



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 19646-2025

Replacing 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

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2 Terms and definitions

2.1.1 cream: product obtained from the fat-containing fraction separated from raw milk, with or without the addition of food additives, processed to a fat content of 10.0 g per 100 g to 80.0 g per 100 g.

2.1.2 recombined cream: product made from one or more of raw milk, cream, butter and anhydrous milkfat as the main raw material, with one or more of other raw materials other than non-milk fat, food additives and nutritional fortification substances, processed to a fat content of 10.0 g per 100 g to 80.0 g per 100 g.

2.2 butter: product made from one or more of raw milk, cream and anhydrous milkfat as the main raw material, with or without other raw materials other than non-milk fat and food additives, processed to a fat content of not less than 80.0 g per 100 g.

2.3 anhydrous milkfat: product made from one or more of raw milk, cream and butter, with or without food additives, processed to a fat content of not less than 99.8 g per 100 g.

3.1 Raw material requirements

Raw milk is to comply with GB 19301.

Other raw materials are to comply with the corresponding food standards and the relevant

provisions.

3.2 Sensory requirements

Table 1 fixes three sensory items. The colour is a uniform milky white or milky yellow, or the colour proper to the auxiliary materials used. The taste and odour are those proper to cream, recombined cream, butter or anhydrous milkfat, or to the auxiliary materials, without off odours. The state is substantially uniform, sediment from the auxiliary materials being allowed, and free of foreign matter visible to normal sight.

The method is the same for all three: place a suitable quantity of the sample in a 50 mL beaker, observe the colour and the texture under natural light, smell it, rinse the mouth with warm boiled water and taste it.

3.3 Physical and chemical indexes

Table 2 has three columns of index values, the first shared by cream and recombined cream, the second for butter and the third for anhydrous milkfat.

Moisture, in grams per 100 g, is not applicable to cream and recombined cream, is to be not greater than 16.0 for butter and not greater than 0.1 for anhydrous milkfat. Butter is tested by GB 5009.3 and anhydrous milkfat by the Karl Fischer method of GB 5009.3.

Fat, in grams per 100 g, is to be not less than 10.0 for cream and recombined cream, not less than 80.0 for butter and not less than 99.8 for anhydrous milkfat, tested by GB 5009.6; for anhydrous milkfat it may be obtained as 100 minus the moisture content in grams per 100 g.

Acidity, in degrees Thorner, is to be not greater than 30.0 for cream and recombined cream and not greater than 20.0 for butter, and is not applicable to anhydrous milkfat; the method is GB 5009.239. A footnote states that the acidity index does not apply to products whose production involves a fermentation or an acid adjustment step.

3.4 Limits of contaminants, mycotoxins and microorganisms

Contaminant limits are to comply with GB 2762 and mycotoxin limits with GB 2761.

Cream products made by a commercially sterile process are to meet the requirements for commercial sterility, tested by the method of GB 4789.26.

For products made by other processes, the pathogen limits are to comply with GB 29921 and the other microbiological limits with Table 3. Table 3 uses a sampling plan and limits expressed, unless otherwise indicated, in colony forming units per gram. The total plate count has n equal to 5, c equal to 2, m equal to 10 000 and M equal to 100 000, tested by GB 4789.2. Coliforms have n equal to 5, c equal to 2, m equal to 10 and M equal to 100, tested by GB 4789.3. Moulds are to be not more than 90, tested by GB 4789.15. A footnote

states that the sampling and the handling of the samples follow GB 4789.1 and GB 4789.18, and a second footnote that the total plate count does not apply to products whose production involves a fermentation step.

3.6 Food additives and nutritional fortification substances

The use of food additives is to comply with GB 2760.

The use of nutritional fortification substances is to comply with GB 14880.

4 Other

The label of a cream product is to state the product category. Fermented cream and fermented recombined cream are to be marked as such; cream and recombined cream whose acidity has been adjusted artificially are to be marked as acidified cream and acidified recombined cream.

Butter may also be called huangyou, that is butter in the sense of the yellow fat product, and anhydrous milkfat may also be called anhydrous butter or anhydrous milk fat.

R Relationship to previous standards

The foreword states that this document replaces GB 19646-2010, National food safety standard - Cream, butter and anhydrous milkfat.

The main changes recorded against that edition are: the terms and definitions were modified; the sensory requirements were modified; the physical and chemical indexes were modified; the microbiological limits were modified; and Clause 4, Other, was added.