

**cheeses in brine— Specification**

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## DKS 2850:2019

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State Department of Livestock  
Government Chemist's Department  
Egerton University — Department of Dairy and Food Science Technology  
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Sameer Agriculture and Livestock (K) Limited  
New Kenya Cooperative Creameries (NKCC)  
National Public Health Labs  
Department of veterinary services  
Brookside Dairy Ltd.  
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# **Cheeses in brine — Specification**

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# DKS 2850:2019

## Foreword

This Kenya Standard was prepared by the Milk and Milk Products Technical Committee under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

Cheese is the ripened or unripened soft, semi-hard, hard, or extra-hard milk product, which consists of high concentration of the constituents of milk, principally fat, casein and soluble salts, together with water in which small amounts of soluble salts, lactose, and albumin from milk is coagulated. The milk is coagulated by means of rennet and/or other protease enzymes. It is therefore important to use milk of good quality to obtain high quality cheese.

There are various types of cheese that are produced and marketed worldwide. This standard specifies the general requirements for all types of cheeses in brine produced and marketed in Kenya.

During the preparation of this standard, reference was made to the following document:

**Group standard for cheese in brine, CXS 208-1999**

Acknowledgement is hereby made for the assistance derived from these sources.

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## Cheeses in brine — Specification

### 1 Scope

This Kenya Standard specifies the general requirements and methods of sampling and test for all cheeses in brine intended for direct consumption and/ or for further processing in conformity with the description in Section 3 of this Standard.

Subject to the provisions of this Standard, standards for individual varieties of Cheeses in Brine may contain provisions which are more specific than those in this Standard.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

- AOAC 999.10, Official method for lead, cadmium, zinc, copper, and iron in foods Atomic Absorption Spectrophotometry after microwave Digestion
- KS CODEX STAN 192, Codex general standard for food additives
- KS CODEX STAN 193, Codex general Standard for Contaminants and Toxins in Food and Feed
- KS CXS 206-1999, General Standard for the Use of Dairy Terms
- KS EAS 153 –Drinking (portable) water specification
- KS EAS 38, Labelling of prepackaged foods
- KS EAS 805, Use of Nutrition and health claims
- KS 28-1, General standard for cheese
- KS 229, Standard for edible salt
- KS 1552, Code of hygienic practice for milk and milk products
- KS ISO 707, Milk and milk products — Guidance on sampling
- KS ISO 1735, Cheese and processed cheese products - Determination of fat content - Gravimetric method (Reference method)
- KS ISO 4833, Microbiology of food and animal feed Stuffs-Horizontal method for the enumeration of microorganisms-colony count Technique at 30
- KS ISO 4832, Microbiology of food and animal feeding stuffs- Horizontal method for the enumeration of coliforms-colony-count technique
- KS ISO 5534, Cheese and processed cheese \_ Determination of the total solids content (Reference method)
- KS ISO 5943, Cheese and processed cheese products — Determination of Sodium chloride content — Potentiometric titration method
- KS ISO 6785:2001, Milk and milk products – Detection of Salmonella spp
- KS ISO 6888–1:1999 Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) – Part 1: Technique using Baird-Parker agar medium
- KS ISO 6611, Milk and milk products — Enumeration of colony-forming units of yeasts and/or moulds — Colony-count technique at 25 degrees C
- KS ISO/TS 6733, Milk and milk products -- Determination of lead content -- Graphite furnace atomic absorption spectrometric method
- KS ISO 11290-2, Microbiology of the food chain — Horizontal method for the detection and enumeration of Listeria monocytogenes and of Listeria spp. — Part 2: Enumeration method
- KS ISO 14501, Milk and milk powder - Determination of aflatoxin M content - Clean-up by immunoaffinity chromatography and determination by high-performance liquid chromatography
- KS ISO 7251, Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique

KS ISO 55381: Milk and milk products - Sampling - Inspection by attributes.  
 KS ISO 16649–2:2001, Microbiology of food and animal feeding stuffs – Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli – Part 1: Colony-count technique at 44°C using 5-bromo-4-chloro-3-indolyl Beta-D-glucuronide

### 3 DESCRIPTION

Cheeses in Brine are semi-hard to soft ripened cheeses in conformity with the general Standard for Cheese (KS 28-1). The body has a white to yellowish colour and a compact texture suitable for slicing, with none to few mechanical openings. The cheeses have no actual rind and have been ripened and preserved in brine until delivered to, or prepacked for, the consumer. Certain individual Cheeses in Brine contain specific herbs and spices as part of their identity.

### 4 ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### 4.1 Raw materials

Milk and/or products obtained from milk complying with the relevant Kenya Standards.

#### 4.2 Permitted ingredients

The following ingredients shall be permitted in cheese:

- a) Starter cultures of harmless lactic acid and/or flavour producing bacteria and cultures of other harmless microorganisms.
- b) Safe and suitable enzymes.
- c) Sodium chloride complying with KS 229
- d) Potable water complying with KS EAS 153.
- e) Herbs and spices where part of the identity of the Cheese in Brine complying with the relevant Kenya standards

#### 4.3 Compositional requirements

The following requirements given in Table shall be applicable to I cheeses in brine.

However, this requirements shall not preclude the designation of more specific requirements in I standards for individual varieties of Cheeses in Brine

**Table 1 — compositional requirements of cheeses in brine**

S/N	R			Test method
i)	Minimum fat in dry matter, %	40	40	KS ISO 1735
ii)	Minimum dry matter, %	40	52	KS ISO 5534
iii)	Salt,%		3%	KS ISO 5943

### 5 FOOD ADDITIVES

Only those food additives listed may be used and only within the limits specified.

INS no.	Name of additive	Maximum level
<b>Acidity regulators</b>		
270	Lactic acid, L-, D- and DL-	Limited by GMP
575	Glucono delta-lactone	Limited by GMP

## 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 Code of Hygienic Practice for Milk and Milk Products (KS 1552) and other relevant texts such as Codes of Hygienic Practice and Codes of Practice. The products should comply with any microbiological criteria established in accordance with the Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods (KS CXG 21-1997).

**6.2** The products shall comply with microbiological criteria established in accordance with Table 4 below

**Table 4 — Microbiological requirements for cheeses in brine**

S/N	Quality	Requirement	Test method
i)	Total coliforms ,CFU/g, max	100	KS ISO 4832
ii)	<i>Listeria monocytogenes</i> , CFU/25g	Absent	KS ISO 11290-2
iii)	<i>Salmonella spp.</i> CFU/25g	Absent	KS ISO 6785
iv)	<i>Staphylococcus aureus</i> , CFU/g	Absent	KS ISO 6888-1
v)	<i>Escherichia coli</i> , cfu/g	Absent	KS ISO 7251
	Yeast and moulds, CFU/g, max	10	KS ISO 6611

## 7 Contaminants

The products covered by this standard shall comply with the maximum levels for contaminants that are specified for the product in the General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995).

### 7.1 Heavy metals

When tested in accordance with AOAC 999.10 or KS ISO/TS 6733, the level of lead (Pb) shall not exceed 0.02 mg/kg.

### 7.2 Pesticide residues

cheeses in brine shall conform to maximum limits residues set by Codex Alimentarius Commission.

### 7.3 Mycotoxin residues

When tested in accordance with ISO 14501 the level of Aflatoxin M1 shall not exceed 0.50 µg/kg.

#### **7.4 Veterinary drugs residues**

Cheeses in brine shall conform to maximum tolerable residue limits for antibiotics and other veterinary drugs set by Codex Alimentarius Commission.

### **8 Packaging**

The products shall be packed in food grade material that ensures product safety and integrity.

### **9 Labelling**

In addition to the provisions of the General Standard for the Labelling of Prepackaged Foods (KS EAS 38), Use of Nutrition and health claims (KS EAS 805), and the General Standard for the Use of Dairy Terms (KS CXS 206-1999), the following specific provisions apply

#### **9.1 Name of the food**

The name of the food shall be cheese brine. However, the word "cheese in brine" may be omitted in the designation of an individual cheese in brine variety reserved by a standard for individual cheeses in brine, and, in the absence thereof, a variety name specified in the national legislation of the country in which the product is sold, provided that the omission does not create an erroneous impression regarding the character of the food.

#### **9.2 Declaration of milk fat content**

The milk fat content shall be declared in a manner found acceptable in the country of sale to the final consumer, either (i) as a percentage by mass, (ii) as a percentage of fat in dry matter, or (iii) in grams per serving as quantified in the label provided that the number of servings is stated.

Additionally, the following terms may be used:

<b>High fat</b>	(if the content of FDM is above or equal to 60%)
<b>Full fat</b>	(if the content of FDM is above or equal to 45% and less than 60%)
<b>Medium fat</b>	(if the content of FDM is above or equal to 25% and less than 45%)
<b>Partially skimmed</b>	(if the content of FDM is above or equal to 10% and less than 25%)
<b>Skim</b>	(if the content of FDM is less than 10%)

#### **9.3 Name of manufacturer**

In the case of cheese for export, the original cheese, or where not possible, the original pack or prepared consumer pack shall be marked with the name of the manufacturer or exporter in clear lettering.

#### **9.4 Country of manufacture (origin)**

In the case of cheeses sold in the home market and designated by the name of cheese not originating in the producing country, the original cheese, or where not possible, the original pack or prepared consumer pack shall be marked with 'the name, or other clear indication, of the producing country'.

Other clear indication could include things such as a clear statement of the full address of the manufacturer or the name of a well-recognized state, region or province of the producing country.

**10.5** The name and address of the manufacturer, packer, distributor, importer, exporter or vendor of the food shall be declared.

#### **10.6 Net contents**

The net contents shall be declared by weight in either the metric ("Système International" units) or as required by the country in which the product is sold.



**10.7 List of Ingredients**

A complete list of ingredients shall be declared on the label in descending order of proportion.

**10.8** storage instructions or conditions for use

**10.9** date of manufacture

**10.10** Expiry date;

**10.11** batch code/number

**10.12** lot identification

However, lot identification, and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents

**10 METHODS OF SAMPLING AND ANALYSIS**

**10.1** Sampling shall be carried out in accordance with the latest version of KS ISO 707 "Milk and Milk products - Guidance on sampling" and in KS ISO 55381: Milk and milk products - Sampling - Inspection by attributes.

**10.2** Analysis for cheese shall be carried out in accordance to appropriate standard methods declared in this standard. Other test may be performed as per the methods given in the latest AOAC/ Codex/ ISO and other internationally recognized methods

**10.3 Special requirements for Cheese in Brine:**

A representative piece of cheese is placed on a cloth or on a sheet of absorbent paper for 5 to 10 min. A slice of 2–3 cm is cut off and sent to the laboratory in a sealed insulated box for analysis.

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