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EAST AFRICAN STANDARD

Poultry egg fertility tester — Specification

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.

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.each.int

Introduction

Fertile and sound eggs ensure the best hatches and proper utilization of incubation space. Fertility tester shall test the fertility of the eggs during incubation.

As there are various types and sizes of egg fertility testers in vogue and their performance differs in most of the cases, this standard has been prepared to have an effective quality control and help achieve uniform performance. This standard would also help those who are engaged in the study of embryonic development of eggs at universities, colleges and laboratories.

This standard contains clause **6.2** which calls for an agreement between the purchaser and the vendor.

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

IS 6228:1971(R2000), *Specification for Poultry Egg Fertility Tester*

Codex Alimentarius website: 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

Assistance derived from these sources is hereby acknowledged.

Poultry egg fertility tester — Specification

1 Scope

This standard prescribes the requirements and performance test for poultry egg fertility testers.

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.

IEC 60598-1, *Luminaires — Part 1: General requirements and tests*

IEC 61558-1, *Safety of power transformers, power supplies, reactors and similar products — Part 1: General requirements and tests*

IEC 61558-2-1, *Safety of power transformers, power supplies, reactors and similar products — Part 2-1: Particular requirements and tests for separating transformers and power supplies incorporating separating transformers for general applications*

IEC 61558-2-2, *Safety of power transformers, power supplies, reactors and similar products — Part 2-2: Particular requirements and tests for control transformers and power supplies incorporating control transformers*

3 Definitions

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

fertility tester
an equipment used for testing fertility of poultry eggs

4 Source of supply

4.1 The fertility tester shall be operated at a rated voltage of 230 to 240 V ac/dc single phase.

4.2 This may also be operated using dry cells with an output of 6 volts.

5 Materials

5.1 The body of the fertility tester shall be made of 0.63 mm aluminium sheet and handle shall be of seasoned teak wood or any other suitable hardwood.

5.2 All materials used in the construction shall be of such quality and type that they shall withstand the effects of changing weather conditions, excessive dampness, corrosive fumes or any other deleterious influences to which they are exposed under the conditions of use.

6 Requirements

6.1 Description — The fertility tester shall consist of two parts, namely, a transformer unit and a projector unit. The transformer should be fitted with lead and three-pin plug to plug into electric supply point at one end and with a two-pin outlet to connect projector at the other end. The projector should consist of aluminium casing. A white-light reflector shall be mounted to reflect a narrow, high powered

beam of light from the lamp. A convenient handle with a long flexible lead with two-pin plug is attached to the projector.

6.2 The transformer with an input of 230 V ac/dc and with an output of 6 volts conforming to IEC 61558 shall be used.

6.3 A 6-volt pre-focused flashlight lamp or any other suitable bulb shall be provided.

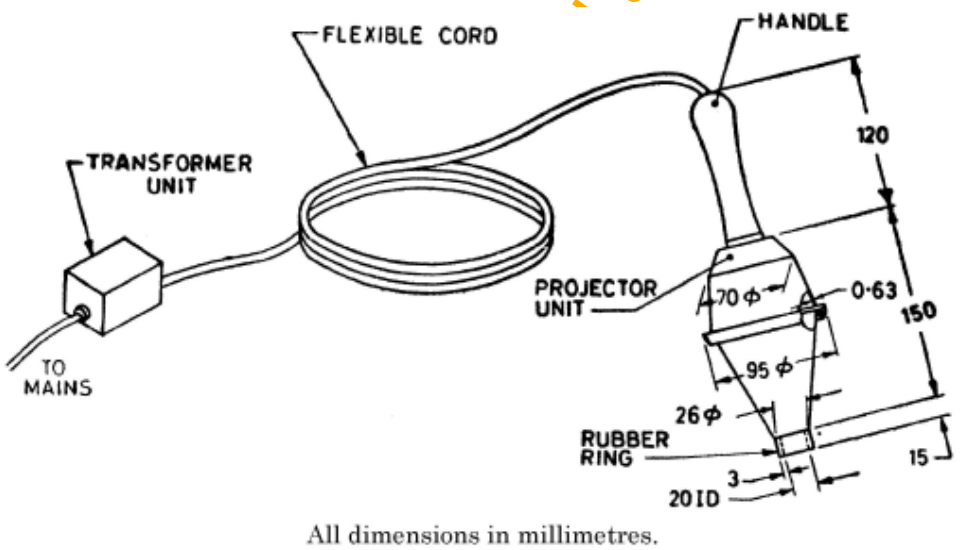
6.4 A flexible lead sufficiently long shall be provided.

6.5 A rubber ring shall be provided at touching end of the fertility tester which will avoid any chance of damage to the eggs.

The rubber ring shall have the following dimensions:

Internal diameter, Min	20 mm
Thickness, Min	3 mm
Height, Min	15 mm

6.6 A typical drawing of a fertility tester is given in Figure 1.



All dimensions in millimetres.

Figure 1 — Poultry egg fertility tester

7 Marking and packing

7.1 Marking

7.1.1 Each fertility tester shall be marked legibly and indelibly with the following particulars:

a) Manufacturer's name or trade-mark,

b) Manufacturer's model or type reference,

c) Rated input in watts,

d) Nature of supply, and

e) Year of manufacture.

7.1.2 Each fertility tester may also be marked with a Certification Mark.

7.2 Packing

The egg fertility testers shall be packed as agreed to between the purchaser and the vendor.

8 Sampling

Unless otherwise agreed to between the purchaser and the supplier, the sampling plan and criteria for conformity shall be as given in Annex A.

9 Heating test

The fertility tester shall not get heated when tested after six hours of test operation.

Annex A
(normative)

Sampling of egg fertility tester

A.1 Scale of sampling

A.1.1 Lot — All fertility testers in a consignment belonging to the same batch of manufacture shall constitute a lot. If the consignment is declared to consist of different batches of manufacture, the fertility tester belonging to the same batch shall be grouped together and each such group shall constitute a separate lot.

A.1.2 Fertility tester shall be tested from each lot for ascertaining their conformity to the requirement of this specification.

A.1.3 The number of fertility testers to be selected for testing from a lot shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 1.

A.2 Method of selection of fertility testers

Fertility testers to be selected from the lot (see A.1.3) shall be chosen at random and in order to ensure the randomness of selection, a random number table shall be used. In case random number table is not available, the following procedure shall be followed:

Starting from any fertility tester, the fertility tester shall be counted as 1, 2, 3 ,....., etc, up to *r* and so on in one order, where *r* is equal to the integral part of the value *N*/*n*, *N* being the total number of fertility testers in the lot and *n* being the number of fertility testers to be chosen (see Table 1). Every *r*th fertility tester thus counted shall be separated until the requisite number of fertility testers is obtained from the lot to constitute a sample for test.

Table 1 — Scale of sampling and permissible number of defectives

Number of fertility testers in the lot (*N*)	Visual and dimensional tests		Tests other than visual and dimensional	
	Sample size (*n*)	Permissible number of defectives	Sub-sample size	Permissible number of defectives
(1)	(2)	(3)	(4)	(5)
Up to 25	5	0	2	0
26 to 100	13	1	3	0
101 to 500	32	3	5	0
501 to 1000	50	5	8	1
1 001 and above	80	7	13	1

A.3 Criteria for conformity

A.3.1 Visual and Dimensional Characteristics

All the fertility testers drawn as under col 2 of Table 1 shall be first inspected, along with their components for visual and dimensional characteristics. A fertility tester shall be considered as defective if the fertility tester or any of its components fail to meet the requirements for the characteristics under consideration. If the number of defective fertility testers is less than or equal to the corresponding permissible number of defectives given in col 3 of Table 1, the lot shall be declared to have satisfied the requirements for these characteristics. If, however, the number of defective

fertility testers exceed the permissible number, the lot shall be deemed as not conforming to the requirements for these characteristics.

A.3.2 Tests other than visual and dimensional characteristics

A.3.2.1 The lot having been found satisfactory for visual and dimensional characteristics (see A.3.1) shall be finally tested for tests other than visual and dimensional requirements specified in Clause 9. For this a number of fertility testers in accordance with col 4 of Table 1 shall be drawn at random from those already tested for visual and dimensional characteristics (see A.3.1).

A.3.2.2 The lot shall be considered to have satisfied the requirements for tests other than visual and dimensional if the number of defective fertility testers is less than or equal to the corresponding number given in col5 of Table 1.

A.3.3 A lot shall be declared as conforming to the specification, if it satisfies the requirements of the visual and dimensional characteristics (see A.3.1) and the test prescribed under Clause 9.