



## EAST AFRICAN STANDARD

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Dried fish *Rastrineobola argentea* — Specification

DRAFT EAST AFRICAN STANDARD

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 East Africa. It is envisaged that through harmonized standardization, trade barriers which are encountered when goods and services are exchanged within the Community will be removed.

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. 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.

Article 15(1) of the EAC SQMT Act, 2006 provides that “Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose”.

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.

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## Introduction

The **Silver Cyprinid** (*Rastrineobola argentea*) is a species of ray-finned fish in the family Cyprinidae, the only member of the genus *Rastrineobola*. It is found in Lake Victoria. Its local names are **omena** (Kenya), **dagaa** (Tanzania) and **mukene** (Uganda), **ndagala** (Burundi) and **sambaza** (Rwanda).

Being a fast-swimming and smallish pelagic fish, it has been able to withstand the ecological disturbance caused by the introduction of the predator fish *Lates niloticus* (Nile perch) compared to other local species in the lake. The species is not under IUCN red list (threatened species).

Lateral line lie low on the body and running along the lower part of the caudal peduncle. Cheek covered by thin suborbital bones. Caudal fin is yellowish. The head is integral part of the body, i.e. there is no neck. The body surface is generally free from projections that might offer resistance.

The objective of this standard is to ensure that dried fish reach the consumer in as wholesome state as possible and help in enhancing exports. It will also ensure that dried *Rastrineobola argentea* are of acceptable and good quality.

This East African Standard prescribes minimum requirements for dried *Rastrineobola argentea*, commonly known as *Omena/Dagaa/Mukene/Ndagala/sambaza*.

In the preparation of this East African Standard, the following sources were consulted extensively:

KS 05-1470:1998, *Specification for fresh dried rastrineobola argentea (Omena/Dagaa)*

Codex Alimentarius website: [http://www.codexalimentarius.net/mrls/vetdrugs/jsp/vetd\\_q-e.jsp](http://www.codexalimentarius.net/mrls/vetdrugs/jsp/vetd_q-e.jsp)

USDA Foreign Agricultural Service website: <http://www.mrldatabase.com>

USDA Agricultural Marketing Service website: <http://www.ams.usda.gov/AMSv1.0/Standards>

European Union: [http://ec.europa.eu/enterprise/sectors/pharmaceuticals/veterinary-use/maximum-residue-limits/index\\_en.htm](http://ec.europa.eu/enterprise/sectors/pharmaceuticals/veterinary-use/maximum-residue-limits/index_en.htm)

Assistance derived from these sources is hereby acknowledged.

## Dried fish *Rastrineobola argentea*— Specification

### 1 Scope

This draft East African Standard specifies the requirements and methods of sampling and test for dried fish *Rastrineobola argentea*.

Note: This includes common names used in EAC such as Omena/Dagaa/mukene/Ndagala and sambaza).

### 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.

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

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

CAC/RCP 52[CD/K/521:2010], *Code of practice for fish and fishery products*

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

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

EAS 103, *Schedule for permitted food additives*

ISO 4833, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Colony-count technique at 30 degrees C*

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

ISO 6888-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 1: Technique using Baird-Parker agar medium*

ISO 6888-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) — Part 2: Technique using rabbit plasma fibrinogen agar medium*

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

ISO 11290-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of Listeria monocytogenes — Part 2: Enumeration method*

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

ISO 27085, Animal feeding stuffs -- Determination of calcium, sodium, phosphorus, magnesium, potassium, iron, zinc, copper, manganese, cobalt, molybdenum, arsenic, lead and cadmium by ICP-AES

ISO 16050, Foodstuffs — Determination of aflatoxin B<sub>1</sub>, and the total content of aflatoxin B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub> in cereals, nuts and derived products — High performance liquid chromatographic method

ISO 6496, Animal feeding stuffs -- Determination of moisture and other volatile matter content

ISO 5984, Animal feeding stuffs -- Determination of crude ash

ISO 5985, Animal feeding stuffs -- Determination of ash insoluble in hydrochloric acid

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 0.9

AOAC 990.04 Mercury (Methyl) in seafood by liquid chromatography-atomic absorption spectroscopy (LC-AAS)

### 3.0 Terms and definitions

For the purpose of this standard, the following terms and definitions shall apply;

#### 3.1

##### **Dried Silver cyprinid**

whole product presented as a dried fresh water fish which has not been gutted beheaded or split and subsequently washed and dried

#### 3.2

##### **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 or flavour to the product

#### 3.3

##### **Sound**

free from physiological deterioration or adulteration/contamination, that appreciably affects their appearance, edibility and the keeping quality of the dried fish.

#### 3.4

##### **Foreign matter**

any material which is not of fish origin e.g. sand, stones, metallic chips, plant parts etc

### 4.0 Requirements

#### 4.1 General Requirements

**4.1.1** Fish shall be prepared from sound fish of the designated species, which is of an acceptable quality and fit to be sold fresh for human consumption.

**4.1.2** Water used for washing the fish shall comply with EAS 12.

**4.1.3** After washing, the fish shall be dried either in the sun or in artificial dryers until a satisfactory product is obtained.

**4.1.4** The fish, while drying, shall be protected against contamination from dirt, sand, and insects.

**4.1.5** The dried fish shall have the characteristic silvery skin colour and dried fish odour.

4.1.6 It shall be free from any indication of spoilage such as mouldiness, colour change.

4.1.7 The product shall be free from foreign matter.

## 4.2 Specific requirements

4.2.1 The dried fish *Rastrineobola argentea* shall comply with the requirements given in Table 1.

S/N	Parameter	requirement	Test
1	Moisture, %, max.	12	ISO 6496
2	Total ash, % max.	15	ISO 5984
3	Acid insoluble ash, % max.	0.5	ISO 5985

4.2.2 The dried fish shall be presented not less than 90 per cent whole.

## 5 Hygiene

5.1 The product covered by the provisions of this standard shall be prepared and handled in accordance with, EAS 39, CAC/RCP 52 [The product shall comply with microbiological limits given in table 2

Table 2 — Microbiological limits for *Rastrineobola argentea*

S/No.	Type of microorganism	Maximum limit	Method of test
1	<i>Salmonella</i> in 25 g	Absent	ISO 6579
2	<i>E. coli</i> per g	Absent	ISO 7251
3	<i>Staphylococcus aureus</i> CFU per g	$2 \times 10^3$ g	ISO 6888
4	Total viable count	$10^5$ /g	ISO 4833
5	<i>Clostridium perfringens</i> species	Absent	ISO 7937
6	<i>Listeria monocytogenes</i>	Absent	ISO 11290-2
7	yeast and moulds	$10^4$	ISO 21527-1

5.2 The product shall be free from any parasite which represent a hazard to health.

## 6.0 Contaminant limits

6.1 Fresh dried *Rastrineobola argentea* shall comply with the contaminant limits given in Table 3.

Table 3 — Contaminant limits for *Rastrineobola argentea*

Type of contaminant		Maximum limit (mg/kg)	Method of test
(i)	Arsenic	0.1	ISO 27085
(vi)	Lead	0.3	ISO 27085
(vii)	Cadmium	0.3	ISO 27085
(viii)	Methyl mercury	0.5	AOAC 990.04

6.2 The dried fish shall contain no more than 10 microgram per kilogram total aflatoxin of which not more than 5 microgram per kilogram may be aflatoxin B1 when tested in accordance with ISO 16050

## 7 Pesticide residues

Dried silver cyprinid (*Rastrineobola argentea*) shall comply with those maximum pesticides residue limits established by the Codex Alimentarius Commission for similar commodities”

## 8 Food additives

Only permitted additives by CODEX STAN 192 may be used in processing of dried silver cyprinid (*Rastrineobola argentea*)

## 9 Weight and measures

The fill and the weight of the product shall comply with Weight and Measures regulations of the importing Partner State.

## 10 Packaging and labelling

### 10.1 Packaging

10.1.1 Dried silver cyprinid (*Rastrineobola argentea*) shall be packaged in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

10.1.2 The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They shall not impart any toxic substance or undesirable odour or flavour to the product.

### 10.2 Labelling

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

- (i) Name of the product.
- (ii) Name and physical address of processor/packer.
- (iii) Net weight in grams or kilograms.
- (iv) Date of packaging.
- (v) Batch or code number.
- (vi) Expiry date.
- (vii) Storage conditions.
- (viii) Country of origin

**10.3** Nutritional labelling, nutrition and health claims may be made in accordance with EAS 799, EAS 800 and US 801.

## **11 Method of sampling and test**

Sampling and tests shall be done as per test methods described in respective tables

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