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DRAFT EAST AFRICAN STANDARD

Fried fish — Specification

EAST AFRICAN COMMUNITY

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East African Community
P.O.Box 1096
Arusha
Tanzania
Tel: 255 27 2504253/8
Fax: 255 27 2504481/2504255
E-mail: eac@eachq.org
Web: www.eac-quality.net

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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.

DEAS 896 was prepared by Technical Committee EAS/TC 003, *Fish and fishery products*.

Fried fish — Specification

1 Scope

This Draft East African Standard specifies requirements, methods of sampling and test for fried fish which may be whole or portions intended for human consumption. The standard covers all fish species.”

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 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*

CAC/GL 50, *General guidelines on sampling*

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

CODEX STAN 192, *General standard for food additives*

EAS 35, *Edible salt — Specification*

EAS 321, *Edible fats and oils (general) — Specification*

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

EAS 39, *Hygiene in the food and drink manufacturing industry — Code of practice*

EAS 803, *Nutrition labelling — Requirements*

EAS 804, *Claims on foods — Requirements*

EAS 805, *Use of nutritional and health claims — Requirements*

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

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 7937, *Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of Clostridium perfringens -- Colony-count technique*

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

fried fish

fish or shellfish that has been prepared by frying

3.2

“whole fish”

fish as captured, ungutted

3.3

“fish portion”

product including the coating and may be of any shape, weight or size

3.4

“frying”

cooking of fish or portion in oil or fat at temperatures between 177 °C and 191 °C

4 Requirements

4.1 General requirements

4.1.1 Raw materials

4.1.1.1 Fish

Fish used shall be obtained or prepared from any fish species which is sound and wholesome, fresh, chilled or frozen, fit for human consumption.

4.1.1.2 Fat/ oil

Fat /oil used shall conform to EAS 321.

NOTE — Using fat/oil several times may affect quality and safety of the product.

4.1.2 Optional ingredients

All other ingredients used shall be of food grade quality and conforms to all applicable standards, which may include but not limited to the following;

- a) seasoning and condiments;
- b) herbs and spices
- c) salt: Salt used shall conform to EAS 35

4.1.2 Finished product

Fried fish shall:

- a) have characteristics colour of the fried fish
- b) not show any evidence of visible fungal, mould growth
- c) be free from insect or mite infestation;
- d) be presented, with or without the belly lining, scaled or unscaled or whole or in portion; and
- e) have the characteristic odour of the fried fish;

4.2 Specific requirements

4.2.1 Fried fish shall comply to the specific requirements in table 1.

Table 1 — Specific requirements for fried fish

S/No	Parameter	Limits, max	Test methods
i	Moisture content, % m/m,	25	Annex A.
ii	Free fatty acid, moisture free base % m/m	0.5	ISO 660

4.2.2 When tested in accordance with AOAC 977.13, the level of histamine in histamine sensitive fish such as scromboids species shall not exceed 20 ppm.

5 Food additives

Food additives may be used in the preparation and processing of fried fish in accordance with CODEX STAN 192.

6 Hygiene

Fried fish shall be produced and handled in a hygienic manner in accordance with EAS 39 and CAC/RCP 52 and shall comply with the microbiological limits given in Table 2.

Table 2 — Microbiological limits for fried fish

S/No.	Type of microorganism	Maximum limit	Test method
i)	<i>Salmonella</i> in 25 g	Absent	ISO 6579
ii)	<i>Escherichia coli</i> , MPN/g	Absent	ISO 7251
iii)	<i>Staphylococcus aureus</i> , CFU/g	2×10^3	ISO 6888-1
iv)	Total viable count, CFU/g	10^6	ISO 4833-1
v)	<i>Vibrio spp.</i>	Absent	ISO/TS 21872
vi)	Yeast and moulds, CFU/g	10^3	ISO 21527-1
vii)	<i>Clostridium perfringens</i> 5g	Absent	ISO 7937
* NOTE: <i>E. coli</i> strain 0157: H 7 shall be absent.			

7 Contaminants

7.1 Heavy metals

Fried fish shall comply with the heavy metal limits given in Table 3.

Table 3 — Heavy metal limits for fried fish

S/No.	Heavy metal	Maximum limit, mg/kg	Test method
i)	Arsenic	0.1	AOAC 952.13
ii)	Lead	0.3	AOAC 972.23
iii)	Cadmium	0.3	AOAC 973.34
iv)	Methyl mercury	0.5	AOAC 983.20

7.2 Aflatoxins

When tested in accordance with ISO 16050, the level of total aflatoxin in fried fish shall not exceed 10 µg/kg.

7.3 Veterinary drug residues

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

7.4 Pesticide residues

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

8 Weights and measures

The weight of the product shall comply with Weights and Measures regulations of the Partner State.

9 Packaging

Frozen lobster tails shall be packaged in food grade containers which will safeguard the hygienic, nutritional, technological and organoleptic qualities of the product.

10 Labelling

10.1 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 shall be “fried fish”; and in addition the common name or name of the fish specie may appear on the label
- b) name and physical address of processor/packer;
- c) net weight in grams or kilograms;
- d) date of packaging;
- e) batch number;
- f) expiry date;
- g) storage conditions;
- h) instruction for use; and
- i) country of origin.

10.2 Nutritional labelling, nutrition and health claims may be made in accordance with EAS 803, EAS 804 and EAS 805.

11 Sampling

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

Annex A (normative)

Determination of moisture content

A.1 Principle

The sample is dried to constant weight in an oven.

A.2 Apparatus

A.2.1 Moisture dishes, made of nickel, stainless steel, aluminium or porcelain, with well-fitting lids

A.2.2 Oven

A.2.3 Desiccator

A.3 Procedure

Weigh accurately about 10 g of the sample in a suitable moisture dish, previously dried in an oven and weighed. Place the dish in an oven maintained at $105\text{ °C} \pm 2\text{ °C}$ for five hours. Cool the dish in a desiccator and weigh with the lid on. Repeat the process of heating, cooling and weighing at half-hour intervals until the loss in mass between two successive weightings is less than 1 mL. Record the lowest mass obtained. Preserve the dish containing this dried material in a desiccator for the determination of total ash (see A.2.3).

A.4 Calculation

The moisture content shall be expressed as follows:

$$\text{Moisture, \% by mass} = \frac{m_1 - m_2}{m_1 - m} \times 100$$

where

m_1 is the mass, in grams, of the moisture dish with material before drying;

m_2 is the mass, in grams, of the moisture dish with the material after drying; and

m is the mass, in grams, of the empty moisture dish.

