



CD/K/677:2010  
ICS 67.120

## EAST AFRICAN STANDARD

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Ham — Specification

EAST AFRICAN COMMUNITY

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

## 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

This standard is intended chiefly to cover the technical provisions relating to ham, and it does not include all the necessary provisions of a contract.

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

IS 2476:1963(R2000), *Specification for Ham*

Codex Alimentarius website: [http://www.codexalimentarius.net/mrls/pestdes/jsp/pest\\_q-e.jsp](http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_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>

USDA Plant Inspectorate Service website: [http://www.aphis.usda.gov/import\\_export/plants](http://www.aphis.usda.gov/import_export/plants)

European Union: [http://ec.europa.eu/sanco\\_pesticides/public](http://ec.europa.eu/sanco_pesticides/public)

Assistance derived from these sources is hereby acknowledged.

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## Ham — Specification

### 1 Scope

This East African Standard specifies the requirements and the methods of test for ham.

### 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 Official Method 931.06:1931, *Phosphorus (Total) ( $P_2O_5$ ) in Eggs*

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

CD-K-683:2010, *Smoked bacon — Specification*

CD/K/700:2010, *Ante-mortem and post-mortem inspection of meat animals — Code of practice*

EAS 5, *Refined white sugar — Specification*

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

EAS 35, *Edible salt — Specification*

EAS 38, *Labelling of prepackaged foods — Specification*

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

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

EAS 103, *Schedule for permitted food additives*

EAS 123, *Distilled water — Specification*

ISO 936, *Meat and meat products — Determination of total ash*

ISO 1736, *Dried milk and dried milk products — Determination of fat content — Gravimetric method (Reference method)*

ISO 1737, *Evaporated milk and sweetened condensed milk — Determination of fat content — Gravimetric method (Reference method)*

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 5537, *Dried milk — Determination of moisture content (Reference method)*

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

ISO 6491, *Animal feeding stuffs — Determination of phosphorus content — Spectrometric method*

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

ISO 8156, *Dried milk and dried milk products — Determination of insolubility index*

ISO 9390, *Water quality — Determination of borate — Spectrometric method using azomethine-H*

ISO 13730, *Meat and meat products — Determination of total phosphorus content — Spectrometric method*

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 0.95*

ISO 21527-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of yeasts and moulds — Part 2: Colony count technique in products with water activity less than or equal to 0.95*

### **3 Terminology**

For the purpose of this standard, the grouping of the various characteristics of the carcass from which the hams are derived under conformation, finish and quality shall be as follows:

#### **3.1 Conformation**

The head should be small in relation to the carcass. The shoulder and jowl should be light and the loin full and deep. The back should appear to be excessively long. The ham should be broad, well-fleshed to the hock, showing a fine bone and U-shaped in the space between the legs. Bone formation should be light, flat and pinkish in colour.

#### **3.2 Finish**

This refers to the quality of fat laid down. The quantity of internal and external fat should be such as to require no trimming. The cut sternum should show the predominance of lean over fat. When cut through, the amount of fat at the last rib should not be excessive. The fat should be white, dry and firm to the touch.

#### **3.3 Quality**

The rind should be free from wrinkles, scores, stabs and fighting scars. It should have an attractive colour and should not be unduly dry. The colour of the flesh should be bright, sappy and attractive pink.

#### **3.4 Presentation**

The material shall be of the following two types:

- a) Smoked, and
- b) Unsmoked.

### **4 Requirements**

#### **4.1 General**

The pigs from which ham is derived shall be slaughtered in a hygienically managed slaughter-house and subjected to ante-mortem and post-mortem examination according to the procedure prescribed in CD/K/700:2010.

## 4.2 Hygienic requirements

**4.2.1** The material shall be prepared under strict hygienic conditions by persons free from contagious and infectious diseases and only in premises maintained in a thoroughly clean and hygienic condition and having adequate and safe water supply and duly approved and licensed by the public health authorities concerned.

**4.2.2** All workers shall use clean, white, washed clothings.

**4.2.3** Necessary precautions shall be taken to prevent incidental contamination of the product from soiled equipment or from personnel suffering from injuries.

**4.2.4** Quality of water used for processing shall conform to EAS 12.

## 4.3 Material and preparation

**4.3.1** The ham shall have excellent conformation and quality and adequate finish and shall be firm. It shall be of good colour and shall be free from hair, bruises and discolouration. It shall have good proportion of lean to fat and meat to bone and a firm and fine texture.

Coarse, dark coloured or soft ham shall be excluded. The weight of the ham shall range from 5.0 kg to 9.0 kg.

**4.3.2** Ham shall be cut from the carcass approximately 6 cm from the tip of the Aitch bone. The feet shall be sawed off at the hock joint to expose the small cut in the bone. Excess fat shall be removed, leaving a smooth lean face.

**4.3.3** The layer of fat measured at the thickest point of the butt end shall be not less than 1 cm and not more than 4 cm in thickness.

**4.3.4** The material shall be free from internal bruises. However, slight cuts, blemishes or scalps in the rind, the diameters of which do not exceed 3.5 cm and which are not more than skin deep, may be permitted.

**4.4** Unless specified otherwise, ham which has been maintained at a temperature not higher than -25 °C for a period of not more than 3 months may be used, provided it is not in a state of deterioration and provided the meat is in excellent condition.

**4.5** The material shall be cured as prescribed in 4.6 and smoked. The smoking shall be done as prescribed in 4.7. The finished material shall have a bright attractive appearance and possess the aroma and flavour of freshly processed ham. It shall be sound, cool (temperature not exceeding 21 °C), dry and otherwise in excellent condition at the time of packaging, transport and final delivery.

**4.6 Curing** — The ham may be cured by any of the following methods:

**4.6.1 Dry-sugar curing** — The ham shall be thoroughly, but not excessively, cured with a well-blended mixture of common salt (see EAS 35), sugar (see EAS 5) and sodium nitrate or sodium nitrite or both, with or without the addition of water in accordance with good commercial practice. The cured ham shall be washed but shall not be soaked before smoking.

**4.6.2 Dry-salt curing** — Curing shall be done as in 4.6.1 except that no sugar shall be used.

**4.6.3 Wet-salt curing** — The ham shall be thoroughly, but not excessively, cured with or without injecting the curing mixture consisting of common salt and sodium nitrate or sodium nitrite or both, and shall be immersed in a curing solution of salt and sodium nitrate or sodium nitrite or both in accordance with good commercial practice. The ham shall be washed but not soaked before smoking.

**4.6.4 Wet-sugar curing** — The ham shall be thoroughly, but not excessively, cured with or without injecting the curing mixture consisting of common salt, sugar and sodium nitrate or sodium nitrite or

both, and shall be immersed in a curing solution of salt, sugar and sodium nitrate or sodium nitrite or both in accordance with good commercial practice. The ham shall be washed but not soaked prior to smoking.

**4.7 Smoking** — The ham shall be dried and smoked in accordance with good commercial practice and, unless specified otherwise, it shall be smoked in dry smoke from hardwood or hardwood sawdust for not less than 24 hours at such a temperature and for such a length of time as will result in the material attaining bright attractive appearance, uniform colour and the characteristic aroma and flavour.

**4.8 Sodium chloride content** — The final processed material shall contain not more than 7.5 percent by weight of sodium chloride, when determined according to the method prescribed in Annex A of CD-K-683:2010.

**4.9 Nitrite content** — The final processed material shall not contain more than 0.02 percent by weight of nitrite, calculated as sodium nitrite, when determined by the method prescribed in Annex B of CD-K-683:2010.

## **5 Packing and marking**

### **5.1 Packing**

Unless agreed to otherwise between the purchaser and the vendor, the material shall be wrapped first in hosiery cloth, then in kraft paper and finally in hessian cloth.

### **5.2 Marking**

**5.2.1** Each container shall be marked to give the following information:

- a) Name and type of the material,
- b) Name of the manufacturer,
- c) Batch or code number,
- d) Number of pieces,
- e) Minimum net weight and gross weight, and
- f) Date of packing.

**5.2.2** Each container may also be marked with a Certification Mark.

## **6 Sampling**

Representative samples of the material for tests shall be drawn according to the method prescribed in Annex C of CD-K-683:2010.

## **7 Tests**

**7.1** Tests for sodium chloride and nitrite shall be conducted according to the methods prescribed in Annexes A and B respectively of CD-K-683:2010.

**7.2 Quality of reagents** — Unless specified otherwise, pure chemicals and distilled water [see EAS 123] shall be employed in tests.

**NOTE** Pure chemicals shall mean chemicals that do not contain impurities which affect the experimental results.

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