



# National Standard of the People's Republic of China

GB 5420-2010

## National Food Safety Standard

### Cheese

食品安全国家标准

干酪

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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

The Standard is based on Codex Standard 283-1978 (Revision 1999, Amendment 2006, 2008) General Standard for Cheese. However, it is non-equivalent to Codex Standard 283-1978 (Revision 1999, Amendment 2006, 2008) in conformity.

The Standard replaces the safety indicators in GB 5420-2003 “Hygienic Standard for Cheese” and GB/T 21375-2008 “Cheese”.

Compared with GB 5420-2003, the main changes are made to the Standard as follows:

- The title of the Standard “Hygiene Standard for Cheese” is renamed as “Cheese”;
- Terms and definitions of the product is amended;
- Physical and chemical index is removed;
- The limits of contaminants was referenced directly from GB 2762;
- The limits of mycotoxins was referenced directly from GB 2761;;
- Representation of microorganism index is revised;
- Index of listeria monocytogenes is added to the microorganism index;
- Requirements on nutrition fortifiers are added.

The replaced former editions are:

- GB 5420-1985, GB 5420-2003.

# National food safety standard

## Cheese

### 1. Scope

The standard applies to ripened cheese, mold ripened cheese, and unripened cheese.

### 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 Cheese

Cheese refers to a kind of dairy product in a ripened or unripened, soft, semi-rigid, rigid or especially rigid form, possibly having a coat, whose proportion of whey protein/casein does not exceed the ratio in milk in the total product composition. Cheese is produced through the following processes:

**(a)** Milk, skimmed milk, partly skimmed milk, ripened cream, single cream, whey cream, and one or more proteins in buttermilk is curdled or partially curdled under the action of rennet or other adequate milk coagulants to drain a part of whey from the curd. The preparation is a process of concentration of milk protein (especially casein), with the purpose of increasing the content of whey protein to significantly higher levels than that of the base protein.

**(b)** The process includes curdling of proteins in milk and/or dairy products, it then endows the final products with physical, chemical and sensory characteristics which are similar to the description in step (a).

#### 3.1.1 Ripened cheese

The ripened cheese refers to the coagulation in the process, and it cannot be consumed immediately after being produced. It must be subject to biochemical and physical processes after being stored for a certain period of time at specified temperature in order to produce its special cheese flavor.

### 3.1.2 Mold ripened cheese

Mold ripened cheese refers to the cheese which is ripened by promoting the mold within the cheese and(or) on the surface of the cheese.

### 3.1.3 Unripened cheese

Unripened cheese (including fresh cheese) refers to the cheese that can be consumed immediately after being prepared.

## 4. Technical Requirements

### 4.1 Requirements for raw materials

4.1.1 Raw milk: should comply with the requirements of GB 19301.

4.1.2 Other raw materials: should comply with relevant standards and/or regulations.

4.2 Sensory requirements: should conform to the requirements in Table 1.

**Table 1 Sensory indices**

Item	Requirements	Testing method
Color	Possess the color that this kind of products should have.	Take appropriate amount of samples into 50ml beaker, and observe the color and texture under natural light. Smell it and feel its taste after rinsing the mouth with warm water.
Taste and aroma	Possess the taste and aroma that the products should have.	
Texture	Uniform and fine in texture, possesses firmness of this kind of products.	

### 4.3 Contaminants Limits

It should conform to the requirements of GB 2762.

### 4.4 Mycotoxin Limits

It should conform to the requirements of GB 2761.

### 4.5 Microorganism Limits:

It should conform to the requirements listed in Table 2.

**Table 2 Index of microorganism**

Item	Sampling plan <sup>a</sup> and limits (if not specified, in CFU/g)				Test method
	n	c	m	M	
Coliforms	5	2	100	1,000	GB 4789.3
Staphylococcus aureus	5	2	100	1,000	GB 4789.10
Salmonella	5	0	0/25g	-	GB 4789.4
Listeria monocytogenes	5	0	0/25g	-	GB 4789.30
Yeast <sup>b</sup> ≤	50				GB 4789.15
Mould <sup>b</sup> ≤	50				
<sup>a</sup> The analysis and treatment of samples should conform to GB 4789.1 and GB 4789.18. <sup>b</sup> Not applicable to mold ripened cheese.					

#### 4.6 Food Additives and Nutrition Fortifiers

4.6.1 The quality of food additives and nutrition fortifiers shall conform to relevant standards and regulations.

4.6.2 The use of food additives and nutrition fortifiers shall conform to GB2760 and GB14880.