



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

GB XXXX-XXXX

Substitute GB 5420-2003, GB/T 21375-2008

Cheese

(Draft for Comment)

Issued on XXXX-XX-XX

Implemented on XXXX-XX-XX

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

Preface

The Standard corresponds to Codex Stan 283-1978 *General Standard for Cheese*, the Standard and Codex Stan 283-1978 are not equivalent one another in terms of consistency. The Standard substitutes the safety indicators in GB 5420-2003 “Hygienic Standard for Cheese” and GB/T 21375-2008 “Cheese”.

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

- the title of the Standard “Hygiene Standard for Cheese” is modified to “Cheese”;
- the scope of application is modified to “applicable to all products which can be directly edible or reprocessed, conformable to the definition of cheese in the Standard”;
- terms and definitions of the product is supplemented;
- physical and chemical indices are deleted;
- index of pollutant is modified: directly quoted from GB 2762 “Limit of Pollutants in Foods”;
- index of aflatoxin is modified: directly quoted from GB 2761 “Limit of Fungimycin in Foods”;
- representation of microorganism index is modified;
- index of *listeria monocytogenes* is supplemented into the microorganism index.

The Standard is proposed and put under centralized management by the Ministry of Health of the People’s Republic of China.

The replaced former editions are:

- GB 5420-1985, GB 5420-2003;
- GB/T 21375-2008.

Cheese

1. Scope

The Standard stipulates the terms and definitions, technical requirements, food additives and nutrition fortifiers, production and processing, packing, identification, storage and transport, requirements of inspection method for cheese.

The Standard is applicable to the production, circulation, supervision and management of cheese.

2. Normalized References

The clauses of the following reference are incorporated into the Standard by reference. For dated references, subsequent amendments to (exclude mistakes), or revisions of any of these publications do not apply. However, the parties who conclude an agreement according to the Standard are encouraged to discuss whether the latest edition can be used or not. For undated references, the latest edition of the normative document referred to applies.

GB 2760	Hygienic Standard for Food Additives
GB 2761	Limit of Fungimycin in Foods
GB 2762	Limit of Pollutants in Foods
GB 4789.3	Microbiological Examination in Foods – Counting for Coliform
GB 4789.4	Microbiological Examination in Foods – Salmonella
GB 4789.15	Microbiological Examination in Foods – Counting for Fungi and Yeast
GB 4789.18	Microbiological Examination in Foods – Milk and Dairy Products
GB 4789.30	Microbiological Examination in Foods – Listeria Monocytogenes
GB 4789.37	Microbiological Examination in Foods – Staphylococcus Aureus
GB 7718	General Rule for Pre-packaged Foods Labels
GB 5009.5	Determination of Protein in Foods
GB 12693	Good Manufacturing Practice for of Dairy Enterprises
GB 14880	Hygienic Standard for Nutrition Fortifiers in Foods
GB 19301	Raw Milk

3. Terminology and Definitions

The following terms and definitions are adopted in the Standard.

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 ratio of whey protein/casein does not exceed the corresponding ratio in milk. Cheese is prepared with a method as follows:

(a) milk, skimmed milk, partly skimmed milk, ripened cream, whey, 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 (particularly of the portion of casein), namely, the content of protein in cheese is significantly higher than that in raw material;

(b) the process includes curdling of proteins in milk and/or dairy products, it then gives physical and chemical characters of the finished products or similar to that described in step (a).

3.2 Ripened cheese

The ripened cheese refers to the coagulation in the process, yet not directly edible immediately after prepared, which must be subject to biochemical and physical processes after stored for a certain period of time at adequate temperature to produce cheese having the cheese flavor.

3.3 Mold ripened cheese

Mold ripened cheese refers to the cheese which is ripened by promotion with growth of the mold through interior of cheese and/or surface of the cheese.

3.4 Unripened cheese

Unripened cheese (including fresh cheese) refers to the cheese directly edible immediately after being prepared.

4. Technical Requirements

4.1 Requirements for raw materials

4.1.1 Raw milk: be subject to the requirements of GB 19301.

4.1.2 Other raw materials: be subject to related standards and relevant provisions.

4.2 Sensory indices

It should conform to the provisions in Table 1.

Table 1 Sensory indices

Item	Requirements
Color	It possesses its color that this kind of products should have.
Texture	Fine texture, consistency in texture, having its hardness of this kind of products.
Taste and flavor	It possesses its taste and flavor that the products should have.

4.3 Limit of pollutants

It should conform to the provisions of GB 2762.

4.4 Limit of fungimycin

It should conform to the provisions of GB 2761.

4.5 Index of microorganism

It should conform to the provisions of Table 2.

Table 2 Index of microorganism

Item	Plan of sampling and limit
Coliform	$n=5, c=2, m=100 \text{ cfu/g}, M=1000 \text{ cfu/g}$
Staphylococcus aureus	$n=5, c=2, m=100 \text{ cfu/g}, M=1000 \text{ cfu/g}$
Salmonella	$n=5, c=0, m=0 \text{ cfu/25g}$
Listeria monocytogenes	$n=5, c=0, m=0 \text{ cfu/25g}$
Yeast ^a /(cfu/g) ≤	50
Fungi ^a /(cfu/g) ≤	50
^a mold ripened cheese is not included.	

5. Food Additives and Nutrition Fortifiers

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

5.2 The species and application amount of food additives shall conform to GB 2760, and nutrition fortifiers shall meet the regulations of GB 14880.

6. Production and Processing

The requirements for production and processing shall conform to the regulations of GB 12693.

7. Package

Packing containers and material shall conform to relevant hygiene standards and regulations.

8. Identification

Identification of products should conform to the provisions of GB 7718 or GB 13432, and the State's regulations.

9. Storage and Transportation

9.1 Storage

The products shall be kept at places with a temperature of 2-12°C or as required for the product itself. The products can not be mix stored with toxic, harmful, odorous, volatile and corrosive substances.

9.2 Transportation

The products shall be kept away from direct sunlight and rain during transport. The products can not be mix transported with toxic, harmful, odorous substances or substances that may affect the product quality. The temperature during transportation shall be maintained at the level conformable to that of storage.

10. Method of Inspection

10.1 Sensory indices

10.1.1 Color and texture: sample is cut before subject to observing the color and texture under the natural light.

10.1.2 Taste and flavor: sample is first smelled, followed by tasting it.

10.2 Microorganism index

The devices and materials for examination of microorganism index, sampling plan and handling of examined samples shall be subject to GB 4789.18.

10.2.1 Coliform: examined with a direct counting method as specified in GB 4789.3.

10.2.2 Yeast and fungi: examined in accordance with GB 4789.15.

10.2.3 Salmonella: examined in accordance with GB 4789.4.

10.2.4 Staphylococcus aureus: examined in accordance with GB 4789.37.

10.2.5 Listeria monocytogenes: examined in accordance with GB 4789.30.