

CODEX STANDARD FOR FERMENTED MILKS**CODEX STAN 243-2003****1. SCOPE**

This standard applies to fermented milks, that is Fermented Milk including, Heat Treated Fermented Milks, Concentrated Fermented Milks and composite milk products based on these products, for direct consumption or further processing in conformity with the definitions in Section 2 of this Standard.

2. DESCRIPTION**2.1 FERMENTED MILK**

Fermented Milk is a milk product obtained by fermentation of milk, which milk may have been manufactured from products obtained from milk with or without compositional modification as limited by the provision in Section 3.3, by the action of suitable microorganisms and resulting in reduction of pH with or without coagulation (iso-electric precipitation). These starter microorganisms shall be viable, active and abundant in the product to the date of minimum durability. If the product is heat-treated after fermentation the requirement for viable microorganisms does not apply.

Certain Fermented Milks are characterized by specific starter culture(s) used for fermentation as follows:

Yoghurt: Symbiotic cultures of *Streptococcus thermophilus* and *Lactobacillus delbrueckii* subsp. *bulgaricus*.

Alternate Culture Yoghurt: Cultures of *Streptococcus thermophilus* and any *Lactobacillus* species.

Acidophilus Milk: *Lactobacillus acidophilus*.

Kefir: Starter culture prepared from kefir grains, *Lactobacillus kefiri*, species of the genera *Leuconostoc*, *Lactococcus* and *Acetobacter* growing in a strong specific relationship.

Kefir grains constitute both lactose fermenting yeasts (*Kluyveromyces marxianus*) and non-lactose-fermenting yeasts (*Saccharomyces unisporus*, *Saccharomyces cerevisiae* and *Saccharomyces exiguus*).

Kumys: *Lactobacillus delbrueckii* subsp. *bulgaricus* and *Kluyveromyces marxianus*.

Other microorganisms than those constituting the specific starter culture(s) specified above may be added.

2.2 CONCENTRATED FERMENTED MILK

Concentrated Fermented Milk is a Fermented Milk the protein of which has been increased prior to or after fermentation to minimum 5.6%. Concentrated Fermented Milks includes traditional products such as Stragisto (strained yoghurt), Labneh, Ymer and Ylette.

2.3 FLAVOURED FERMENTED MILKS

Flavoured Fermented Milks are composite milk products, as defined in Section 2.3 of the Codex General Standard for the Use of Dairy Terms (CODEX STAN 206-1999) which contain a maximum of 50% (m/m) of non-dairy ingredients (such as nutritive and non nutritive sweeteners, fruits and vegetables as well as juices, purees, pulps, preparations and preserves derived therefrom, cereals, honey, chocolate, nuts, coffee, spices and other harmless natural flavouring foods) and/or flavours. The non-dairy ingredients can be mixed in prior to/or after fermentation.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 RAW MATERIALS**

- Milk and/or products obtained from milk.
- Potable water for the use in reconstitution or recombination.

3.2 PERMITTED INGREDIENTS

- Starter cultures of harmless microorganisms including those specified in Section 2;
- Sodium chloride; and
- Non-dairy ingredients as listed in Section 2.3 (Flavoured Fermented Milks).
- Gelatine and starch in:
 - fermented milks heat-treated after fermentation;
 - flavoured fermented milk; and
 - plain fermented milks if permitted by national legislation in the country of sale to the final consumer;

provided they are added only in amounts functionally necessary as governed by Good Manufacturing Practice, taking into account any use of the stabilizers/thickeners listed in section 4. These substances may be added either before or after adding the non-dairy ingredients.

3.3 COMPOSITION

	Fermented Milk	Yoghurt, Alternate Culture Yoghurt and Acidophilus milk	Kefir	Kumys
Milk protein ^a (% m/m)	min. 2.7%	min. 2.7%	min. 2.7%	
Milk fat (% m/m)	less than 10%	less than 15%	less than 10%	less than 10%
Titration acidity, expressed as % lactic acid (% m/m)	min. 0.3%	min. 0.6%	min. 0.6%	min. 0.7%
Ethanol (% vol./w)				min. 0.5%
Sum of microorganisms constituting the starter culture defined in section 2.1 (cfu/g, in total)	min. 10 ⁷	min. 10 ⁷	min. 10 ⁷	min. 10 ⁷
Labelled microorganisms ^b (cfu/g, total)	min. 10 ⁶	min. 10 ⁶		
Yeasts (cfu/g)			min. 10 ⁴	min. 10 ⁴

^a) Protein content is 6.38 multiplied by the total Kjeldahl nitrogen determined.

^b) Applies where a content claim is made in the labelling that refers to the presence of a specific microorganism (other than those specified in section 2.1 for the product concerned) that has been added as a supplement to the specific starter culture.

In Flavoured Fermented Milks the above criteria apply to the fermented milk part. The microbiological criteria (based on the proportion of fermented milk product) are valid up to the date of minimum durability. This requirement does not apply to products heat-treated after fermentation.

Compliance with the microbiological criteria specified above is to be verified through analytical testing of the product through to “the date of minimum durability” after the product has been stored under the storage conditions specified in the labeling.

3.4 ESSENTIAL MANUFACTURING CHARACTERISTICS

Whey removal after fermentation is not permitted in the manufacture of fermented milks, except for Concentrated Fermented Milk (Section 2.2).

4 FOOD ADDITIVES

Only those additives classes indicated in the table below may be used for the product categories specified. Within each additive class, and where permitted according to the table, only those individual additives listed may be used and only within the limits specified.

In accordance with Section 4.1 of the Preamble to the General Standard for Food Additives (CODEX STAN 192 - Rev. 2-1999), additional additives may be present in the flavoured fermented milks as a result of carry-over from non-dairy ingredients.

Additive class	Fermented Milks		Fermented Milks Heat Treated After Fermentation	
	Plain	Flavoured	Plain	Flavoured
Colours	-	X	-	X
Sweeteners	-	X	-	X
Emulsifiers	-	X	-	X
Flavour enhancers	-	X	-	X
Acids	-	X	X	X
Acidity regulators	-	X	X	X
Stabilizers	X ¹	X	X	X
Thickeners	X ¹	X	X	X
Preservatives	-	-	-	X
Packaging gases	-	X	X	X

X = The use of additives belonging to the class is technologically justified. In the case of flavoured products the additives are technologically justified in the dairy portion.

- = The use of additives belonging to the class is not technologically justified

¹ = Use is restricted to reconstitution and recombination and if permitted by national legislation in the country of sale to the final consumer.

5. CONTAMINANTS

The products covered by this standard shall comply with the maximum limits for contaminants and the maximum residue limits for pesticides and veterinary drugs established by the Codex Alimentarius Commission.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 4-2003), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 From raw material production to the point of consumption, the products covered by this Standard should be subject to a combination of control measures, which may include, for example, pasteurization, and these should be shown to achieve the appropriate level of public health protection.

6.3 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. LABELLING

In addition to the provisions of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991) and the General Standard for the Use of Dairy Terms (CODEX STAN 206-1999), the following specific provisions apply:

7.1 NAME OF THE FOOD

7.1.1 The name of the food shall be fermented milk or concentrated fermented milk as appropriate.

However, these names may be replaced by the designations Yoghurt, Acidophilus Milk, Kefir, Kumys, Stragisto, Labneh, Ymer and Ylette, provided that the product complies with the specific provisions of this Standard. Yoghurt may be spelled as appropriate in the country of retail sale.

“Alternate culture yoghurt”, as defined in Section 2, shall be named through the use of an appropriate qualifier in conjunction with the word “yoghurt”. The chosen qualifier shall describe, in a way that is accurate and not misleading to the consumer, the nature of the change imparted to the yoghurt through the selection of the specific *Lactobacilli* in the culture for manufacturing the product. Such change may include a marked difference in the fermentation organisms, metabolites and/or sensory properties of the product when compared to the product designated solely as “yoghurt”. Examples of qualifiers which describe differences in sensory properties include terms such as “mild” and “tangy”. The term “alternate culture yoghurt” shall not apply as a designation.

The above specific terms may be used in connection with the term “frozen” provided (i) that the product submitted to freezing complies with the requirements in this Standard, (ii) that the specific starter cultures can be reactivated in reasonable numbers by thawing, and (iii) that the frozen product is named as such and is sold for direct consumption, only.

Other fermented milks and concentrated fermented milks may be designated with other variety names as specified in the national legislation of the country in which the product is sold, or names existing by common usage, provided that such designations do not create an erroneous impression in the country of retail sale regarding the character and identity of the food.

7.1.2 Products obtained from fermented milk(s) heat treated after fermentation shall be named “Heat Treated Fermented Milk”. If the consumer would be misled by this name, the products shall be named as permitted by national legislation in the country of retail sale. In countries where no such legislation exists, or no other names are in common usage, the product shall be named “Heat Treated Fermented Milk”.

7.1.3 The designation of Flavoured Fermented Milks shall include the name of the principal flavouring substance(s) or flavour(s) added.

7.1.4 Fermented milks to which only nutritive carbohydrate sweeteners have been added, may be labeled as “sweetened _____”, the blank being replaced by the term “Fermented Milk” or another designation as specified in Section 7.1.1. If non-nutritive sweeteners are added in partial or total substitution to sugar, the mention “sweetened with _____” or “sugared and sweetened with _____” should appear close to the name of the product, the blank being filled in with the name of the artificial sweeteners.

7.1.5 The names covered by this Standard may be used in the designation, on the label, in commercial documents and advertising of other foods, provided that it is used as an ingredient and that the characteristics of the ingredient are maintained to a relevant degree in order not to mislead the consumer.

7.2 DECLARATION OF FAT CONTENT

If the consumer would be misled by the omission, the milk fat content shall be declared in a manner acceptable in the country of sale to the final consumer, either as (i) a percentage of mass or volume, or (ii) in grams per serving as qualified in the label, provided that the number of servings is stated.

7.3 LABELLING OF NON-RETAIL CONTAINERS

Information required in Section 7 of this Standard and Sections 4.1 to 4.8 of the General Standard for the Labelling of Pre-packaged Foods, and, if necessary, storage instructions, shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer or packer, shall appear on the container. However, lot identification and the name and address of the manufacturer or packager may be replaced by an identification mark, provided that such mark is clearly identifiable with the accompanying documents.

8. METHODS OF SAMPLING AND ANALYSIS

See *Codex Alimentarius*, Volume 13.