color corresponding to the additional ingredient(s) used	Take appropriate amount of sample to 50mL beaker, observe the color and texture under natural light, smell and taste after rinsing mouth with warm water.
<b>Taste and flavor</b>	Taste and flavor unique to fermented milk	Possesses the supposed taste and aroma corresponding to the additional ingredient(s) used	
<b>Texture / Appearance</b>	The texture shall be fine and uniform; allowing for a minute amount of whey coagulation; flavored fermented milk displays texture corresponding to the ingredients added for flavoring		

##### 4.3 Physicochemical indexes: should comply with requirements in Table 2.

**Table 2 Physicochemical indexes**

Item	Requirement		Test method
	Fermented milk	Flavored fermented milk	
Fat <sup>a</sup> /(g/100g) ≥	3.1	2.5	GB 5413.3
Non-fat milk solids/(g/100g) ≥	8.1	-	GB 4313.39
Protein/(g/100g) ≥	2.9	2.3	GB 5009.5
Acidity/(°T) ≥	70.0		GB 5413.34
<sup>a</sup> only applicable to whole milk products.			

4.4 Contaminant Limits: Should comply with the requirements in GB2762.

4.5 Mycotoxin Limits: Should comply with the requirements in GB2761.

4.6 Microorganism Limits: Should comply with the requirements of Table 3

**Table 3 Microorganisms Limits**

Item	Sampling plan <sup>a</sup> and limits (if not specified, in CFU/g or CFU/mL)				Test method
	n	c	m	M	
Coliform	5	2	1	5	GB 4789.3
Staphylococcus aureus	5	0	0/25g(mL)	-	GB 4789.10
Salmonella	5	0	0/25g(mL)	-	GB 4789.4
Yeast ≤	100				GB 4789.15
Mould ≤	30				

<sup>a</sup> The analysis and treatment of samples should conform to GB 4789.1 and GB 4789.18.

4.7 Lactobacillus Count: should comply with provisions in Table 4

**Table 4 Lactobacillus Count**

Item	Limit [CFU/g (ml)]	Test Method
Lactobacillus Count <sup>a</sup> ≥	1×10 <sup>6</sup>	GB 4789.35

<sup>a</sup> products that have gone through heat treatment after the fermentation process will not be subjected to any requirements on the minimum Lactobacillus Count.

#### 4.8 Food additives and Nutrition Enhancers

4.8.1 The quality of food additives and nutrition enhancers should comply with relevant safety standards and regulations.

4.8.2 The use of food additives and nutrition enhancers should comply with requirements in GB 2760 and GB 14880.

#### 5. Others

5.1 Products that have gone through proper heat based treatment after the fermentation process should be labeled with the following Chinese terms such as: “xx 热处理发酵乳” (xx heat treated fermented milk), “xx 热处理风味发酵乳” (xx heat treated flavored fermented milk), “xx 热处理酸乳/奶” (xx heat treated yoghurt) or “xx 热处理风味酸乳/奶” (xx heat treated flavored yoghurt) should be labeled.

5.2 Product fully made of milk powder should be labeled with the Chinese terms “复原乳” or “复原奶” (reconstituted milk) adjacent to the product name; product made of raw cow (goat) milk and partly added with milk powder should be labelled with Chinese terms “含 xx%复原乳” or “含 xx%复原奶” (contain xx% reconstituted milk) adjacent to the product name.

Note: “XX%” refers to the mass of milk powder used as a percentage of the product’s total milk solid content.

5.3 The Chinese term “复原乳” (reconstituted dairy) or “复原奶”(reconstituted milk) and the product name should be labeled on the main displaying panel of the packaging and containers; these words shall be boldly indicated on the label with the height of the fonts used should not be less than one fifth of the height of the main display section.