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DRAFT EAST AFRICAN STANDARD

Fresh and frozen whole fin 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.

FDEAS 827 was prepared by the Technical Committee EASC/TC 003, *Fish and fishery products*.

Fresh and frozen whole fin fish — Specification

1 Scope

This Draft East African Standard specifies requirements and methods of sampling and test for fresh and frozen whole fin fish 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*

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

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of microorganisms — Part 1: Colony-count technique 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 11290 (all parts), *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes*

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
fin fish**
fresh water and marine vertebrate fish
- 3.2
whole fish**
fish as captured, gutted/ungutted, with/without scales, head on or beheaded
- 3.3
fresh fin fish**
fish that has not been frozen, dried or otherwise preserved, except by chilling; fish in rigor deemed to be fresh fish
- 3.4
gutted fish**
fish from which the guts have been removed. Gutting consists of bleeding the fish and removal of the stomach and gut.
- 3.5
rigor mortis**
stiffening of the muscles of an animal which results from a series of complex changes that take place in the tissues shortly after death
- 3.6
chilling**
process of cooling fish to a temperature approaching that of melting ice (between 0 °C – 4 °C)
- 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
Clean water**
it is the medium through which the fish to be wash free from objectionable substance and microorganism.
- 3.9
Frozen fish**
fish that has been subjected to a frozen state that attain a core core temperature of -18°C or below

4 Requirements

4.1 General requirements

Fresh and frozen whole fin fish shall comply with the general requirements as indicated in the statements and Table 1.

- i. Fish with or without scales, head on or beheaded, gutted/ungutted
- ii. Captured fish should be of legal size as per Partner States regulation

Table 1 — General requirements for fresh and frozen whole fin fish

Fresh/ chilled fin fish	Frozen fin fish
a) be in a sound, wholesome condition;	When thawed the frozen fish will have characteristics provided for the fresh/chilled fin fish
b) be bright in appearance;	Free from freezer burn/dry patches
c) have a fresh characteristic smell of its species;	Free from discolouration
d) have prominent, bright, clear and moist eyes;	
e) have bright red gills;	
f) have bright abdominal blood;	
g) be firm, and shall have elastic flesh;	
h) The slime on fresh fish shall be transparent.	

4.1.3 Water used for preparation of the fish shall be potable complying with EAS 12.

4.2 Specific requirements

4.2.1 Fresh fish shall be stored at chilling temperature (0 °C – 4 °C).

4.2.2 Frozen fish shall be maintained at a temperature of -18 °C or lower.

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

5 Food additives

Food additives may be used in the preparation of fresh and frozen whole fin fish in accordance with CODEX STAN 192.

6 Hygiene

The product shall be prepared 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 fresh and frozen whole fin fish

S/No.	Micro-organisms	Maximum limit	Test method
i)	<i>Salmonella</i> spp per 25 g	Absent	ISO 6579-1
ii)	<i>Escherichia coli</i> , MPN/g	10	ISO 16649-2
iii)	<i>Listeria monocytogenes</i> per 25 g	Absent	ISO 11290-1
iv)	<i>Staphylococcus aureus</i> , CFU/g	10 ³	ISO 6888-1
v)	<i>Vibrio Spp.</i> per 25 g	Absent	ISO/TS 21872-1
vii)	Total viable count, CFU/g	10 ⁵	ISO 4833-1

7 Contaminants

7.1 Heavy metals

Fresh and frozen whole fin fish shall comply with the heavy metal limits given in Table 3.

Table 3 — Heavy metal limits for fresh and frozen whole fin fish

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

7.2 Mycotoxins

Aflatoxin for cultured fish shall not exceed the limits for total 10ppb and B1 5ppb tested as per ISO 1605.

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 Packaging

Fresh and frozen whole fin fish shall be packaged in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

9 Labelling

9.1 General

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

- a) origin of the fin fish whether cultured or captured”;
- b) Common Name /species name or family
- c) with or without scale
- d) name of the product shall be "Fresh/chilled fin fish or frozen whole fin fish”;
- e) storage and transportation conditions declaring the temperature to be -18 °C or lower for frozen and 0 °C -4 °C for fresh/chilled;
- f) name and physical address of processor;
- g) net weight in grams or kilograms;
- h) date of production;
- i) batch number;
- j) expiry date.;
- k) instruction for use; and
- l) country of origin.

9.2 Labelling of non-retail containers

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.

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.

10 Sampling

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

