



DEAS 740:2010
ICS 67.080.20

DRAFT EAST AFRICAN STANDARD

Cassava flour — 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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Acknowledgement

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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

Cassava flour — Specification

1 Scope

This draft East African Standard specifies requirements and methods of sampling and test for cassava flour, which is obtained from the processing of cassava (*Manihot esculenta* Crantz) 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*

EAS 103, *General standard for food additives*

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 217-2, *Methods for the microbiological examination of foods — Part 8: Enumeration of yeast and moulds in foods*

DEAS 739, *Dried cassava chips — Specification*

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

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

ISO 13690, *Cereals, pulses and milled cereal products — Sampling of static batches*

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

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

ISO 6633, *Fruit and vegetable products — Determination of lead content — Flameless atomic absorption spectrometric 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*

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ISO 5498, *Agricultural food products — Determination of crude fibre content — General method*

ISO 2171, *Cereals and milled cereal products — Determination of total ash*

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 16050, *Foodstuffs — Determination of aflatoxins B₁ and total content of aflatoxins B₁, B₂, G₁ and G₂ in cereals, nuts, and derived products — High performance liquid chromatographic method*

3 Terms and definitions

3.1 Product description

Cassava (flour is the product prepared from dried cassava chips or paste by a pounding, grinding or milling process, followed by sifting to separate the fibre from the flour. In the case of cassava flour prepared from bitter cassava, detoxification is first carried out before it undergoes drying in the form of chips, paste or crumbs.

3.2 Terms and definitions

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

3.2.1

detoxication

process of reducing cyanide on fresh weigh basis to acceptable level described under 4.2

3.2.2

filth

impurities of animal origin (including dead insects)

3.2.3

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

3.2.4

foreign matter

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

3.2.5

practically free

product without defects, in excess of those that can be expected to result from, and be consistent with good cultural and handling practices employed in the production and marketing of the fresh cassava

4 Essential composition and quality factors

4.1 Raw material

The raw material shall be dried cassava chips, paste, crumbs or cassava roots conforming to the relevant East African standards.

4.2 Essential composition factors

Cassava flour shall conform to the compositional requirements in Table 1.

Table 1 — Compositional requirements for cassava flour

Characteristic	Requirement	Method of test
Crude ash content, % by mass on dry matter basis, max.	3.0	ISO 2171
Moisture content, % by mass, max.	12	ISO 712
Crude fibre content, % by mass on a dry matter basis, max.	2.0	ISO 5498
Acid insoluble ash, % by mass on dry matter basis max.	0.35	EAS 82
Starch by mass on dry matter basis, min	60%	ISO 10520
Hydrogen cyanide	10	DEAS 744

4.3 General quality factors

Cassava flour shall be

- practically free from filth in amounts that may represent a hazard to human health.
- free of off flavours and odours,
- practically free from any living insects and foreign matter
- safe and suitable for human consumption.
- have colour characteristic of the variety

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

4.4 Specific quality factors

4.4.1 Particle size

Not less than 90 % shall pass through a 0.60 mm sieve for fine flour and not less than 90 % shall pass through a 1.20 mm sieve for coarse flour. Testing for particle size shall be done in accordance with EAS 82.

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Cassava flour intended for baking purposes shall have particle size of which Not less than 90 % shall pass through a 0.25 mm sieve

4.4.2 Hydrocyanic acid content

When tested in accordance with DEAS 744, the total hydrocyanic acid content of cassava flour shall not exceed 10 mg/kg,

5 Food additives

Cassava flour may contain only permitted additives in accordance with EAS 103

6 Contaminants

6.1 Pesticide residues

Cassava flour shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission for this commodity.

6.2 Other contaminants

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

7 Hygiene

Cassava flour shall be prepared and handled in accordance with EAS 39 and shall conform to microbiological limits in Table 2.

Table 2 — Microbiological limits for edible cassava flour

Microorganisms	Maximum limit	Method of test
<i>Escherichia. Coli</i> , per g	shall be absent	ISO 7251 ISO 4833
<i>Salmonella</i> in 25 g	shall be absent	ISO 6579
Yeast and mould, CFU/g, max.	10 ³	EAS ISO ISO 21527 -2

8 Packaging

Cassava flour shall be packaged in food grade materials that will safeguard the hygienic, nutritional and organoleptic qualities of the product.

The packaging materials shall comply with the environmental legislation of the destination country,

9 Weights and Measures

Cassava flour shall be packaged in accordance with the Weights and Measures requirements of the destination country.

10 Labelling

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

- a) The common name of the food shall be 'Cassava flour' and the terms 'Fine' or 'Coarse', in accordance with 4.4, shall appear in close proximity to the name of the food.
- b) Net contents shall be declared by weight in metric ('Système International') units.
- c) Name, location and address of the manufacturer shall be declared and/or brand name / trade name.
- d) Country of origin shall be declared.
- e) lot identification number
- f) Best before date
- g) The statement 'Human Food' shall appear on the package.
- h) Storage instructions

10.2 When labelling non-retail containers, 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.

10 Methods of sampling and test

Sampling shall be done in accordance with ISO 13690. Testing shall be done in accordance with the methods indicated against each requirement or other equivalent methods.

11 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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