



DEAS 739:2010  
ICS 67.080.20

## **DRAFT EAST AFRICAN STANDARD**

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**Dried cassava chips — 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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## Acknowledgement

This standard was developed with support from the Policy Analysis and Advocacy Programme (PAAP) of the Association for Strengthening Agricultural Research in Eastern and Central Africa (ASARECA). This was possible through a grant by the United States Agency for International Development (USAID). This support was used in the process of formulation and mobilization of stakeholders to review the standard in national and regional fora.

ASARECA is a non-political association of agricultural research institutes in: Burundi, DR Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, Sudan, Tanzania and Uganda. ASARECA serves as a platform for promoting regional research and in the sharing of benefits and spillovers that derive from such research. The mission of ASARECA is to *“Enhance regional collective action in agricultural research for development, extension and agricultural training and education, to promote economic growth, fight poverty, eradicate hunger and enhance sustainable use of resources in Eastern and Central Africa”*.

Development of standards has been part of PAAP’s contribution to changing the way business is done in crucial agricultural sectors to increase efficiency and/or reduce waste through rationalization and harmonization of policies, laws, regulations and procedures. Rationalization focuses on how countries conduct business in a given subsector, and determines what should be done to make the procedures and processes more efficient. Harmonization brings together regionally different approaches (policies, laws, regulations and procedures) into unified approaches that are applied across the countries. This harmonization process allows commodities and factors to move freely across national boundaries, thereby improving domestic and foreign investment by expanding markets beyond national borders. Over time this will lead to gradual attainment of seamless borders for trade in cassava and cassava products across the region.

Removal of regulatory bottlenecks to transboundary movement of cassava products in the region will enhance competitiveness of trade and value addition in the sub-sector. It will improve the value chains by supporting product differentiation and hence increased trade in cassava products in the region. This will ultimately contribute to incomes, employment generation and improved welfare in the region. This fits snugly with the aspirations of ASARECA as a key player contributing to economic development of the region.

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

## Dried cassava chips — Specification

### 1 Scope

This draft East African Standard specifies the requirements and methods of sampling and test for dried cassava chips intended for human consumption.

### 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.

EAS 38, *General standard for the labelling of pre-packaged foods*

EAS 39, *Code of practice for hygiene in the food and drink manufacturing industry*

ISO 712, *Cereals and cereal products — Determination of moisture content — Routine reference method*

EAS 217-2, *Methods for the microbiological examination of foods — Part 2: General guidance for the enumeration of micro-organisms — Colony count technique at 30 °C*

EAS 217-6, *Methods for the microbiological examination of foods — Part 6: Examination for Salmonella Spp*

EAS 217-8, *Methods for the microbiological examination of foods — Part 8: Enumeration of yeast and moulds*

ISO 874 *Fresh fruits and vegetables - sampling*

DEAS 744, *Cassava and cassava products — Determination of total cyanogens — Enzymatic assay method*

ISO 3094, *Fruit and vegetable products – Determination of copper*

ISO 6633, *Fruit and vegetable products – Determination of lead content – Flameless AAS method*

ISO 6634, *Fruit and vegetable Products – Determination of arsenic content – Silver diethyldithiocarbamate spectrophotometric method*

ISO 6637 *Fruit and vegetable products — Determination of mercury content — Flameless atomic absorption method*

ISO 5498, *Agricultural food products — Determination of Crude Fibre Content — Modified Scharrer Method*

ISO 2171, *Cereals, pulses, and derived products — Determination of total ash*

EAS 82, *Milled cereal products — Methods of Test (General methods)*

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 10520, *Native starch — Determination of starch content — Ewers polarimetric method*

ISO 16050, *Food stuffs — Determination of aflatoxins B<sub>1</sub> and total content of aflatoxins B<sub>1</sub>, B<sub>2</sub>, G<sub>1</sub> and G<sub>2</sub> in cereals, nuts, and derived products — High performance liquid chromatographic method*

### 3 Terms and definitions

#### 3.1 product description

##### **dried cassava chips**

pieces of fresh cassava storage roots obtained by slicing or chipping peeled cassava storage root and drying them with or without additional processing

### 4 Terms and definitions

For the purpose of this standard, the following terms and definitions shall apply.

#### 4.1

##### **filth**

impurities of animal origin, including dead insects

#### 4.2

##### **food grade material**

one that will not transfer non-food chemicals into the food and contains no chemicals which would be hazardous to human health

#### 4.3

##### **foreign matter**

all organic and inorganic materials (such as sand, soil, glass) .

### 5 General requirements

#### 5.1 Raw materials

The raw material shall be Fresh sweet cassava roots

The cassava storage roots from which the dried cassava chips are prepared shall be of the following conditions:

- Mature;
- free from diseases and pests;
- not be woody; and
- not be spongy.

#### 5.2 Processing

The processing of cassava chips shall be done shall be done in accordance with EAS 39.

### 5.3 General quality requirements

Dried cassava chips shall be safe and suitable for human consumption and shall conform to the following requirements:

- a) The taste and odour of dried cassava chips shall be typical of the product.
- b) The colour of the chips shall be characteristic of the variety.

NOTE The colour of cassava is usually white, creamy or yellow. The yellow coloured varieties are normally rich in carotenes.

- c) Dried cassava chips shall be free from filth, foreign matter and extraneous matter
- d) the cassava chips shall not appear mouldy

### 5.4 Composition requirements

Dried cassava chips shall conform to the compositional requirements in Table 1.

**Table 1 — Compositional requirements for dried cassava chips**

Parameter	Requirement	Method of test
Moisture content, by mass, %, maximum	12	ISO 712
Crude ash on dry matter basis %, maximum	3	ISO 2171
Acid insoluble ash, on dry matter basis, %, maximum	0.15	EAS 82
Crude fibre on dry matter basis %, maximum	2	ISO 5498
Hydrogen cyanide mg/kg, dry matter basis max	10	DEAS 744

## 6 Contaminants

### 6.1 Pesticide residues

Dried cassava chips shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission for this product.

### 6.2 Other contaminants

Dried cassava chips shall comply with the maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193).

## 7 Hygiene

7.1 The product covered by the provisions of this standard shall be processed, packaged, stored and transported under hygienic conditions conforming to EAS 39.

7.2 Dried cassava chips shall conform to the requirements for microbiological limits in Table 2.

Table 2 — Microbiological limits for dried cassava chips

Micro organisms	Requirement	Method of test
<i>Escherichia coli</i> cfu/g, max.	Shall be absent	ISO 7251
<i>Salmonella</i> , 25 gm	shall be absent	EAS ISO
Yeasts and moulds, cfu/g, max.	10 <sup>3</sup>	EAS ISO

## 8 Packaging

Dried cassava chips shall be packaged in food grade, clean and moisture-proof materials that safeguard the hygienic, nutritional, physical and organoleptic qualities of the product.

## 9 Weights and Measures

Dried cassava chips shall be packaged in accordance with the requirements specified under the Weights and Measures legislation of each Partner State.

## 10 Labelling

**10.1** In addition to the requirements of EAS 38, the following labeling requirements shall apply and shall be **legibly** and **indelibly** marked;

- a) the common name of the product which shall be "Dried cassava chips".
- b) name and physical address of the manufacturer or packer;
- c) lot identification;
- d) net mass in metric units;
- e) date of manufacture;
- f) country of origin;
- g) the words "Human food, store in cool dry place"; away from contaminants and;
- h) best before date

**10.2** Information for non-retail containers shall either be given on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the container.

## 11 Methods of sampling

Sampling shall be done in accordance to ISO 874

## 12. Criteria for conformity

A lot shall be declared as conforming to this standard if each sample inspected or analysed for quality requirement conforms to the provision of this standard.

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