EAST AFRICAN COMMUNITY

EDICT OF GOVERNMENT

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EAS 741 (2010) (English): Cassava composite wheat flour – Specification

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EAST AFRICAN STANDARD

Cassava wheat composite flour — 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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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.

Introduction

Cassava is cultivated in most parts of East Africa. The farmers have a number of varieties both local and improved. Cassava roots have a short shelf-life and are either consumed immediately after harvest or have to be processed into shelf stable products.

Cassava roots are processed at household and cottage levels in the rural areas. Processing at these levels involves mainly the production of cassava chips and flour from fermented or unfermented roots.

The processing of cassava roots into flour is done by traditional methods. The process for production of flour involves peeling, cutting into pieces, sun drying, milling, sieving and packaging for unfermented flour. For fermented cassava flour, the cassava pieces are fermented before sun drying.

Currently in East Africa, cassava flour is mainly used in the making flour and local gin (waragi) despite its many application. For example, the use of cassava flour for baking bread or biscuits is limited, but the potential for cassava flour to be used in the baking industry exists. Use of cassava in the baking as composite cassava -wheat flour, will save Partner States a lot of foreign earnings from the importation of wheat

Development of this standard should encourage the processing and use of cassava flour in baking products such as bread, biscuits, buns, doughnuts, and pancakes. This standard therefore aims at providing guidance for the production of high quality grade composite cassava flour for baking.

Cassava wheat composite flour — Specification

1 Scope

This East African Standard specifies the requirements and the methods of sampling and test for cassava-wheat composite. This standard does not apply to other composite flours from non wheat sources which may be used in different products.

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

EAS 740, *Cassava flour – Specification*

EAS 739, *Dried cassava chips — Specification*

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

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

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

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

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

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

EAS ISO 6634, *Fruit and vegetable products — Determination of arsenic content — Silver diethyldithocarbamate spectrophotometric method*

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

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

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

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

EAS ISO 16050, *Foodstuffs — Determination of aflatoxins B_1 and total content of aflatoxins B_1, B_2, G_1 and G_2 in cereals, nuts, and derived products — High performance liquid chromatographic method*

3 Terms and definitions

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

3.1
cassava-wheat composite flour
combination of cassava flour and wheat flour

3.2.
filth
impurities of animal origin (including dead insects)

3.3
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

3.4
foreign matter
all organic and inorganic materials (such as sand, soil, glass)

3.5
flour
finely ground content of dried wheat grains or peeled roots

4 Essential composition and quality requirements

4.1 General requirements

The general requirements for cassava wheat composite flour shall be as follows;

a) homogenous in size and colour;

b) practically free of filth and foreign matter;

c) not be rancid or have any off odours or flavours

4.2 Ingredients

The cassava flour used in the manufacture of composite flour shall conform to DEAS 740. The wheat flour shall conform to EAS 1, *Wheat flour — Specification*.

4.3 Proportion of cassava flour

The levels of substitution of wheat flour with cassava flour in composite flour shall have a minimum of 10 % weight of composite flour.

4.3 Composition of composite flour

Composite cassava flour shall conform to the compositional requirements in Table 1.

Table 1 –Compositional requirement for composite cassava flour

Characteristic	Requirement	Method of test
Protein content, percent by mass, min. (N x 6.25)	8.0	ISO 1871
Crude fat content, % by mass on a dry weight basis, min.	2.0	ISO 5986
Crude fibre content, % by mass on dry matter basis , max.	1.25	ISO 5498
Acid value	50	ISO 7305
Acid insoluble ash, % by mass, max.	0.35	EAS 82
Moisture content, %, by mass, max.	13.5	ISO 712

4.4 Specific quality factors

4.4.1 Particle size (composite flour for baking)

Not less than 90 % shall pass through a 0.25 mm sieve for fine flour.

4.4.2 Total cyanogens content

When tested in accordance with DEAS 744, the total hydrogen cyanide content of the cassava wheat composite flour shall not exceed 10 mg/kg.

4.5 Fortification

Cassava wheat composite flour may be fortified with nutrients in accordance with national legislation.

5 Food additives

Food additives may be added to composite flour in accordance with EAS 103. .

6 Contaminants

6.1 Pesticide residues

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

6.2 Other contaminants

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

Table 2 – Microbiological limits

Micro-organism	Maximum limit	Method of Test
Escherichia. coli, in 10 g mpn	Shall be absent	ISO 7251 ISO 4833
Salmonella in 25 g	Shall be Absent	ISO 6579
Yeast and mould, CFU/g, max.	10^3	ISO 21527-2

8 Packaging

The cassava wheat composite flour shall be packaged in materials which will safeguard the safety and quality of the product.

Cassava-wheat composite flour shall be packaged in food grade materials, which 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 wheat composite flour shall be packaged in accordance with the Weights and Measures requirements of the destination country.

10 Labelling

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

a) common name of the product shall be “Cassava wheat composite flour

b) percentage substitution

c) list of ingredients in descending order of proportion;

d) net weight

e) name and physical address of the manufacturer/packer/distributor and /or trade name/ brand name;

f) lot identification code or in clear mark to identify the producing factory and the lot; and

g) manufacturing and best before date;

h) storage instructions as ‘store in a cool dry place;

i) instructions on disposal of used package.

11 Methods of sampling and test

Sampling shall be done in accordance with ISO 13690 and testing in accordance with the methods indicated against each requirement or other equivalent methods and by visual examination.

13 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.

