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DRAFT EAST AFRICAN STANDARD

Frozen fish sticks (fish fingers), fish portions and fish fillets — Breaded or in batter — Specification

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.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

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.

FDEAS 830 was prepared by the Technical Committee EASC/TC 003, *Fish and fishery products*.

Frozen fish sticks (fish fingers), fish portions and fish fillets — Breaded or in batter — Specification

1 Scope

This Draft East African Standard specifies requirements and methods of sampling and test for frozen fish sticks (fish fingers), fish portions and fish fillets – breaded or in batter, intended for human consumption

2 Normative references

The following referenced documents are indispensable for the application 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 952.13, *Arsenic in food — Silver diethyldibocarbamate method*

AOAC 972.23, *Lead in fish — Atomic absorption spectrophotometric method*

AOAC 973.34, *Cadmium in food — Atomic absorption spectrophotometric method*

AOAC 977.13, *Histamine in sea food — Fluorometric method*

AOAC 983.20, *Mercury (methyl) in fish and shellfish — Gas chromatographic method*

AOAC 2015.01, *Heavy metals in food*

CAC/GL 50-2004 *General guideline on sampling*

CAC/RCP 52-2003, *Code of practice for fish and fishery products*

CODEX STAN 192-1995, *General standard for food additives*

EAS 12, *Drinking (potable water) — Specification*

EAS 38, *Labelling of pre-packaged foods — Requirements*

FDEAS 827:2015, *Fresh and frozen whole fin fish – Specification*

FDEAS 831:2015, *Frozen fish fillets — specification*

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

ISO 6579, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Salmonella spp.*

ISO 6888 (all parts), *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species)*

ISO 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

ISO 11290 (all parts), *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes*

ISO 16050, *Foodstuffs — Determination of aflatoxin B1, and the total contents of the aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products — High performance liquid chromatographic method*

ISO 21527-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 1: Colony count technique in products with water activity greater than 0,95*

ISO/TS 21872 (all parts), *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of potentially enteropathogenic Vibrio spp.*

3 Terms and definitions

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

- 3.1 fish stick (fish finger)**
product including the coating shaped so that the length is not less than three times the greatest width
- 3.2 fish portion**
product including the coating and may be of any shape, weight or size
- 3.3 fillets**
slices of fish of irregular size and shape which are removed from the carcass by cuts made parallel to the backbone and pieces of such fillets, with or without the skin
- 3.4 batter**
paste prepared from ground cereals, spices, salt, sugar and other ingredients and/or additives for coating. Typical batter types are non-leavened batter and leavened batter.
- 3.5 breading**
application of dry breadcrumbs or other dry preparations mainly from cereals with colourants and other ingredients used for the final coating of fish and fishery products. Breading types/forms are free flowing breading, coarse breading and flour type breading.
- 3.6 foreign matter**
presence of soil, sand, skins, scales, bones, dirt or any material other than flesh
- 3.7 food grade material**
packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour, colour or flavour to the product
- 3.8 coating**
covering the surface of a fishery product with batter and/or breading

4 Requirements

4.1 General requirements

4.1.1 Raw material

4.1.1.1 Frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter shall be prepared from frozen fish fillets and/or fresh and frozen whole fin fish that conform to FDEAS 831 and FDEAS 827 respectively or minced fish flesh, or mixtures thereof, of edible species which are of a quality such as to be sold fresh for human consumption.

4.1.1.2 The coating and all ingredients used therein shall be of food grade quality and conform to relevant Codex or East African standards.

4.1.1.3 Fat or oil used in cooking operation shall be suitable for human consumption and conform to relevant East African or Codex standard.

4.1.1.4 Water used for washing the fish shall be potable and complying with EAS 12.

4.1.2 Finished product

Frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter shall:

- a) be free from foreign matter; and
- b) not have objectionable odour, colour and flavour.

4.2 Specific requirements

4.2.1 When tested in accordance with AOAC 977.13, the level of histamine in fish such as scombroids species shall not exceed 10 ppm.

4.2.2 The frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter, shall be maintained at a temperature of -18 °C or below.

5 Food additives

Food additives may be used in the preparation and processing of frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter in accordance with CODEX STAN 192.

6 Hygiene

The product covered by the provisions of this standard shall be prepared and handled in accordance with EAS 39 and CAC/RCP 52 and shall comply with microbiological limits given in Table 1.

Table 1 — Microbiological limits for frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter

S/No	Micro-organisms	Maximum limits	Test method
i)	<i>Salmonella</i> spp, per 25 g	Absent	ISO 6579
ii)	<i>Escherichia coli</i> , MPN/g	10	ISO 7251
iii)	<i>Listeria monocytogenes</i> , per 25	Absent	ISO 11290

iv)	<i>Staphylococcus aureus</i> , CFU/g	10 ³	ISO 6888
v)	<i>Vibrio Spp.</i> Per 25 g	Absent	ISO/TS 21872
vi)	Total viable count, CFU/g	10 ⁵	ISO 4833-1
vii)	Yeast and moulds, CFU/g	10 ³	ISO 21527-1

6 Contaminants

6.1 Heavy metals

Frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter, shall comply with the heavy metal limits given in Table 2.

Table 2 — Heavy metal limits for frozen fish sticks (fish fingers), fish portions and fish fillets, breaded or in batter

S/No	Heavy metal	Maximum limit, mg/kg	Test method
i)	Lead	0.3	AOAC 972.23
ii)	Cadmium	0.3	AOAC 973.34
iii)	Mercury	0.5	AOAC 2015.01

6.2 Aflatoxins

When tested in accordance with ISO 16050, the level for aflatoxin B1 in the product shall not exceed 5 µg/kg and total aflatoxin shall not exceed 10 µg/kg.

6.3 Veterinary drug residues

The product shall comply with those maximum veterinary drug residue limits established by the Codex Alimentarius Commission.

6.4 Pesticide residues

The product shall comply with those maximum pesticides residue limits established by the Codex Alimentarius Commission.

7 Packaging

Frozen fish sticks (fish fingers), fish portions and fish fillets - breaded or in batter, shall be packaged in food grade material which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

8 Labelling

8.1 General

In addition to the requirements in EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked:

- a) name of the product as “Frozen fish sticks” (fish fingers), “fish portions” or “fish fillets”, breaded or in batter;
- b) common name /species name;
- c) storage and transportation conditions declaring the temperature to be -18 °C or lower;
- d) name and physical address of processor or packer;
- e) net weight in grams or kilograms;
- f) date of production;
- g) batch number;
- h) expiry date;
- i) instruction for use;
- j) list of ingredients used in descending order of proportion; and
- k) country of origin.

8.2 Labelling of non-retail containers

8.2.1 Information on the above provisions shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the processor or packer as well as storage instructions, shall appear on the container.

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

9 Sampling

Sampling shall be done in accordance with CAC/GL 50.

