China - Peoples Republic of

Post: Beijing

National Dairy Standard - Fermented Milk

Report Categories:
FAIRS Subject Report

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Report Highlights:
On November 20, 2009, China notified the WTO of "National Food Safety Standard of the People’s Republic of China for Fermented Milk" as SPS/N/CHN/129. This standard relates to the quality specifications of fermented milk products. The date for submission of final comments to the WTO is January 1, 2010. The proposed date of entry into force has not been specified.

Executive Summary:
On November 20, 2009, China notified the WTO of "National Food Safety Standard of the People’s Republic of China for Fermented Milk" as SPS/N/CHN/129. This standard relates to the quality specifications of fermented milk products. The date for submission of final comments to the WTO is January 1, 2010. The proposed date of entry into force has not been specified.

According to the WTO notification, “This standard applies to the production, circulation, supervision
and management of fermented milk. It specifies the terms and definitions, technical requirements, food additives and nutrition fortifier, as well as the requirements of production process, packaging, labeling, storage, transportation and testing method for fermented milk.”

Thanks go to the consortium of industry and 3rd country Embassies in Beijing for their assistance in translating and reviewing this standard.

This report contains an UNOFFICIAL translation of National Standard on Fermented Milk.

**General Information:**

BEGIN TRANSLATION

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

GB XXXX-XXXX  
Substitute GB2746-1999, GB19302-2003

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**Fermented Milk**

*(Draft for Comment)*

Issued on XXXX-XX-XX  Implemented on XXXX-XX-XX

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**Preface**


Compared with the GB 19302-2003, main changes are made to the Standard as follows:

- the title of the Standard is modified to “Fermented milk”;

- the scope of application of the Standard is modified;

- the terms and definitions of the product are revised;
- the description of product texture is revised;
- index of fat in skimmed and partly skimmed products is no longer required;
- index of non-fat solids in modified yoghurt is deleted;
- index of total solid content is deleted;
- limit of fungimycin is directly quoted from GB 2761;
- limit of pollutant in product supplemented is directly quoted from GB 2762;
- representation of microorganism index is modified;
- identification of heat treated product after fermented is supplemented;

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/T 2746-1985, GB 2746-1999;

Fermented Milk

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 examination method for fermented milk.
The Standard is applicable to the production, circulation, supervision and management of fermented milk.

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
3. Terminology and Definitions

The following terms and definitions are adopted in the Standard.

3.1 Yoghurt
A product made of raw cow milk and goat milk or dry milk through a procedure of pasteurization and fermentation by inoculating streptococcus thermophilus and lactobacillus bulgaricus.

3.2 Modified yoghurt
A product made of over 80% of raw cow milk and goat milk or dry milk through the procedures of pasteurization and fermentation by inoculating streptococcus thermophilus and lactobacillus bulgaricus with or without adding food additives, nutrition fortifiers, garden stuff and cereals, etc. before or after fermented.

3.3 Fermented milk
A product made of raw cow milk and goat milk or dry milk by decreasing pH value after pasteurization and fermentation.

3.4 Modified fermented milk
A product made of 80% of raw cow milk and goat milk or dry milk by decreasing pH value after pasteurization and fermentation and inoculating streptococcus thermophilus and lactobacillus bulgaricus with or without adding food additives, nutrition fortifiers, garden stuff and cereals, etc. before or after fermentation.
The products mentioned above shall contain active lactobacillus within the quality assurance period. If the fermented product is subject to heat treatment, the index of viable count is no longer required.

4. Requirements of Indices

4.1 Requirements for raw materials
4.1.1 Raw milk: be subject to GB 19301.
4.1.2 Other raw materials: be subject to relevant safety standards and provisions.
4.1.3 Microbial strain for fermentation: species of streptococcus thermophilus and lactobacillus bulgaricus, or others approved by the Health Administrative Department of the State Council.

4.2 Sensory indices
It shall conform to the provisions in Table 1.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoghurt, fermented milk.</td>
<td>Modified yoghurt, modified fermented milk.</td>
</tr>
<tr>
<td>Color</td>
<td>Consistency in color, presenting in white or yellowish.</td>
</tr>
<tr>
<td>Taste and flavor</td>
<td>The taste and flavor that the product shall originally have.</td>
</tr>
<tr>
<td>Texture</td>
<td>The product has its texture that shall have.</td>
</tr>
</tbody>
</table>

4.3 Physicochemical indices
Physicochemical indices shall conform to the provisions in Table 2.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat(^a)/(g/100g) ≥</td>
<td>3.1  2.5</td>
</tr>
<tr>
<td>Non-fat solids/(g/100g) ≥</td>
<td>8.1  -</td>
</tr>
<tr>
<td>Protein/(g/100g) ≥</td>
<td>2.9  2.3</td>
</tr>
<tr>
<td>Acidity/(°T) ≥</td>
<td>70.0</td>
</tr>
</tbody>
</table>

\(^a\) Not applicable to skimmed or partly skimmed products

4.4 Limit of pollutants
Limit of pollutants shall conform to the provisions of GB 2762.

4.5 Limit of fungimycin
Limit of fungimycin shall conform to the provisions of the GB 2761.

4.6 Index of microorganism
Index of microorganism shall conform to the provisions of Table 3.

<table>
<thead>
<tr>
<th>Item</th>
<th>Plan of sampling and limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coliform</td>
<td>n=5, c=2, m=1cfu/g, M=5cfu/g</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>n=5, c=0, m=0cfu/25g</td>
</tr>
<tr>
<td>Salmonella</td>
<td>n=5, c=0, m=0cfu/25g</td>
</tr>
<tr>
<td>Yeast/(cfu/g) ≤</td>
<td>100</td>
</tr>
<tr>
<td>Fungi/(cfu/g) ≤</td>
<td>30</td>
</tr>
</tbody>
</table>

4.6.2 Microbial content of lactobacillus
Microbial content of lactobacillus shall conform to the requirements in Table 4.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microbial content of lactobacillus /(cfu/g)</td>
<td>$1 \times 10^6$</td>
</tr>
</tbody>
</table>

Note 1: The microbial content of lactobacillus for heat treated products after fermented is no longer required.

5. Food additives and nutrition fortifiers

5.1 The quality of food additives and nutrition fortifiers shall conform to the related standard and relevant regulations.
5.2 The species and application amount of food additives shall conform to GB 2760, while the nutrition fortifiers shall meet the regulations of GB 14880.

6. Production and processing
Requirement for hygiene during the production and processing shall conform to the regulations of GB 12693.

7. Packaging
The materials of packaging containers shall conform to relevant standards and stipulations.

8. Identification

8.1 Identification of products shall conform to the provisions of GB 7718, GB 13432 and the State’s regulations.
8.2 The Chinese term “热处理酸乳” or “热处理发酵乳” shall be identified for heat treated yoghurt
after fermentation or using other fermented milk.

8.3 Yoghurt fully made of dry milk shall be identified with the Chinese term “复原乳” or “复原奶” (“reconstituted milk”) at a location adjacent to the name of the product. Yoghurt made of raw milk or partly added to dry milk shall be identified with the Chinese term “含 XX%复原乳” or “含 XX%复原奶” (“XX% reconstituted milk”) at location adjacent to the name of the product. “XX%” designates a mass fraction of dry milk added in the full milk solid of the yoghurt. “复原乳” (reconstituted) shall be identified on the same main display plane of the package; reconstituted shall be boldly indicated with its font size no less than that of the product name and its font height no less than one fifth of the main displaying plane.

9. Storage and Transportation

9.1 Storage
The yoghurt products shall be stored at 2-10 degrees Celsius. The heat treated products after fermented may be kept at room temperature. The products can not be mix stored with toxic, harmful, odorous, volatile, and corrosive substances.

9.2 Transportation
The yoghurt products shall be transported at 2-10 degrees Celsius, and the heat treated products after fermented shall be transported under the closed condition. It 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.

10. Method of Examination

10.1 Sensory indices
10.1.1 Color and texture: an adequate amount of sample is put in a 50mL beaker for observing its color and texture under the natural light.
10.1.2 Taste and flavor: an adequate amount of sample is put in a 50mL beaker for smelling first, followed by gargling with lukewarm water before tasting it.
10.2 Physicochemical indices
10.2.1 Fat: determined with a method specified in GB XXXX.
10.2.2 Non-fat solids:
10.2.2.1 Method I
20g of refined marine sand is put into a glass dish in a diameter of 5-7cm, dried at 95-105°C for 2h, and
then cooled at a desiccator for 0.5h before weighing it, repeated drying until its weight becomes constant, then measuring 5.0mL sample to a container in a constant weight, weighing it before putting it on a water bath to evaporate it to dryness, followed by wiping out the water spot outside of the dish, and then drying at 95-105°C for 3h, cooled at a desiccator for 0.5h before weighing it and dried again at 95-105°C for 1h, followed by weighing after it cooled until the difference in mass between two weights measured is no more than 1.0mg. The content of total solids in sample is then calculated in accordance with Formula (1), while the content of non-fat solids in accordance with Formula (2):

\[
X = \frac{m_1 - m_2}{m_3 - m_2} \times 100 \quad \text{............... (1)}
\]

in which,
X - the content of total solids in sample, g/100g;
m_1 - the mass of dish, sand and dried sample, g;
m_2 - the mass of dish and sand, g;
m_3 - the mass of dish, sand and sample added, g..

\[
X = X_1 - X_2 \quad \text{................................. (2)}
\]

in which,
X - the content of non-fat solids in sample, g/100g;
X_1 - the content of total solids in sample, g/100g;
X_2 - the content of fat in sample, g/100g..

Two significant figures are retained in the calculation; the absolute difference of two independently measured results under the same condition shall not exceed 5% of the arithmetic mean.

10.2.2.2 Method II

The content of total solids is calculated from the readings measured with a milk gauge and the content of fat based on Formulas (3) and (2).

\[
X = 0.25X_1 + 1.2X_2 + 0.14 \quad \text{................................. (3)}
\]

in which,
X - the content of total solids in sample, g/100g;
X_1 - the reading on the milk gauge;
X_2 - the content of fat in sample, g/100g.
When using a 20°C/4°C milk gauge, 2° must be added to the readings measured before calculating in accordance with Formula (3). The content of non-fat solids in sample is calculated in accordance with Formula (2).

10.2.3 Protein: determined as per GB 5009.5.
10.2.4 Acidity: determined as per GB XXXX.
10.3 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.
10.3.1 Coliform: examined with a direct counting method in GB 4789.3.
10.3.2 Yeast and fungi: examined in accordance with GB 4789.15.
10.3.3 Salmonella: examined in accordance with GB 4789.4.
10.3.4 Staphylococcus aureus: examined in accordance with GB 4789.10.
10.3.5 Lactobacillus: examined in accordance with GB 4789.35.