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DRAFT EAST AFRICAN STANDARD

Butter — Specification

EAST AFRICAN COMMUNITY

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East African Community
P.O. Box 1096,
Arusha
Tanzania
Tel: + 255 27 2162100
Fax: + 255 27 2162190
E-mail: eac@eachq.org
Web: www.eac-quality.net

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DRAFT FOR COMMENTS

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.

This third edition cancels and replaces the second edition (EAS 22: 2007), which has been technically revised.

Butter — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for butter intended for human 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, *Official method for lead, cadmium, zinc, copper, and iron in foods Atomic absorption Spectrophotometry after microwave Digestion*

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

CAC/RCP 57, *Code of hygienic practice for milk and milk products*

CODEX STAN 192, *Codex general standard for food additives*

EAS 35, *Fortified food grade Salt — Specification*

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

EAS 803, *Nutrition labelling — Requirements*

ISO 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

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

ISO 1740, *Milkfat products and butter — Determination of fat acidity (Reference method)*

ISO 2446, *Milk — Determination of fat content*

ISO 3727-1, *Butter — Determination of moisture, non-fat solids and fat contents — Part 1: Determination of moisture content (Reference method)*

ISO 3727-2, *Butter — Determination of moisture, non-fat solids and fat contents — Part 2: Determination of non-fat solids content (Reference method)*

ISO 3727-3, *Butter — Determination of moisture, non-fat solids and fat contents — Part 3: Calculation of fat content*

ISO 3961, *Animal and vegetable fats and oils — Determination of iodine value*

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

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

ISO 5764, *Milk — determination of freezing point — Thermistor cryoscope method (Reference method)*

ISO 6320, *Animal and vegetable fats and oils — Determination of refractive index*

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

ISO 6888-3, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 3: Detection and MPN technique for low numbers*

ISO 7238, *Butter — Determination of pH of the serum — Potentiometric method*

ISO 8968-4, *Milk and milk products — Determination of nitrogen content — Part 4: Determination of protein and non-protein nitrogen content and true protein content calculation (Reference method)*

ISO 11866-1, *Milk and milk products — Enumeration of presumptive Escherichia coli — Part 1: Most probable number technique using 4-methylumbelliferyl-beta-D-glucuronide (MUG)*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 butter
fatty product derived exclusively from milk and/or products obtained from milk, principally in the form of an emulsion of the type water-in-oil

3.2 cow
lactating female of cattle (*Bos indicus* and *Bos Taurus* or their crosses)

4 Requirements

4.1 Raw materials

Butter shall be made exclusively from milk.

4.2 Permitted ingredients

The following ingredients may be used:

- a) edible salt complying with EAS 35 for salted butter; and
- b) starter cultures of lactic acid bacteria.

4.3 General requirements

Butter shall:

- a) have characteristic texture and colour;
- b) be of characteristic flavour, free from taint and rancidity;
- c) be firm, neither greasy nor oily at 25 °C and showing granular texture on breaking; and
- d) not have water exuding to the surface.

4.4 Specific requirements

Butter shall comply with specific requirements given in Table 1 when tested in accordance with test methods specified therein.

Table 1 — Specific requirements for butter

| S/N | Characteristic | Requirement | Test method |
|-------|---|-----------------|---------------|
| i. | Fat content, %, m/m, min. | 80 | RS ISO 3727-3 |
| ii. | Milk Solids-Not-Fat content, %, m/m, max. | 2 | RS ISO 3727-2 |
| iii. | Moisture Content, %, m/m, max. | 16 | RS ISO 3727-1 |
| iv. | Butter serum pH | 6.6 - 7.0 | RS ISO 7238 |
| v. | Acid value of fat, %, max. | 0.10 | RS ISO 660 |
| vi. | Iodine value | 26 - 40 | RS ISO 3961 |
| vii. | Free fatty Acid as oleic acid, %, max. | 0.3 | RS ISO 1740 |
| viii. | Refractive Index at 40 °C | 1.4530 - 1.4590 | RS ISO 6320 |

4.3 Microbiological limits

Butter shall comply with microbiological limits given in Table 2 when tested in accordance with test methods specified therein

Table 2 — Microbiological limits for butter

| S/N | Microorganism | Maximum limit | Test method |
|------|------------------------------------|-----------------|-------------|
| i. | <i>Total plate count</i> , CFU/g | 10 ⁵ | ISO 4833-1 |
| ii. | <i>E. coli</i> , CFU/g | Absent | ISO 11866-1 |
| iii. | <i>Salmonella Spp</i> , in 25 g | Absent | ISO 6579-1 |
| iv. | <i>Moulds and yeasts</i> , CFU/g | 10 | ISO 6611 |
| v. | <i>Staphylococcus aureus per g</i> | Absent | ISO 6888-3 |

5 Food additives

Food additives, if used, shall comply with CODEX STAN 192.

6 Contaminants

6.1 Heavy metals

The level of Lead (Pb) shall not exceed 0.02 mg/kg when tested in accordance with AOAC 999.10.

6.2 Mycotoxin

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

6.3 Pesticide and veterinary drug residues

The products covered by this standard shall comply with the maximum residue limits for veterinary drug and pesticide residues established in Codex Standard Guide for Maximum Pesticide Limits in Foods.

7 Hygiene

Butter shall be produced and handled in accordance with CAC/RCP 57 and CAC/RCP 1.

9 Packaging

Butter shall be packaged in food grade containers which safeguards the quality of the product.

10 Labelling

The containers shall be labelled in compliance with the requirements of EAS 38 and EAS 803. In addition, the following particulars shall be legibly and indelibly labelled on the container:

- a) name of the product as "salted butter or unsalted butter";
- b) net content in SI units;
- c) name and physical address of manufacturer;
- d) batch or code number;
- e) nutritional information;
- f) the date of manufacture and expiry date;
- g) instruction for storage and use; and
- h) country of origin.

11 Sampling

Sampling of butter for analysis shall be done in accordance with ISO 707.

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