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DRAFT EAST AFRICAN STANDARD

Dried Cassava Leaves — 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.

East African Community

P O Box1096

Arusha

Tanzania

Tel: 255 27 2504253/8

Fax: 255-27-2504481/2504255

E-Mail: eac@eachq.org

Web: www.each.org

Dried cassava leaves — Specification

1 Scope

This draft East African Standard specifies the requirements, sampling and test methods for dried cassava leaves, obtained from fresh cassava (*Manihot esculenta Crantz*) leaves 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.

CODEX STAN 192, *General Standard for Food Additives*

CODEX STAN 193, *Codex General Standard for Contaminants and Toxins in Food and Feed*

EAS 38, *Labelling of pre-packaged foods —General requirements*

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

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

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*

ISO 16649-2, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of beta-glucuronidase-positive Escherichia coli —Part 2: Colony-count technique at 44 degrees C using 5-bromo-4-chloro-3-indolyl beta-D-glucuronide*

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*

ISO 2171, *Cereals, pulses and by-products —Determination of ash yield by incineration*

ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of micro-organisms — Part 1: Colony-count at 30 degrees C — Pour plate technique*

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

ISO 5985*, Animal feeding stuffs — Determination of ash insoluble in hydrochloric acid*

ISO 6579-1, *Microbiology of the food chain — Horizontal method for the detection, enumeration and serotyping of Salmonella — Part 1: Detection of Salmonella spp.*

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

3 Terms and definitions

3.1 Dried cassava leaves

products prepared by drying pounded and or ground fresh cassava leaves.

3.2

filth

impurities of animal origin, including dead insects,

3.3 extraneous matter

organic matter of cassava origin other than dried cassava leaves,

3.4

foreign matter

organic and inorganic materials (such as sand, soil, glass) other than extraneous matter in the dried ground cassava leaves and

4 Requirements

4.1 General requirements

Dried cassava leaves shall:

a) be free from filth be free from abnormal flavours, odours,

b) have characteristic colour and smell of the ingredients used; and

c) be free of any visible foreign and extraneous matter.

4.2 Specific requirements

Dried cassava leaves shall comply with the specific requirements given in Table 1 when tested in accordance with test methods specified therein.

Table 1 —Specific requirements for dried ground cassava leaves

S/N	Characteristics	Requirement	Test method
i.	Moisture content, % by mass, max.	13	ISO 712
ii.	Crude ash content, % by mass on dry matter basis, max.	8.0	ISO 2171
iii.	Crude fibre content, % by mass on a dry matter basis, max.	39.0	ISO 5498
iv.	Acid insoluble ash, % by mass, max.	0.35	ISO 5985
v.	total hydrocyanic acid,% mg/kg, max	10	EAS 744.

5 **Additives**

Dried cassava leaves may contain only permitted additives in accordance with CODEX STAN 192.

6 Contaminants

6.1 Pesticide residues

Dried cassava leaves shall conform to those maximum residue limits for pesticide residues established by Codex Alimentarius Commission.

6.2 Other contaminants

Dried cassava leaves shall conform to those maximum levels of the Codex General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193).

6.3 Mycotoxins

Dried ground cassava leaves shall not exceed maximum limits of mycotoxins given in Table 2 when tested in accordance with test method specified therein.

Table 2 —Limits for aflatoxins in Dried ground cassava leaves

S/N	Type of mycotoxin	Maximum limit (µg/kg)	Test method
i.	Total aflatoxin	10	ISO 16050
ii.	Aflatoxin B1	5	

7 Hygiene

7.1 Dried cassava leaves shall be handled in hygienic manner in accordance with EAS 39 and shall conform to microbiological limits specified in Table 2.

7.2 Dried cassava leaves shall not exceed the microbiological limits in Table 3 when tested in accordance with test methods specified therein.

Table 3— Microbiological limits for Dried cassava leaves

S/N	Microorganisms	Limit	Test method
i.	Total Plate Count, cfu/g max.	10^4	ISO 4833-1
ii.	*Escherichia coli, cfu/ g* max.	Absent	ISO 16649-2
iii.	*Salmonella spp* in *25 g* max.	Absent	ISO 6579-1
iv.	Yeasts and moulds, cfu/g, max.	10^2	ISO 21527-2

8 Packaging

Dried cassava leaves shall be packaged in food grade materials which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

9 Labelling

In addition to the requirements of EAS 38 the labelling of dried ground cassava leaves shall include the following:

d) name of the product as “Dried cassava leaves”;

e) list of ingredients;

f) net content;

g) name, location and address of the manufacturer;

h) country of origin;

i) date of manufacture;

j) expiry date;

k) instructions for use;

l) storage conditions;

m) lot identification number/batch number; and

n) The statement "'Human Food**"** shall appear on the package.

10 Sampling

Sampling of Dried ground cassava leaves shall be done in accordance with EAS 900

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