



# National Standard of the People's Republic of China

GB 19646-2010

---

## National Food Safety Standard Cream, Butter and Anhydrous Milkfat

食品安全国家标准

稀奶油、奶油和无水奶油

- Date of Publication: 2010-03-26
- Date of Implementation: 2010-12-01
- Issued by: Ministry of Health

*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 standard 279-1971(Revision 1999, Amendment 2003, 2006), Codex Standard for Butter, Codex standard 280-1973 (Revision 1999, Amendment 2006), Codex Standard for Milkfat Products and Codex standard 288-1976 (Revision 2003, Amendment 2008), Codex Standard for Cream and Prepared Creams issued by CAC. However, it is non-equivalent to Codex Stan 279-1971 (Revision1999, Amendment 2003, 2006), Codex standard 280-1973 (Revision 1999, Amendment 2006) and Codex standard 288-1976 (Revision 2003, Amendment 2008) in conformity.

This standard supersedes GB 19646-2005 Hygienic standard for Cream and Butter and part of the indexes in GB/T 5415-2008 Cream. Indexes in GB/T 5415-2008 Cream which have been referred to in this standard should comply with this standard.

In comparison with GB 19646-2005 Hygienic standard for Cream and Butter, the major changes are as follows:

- The name of standard is changed to “Cream, Butter and Anhydrous MilkFat”;
- The description of application scope is modified;
- “Terms and definitions” is added;
- “Sensory index” has been revised;
- The acidity index of cream is added;
- The index of non-fat milk solid has been added;
- “Limit of Contaminants” will directly refer to GB2762;
- “Limits of Mycotoxins” will directly refer to GB2761;
- Representation of “microorganism index” is modified;
- Requirements for nutrition enhancer are added.

The superseded former versions are:

- GB 19646-2005

# National Food Safety Standard

## Cream, Butter and Anhydrous Milkfat

### 1. Scope

This standard applies to Cream, Butter and Anhydrous Milkfat.

### 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 Cream

Products with 10.0% - 80.0% fat content, of which the main ingredient is fat divided from milk, with or without adding other ingredients, food additives and nutrition enhancers.

#### 3.2 Butter

Products with no less than 80.0% fat content, of which the main ingredient is milk and/or cream (fermented or unfermented), with or without adding other ingredients, food additives and nutrition enhancers.

#### 3.3 Anhydrous Milkfat

Products with no less than 99.8% fat content, of which the main ingredient is milk and/or butter or cream (fermented or unfermented), with or without adding other ingredients, food additives and nutrition enhancers.

### 4. Technical Requirements

#### 4.1 Raw material requirements

4.1.1 Fresh milk: should comply with GB19301

4.1.2 Other materials: should comply with the corresponding safety standard and relevant regulations.

**4.2 Sensory requirements: should comply with Table 1****Table 1 Sensory requirements**

Item	Requirements	Testing method
Color	Uniform milky white, creamy yellow or the color corresponding to that of the auxiliary materials	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.
Taste and Aroma	With taste and aroma corresponding to that of cream, butter, anhydrous milkfat and auxiliary materials; without abnormal odors	
Texture and Appearance	Uniform texture, may have sediment from certain auxiliary materials, no visible extrinsic contaminant	

**4.3 Physicochemical index: should comply with Table 2****Table 2 Physicochemical index**

Item	Index			Testing method
	Cream	Butter	Anhydrous milkfat	
Moisture/ (%) ≤	-	16.0	0.1	Butter tested according to GB 5009.3; Anhydrous milkfat tested according to Karl Fischer Method in GB 5009.3
Fat / (%) ≥	10.0	80.0	99.8	GB 5413.3 <sup>a</sup>
Acidity <sup>b</sup> / (°T) ≤	30.0	20.0	-	GB 5413.34
MSNF <sup>c</sup> / (%) ≤	-	2.0	-	-

<sup>a</sup> Fat content of anhydrous milkfat (%) = 100% - moisture (%)  
<sup>b</sup> Not applicable to the products made of fermented cream  
<sup>c</sup> MSNF (%) = 100% - fat (%) - moisture (%) (subtract salt content for salted butter)

**4.4 Limits of contaminants: should comply with GB 2762****4.5 Limits of mycotoxins: should comply with GB 2761****4.6 Limits of microorganism**

4.6.1 Cream products produced from canning process or UHT sterilization process should comply with the requirement of commercial sterility, and be tested according to GB/T 4789.26.

4.6.2 Other products should comply with Table 3.

**Table 3 Limits of microorganism**

Item	Sampling plan <sup>a</sup> and limit (indicated by CFU/g or CFU/mL if not specified)				Testing method
	n	c	m	M	
Aerobic plate count <sup>b</sup>	5	2	10,000	100,000	GB 4789.2
Coliforms	5	2	10	100	GB 4789.3 Plate Count
Staphylococcus aureus	5	1	10	100	GB 4789.10 Plate Count
Salmonella	5	0	0/25g (ml)	-	GB 4789.4
Moulds ≤	90				GB 4789.15
<p>a The analysis and treatment of samples should conform to GB 4789.1 and GB 4789.18.</p> <p>b Not applicable to the products made of fermented cream.</p>					

#### 4.7 Food additives and nutrition enhancers

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

4.7.2 The use of food additives and nutrition enhancers should comply with GB 2760 and GB 14880.