EAST AFRICAN STANDARD

Chicken 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.

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Introduction

The demand for chicken meat products is on the increase due to its greater availability and chicken sausage is one such product. Sausage is generally defined as any comminuted, seasoned meat usually formed into a symmetrical shape. Chicken sausage is the coarse or finely comminuted product prepared from chicken meat or chicken meat and byproducts.

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

IS 13400:1992(R2003), Meat and Meat Products — Chicken Sausages — Specification


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


Assistance derived from these sources is hereby acknowledged.
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Chicken sausages — Specification

1 Scope

This East African Standard specifies the requirements, method of test and sampling for chicken sausages.

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.

CD-K-617:2010, Chicken essence — Specification
CD-K-620:2010, Poultry — Glossary of terms
CD-K-622:2010, Chicken canned in brine — Specification
CD-K-629:2010, Transport of small and medium sized seed-eating birds — Code of practice
CD-K-692:2010, Mutton and goat meat canned in brine — Specification
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)
3 Definitions

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

3.1 Broiler
It is a young meat type chicken, usually 6 to 8 weeks of age of either sex, that is tender-meated with soft, pliable, smooth textured skin and flexible breast bone.

3.2 Culled Chicken
Chicken of any age (not below 8 weeks) which shall be healthy and well nourished, usually include spent hens, cockerels and cocks.

3.3 Deboned Chicken Meat
Hand or mechanically deboned meat free of bones, separable fat and thick tendons.

3.4 Byproducts
Includes skin, gizzard, heart and ova that are clean and wholesome.

4 Types

Chicken sausages shall be of 2 types designated as cooked or uncooked. Sausages when classified as 'cooked' should have been cooked to an internal temperature of 70 ± 2°C.
5 Requirements

5.1 Hygienic requirements shall be as per EAS 39.

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

5.2 Requirements for dressed chicken and by-products

5.2.1 The material shall be the carcasses drawn from the healthy live chickens.

5.2.2 The poultry shall be subjected to ante-mortem and post-mortem inspection by a qualified veterinarian in accordance with CD-K-618:2010.

5.2.3 The chicken shall be suitably scalded and all pin feathers and body hairs removed by picking or singeing. The chicken shall be well dressed and head, legs, vents and oil gland removed and eviscerated. The dressed chicken shall meet the requirements of CD-K-614:2010.

5.2.4 The carcasses shall be properly cleaned, washed and drained. The carcasses shall be suitably chilled.

5.2.5 The dressed chicken and properly cleaned gizzard and heart shall be stored chilled at 4 °C for a maximum period of 5 days or frozen at -18 °C for a maximum period of 3 months, when required.

5.2.6 Meat, skin and separable fat shall be collected separately. Meat shall be free from visible bones and thick tendons shall be separated.

5.2.7 Meat, byproducts and fat shall be chilled to less than 4 °C or frozen (-18 °C). When frozen, they should be tempered to a temperature of 2 to 4 °C before sausage manufacture.

5.3 Requirements for deboning

The dressed carcass or cuts shall be deboned in hot, chilled or frozen and tempered condition.

5.3.1 Deboning process shall be done in a cool room maintained at less than 20 °C. The deboned meat shall be immediately transferred to chill room temperature at 4 °C unless used immediately.

5.4 Ingredients requirements

5.4.1 Quality of Meat

The requirements for dressed chicken (5.2) and requirements for deboning (5.3) should be satisfied. The deboned meat shall be moderately firm (not oily or soft), of bright colour and free from foreign odour or flavour, discolouration and deterioration. Frozen meat shall be used after proper tempering and it should be sound and fit for human consumption.

5.4.2 Quality of byproducts

Byproducts shall be free from extraneous material and taints and shall be properly stored before being used.

5.4.3 Chicken fat

Abdominal fat, subcutaneous fat and other separable fat shall be used. The fat should be wholesome and free from extraneous material.

5.4.4 Fillers/binders

Wholesome cereal rusk, whole egg liquid, cracker meal, wheat flour, suji, potato flour, soya flour, textured soya and dried milk solids shall be used.
5.4.5 Spices and condiments
Spices and condiments used shall be clean, wholesome and fit for human consumption.

5.4.6 Sweetening agents
Sweetening agents, if used shall be only refined cane sugar (see EAS 5) or dextrose.

5.4.7 Salt
Salt used in the preparation of chicken sausages shall conform to EAS 35.

5.4.8 Phosphates, food grade
Sodium tripolyphosphate, tetra sodium pyro-phosphate, sodium hexametaphosphate or a mixture of these phosphates may be used in chicken sausages.

5.4.9 Preservatives
No preservatives other than sodium nitrite/ metabisulphite shall be used.

5.4.10 Animal casings
Animal casings used shall conform to the quality laid down in CD-K-693:2010. The synthetic casings may also be used.

5.5 Requirements for the finished product

5.5.1 Appearance and flavour
Chicken sausages after linking shall not show any defects of casing or in colour and have pleasant flavour and appearance. No foreign or any other objectionable odour shall be present.

5.5.2 Texture
Chicken sausages shall be of a good uniform texture characteristic of the product.

5.5.3 Freedom from defects
Pieces of feather, hair and particles of bone shall not be present in the product. The product shall be free from dirt, insect and rodent contamination. Poisonous or deleterious substances shall not be present.

5.5.4 Added colour
No artificial colouring matter shall be used.

5.5.5 Composition requirements
Chicken sausages shall conform to the formulation requirements given under Table 1 and composition requirements given under Table 2.

5.5.6 Microbiological specifications
Chicken sausages shall also conform to the microbiological specifications given in Table 3.

5.5.7 Storage requirements
Chicken sausages uncooked or cooked shall be brought to a temperature of 4°C within 12 hours. The fresh chilled material should be consumed within 5 days when stored at a temperature not exceeding 4°C. The cooked chilled sausages should be consumed within 10 days when stored at a temperature...
not exceeding 4°C. Fresh or cooked sausages shall be chilled before freezing and the freezing completed at -18°C or lower within 12 hours.

The frozen sausages shall be stored at -14 °C or lower and shall be consumed within 2 months or at -10 °C and shall be consumed within one month.

### Table 1 — Requirements for formulation

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Ingredients No.</th>
<th>Requirement (Percent by mass)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>i)</td>
<td>Lean meat, Min</td>
<td>60</td>
</tr>
<tr>
<td>ii)</td>
<td>Chicken fat, Max</td>
<td>16</td>
</tr>
<tr>
<td>iii)</td>
<td>By products (see 3.4), Max</td>
<td>15</td>
</tr>
<tr>
<td>iv)</td>
<td>Added water, Max</td>
<td>9</td>
</tr>
<tr>
<td>v)</td>
<td>Fillers, Max</td>
<td>5</td>
</tr>
<tr>
<td>vi)</td>
<td>Phosphate, Max</td>
<td>0.5</td>
</tr>
<tr>
<td>vii)</td>
<td>Salt, Max</td>
<td>2.5</td>
</tr>
<tr>
<td>viii)</td>
<td>Spices, seasonings, Max</td>
<td>5.0</td>
</tr>
<tr>
<td>ix)</td>
<td>Sodium nitrite, Max</td>
<td>0.02</td>
</tr>
</tbody>
</table>

**NOTE** Keeping the lean meat at the minimum prescribed level the other parameters may be adjusted within the limit specified above to make the sum total 100 and also meet the compositional requirements as given in Table 2. Record of these formulations shall be maintained.

### Table 2 — Requirement for composition

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Ingredients No.</th>
<th>Requirement (Percent by mass)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>i)</td>
<td>Moisture, % by mass, Max</td>
<td>62</td>
</tr>
<tr>
<td>ii)</td>
<td>Protein, % by mass, Min</td>
<td>14</td>
</tr>
<tr>
<td>iii)</td>
<td>Fat, % by mass, Max</td>
<td>20</td>
</tr>
<tr>
<td>iv)</td>
<td>Ash, % by mass, Max</td>
<td>3.2</td>
</tr>
<tr>
<td>v)</td>
<td>Added phosphates (expressed as P₂O₅), % by mass, Max</td>
<td>0.3</td>
</tr>
<tr>
<td>vi)</td>
<td>Nitrite (expressed as sodium nitrite), % by mass, Max</td>
<td>0.012</td>
</tr>
</tbody>
</table>

### Table 3 — Microbiological Specifications for chicken sausages

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Characteristic</th>
<th>Requirement</th>
<th>Method of test</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>i)</td>
<td>Total bacterial count/g, Max</td>
<td>100 000</td>
<td>100 000</td>
</tr>
<tr>
<td>ii)</td>
<td><em>Escherichia coli</em> count/g, Max</td>
<td>20</td>
<td>Nil</td>
</tr>
<tr>
<td>iii)</td>
<td>Faecal Streptococci count/g, Max</td>
<td>1000</td>
<td>100</td>
</tr>
<tr>
<td>iv)</td>
<td>Coagulase positive Staphylococci, Max</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>v)</td>
<td><em>Salmonella</em> per 25 g</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>vi)</td>
<td><em>Shigella</em> per 25 g</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>vii)</td>
<td><em>Vibrio cholerae</em> per 25 g</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>viii)</td>
<td><em>Listeria monocytogenes</em> per 25 g</td>
<td>Absent</td>
<td>Absent</td>
</tr>
<tr>
<td>ix)</td>
<td>Faecal coliforms, per g, Max</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>x)</td>
<td>Yeast and moulds, per g, Max</td>
<td>100</td>
<td>Nil</td>
</tr>
</tbody>
</table>

### 6 Packing and marking

#### 6.1 Packing

Unless agreed otherwise between the purchaser and the packer, chicken sausages shall be packed in polyethylene bags, heat sealed or gum taped, or in bags made of other suitable flexible packaging.
material or wrapped in butter paper and then in Kraft paper. The unit of packing shall be as agreed to between the purchaser and the packer.

6.2 Marking

6.2.1 Each package shall be marked with the following particulars:

a) Name and type of the material with brand name, if any;
b) A complete list of ingredients shall be declared on the label in descending order of proportion;
c) Name and address of the manufacturer;
d) Net mass of the contents;
e) Batch number or code number;
f) Storage conditions (see 5.5.7);
g) Date of manufacture; and
h) Expiry date.

6.2.1 Standard Mark — Each container may also be marked with a Certification Mark.

7 Sampling

The method of drawing representative samples of material and the criteria for conformity shall be as prescribed in Annex A.

8 Tests

Tests shall be carried out as prescribed in 5.5.1, 5.5.2, 5.5.3, Table 2 and Table 3.
Annex A
(normative)

Sampling of chicken sausages

A.1 General requirements of sampling

A.1.1 Sampling shall be done by a person agreed to between the purchaser and the packer and in the presence of the purchaser (or his representative) and the packer (or his representative).

A.1.2 Samples shall be stored in such a manner that the temperature of the material does not vary unduly from the normal temperature.

A.2 Scale of sampling

A.2.1 Lot

In any single consignment all the packets containing chicken sausages of the same size and from the same batch of manufacture shall be grouped together to constitute a lot.

A.2.1.1 Samples shall be tested from each lot for ascertaining conformity of the material to the requirements of this specification.

A.2.2 The number of packets to be selected from the lot for testing the physical and chemical requirements shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 4. A sub-sample as given in col4 shall be taken at random from the sample selected as in col2.

A.2.3 The packets to be selected from the lot (A.2.2) shall be chosen at random from the lot and for this purpose a random number table shall be used. In case such tables are not available, the following procedure shall be adopted:

Starting from any packet, count them as 1,2,3 ........ up to \( r \) and so on in the order. Every \( r \)th packet thus counted shall be chosen, \( r \) being the integral part of \( \frac{N}{n} \), where \( N \) is the total number of packets in the lot and \( n \) is the number of packets to be selected.

A.3 Number of tests

A.3.1 Tests for flavour and appearance, texture, freedom from defects and colour shall be carried out individually on each of packets selected as in col2 of Table 4 (see B.2.2).

A.3.2 Tests for composition requirements (see Table 2) and microbiological specifications (Table 3) shall be carried out individually on each of the packets selected as in col14 of Table 4.

A.4 Criteria for conformity

A.4.1 The lot shall be considered satisfactory in respect of the requirements tested in A.3.1 if the number of defective packets found in A.3.1 does not exceed the corresponding number given in col3 of Table 4.

A.4.2 The lot shall be considered satisfactory in respect of the requirements tested in A.3.2 if each sample satisfies all these requirements.

A.4.3 The lot shall be declared to be in conformity with all the requirements of this specification if it has been found satisfactory in A.4.1 and A.4.2.
### Table 4 — Scale of Sampling

<table>
<thead>
<tr>
<th>Number of packets in the lot</th>
<th>Packets to be selected</th>
<th>Permissible No. of defectives</th>
<th>Size of sub-sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Up to 150</td>
<td>5</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>151 to 300</td>
<td>10</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>301 to 500</td>
<td>13</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>501 to 1,000</td>
<td>20</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>1,001 to 3,000</td>
<td>32</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>3,001 and above</td>
<td>50</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>
Annex B  
(normative)

Determination of faecal streptococci count

B.1 Medium

B.1.1 Sterile KF agar with the following composition shall be used:

- Proteose peptone No. 3  10 g
- Yeast extract  10 g
- Sodium chloride AR  5 g
- Sodium glycerophosphate  10 g
- Maltose CP  20.0 g
- Lactose  1 g
- Sodium azide  0.49 g
- Sodium carbonate AR  0.0636 g
- Bromocresol purple  0.015 g
- Agar  10 g
- Distilled water (see EAS 153)  1 litre

B.1.1.1 Dissolve the agar in 750 ml of the distilled water by steaming. All ingredients mentioned above (B.1.1) except bromocresol purple and sodium carbonate are dissolved separately in 250 ml of distilled water. Mix the two solutions well. Add sodium carbonate in small portions and then filter through absorbent cotton. Add Bromocresol purple in the filtrate and mix well. Distribute in appropriate quantities and sterilize in an autoclave at 121 °C for 15 minutes.

NOTE  In case compounded agar medium is used, follow manufacturer's instructions for sterilization.

B.1.2 Add 1 ml of 1.0 percent solution of 2, 3, 5 triphenyl tetrazolium chloride per every 100 ml of the melted and cooled agar prior to use.

B.1.3 Pour 1 ml each of the 0.1 and 0.01 dilution sample to two separate sterile petri dishes. Add the cooled agar (nearly 10 ml). Mix it by rotating. Incubate the plates at 37 °C for 48 h. Count the red and pink colonies and compute their number per gram.