



CD/K/623:2010  
ICS 67.120.20

## **EAST AFRICAN STANDARD**

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**Poultry — Canned chicken curry — 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.

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## Introduction

The demand for chicken and chicken products is increasing day by day. The chicken preparations are also getting a good response from the civilian as well as defence personnel. Therefore, the formulation of this standard on canned chicken curry will go a long way in helping the consumer to get a quality product.

A suggested recipe and mode of preparation of chicken curry is given in Annex A.

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

IS 12541:1988(R2000), *Meat and Meat Products — Poultry — Chicken Curry, Canned — Specification*

Codex Alimentarius website: [http://www.codexalimentarius.net/mrls/vetdrugs/jsp/vetd\\_q-e.jsp](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](http://ec.europa.eu/enterprise/sectors/pharmaceuticals/veterinary-use/maximum-residue-limits/index_en.htm)

Assistance derived from these sources is hereby acknowledged.

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

## Poultry — Canned chicken curry — Specification

### 1 Scope

This East Africa Standard specifies the requirements, methods of test and sampling for canned chicken curry.

### 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-614:2010, *Dressed poultry — Specification*

CD-K-617:2010, *Chicken essence — Specification*

CD-K-618:2010, *Ante-mortem and post-mortem inspection of poultry — Code of practice*

CD-K-619:2010, *Handling, processing, quality evaluation and storage of poultry — Code of practice*

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-630:2010, *Transport of poultry — Code of practice*

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

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

EAS 35, *Edible salt — Specification*

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

EAS 38, *Labelling of prepackaged foods — Specification*

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

EAS 103, *Schedule for permitted food additives*

EAS 123, *Distilled water — Specification*

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 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 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 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 7937, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of Clostridium perfringens — Colony-count technique*

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

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

##### **Broiler or Fryer**

A broiler or fryer 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 breastbone cartilage.

#### 3.2

##### **Roaster**

A roaster is a young chicken (usually 12 to 22 weeks of age), of either sex, that is, tender-meated with soft, pliable, smooth-textured skin and breastbone cartilage that may be somewhat less flexible than that of a broiler or fryer.

#### 3.3

##### **Stag**

A stag is a male chicken (usually 22 to 44 weeks of age) with coarse skin, somewhat toughened and darkened flesh, and considerable hardening of the breastbone cartilage. Stag show a condition of fleshing and a degree of maturity intermediate between that of rooster and a cock.

#### 3.4

##### **Stewing Chicken or Fowl**

A stewing chicken or fowl is a mature chicken (usually more than 44 weeks of age) with meat less tender than that of a roaster, and non-flexible breastbone tip.

#### 3.5

##### **Cock or Rooster**

A cock or rooster is a mature male chicken (usually over 44 weeks of age) with coarse skin, toughened and darkened meat, and hardened breastbone tip.

### 4 Requirements

4.1 **Hygienic requirements** — Factory, processing and employee hygiene shall be as per EAS 39.

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

#### 4.2 Requirement for live chicken

4.2.1 The material shall be the carcasses drawn from the live chickens which shall be healthy and of good confirmation. The birds shall have their breast bones well covered with flesh. The eyes of the birds shall be bright, nostrils free from discharges, combs and wattles firm and bright in colour, feather glossy, movement active and showing no evidence of any other disease.

4.2.2 The poultry shall be subjected to ante-mortem and post-mortem inspection by a qualified veterinarian (CD-K-618:2010).

#### 4.3 Requirements for dressed chicken

4.3.1 The poultry shall be slaughtered in licensed premises and properly bled.

4.3.2 The chicken shall be well dressed (see CD-K-614:2010).

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

4.3.4 The material shall be free from artificial colouring matter and firming agents.

4.3.5 Meat pieces with normal bone content only shall be canned. Meat pieces shall measure 2.5 cm to 4 cm in diameter.

4.3.6 No preservatives other than sodium chloride shall be used.

4.3.7 No tenderizing material shall be used to soften the meat.

4.3.8 The meat with correct proportion of onion, species and vegetable fat shall be properly cooked before canning. Meat juice shall not be separated either before or during the process of preparation of curry.

#### 4.4 Requirement for the finished products

4.4.1 The content of the can on opening shall not display disintegration.

4.4.2 The material shall have good characteristic flavour typical of canned poultry meat. It shall be free from any objectionable colour or odour.

4.4.3 The meat should not be tough and leathery. The gravy shall not be watery.

4.4.4 The end product shall be free from feather, hair, dirt, insect contamination or any other extraneous matter.

4.4.5 Poisonous and deleterious substances of any type including those of microbial origin shall not be present.

4.4.6 The can shall give a negative pressure of not less than 150 mm of mercury at  $27 \pm 2^\circ\text{C}$  under normal atmospheric pressure. Head space shall not be less than 1.5 cm.

4.4.7 The average proportion of meat including bone to gravy in the canned curry shall be in the ratio of 45: 55. A tolerance of  $\pm 5$  shall be permitted.

4.4.8 The bone content shall not exceed 10 percent of the total contents of the can.

4.4.9 The material shall also conform to the requirements prescribed in Table 1.

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### 5 Packaging and storage

#### 5.1 Packing

The material shall be packed in suitable new open top sanitary cans (OTS) lacquered internally with sulphur resistant coating and hermetically sealed.

#### 5.2 Storage

Cans shall be stored at ambient temperature.

#### 5.3 Marking

The labels shall give the following information, in addition to any other information required by EAS 38:

- a) Name of the product,
- b) Name and address of the manufacturer,
- c) Net weight of the content,
- d) Batch No. and date of manufacture,
- e) Type of the bird used (see Clause 3) in bold letters,
- f) Declaration regarding preservative,
- g) Name of the ingredients in descending order,
- h) Shelf life not less than 12 calendar months, and
- j) Licence No. and category.

**5.3.1** The labelling on the can should be done either by printing or lithographing on the cans or by affixing labels printed on paper.

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

### 6 Sampling

The method of drawing representative sample of the material and the criteria for conformity shall be as prescribed in CD-K-692:2010.

### 7 Tests

**7.1** Test shall be carried out as prescribed in 4.4.6, 4.4.7, 4.4.8 and Table 1.

#### 7.1.1 Quality of reagents

Unless specified otherwise, pure chemicals and distilled water (see EAS 123) shall be employed.

NOTE 'Pure chemicals' shall mean the chemicals that do not contain impurities which affect the test results

Table 1 — Requirements of chicken curry, canned

| Type of contaminant |  | Requirement                   | Method of test           |
|---------------------|--|-------------------------------|--------------------------|
| (i)                 | Total fat, % by mass, Max              | 6 to 9                        | ISO 1736/1737            |
| (ii)                | Sodium chloride in brine, % (w/v), max | 1.5 to 2.5                    | Annex B                  |
| (iii)               | Arsenic, mg/kg, max                    | 1.0                           | EAS 41                   |
| (iv)                | Lead, mg/kg, max                       | 0.3                           | EAS 41                   |
| (v)                 | Copper, mg/kg, max                     | 20                            | EAS 41                   |
| (vi)                | Zinc, mg/kg, max                       | 50.0                          | EAS 41                   |
| (vii)               | Tin, mg/kg, max                        | 250.0                         | EAS 41                   |
| (viii)              | Cadmium, mg/kg, max                    | 0.3                           | EAS 41                   |
| (ix)                | Microbiological requirements           | Shall be commercially sterile | See J.5.1, CD/K/551:2010 |

NOTE Requirements for items (iii) to (vii) are calculated an total contents of a can



Canned chicken curry example

**Annex A**  
(normative)

**Suggested recipe and mode of preparation of chicken curry**

**A.1 Recipe for 100 kg fresh chicken**

|                       |           |
|-----------------------|-----------|
| Fresh chilled chicken | 100 kgs   |
| Salt                  | 2.2 kgs   |
| Fat (vegetable oil)   | 10 kgs    |
| Coriander powder      | 4 kgs     |
| Red chilly powder     | 1.250kgs  |
| Black pepper          | 0.800 kgs |
| Cinnamon              | 0.200 kgs |
| Cloves                | 0.050 kgs |
| Saunf                 | 0.200 kgs |
| Turmeric powder       | 0.100 kgs |
| Garlic                | 0.100 kgs |
| Onion (Chopped)       | 20.00 kgs |
| Ginger (Chopped)      | 0.500 kgs |
| Green chilly          | 1.500kgs  |
| Tomato                | 3.500 kgs |
| Mustard               | 0.250 kgs |
| Curry leaves          | 0.100 kgs |

**A.2 Mode of preparation of curry**

Take the requisite quantity of fat (Vanaspati/Vegetable Oil) in a clean stainless steel vessel and heat it. Put the finely chopped onion, ginger, green chilly and garlic in the boiling oil and fry till it become slightly brownish. Add the mixture of remaining species and fry till it becomes brown in colour. Add chicken meat and fry for some time and then add water in just sufficient quantity (approximately 40 litres) to cook the meat to the required texture and to fill the can with gravy. The gravy should not be watery or too thick. After cooking separate the chicken meat from gravy and oil and place in separate clean stainless steel vessels. Fill the can with cooked meat and gravy to have required meat to gravy ratio in the can.

**Annex B**  
(normative)

**Determination of sodium chloride**

**B.1 Reagents**

**B.1.1 Standard Silver Solution** — 0.1 N, standardized against 0.1 N sodium chloride solution.

**B.1.2 Dilute Nitric Acid** — 1:4.

**B.1.3 Ferric ammonium indicator solution** — A saturated solution of ferric alum  $[\text{Fe}(\text{NH}_4)(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}]$ .

**B.1.4 Standard Potassium Thiocyanate Solution** — 0.1N

**B.2 Procedure**

**B.2.1** Wash the emptied can thoroughly with water and wash the residue on the sieve at least thrice with cold water. Collect the drained liquid and all the washings together in a 1 000 ml graduated flask and make up the volume. Centrifuge the made-up liquid for at least 5 min at 1 000 rev/min.

**B.2.2** Take a suitable aliquot of a clear supernatant solution, add a known volume of the standard silver nitrate solution in slight excess and then add 20 ml of dilute nitric acid. Boil gently on a hotplate or a sand-bath until all solids except silver chloride dissolve (usually 15 min). Cool, add 50 ml of water and 5ml of the ferric alum indicator solution and titrate with the standard ammonium thiocyanate solution until permanent light brown colour appears.

**B.3 Calculation**

**B.3.1** Sodium chloride in the brine, per cent by weight

$$= 5.85 \frac{(V_1 N_1 - V_2 N_2)}{W}$$

where,

$V_1$  = volume of the standard silver nitrate solution;

$V_2$  = volume of the standard potassium thiocyanate;

$N_1$  = normality of the standard silver nitrate solution;

$N_2$  = normality of the standard potassium thiocyanate; and

$W$  = weight, in g, of the dried product taken for the test.

**NOTE** The total weight of brine is obtained by finding the difference between the net weight and the drained weight of the contents of the can.

**Annex C**  
(normative)

**Determination of acidity**

**C.1 Reagents**

**C.1.1 Standard Sodium Hydroxide Solution** — 0.1 N.

**C.1.2 Phenolphthalein Indicator Solution** — Prepared by dissolving 0.1 g in 100 ml of rectified spirit.

**C.2 Procedure**

**C.2.1** Weigh accurately about 5 g of the egg material and blend it with 25 ml of distilled water in a waring blender to ensure uniform suspension. Transfer it into an Erlenmeyer flask. Rinse the bowl of the blender at least thrice with distilled water and add to the suspension. Add one or two drops of phenolphthalein indicator solution and titrate with the standard sodium hydroxide solution. Note the volume of sodium hydroxide solution used.

**C.3 Calculation**

$$\text{Acidity, as percent acetic acid} = \frac{0.006 \times V}{W} \times 100$$

where

$V$  = Volume of 0.1 N standard sodium hydroxide solution, and

$W$  = Weight in g of the material.

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