



CD/K/686:2010
ICS 67.120

EAST AFRICAN STANDARD

Raw or cooked red meat sausages — 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.

© East African Community 2010 — All rights reserved*

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

The standard covers raw cooked sausages made from red meat. The requirements for sausage meat are also covered in the standard.

The standard incorporates requirements that enhance maintenance of quality and safety of sausages and sausage meat. The standard also incorporates parameters which facilitate fair trade practices by stipulating the minimum levels of total meat and lean meat.

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

IS 3060:1979(2000), *Specification for Pork Sausages, Canned*

IS 3061:1979(R2000), *Specification for Pork Sausages, Fresh*

KS 59-1:2009, *Sausages — Specification — Part 1: Raw or cooked red meat sausages*

Codex Alimentarius website: http://www.codexalimentarius.net/mrls/pestdes/jsp/pest_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>

USDA Plant Inspectorate Service website: http://www.aphis.usda.gov/import_export/plants

European Union: http://ec.europa.eu/sanco_pesticides/public

Assistance derived from these sources is hereby acknowledged.

Contents

1	Scope	1
2	Normative references	1
3	Definitions.....	3
4	Raw materials.....	3
5	Essential compositional and quality requirements	4
5.1	Fresh sausages	4
5.2	Cooked sausages and or smoked sausages	4
6	Optional ingredients.....	5
7	Food additives	5
8	Requirements	5
8.1	General requirements	5
8.2	Microbiological limits.....	6
9	Source of meat	6
10	Limits for heavy contaminants in red meat sausages and sausage meat	6
11	Packaging and labelling.....	6
11.1	Packaging.....	6
11.2	Labelling	7

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

Raw or cooked red meat sausages — Specification

1 Scope

This East African Standard specifies the requirements for raw or cooked red meat sausages and sausage meat.

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-673:2010, *Porcine (pig) meat — Carcasses and cuts*

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

CD-K-692:2010, *Mutton and goat meat canned in brine — Specification*

CD-K-693:2010, *Animal casings — Specification*

CD-K-697:2010, *Code of hygienic practice for meat*

CD-K-699:2010, *Veterinary drugs residues in foods — Maximum residue limits*

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 937, *Meat and meat products — Determination of nitrogen content (Reference method)*

ISO 1442, *Meat and meat products — Determination of moisture content (Reference method)*

ISO 1443, *Meat and meat products — Determination of total fat content*

ISO 1444, *Meat and meat products — Determination of free fat content*

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 1841-1, *Meat and meat products — Determination of chloride content — Part 1: Volhard method*

ISO 1841-2, *Meat and meat products — Determination of chloride content — Part 2: Potentiometric method*

ISO 2294, *Meat and meat products — Determination of total phosphorus content (Reference method)*

ISO 2917, *Meat and meat products — Measurement of pH — Reference method*

ISO 2918, *Meat and meat products — Determination of nitrite content (Reference method)*

ISO 3091, *Meat and meat products — Determination of nitrate content (Reference method)*

ISO 3496, *Meat and meat products — Determination of hydroxyproline content*

ISO 4134, *Meat and meat products — Determination of L-(+)- glutamic acid content — 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 5553, *Meat and meat products — Detection of polyphosphates*

ISO 5554, *Meat products — Determination of starch 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 7251, *Microbiology of food and animal feeding stuffs — Horizontal method for the detection and enumeration of presumptive Escherichia coli — Most probable number technique*

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 13493, *Meat and meat products — Determination of chloramphenicol content — Method using liquid chromatography*

ISO 13496, *Meat and meat products — Detection of colouring agents — Method using thin-layer chromatography*

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

ISO 13965, *Meat and meat products — Determination of starch and glucose contents — Enzymatic 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 Definitions

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

3.1

sausage meat

is a mixture of chopped or ground red meat or any other approved red meat with seasonings, fillers or binders and may contain preservatives

3.2

sausage

is a product obtained by stuffing sausage meat into a casing and which may be raw, cooked and/or smoked

3.3

total meat content

shall be the total of meat inclusive of fats/rinds

3.4

natural casings

they are casings obtained from the small intestines of wholesome animals

3.5

approved red meat

is meat originating from gazetted meat animals that is wholesome and fit for human consumption as per the meat control act

4 Raw materials

4.1 Raw approved red meat shall be wholesome and fit for human consumption and free from objectionable odours, flavours and blood clots, bones, tendons and any other contamination.

4.2 Natural and edible collagen casings shall be wholesome and fit for human consumption and free from defects such as holes, blisters, lacerations, parasitic, yeasts and fungal infestations, and salt burns.

4.3 Non edible artificial casings shall be of food grade quality and wholesome.

4.4 All ingredients shall be of acceptable biological chemical and physical quality.

5 Essential compositional and quality requirements

Table 1 — Approved red meat sausage and sausage meat requirements

S/No.	Characteristic	Maximum limits for the final products (% of the total weight)		Test method
		Raw	Cooked and/or smoked	
i)	Total meat content, (min.)	50%	65%	Annex C of CD/K/684:2010
ii)	Moisture content, (max.)	53%	53%	ISO 1442
iii)	Fat content, (max.)	30%	30%	ISO 1443
iv)	Total ash, (max.)	3%	—	ISO 936

5.1 Fresh sausages

5.1.1 Raw pork sausage shall have a minimum meat content of 50% and shall be of the following composition:

- Pork sausage meat or pork sausage meat, or a mixture of pork and beef meat provided 80% of the meat content shall be pork;
- Pork fat;
- Salts complying with EAS 35.

5.1.2 Raw beef sausages shall have a minimum meat content of 50% and shall be of the following composition:

- Beef or beef sausage meat, can be a mixture of beef and pork meat provided 65% of the meat content shall be beef;
- Beef fat;
- Salt complying with EAS 35.

5.2 Cooked sausages and or smoked sausages

5.2.1 Cooked sausages shall have a minimum meat content of 65% and shall be of the following composition:

- Beef meat;
- Pork meat;
- Any other approved red meat;
- Fats (beef or pork) complying with relevant East African Standards;
- Salts complying with EAS 35;
- Curing agents complying with the relevant East African Standards or relevant health regulations

5.2.2 Other economic cooked sausages shall have a minimum meat content of 50% and shall be of the following composition:

- a) Beef meat;
- b) Pork meat;
- c) Any other approved red meat;
- d) Fats (beef or pork) complying with relevant East African Standards;
- e) Salts complying with EAS 35;
- f) Curing agents complying with the relevant East African Standards or relevant health regulations.

6 Optional ingredients

6.1 Fillers and binders

- a) Carbohydrates such as rusk crumbs, grain, and potato flour etc complying with relevant East African Standards.
- b) Proteins such as dried whole milk and skimmed milk powder, vegetable proteins complying with relevant East African Standards.
- c) Permitted emulsifying agents complying with relevant East African Standards.
- d) Spices, seasonings and condiments complying with relevant East African Standards.

7 Food additives

The application of permitted food additives in sausages and sausage meat shall comply with EAS 103. The levels of the following food additives in these products shall be:

- a) Sulphur dioxide maximum 450 ppm;
- b) Sodium nitrite maximum 200 ppm;
- c) Permitted food colours.

8 Requirements

8.1 General requirements

8.1.1 The processing of sausages and sausage meat shall be done under hygienic conditions stipulated in CD-K-697:2010.

8.1.2 An establishment shall use no meat or meat products unless the meat or meat products have been derived from animals subjected to ante-mortem and post-mortem inspection in accordance with CD/K/700:2010. The meat shall have been passed as fit for human consumption and shall not have been exposed to the addition of any harmful substance which renders it unfit for human consumption after inspection.

8.1.3 Meat and meat products shall be handled, stored and transported in an establishment where basic requirements for plant sanitation are fulfilled and in a manner that will protect the meat and meat products from contamination and deterioration.

8.1.4 Natural sausage casings complying with CD/K/693:2010 shall be obtained from healthy animals slaughtered and inspected and which have been prepared under hygienic conditions stipulated in CD-K-697:2010.

8.1.5 The final products shall be handled and stored in such a manner as to avoid contamination of the product.

8.1.6 Sausages and sausage meat shall be packed in suitable containers capable of protecting the product against any contamination and damages during transportation, storage and retail outlets.

8.1.7 Beef and pork sausages and sausage meat shall comply with maximum pesticide residue limits prescribed in CD/K/699:2010.

8.2 Microbiological limits

Sausages and sausage meat shall not contain any pathogenic organisms and shall comply with microbiological limits given in Table 1:

Table 1 — Microbiological limits for sausages and sausage meat

SL No.	Type of organisms	Maximum limits		Test method
		Raw Sausages and sausage meat	Cooked Sausage	
i)	Total viable counts, per g	10 ⁶	10 ³	ISO 4833
ii)	Coliforms, per g	10 ³	Nil	ISO 4832
iii)	E. coli per g	10 ²	Nil	ISO 7251
iv)	Staphylococcus aureus, per g	10 ³	Nil	ISO 6888
v)	Salmonella, per 30g	Nil	Nil	ISO 6579

9 Source of meat

The identification/isolation of meat species in beef and pork sausages and sausage meat shall be done according to the Elisa test procedure.

10 Limits for heavy contaminants in red meat sausages and sausage meat

Beef and pork sausages and sausage meat shall not contain heavy metal contaminants in excess of the limits given in Table 2.

Table 2 — Limits for heavy contaminants in red meat sausages and sausage meat

SL No.	Metal contaminants	Max. limits, ppm	Test method
i)	Arsenic, as As	0.1	EAS 41
ii)	Copper, as Cu	0.4	EAS 41
iii)	Lead, as Pb	0.1	EAS 41
iv)	Zinc, as Zn	5.0	EAS 41
v)	Iron, as Fe	5.0	EAS 41
vi)	Tin, as Sn	250	EAS 41

11 Packaging and labelling

11.1 Packaging

Packaging of beef and pork sausages and sausage meat shall be done in suitable packaging materials, which protect the product against any microbiological, chemical or any other type of contamination.

11.2 Labelling

Labelling of packages of beef and pork sausages and sausage meat shall be done in accordance with the requirements stipulated in EAS 38 and shall include the following:

- a) Name of the product (as beef, pork sausages or sausage meat as appropriate)
- b) Name, location and address of manufacturer;
- c) Net weight, in g or kg;
- d) Declaration as either "raw", "cooked" and/or "smoked".
- e) List of ingredients in descending order;
- f) Declaration of minimum "Meat content" by percentage;
- g) Declaration of preservatives used;
- h) Casing to be declared as either natural or edible collagen or synthetic non edible casing;
- i) date of manufacture;
- j) Expiry date;
- k) Batch number;
- l) Instructions for use and storage conditions;
- m) Country of origin.

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

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

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