



EAST AFRICAN STANDARD

Transport of live fish seeds for inland pisciculture purposes —
Code of practice



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 transport of live fish seeds of inland species is an important part of pisciculture. Since the stocking of inland water with seeds is mostly seasonal, the timely implementation and success of national programme for extension and intensification of pisciculture would largely depend upon the speed and effectiveness with which the fish seeds are transported from the limited centres of collection or production to the far flung water areas spread over the entire country. The existing transport practices range from open containers with renewal of water at intervals to closed polyethylene bags sealed with oxygen under pressure.

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

IS 10449:1983(R2000), *Code for transport of live fish seeds for inland pisciculture purposes*

IS 4303-1:1975, *Code of hygienic conditions for fish industry — Part 1: Pre-processing stage*

IS 4303-2:1975, *Code of hygienic conditions for fish industry — Part 2: Canning stage*

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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Transport of live fish seeds for inland pisciculture purposes — Code of practice

1 Scope

This code prescribes the conditions for transport of live seeds of inland fish species for pisciculture purposes.

NOTE This Code excludes seeds of fresh water shell fish.

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*

CAC/GL 48, *Model certificate for fish and fishery products*

CAC/RCP 52:2003(Rev. 4:2008), *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 38, *Labelling of prepackaged foods — Specification*

3 Definitions

For the purpose of this standard the following definition shall apply:

Fish seeds

Fish seeds (fertilized eggs, spawn, fry and fingerlings) of quick-growing species of warm and cold fresh water fish meant for development of inland pisciculture.

4 General requirements

4.1 The live fish seeds shall be stored where they shall not be subjected to desiccation, extreme high and low temperatures and any other type of stress.

4.2 Only healthy, disease resistant and conditioned live fish seeds shall be selected and released for packing and transportation.

4.3 As far as practicable, live fish seeds of the same species and size shall be packed for transport. However, fish seeds of certain compatible species, of uniform size which are non-predaceous in habits can be packed in the same container.

4.4 Fish seeds, as far as possible, shall be transported either by air or by the fastest passenger train.

4.5 Minimum of 50 percent of the space in each polyethylene bags used as containers for holding live fish seeds shall be filled with oxygen, so as to provide a pressure of 1.0 kg per cm². The mouth of the polyethylene bag shall be tied tightly to prevent escape of oxygen during transportation.

4.6 During transport, jerks, jolts and shocks shall be avoided, as far as possible. In case of transport by rail, the fastest train shall be chosen and in case of road transport for short distances nearest but metalled or good surfaced-road shall be used.

5 Packing requirements

5.1 Fertilized eggs

Fertilized eggs of brown and rainbow trouts at eyed-stage shall be transported in insulated wooden cabinet of the dimensions 50 x 25 x 40 cm. On the top of the cabinet 20 cm high cupboard with galvanized wire-netting base shall be provided to pack moss with snow or ice. Under the cupboard two trays shall be arranged above the other perforated zinc sheet base for packing moss, and to hold the water from the melting snow or ice lying above. Below the two trays 42 egg trays shall be placed in two rows of tray 21 each. Each egg tray (23 x 23 x 100 cm) shall have a muslin cloth base to keep the eggs moist. Each egg tray shall hold 1 000 eyed eggs in a single layer.

5.2 Spawns, fry and fingerlings

5.2.1 Only tested leak-proof polyethylene bags having not less than 75 micron thickness shall be used to pack spawn, fry and fingerlings of fresh water fish. The dimensions of polyethylene bags shall be 82 x 60 cm.

5.2.2 The fish seed of Indian and exotic carps shall be packed in accordance with size and number as given in Table 1, to avoid mortality of more than 5 percent.

Table 1 — Packing density of carp spawn, fry and fingerlings

Size range (mm)	Duration of transport (hours)	Number to be packed per polyethylene bag
(1)	(2)	(3)
5 to 10	12 to 24	10000 to 12000
11 to 20	Up to 12	2500
21 to 30	Up to 12	1500
31 to 40	Up to 12	1000
41 to 50	Up to 12	300
51 to 60	Up to 12	200
61 to 70	Up to 12	100
71 to 80	Up to 12	50

5.3 The polyethylene bags holding live fish seeds shall be packed in an outer 16.5 litre oil cans having press-in-lid. The tins shall be of good quality, rust-free, and of enough strength to withstand the stresses and strains encountered during transportation by air or rails and/or road. Only one polyethylene bag shall be packed in each tin.

5.4 As far as possible the tins shall be insulated with thermocole lining from inside. Alternatively some soft packing material (paper shaving/ old newspaper) shall be provided at the bottom and four sides of the tin to act as cushioning material to the polyethylene bag and to give protection from tearing off and temperature fluctuations.

5.5 The polyethylene bag shall be filled with pure chlorine-free fresh water up to 50 percent of its capacity before releasing spawn, fry and fingerlings.

5.6 Loading and unloading of the tins shall be done efficiently and quickly after sealing the mouth of the polyethylene bag and be done immediately after the arrival of the consignment of fish seed.

The tins shall be handled with care during storage in aircraft, train or motor lorry.

6 Labelling

6.1 Each tin shall bear a label giving the following information written legibly and indelibly:

- a) Name of the species;
- b) Stage of fish seeds (spawn, fry or fingerlings),
- c) Name, address and telephone number of the consignor; and
- d) Name, address and telephone number of the consignee.

6.2 Each container shall also be marked with a cautionary notice reading as under:

'TOP PRIORITY. LIVE FISH SEEDS. HANDLE WITH CARE'

6.3 Each container shall bear on the face a red arrow showing the upper side.

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