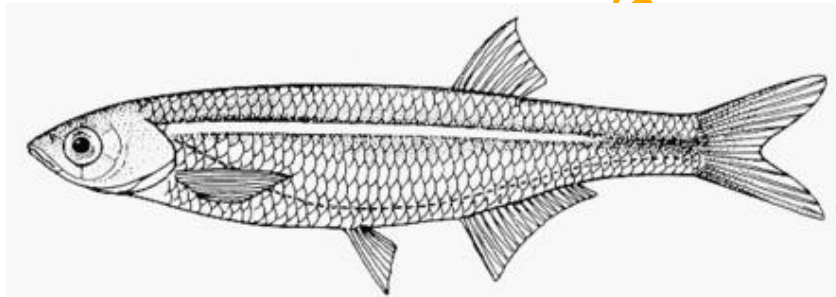


EAST AFRICAN STANDARD

Fresh dried *Rastrineobola argentea* (Omena/Dagaa) — Specification



EAST AFRICAN COMMUNITY

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 the Lake Victoria of Kenya, Tanzania, and Uganda. Its local names are *omena* (Kenya), *dagaa* (Tanzania) and *mukene* (Uganda).

Being a fast-swimming smallish fish of the open waters, it has been better able to withstand the ecological upheaval caused mainly by the introduced predator *Lates niloticus* (Nile perch) than most other local species. It is not considered a threatened species by the IUCN.

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

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 wholesome quality.

The body of *Rastrineobola argentea* is spindle-shaped, although somewhat heavier toward the front than the rear, the cross-section is elliptical. The head is integral with the body, i.e. a neck is lacking. The body surface is generally free from projections that might offer resistance. The eyes are smooth and do not extend beyond the contours of the head; the gill opening is covered with a smooth flap (operculum) and the scales lie closely against the body surface.

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

USDA Foreign Agricultural Service website: <http://www.mrlidatabase.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

Assistance derived from these sources is hereby acknowledged.

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Draft for comments only — Not to be cited as East African Standard

Fresh dried *Rastrineobola argentea* (Omena/Dagaa) — Specification**1 Scope**

This East African Standard specifies the requirements and methods of test for dried *Rastrineobola argentea* (Omena/Dagaa).

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.

CAC/GL 21, *Principles for the establishment and application of microbiological criteria for foods*

CAC/RCP 1, *Recommended international code of practice — General principles of food hygiene*

CAC/GL 30, *Principles and guidelines for the conduct of microbiological risk assessment*

CAC/GL 31, *Guidelines for the sensory evaluation of fish and shellfish in laboratories*

CD-K-572:2010, *Fish and fisheries products — Methods of sampling*

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

CAC/GL 53, *Guidelines on the judgement of equivalence of sanitary measures associated with food inspection and certification systems*

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

EAS 35, *Edible salt — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

EAS 41, *Fruits, vegetables and derived products — Sampling and methods of test*

EAS 103, *Schedule for permitted food additives*

EAS 123, *Distilled water — Specification*

CD/K/516:2010, *Dried and dry-salted fish — Specification*

ISO 4831, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of coliforms — Most probable number technique*

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

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 6887-1, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 1: General rules for the preparation of the initial suspension and decimal dilutions*

ISO 6887-2, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 2: Specific rules for the preparation of meat and meat products*

ISO 6887-3, *Microbiology of food and animal feeding stuffs — Preparation of test samples, initial suspension and decimal dilutions for microbiological examination — Part 3: Specific rules for the preparation of fish and fishery products*

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

ISO 13720, *Meat and meat products — Enumeration of Pseudomonas spp.*

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

ISO 16654, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Escherichia coli O157*

ISO 21567, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of Shigella spp.*

ISO/TS 21872-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of potentially enteropathogenic Vibrio spp. — Part 1: Detection of Vibrio parahaemolyticus and Vibrio cholerae*

ISO/TS 21872-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection of potentially enteropathogenic Vibrio spp. — Part 2: Detection of species other than Vibrio parahaemolyticus and Vibrio cholerae*

3 Description

Rastrineobola argentea is an aquatic cold-blooded water breathing, gilled vertebrate with limbs represented by fins. It normally presented as a dried fresh water fish which has not been gutted, beheaded or, split and subsequently washed and dried. The size of *Rastrineobola argentea* varies between 2 cm to 9 cm long.

4 Provisions with regard to quality

4.1 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.

- 4.2 Water used for washing the fish shall comply with EAS 12.
- 4.3 After washing, the fish shall be dried either in the sun or in artificial dryers until a satisfactory product is obtained.
- 4.4 The fish, while drying, shall be protected against contamination from dirt, sand, and insects.
- 4.5 The skin of the dried fish shall have the characteristic silvery colour and shall not show any evidence of halophilic mould (dun) nor visible evidence of red, halophilic bacteria (pink).
- 4.6 The product shall have the characteristic dried fish odour. It shall be free from any indication of spoilage.
- 4.7 The dried fish shall have a minimum shelf-life of one year.
- 4.8 The dried fish shall have a moisture content of between 5 to 7 per cent, when tested according to CD/K/516:2010.
- 4.9 The dried fish shall be presented 90 per cent whole.

5 Hygiene and handling

- 5.1 The product covered by the provisions of this standard shall be prepared and handled in accordance with CAC/RCP 1, CAC/RCP 52[CD/K/521:2010] and the relevant public health regulations.
- 5.2 The product shall be free from objectionable extraneous matter.
- 5.3 The dried fish shall contain not more than 10 microgram per kilogram aflatoxin of which not more than 5 microgram per kilogram may be aflatoxin B1 when tested in accordance with ISO 16050.
- 5.4 The product shall be free from parasites which represent a hazard to health.

6 Microbiological limits

Fresh dried *Rastrineobola argentea* shall comply with the microbiological limits given in Table 1.

Table 1 — Microbiological limits for *Rastrineobola argentea*

S/No.	Type of microorganism	Maximum limit	Method of test
(i)	<i>Pseudomonas</i> species per gram	Absent	ISO 13720
(ii)	<i>Salmonella</i> in 30 g	Absent	ISO 6579
(iii)	<i>E. coli</i> per g	Absent	ISO 7251
(iv)	<i>Shigella</i> per g	Absent	ISO 21567
(v)	<i>Coliforms</i> g (per 100 g)	Absent	ISO 4832
(vi)	<i>Staphylococcus aureus</i> per 10 g	2×10^3 g	ISO 6888
(vii)	Total viable count	10^5 /g	ISO 4833
(viii)	<i>Vibrio cholerae</i>	Absent	ISO/TS 21872
(ix)	<i>Clostridium perfringens</i>	Absent	ISO 7937

7 Contaminant limits

Fresh dried *Rastrineobola argentea* shall comply with the contaminant limits given in Table 2.

Table 2 — Contaminant limits for *Rastrineobola argentea*

Type of contaminant		Maximum limit (mg/kg)	Method of test
(i)	Arsenic	0.1	EAS 41
(ii)	Copper	0.4	EAS 41
(iii)	Iron	5.0	EAS 41
(iv)	Tin		
	(a) For product packed in tin plate	50.00	EAS 41
	(b) For product packed in other packing containers	250.00	EAS 41
(v)	Mercury	0.5	EAS 41
(vi)	Lead	0.3	EAS 41
(vii)	Cadmium	0.3	EAS 41
(viii)	Methylmercury	0.5	EAS 41
(ix)	Zinc	50.0	EAS 41

8 Packaging and labelling

8.1 Packaging

8.1.1 Any container for dried fish shall be clean, dry and shall protect the organoleptic and other quality characteristics of the product during storage and transport.

8.1.2 The package shall not pass on to the product any foreign odour, flavour, and colour or other foreign matter.

8.2 Labelling

8.2.1 The containers shall be labelled in accordance with EAS 38 and shall include the following:

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

ward



Omena being dried



Omena being dried

Draft



Fresh dagaa



Sardines (dagaa)



Draft for comment

Rastrineobola argentea (Pellegrin, 1904)
Silver cyprinid

Family:	Cyprinidae (Minnows or carps)
Max. size:	9 cm SL (male/unsexed)
Environment:	pelagic ; depth range - 50 m
Distribution:	Africa: Lakes Victoria and Kyoga, the Victoria Nile.
Diagnosis:	Lateral line low on the body and running along the lower part of the caudal peduncle. Cheek covered by thin suborbital bones. Silver with an overall nacreous sheen. Caudal fin yellow. Dead specimens with a distinct mid-lateral stripe.
Biology:	Found inshore and offshore. Juvenile fish migrate away from the shore after spending their larval stage in shallow areas. Adults stay near the bottom during the day and near the surface at night (Ref. 34291). Feeds on zooplankton and surface insects. Rarely reaching a length greater than 8 cm SL. Also caught with dip nets.
Threatened:	No
Dangerous:	harmless
Country info:	

Silver Cyprinid — Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Actinopterygii
Order:	Cypriniformes
Family:	Cyprinidae
Genus:	<i>Rastrineobola</i>
Species:	<i>R. argentea</i>
Binomial name	<i>Rastrineobola argentea</i>
(Pellegrin, 1904)	

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