



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

GB 25190-2010

Replacing GB 19645-2005

National food safety standard - Sterilized milk

食品安全国家标准 灭菌乳

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
 - 3.1 Ultra high-temperature milk
 - 3.2 Retort sterilized milk
- 4 Technical requirements
 - 4.1 Raw material requirements
 - 4.2 Sensory requirements
 - 4.3 Physical and chemical indexes
 - 4.4 Limits of contaminants
 - 4.5 Limits of mycotoxins
 - 4.6 Microbiological requirements
- 5 Other

1 Scope

This standard applies to whole fat, skimmed and partly skimmed sterilized milk.

2 Normative references

The documents cited in this standard are indispensable to its application. For dated references, only the edition bearing that date applies to this standard. For undated references, the latest edition, including all amendments, applies.

The clause carries this introductory wording only: no document is listed under it in the printed text, although Clause 4 refers normatively to GB 19301, GB 19644, GB 2762, GB 2761, GB/T 4789.26 and to the test methods GB 5413.3, GB 5009.5, GB 5413.39 and GB 5413.34.

3 Terms and definitions

3.1 Ultra high-temperature milk: a liquid product made from raw cow or goat milk, with or without the addition of reconstituted milk, heated in a state of continuous flow to at least 132 °C and held there for a very short time to sterilize it, then made up by aseptic filling and other operations.

3.2 Retort sterilized milk: a liquid product made from raw cow or goat milk, with or without

the addition of reconstituted milk, whether or not preheated, filled and sealed and then sterilized and otherwise processed.

4 Technical requirements

4.1 Raw material requirements. 4.1.1 Raw milk shall comply with GB 19301. 4.1.2 Milk powder shall comply with GB 19644.

4.2 Sensory requirements shall comply with Table 1. Table 1 has three columns - item, requirement and test method - and covers three items. Colour and lustre: milky white or slightly yellow. Taste and odour: has the flavour proper to milk, with no off-flavour. Texture: a uniform and consistent liquid, free of clots, free of sediment and free of foreign matter visible to normal eyesight. One test method is given for all three items: place a suitable amount of the sample in a 50 mL beaker, observe the colour and the texture under natural light, smell the odour, rinse the mouth with warm boiled water and taste.

4.3 Physical and chemical indexes shall comply with Table 2. Table 2 has three columns - item, index and test method. Fat, in g per 100 g, at least 3.1, tested by GB 5413.3, with footnote a stating that the fat requirement applies only to whole fat sterilized milk. Protein, in g per 100 g, at least 2.9 for cow milk and at least 2.8 for goat milk, tested by GB 5009.5. Non-fat milk solids, in g per 100 g, at least 8.1, tested by GB 5413.39. Acidity, in degrees Thorner, from 12 to 18 for cow milk and from 6 to 13 for goat milk, tested by GB 5413.34.

4.4 Limits of contaminants shall comply with GB 2762.

4.5 Limits of mycotoxins shall comply with GB 2761.

4.6 Microbiological requirements: the product shall meet the requirements for commercial sterility, tested by the method laid down in GB/T 4789.26.

5 Other

5.1 Ultra high-temperature milk made from raw cow or goat milk alone shall carry, on the main display panel of the package and immediately next to the product name, the Chinese wording for pure cow milk or pure goat milk, in characters no smaller than the type size of the product name and of a height no less than one fifth of the height of the main display panel.

5.2 Sterilized milk produced entirely from milk powder shall be marked, immediately next to the product name, with the Chinese wording for reconstituted milk; sterilized milk produced by adding part milk powder to raw cow or goat milk shall be marked, immediately next to the product name, with the Chinese wording for contains XX % reconstituted milk. Note: XX % is the mass fraction of the added milk powder in the total milk solids of the sterilized milk.

5.3 The wording for reconstituted milk shall be marked on the same main display panel of the packaging container as the product name; the marking shall be conspicuous, in

characters no smaller than the type size of the product name and of a height no less than one fifth of the height of the main display panel.

A1 Amendment No. 1 to GB 25190-2010

Amendment No. 1 was approved by the National Health Commission of the People's Republic of China and the State Administration for Market Regulation in announcement No. 2 of 16 March 2025 and takes effect from 16 September 2025.

In Clause 3, the definition of 3.1 ultra high-temperature milk is changed from a liquid product made from raw cow or goat milk, with or without the addition of reconstituted milk, heated in a state of continuous flow to at least 132 °C and held there for a very short time to sterilize it, then made up by aseptic filling and other operations, to a liquid product made from raw cow or goat milk, heated in a state of continuous flow to at least 132 °C and held there for a very short time to sterilize it, then made up by aseptic filling and other operations.

The definition of 3.2 retort sterilized milk is changed from a liquid product made from raw cow or goat milk, with or without the addition of reconstituted milk, whether or not preheated, filled and sealed and then sterilized and otherwise processed, to a liquid product made from raw cow or goat milk, whether or not preheated, filled and sealed and then sterilized and otherwise processed.

In 4.1 raw material requirements, item 4.1.2, milk powder shall comply with GB 19644, is deleted.

In Clause 5 Other, both 5.2 and 5.3, the two provisions on marking reconstituted milk, are deleted.

A2 Amendment No. 2 to GB 25190-2010

Amendment No. 2 was approved by the National Health Commission of the People's Republic of China and the State Administration for Market Regulation in announcement No. 6 of 2 September 2025 and takes effect from the date of approval.

In 4.3 physical and chemical indexes, the acidity requirement of Table 2 is changed. It read: acidity in degrees Thorner, cow milk from 12 to 18 and goat milk from 6 to 13, test method GB 5413.34. It now reads: acidity in degrees Thorner, cow milk from 10 to 18 and goat milk from 8 to 20, test method GB 5009.239.

The Chinese wording for the second row changes at the same time, from the general term for goat milk to the term for milk of the goat proper; both are rendered goat milk in English.

R Relationship to previous standards

The foreword states that this standard replaces GB 19645-2005 Hygienic standard for

pasteurized milk and sterilized milk, together with part of the indexes of GB 5408.2-1999 Sterilized milk; where an index of GB 5408.2-1999 is covered by this standard, this standard prevails.

The main changes with respect to GB 19645-2005 are listed in the foreword: the hygienic standard for pasteurized and sterilized milk was split into three standards, on pasteurized milk, on sterilized milk and on modified milk, this one being the standard for sterilized milk; the description of the scope was revised; the terms and definitions were made explicit; the sensory indexes were revised; the fat requirement for skimmed and partly skimmed products was removed; a protein requirement for goat milk was added; the limit requirement for the acidity value among the physical and chemical indexes was changed into a range; the veterinary drug residue indexes were removed; the pesticide residue indexes were removed; the limits of contaminants now refer directly to GB 2762; the limits of mycotoxins now refer directly to GB 2761; the food additive requirements were removed; and the marking provisions were revised.

The foreword records the previous editions of the standard replaced as: GB 19645-2005.