

Processed cheese — Specification

PUBLIC REVIEW DRAFT

TECHNICAL COMMITTEE REPRESENTATION

The following organizations were represented on the Technical Committee:

Ministry Of Health — Public Health Department
Government Chemist Department
Egerton University — Department of Dairy and Food Science Technology
Kenya Dairy Board
Kenya Industrial Research and Development Institute (K.I.R.D.I)
Bio Food Products
Consumer Information Network
Eldoville Dairies Limited
Ministry Of Agriculture, Livestock and Fisheries- State Department of livestock
Githunguri Dairy
Brookside Dairy Limited
Sameer Agriculture and Livestock (K) Limited
New Kenya Cooperative Creameries (NKCC)
Kenya Bureau of Standards — Secretariat

REVISION OF KENYA STANDARDS

In order to keep abreast of progress in industry, Kenya Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Managing Director, Kenya Bureau of Standards, are welcome.

© Kenya Bureau of Standards, 2013

Copyright. Users are reminded that by virtue of Section 25 of the Copyright Act, Cap. 12 of 2001 of the Laws of Kenya, copyright subsists in all Kenya Standards and except as provided under Section 26 of this Act, no Kenya Standard produced by Kenya Bureau of Standards may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from the Managing Director.

Processed cheese — Specification

KENYA BUREAU OF STANDARDS (KEBS)

Head Office: P.O. Box 54974, Nairobi-00200, Tel.: (+254 020) 605490, 602350, Fax: (+254 020) 604031
E-Mail: info@kebs.org, Web:<http://www.kebs.org>

Coast Region

P.O. Box 99376, Mombasa-80100
Tel.: (+254 041) 229563, 230939/40
Fax: (+254 041) 229448

Lake Region

P.O. Box 2949, Kisumu-40100
Tel.: (+254 057) 23549, 22396
Fax: (+254 057) 21814

Rift Valley Region

P.O. Box 2138, Nakuru-20100
Tel.: (+254 051) 210553, 210555

DKS 2509:2013

Foreword

This Kenya Standard has been prepared by the Technical Committee on Milk and milk products under the guidance of Standards Projects Committee and it is in accordance with the Kenya Bureau of Standards.

Processed cheese, process cheese, cheese slice, prepared cheese, or cheese food is a food product made from normal cheese and sometimes other unfermented dairy ingredients, plus emulsifiers, extra salt, food colorings, or whey. Many flavors, colors, and textures of processed cheese exist.

Processed cheese has several technical advantages over unprocessed cheese, including extended shelf-life, resistance to separation when cooked, and uniformity of product. Its production also enjoys significant economic advantages over traditional cheese making processes, most often through the ability to incorporate any of a wide variety of less expensive ingredients. The use of emulsifiers in processed cheese results in cheese that melts smoothly when cooked. With prolonged heating, unprocessed cheese will separate into a molten protein gel and liquid fat; processed cheese will not separate in this manner. The emulsifiers, typically sodium phosphate, potassium phosphate, tartrate, or citrate, reduce the tendency for tiny fat globules in the cheese to coalesce and pool on the surface of the molten cheese.

Because processed cheese does not separate when melted, it is used as an ingredient in a variety of dishes. It is a popular addition to hamburgers, as it does not run off, nor does it change in texture or taste as it is heated. This standard will address the issues of quality and safety in this group of products.

During the development of this standard reference was to the following documents.

Codex Stan 287: CAC. VOL/XVI: Edition 1 Codex International Standards for milk and milk products.

Food and Drugs Administration (FDA); Part 133- Cheese and related Cheese Products, 2013
GB 25192-2010; National food safety standard of P.R. China- processed cheese

Milk and milk products: By Eckles, Combs & Macy (1979 Edition).

Polyunsaturated Fatty Acids Rules, (1976)

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

1 Scope

This Kenya Standard specifies the requirements for processed cheese intended for direct consumption.

2 Normative references

KS 28-1:2009; Cheese - Specification - Part 1: General requirements (Second Edition).

KS 660, *Guide to the safe use of food additives*

KS 2194; Good manufacturing practice guidelines for the dairy industry

KS CODEX STAN 206, General standard for the use of dairy terms

KS 57, Chemical analysis of cheese

KS ISO 707, *Milk and milk products — Guidance on sampling*

KS ISO 1854, *Whey cheese — Determination of fat content — Gravimetric method (reference method)*

KS ISO 3433, *Cheese — Determination of fat content — Van Gulik method*

KS ISO 5534, *Cheese and processed cheese — Determination of the total solids content (reference method)*

KS EAS 38, *Labelling of pre-packaged foods*

KS 05- 220: Microbiological examination of foods KS EAS 38, Labelling of pre-packaged foods

CODEX STAN 193-1995; General Standard for Contaminants and Toxins in Food and Feed

CAC/MRL 02-2006; Maximum residue limits for veterinary drug residues and pesticides

CODEX STAN 192-1995; general standards for food additives

KS ISO 12082:2006, *Processed cheese and processed cheese products - Calculation of the content of added citrate emulsifying agents and acidifiers/pH-controlling agents, expressed as citric acid.*
(Confirmed 2013)

3 Product description

Processed cheese is a blend of hard and semi-hard cheeses and to a lesser extent soft cheeses made by grinding and mixing with emulsifying salts followed by heating and agitation resulting in either sliceable or spreadable processed cheese depending on the type of emulsifying salts and the pH.

4 Compositional and quality requirements

4.1 General Requirements

Processed cheese shall meet the following general requirements:

DKS 2509:2013

4.1.2 Appearance

Finish

Shall have smooth, clean, neat unbroken rind and attractive appearance.

Colour

Shall be uniform, light amber to ivory and shall not be artificially coloured.

4.1.3 Body/ Texture

-sliceable cheese; shall be slightly elastic, break easily, and shall not be hard when crushed between fingers.

-spreadable cheese, Shall be continuous and homogenous.

-all processed cheese shall be free from openings, holes, breaks, cracks or fissures.

4.1.4 Flavour

Shall have characteristic, pleasing aroma and mildly salted in taste.

4.2 Permitted food additives

- a) Cream, butter and butter oil may be added in quantities to ensure compliance with the minimum fat requirements.
- b) Salt (sodium chloride).
- c) Vinegar.
- d) Citric acid
- e) Lactic acid
- f) Phosphoric acid
- g) Nisin
- h) Sodium citrate
- i) Added condiments and acidifying agents
- j) Permitted emulsifiers or stabilizers
- k) Spices and other vegetable seasonings in sufficient quantity to characterize the product.
- m) Cultures of harmless bacteria and enzymes

5 Compositional requirements/limits

Processed cheese shall comply with the requirements/limits given in Table 1.

Table 1 — Compositional requirements for processed cheese

SL No.	Parameter	Requirements/limits	Method of test
i)	Milk fat content (dry matter basis), % m/m, min.	10-75%	KS ISO 3433
ii)	Moisture content (dry matter basis), % m/m, max.	56-75%	KS 57
iii)	Salt (sodium, calcium or potassium) (dry matter basis), % m/m, max.	3%	KS 57
iv)	Acidity	5- 6%	KS 57

6 Microbiological Requirements

The products shall comply with any microbiological criteria established in accordance with table 2.

Table 2- microbiological Requirements for processed cheese

SI No.	microorganisms	Requirement/ limit	Test methods
1.	E.coli	NIL/g	Ks 220
2.	salmonella	Nil/ 25g	KS 220
3.	Listeria monocytogenes	Nil/25g	KS 220
4.	s.aureaus	Nil/g	KS 220
5.	Clostridium botulinum	Nil/g	KS 220
6.	Yeast and moulds max,	100cfu/g	KS 220
7.	Coliforms max	10cfu/g	KS 220

7 FOOD ADDITIVES

The Processed cheese shall comply with codex Stan 192- 1995- Codex General Standard for Food Additives, established by the Codex Alimentarius Commission (CAC)

8 Contaminants

Processed cheese shall comply with the maximum levels of KS 660 and the maximum residue limits for pesticides and veterinary drugs established by the Codex Alimentarius Commission (CAC) in codex stan 193- 1995

9 Hygiene

Processed cheese shall be prepared and handled in accordance with the appropriate clauses of KS 2194; Good manufacturing practice guidelines for the dairy industry, Public Health Act, Cap. 242 and Food, Drugs and Chemical Substances Act, Cap.254 of the Laws of Kenya.

10 Environment

Processed cheese should be produced, processed and handled under conditions of cleaner production technological practices and complying with the stipulations of the environmental management and co-ordination Act (EMCA), No. 8 of 1999 of the Laws of Kenya.

11 Packaging

DKS 2509:2013

Processed cheese shall be packed in food grade material that ensures product safety and integrity.

12 Labelling

Processed cheese shall be labelled in accordance to KS EAS 38. In addition, the following information shall be on the label;

- a) Product name as "processed cheese";
- b) Name and physical address of the manufacturer
- c) List of ingredients;
- d) Production date;
- e) Expiry date;
- g) Storage instructions
- h) Lot/ batch/code number or identification;
- i) Net contents weight in kilograms/ and or grams;
- j) Country of manufacture (for export only);
- k) Instructions on disposal of used package.

13 Methods of sampling

Sampling shall be done in accordance to KS ISO 707.