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DRAFT EAST AFRICAN STANDARD

Cheese — Specification — Cheddar cheese

EAST AFRICAN COMMUNITY

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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*.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Cheese — Specification — Cheddar cheese

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for cheddar 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 999.10, *Determination of Lead, Cadmium, Zinc, Copper, and Iron in foods, Atomic Absorption Spectrophotometry after Microwave Digestion*

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

CODEX STAN 192, *General standard for food additives*

CODEX STAN 283, *General standard for cheese*

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

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

ISO 14501, *Milk and milk powder — Determination of aflatoxin M1 content — Clean-up by immunoaffinity chromatography and determination by high-performance liquid chromatography*

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

ISO 5538, *Milk and milk products — Sampling — Inspection by attributes*

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

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

3 Terms and definitions

No terms and definitions are listed in this document.

4 Product description

Cheddar is a ripened hard cheese in conformity with the General Standard for Cheese (CODEX STAN 283). The body has a near white or ivory through to light yellow or orange colour and a firm-textured (when pressed by thumb), smooth and waxy texture. Gas holes are absent, but a few openings and splits are acceptable. The cheese is manufactured and sold with or without rind which may be coated. For Cheddar ready for consumption, the ripening procedure to develop flavour and body characteristics is normally from 5 weeks at 7–15 °C depending on the extent of maturity required. Alternative ripening conditions (including the addition of ripening enhancing enzymes) may be used, provided the cheese exhibits similar physical, biochemical and sensory properties as those achieved by the previously stated ripening procedure. Cheddar intended for further processing need not exhibit the same extent of ripening when justified through technical and/or trade needs.

4 Requirements

4.1 Raw materials

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

4.2 Essential ingredients

The essential ingredients to be used in cheddar cheese shall be as follows:

- Starter cultures of harmless lactic acid and/ or flavour producing bacteria and cultures of other harmless microorganisms;
- Rennet or other safe and suitable coagulating enzymes; and
- Sodium chloride and potassium chloride as a salt substitute.

4.3 Optional ingredients

The optional ingredients which may be used in cheddar cheese shall be as follows:

- Safe and suitable enzymes to enhance the ripening process;
- Safe and suitable processing aids;
- Rice, corn and potato flours and starches complying with Codex Stan 263.

4.4 Specific requirements

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

Table 1 — Specific requirements for Cheddar cheese

Milk constituent	Minimum content (m/m)	Maximum content (m/m)	Reference level (m/m)	Test method
Milk fat in dry matter:	22 %	Not restricted	48 % - 60 %	ISO 1735
Dry matter	Depending on the fat in dry matter content, according to the table below			ISO 1854
	Fat (F) in dry matter content (m/m):		Corresponding minimum dry matter content (m/m)	
	22% ≤ F < 30 %		49 %	
	30% ≤ F < 40 %		53 %	

	$40\% \leq F < 48\%$	57 %	
	$48\% \leq F < 60\%$	61 %	
	$F \geq 60\%$	66 %	

5 Food additives

Food additives may be used in Cheddar cheese in accordance with Codex Stan 192.

6 Heavy metals

6.1 The heavy metal requirements in the product shall comply with the limits in the Table 3.

Table 3 — Maximum limits of heavy metals

S/N	Heavy metal	Maximum limits, mg/kg	Test methods
i.	Lead	0.02	AOAC 999.10

7 Aflatoxins

Aflatoxin M1 shall not exceed 0.5 µg/kg maximum to comply with the levels of contaminants in foods as stipulated in ISO 14501.

8 Hygiene

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

8.2 Cheddar cheese shall have the following microbiological limits when tested as specified in Table 4.

Table 4 — Microbiological limits

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 6888-3
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

9 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.

10 Labelling

In addition to the requirements of EAS 38, the labelling of cheddar cheese should include the following:

- a) name of product; cheddar cheese;

- b) list of Ingredients in descending order;
- c) fat content;
- d) name and address of manufacturer;
- e) date of manufacture;
- f) date of expiry;
- g) batch number;
- h) source of milk (cow/buffalo);
- i) storage conditions; and
- j) country of origin.

11 Sampling

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

