

China 4 dairy national standards (draft) are revising

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Feb 20, 2018, China issued four new national standard drafts about raw milk, pasteurized milk, sterilized milk and method for examination of reconstituted milk. The drafts have been greatly improved in the three key aspects including raw milk grading, processing technology specification and packaging identification of milk product.

1. Promote the raw milk grading system

The raw milk will be graded into excellent, good and qualified grade, which on the basis of protein and fat content as well as total bacterial count and somatic cell indicators as shown in Table 1.

In order to achieve the better division of milk resources, milk in different grades are applied to different kinds of dairy products. For example, high-quality milk can be made into more profitable pasteurized milk, the milk with relatively low quality can be made into cheese or milk powder products.

Table 1: Requirements indicators for different grades¹⁾

Item ²⁾	Indicator ³⁾		
	Better ⁴⁾	Good ⁴⁾	Qualified ⁴⁾
Protein, % ⁵⁾	3.2 ⁴⁾	3.0 ⁴⁾	2.8 ⁴⁾
Fat, % ⁵⁾	3.5 ⁴⁾	3.3 ⁴⁾	3.1 ⁴⁾
Total bacterial count , CFU/g(mL) \leq ⁶⁾	1×10^5 ⁴⁾	5×10^5 ⁴⁾	1×10^6 ⁴⁾
Somatic cell/(pieces/mL) \leq ⁷⁾	4×10^5 ⁴⁾	5×10^5 ⁴⁾	1×10^6 ⁴⁾

For different kinds of product the indicators also been provided as the following tables

Table 2. Furosine and lactulose content in different dairy products^{a)}

Detection items ^{a)}	Raw milk ^{a)}	Pasteurized milk ^{a)}	UHT milk ^{a)}	Retort sterilized milk ^{a)}	Reconstituted milk ^{a)}
Furosine (mg/100g protein) ^{a)}	≤6 ^{a)}	≤12 ^{a)}	<250 ^{a)}	≥250 ^{a)}	Evaluated based on the lactulose/furosine ^{a)}
Lactulose (mg/L) ^{a)}	Not detected ^{a)}	≤50 ^{a)}	<600 ^{a)}	≥600 ^{a)}	
Alkaline phosphatase ^{a)}	-- ^{a)}	Negative ^{a)}	-- ^{a)}	-- ^{a)}	-- ^{a)}

For pasteurized milk production temperature are further defined as follows:

Table 3. Temperatures and durations for pasteurized milk^{a)}

Temperature ^{a)}	Duration ^{a)}
63°C ^{a)}	30 min ^{a)}
72°C~80°C ^{a)}	15 s ^{a)}
89°C ^{a)}	1.0 s ^{a)}
90°C ^{a)}	0.5 s ^{a)}
94°C ^{a)}	0.1 s ^{a)}
96°C ^{a)}	0.05 s ^{a)}
100°C ^{a)}	0.01 s ^{a)}

3. Packaging identification of milk product

It is stipulated in the new standard that the grade of raw milk used, process parameters and quality parameters can be clearly indicated on label, which is beneficial for Chinese consumers to identify different kinds of products and have a better option

It is indicated that China are narrowing the gap between international dairy standards, and to improve the dairy industry level by marketing demands as well as technical requirement. Besides, due to hot competition in China dairy market, it is believed that China domestic dairy product will grow much stronger and more competitive under the raw milk grading supervision system.