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DRAFT EAST AFRICAN STANDARD

Cheese — Specification — Mozzarella cheese

EAST AFRICAN COMMUNITY

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Product description.....	2
5 Requirements.....	2
5.1 Raw materials	2
5.2 Essential ingredients	2
5.3 Optional ingredients.....	2
5.4 Specific requirements	3
5 Food additives	3
6 Contaminants.....	3
6.1 Heavy metals.....	3
6.2 Aflatoxins	3
6.3 Pesticide and veterinary drugs residues	4
7 Hygiene.....	4
8 Packaging.....	4
9 Labelling.....	4
10 Sampling	5

Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 017, *Milk and milk products*.

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Cheese — Specification — Mozzarella cheese

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for mozzarella cheese intended for direct consumption or for further processing.

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 926.08, *Loss on drying (moisture) in cheese*

AOAC 980.21, *Aflatoxin M1 in milk and cheese, Thin-layer chromatography*

CAC/RCP 1, *General principles of food hygiene — Code of practice*

EAS 38, *Labelling of pre-packaged foods — General requirements*

CODEX STAN 192, *General standard for food additives*

CODEX STAN 283, *General standard for cheese*

ISO 1735, *Cheese and processed cheese products — Determination of fat content — Gravimetric method (Reference method)*

ISO 4832, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coliforms — Colony-count technique*

ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of salmonella — Part 1: Detection of salmonella SPP.*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of betaglucuronidase-positive Escherichia coli — Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

ISO 6611, *Milk and milk products — Enumeration of colony-forming units of yeasts and/or moulds — Colony-count technique at 25 degrees C*

ISO 6888-1, *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*

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*

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

ISO 8197, *Milk and milk products — Sampling — Inspection by variables*

ISO 5738, *Milk and milk products — Determination of copper content — Photometric method (reference method)*

3 Terms and definitions

No terms and definitions are listed in this document.

4 Product description

4.1 Mozzarella cheese

Mozzarella is an unripened cheese in conformity with the General Standard for Cheese (CODEX STAN 283) and the Standard for Unripened Cheese Including Fresh Cheese (CODEX STAN 221). It is a smooth elastic cheese with a long stranded parallel-orientated fibrous protein structure without evidence of curd granules. The cheese is rindless 1 and may be formed into various shapes. Mozzarella with a high moisture content is a soft cheese with overlying layers that may form pockets containing liquid of milky appearance. It may be packed with or without the liquid. The cheese has a near white colour. Mozzarella with a low moisture content is a firm/semi-hard homogeneous cheese without holes and is suitable for shredding. Mozzarella is made by “pasta filata” processing, which consists of heating curd of a suitable pH value kneading and stretching until the curd is smooth and free from lumps. Still warm, the curd is cut and moulded, then firmed by cooling. Other processing techniques, which give end products with the same physical, chemical and organoleptic characteristics are allowed.

5 Requirements

5.1 Raw materials

Cows' milk or buffaloes' milk, or their mixtures, and products obtained from these milks

5.2 Essential ingredients

Essential ingredients to be used in Mozzarella cheese shall be as follows:

- a) starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless micro-organisms; and
- b) Rennet or other safe and suitable coagulating enzymes.

5.3 Optional ingredients

Optional ingredients which may be used in Mozzarella cheese shall be as follows:

- a) safe and suitable processing aids;
- b) sodium chloride and potassium chloride as a salt substitute;
- c) vinegar; and
- d) rice, corn and potato flours and starches complying with Codex Stan 262.

5.4 Specific requirements

Mozzarella cheese shall comply with the specific requirements in Table 1 when tested in accordance with test methods specified therein.

Table 1 — Specific requirements for Mozzarella cheese

Milk constituent	With high moisture (Soft)	With low moisture (firm/semi-hard)	Test method	
Milk fat in dry matter, %,min	20	18	ISO 1735	
Dry matter	Depending on the fat in dry matter content, according to the table below			
	Fat in dry matter content (m/m),%:	Corresponding minimum dry matter content (m/m), %:		
		With low moisture	With high moisture	Test method
	18 ≤ F < 30	34	–	AOAC 926.08
	20 ≤ F < 30	–	24	
	30 ≤ F < 40	39	26	
	40 ≤ F < 45	42	29	
	45 ≤ F < 50	45	31	
	50 ≤ F < 60	47	34	
	60 ≤ F < 85	53	38	

5 Food additives

Food additives may be used in mozzarella cheese in accordance with CODEX STAN 192.

6 Contaminants

6.1 Heavy metals

The heavy metal shall not exceed maximum limits set in table 3.

Table 3 — Maximum limits of heavy metals

S/N	heavy metal	maximum limit mg/kg	Test method
i.	Lead	0.02	AOAC 999.10

6.2 Aflatoxins

When tested in accordance AOAC 980.21, aflatoxin M1 shall not exceed 0.5 µg/kg.

6.3 Pesticide and veterinary drugs residues

Mozzarella cheese shall comply with those maximum limits for pesticides and veterinary drugs residues for milk as specified by Codex Alimentarius Commission.

7 Hygiene

7.1 The mozzarella cheese shall be processed, packaged, stored and distributed under hygienic conditions complying with CAC/RCP 1 and CAC/RCP 57.

7.2 Mozzarella cheese shall also have the following microbiological limits, as given in Table 4, when tested according to appropriate test method.

Table 4 — Microbiological limits for mozzarella cheese

S/N	Microorganism	maximum limits	Test method
i.	<i>Salmonella spp</i> /25g	absent	ISO 6579-1
ii.	<i>Staphylococcus aureus</i> , cfu/g	10 ²	ISO 6888-1
iii.	<i>E. coli</i> , cfu/g	absent	ISO 16649-2
iv.	<i>Listeria monocytogenes</i> , /25g	absent	ISO 11290-2
v.	Coliforms, cfu/g	10	ISO 4832
vi.	Yeasts and moulds cfu/g	10 ²	ISO 6611

8 Packaging

The products shall be packaged in food grade containers made of suitable material and shall be well sealed in order to prevent contamination of the contents during storage and transportation.

9 Labelling

Labelling of mozzarella shall be done in accordance with the requirements stipulated in RS EAS 38 and shall also include the following:

- a) name of the product as “Mozzarella cheese”;
- b) name and physical address of manufacturer;
- c) ingredients;
- d) net content;
- e) date of manufacture;
- f) expiry date;
- g) storage conditions; and
- h) country of origin;
- i) source of milk (cow/buffalo);
- j) milk fat content; and

k) batch number.

10 Sampling

In addition to the provision in ISO 707, the sampling shall conform to the provisions in ISO 8197 or ISO 5538 when the sampling is purposely for inspection.

