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Banana (matooke) flour— Specification



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Foreword

Uganda National Bureau of Standards (UNBS) is a parastatal under the Ministry of Trade, Industry and Cooperatives established under Cap 327, of the Laws of Uganda, as amended. UNBS is mandated to co-ordinate the elaboration of standards and is

- (a) a member of International Organisation for Standardisation (ISO) and
- (b) a contact point for the WHO/FAO Codex Alimentarius Commission on Food Standards, and
- (c) the National Enquiry Point on TBT Agreement of the World Trade Organisation (WTO).

The work of preparing Uganda Standards is carried out through Technical Committees. A Technical Committee is established to deliberate on standards in a given field or area and consists of key stakeholders including government, academia, consumer groups, private sector and other interested parties.

Draft Uganda Standards adopted by the Technical Committee are widely circulated to stakeholders and the general public for comments. The committee reviews the comments before recommending the draft standards for approval and declaration as Uganda Standards by the National Standards Council.

The committee responsible for this document is Technical Committee UNBS/TC 204, *Fruits, Vegetables, tubers and processed products*

This second edition cancels and replaces the first edition (US 983:2015), which has been technically revised.

Banana (matooke) flour— Specification

1 Scope

This Uganda Standard specifies requirements, sampling and test methods for EAH banana (matooke) flour for human consumption.

2 Normative references

The following referenced documents referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

US 45, *General standard for food additives*

US 738, *General standard for contaminants and toxins in food and feed*

US 997, *Cooking banana (matooke) — Specification*

US EAS 803, *Nutrition labelling — Requirements*

US EAS 804, *Claims — General requirements*

US EAS 805, *Use of nutrition and health claims — Requirements*

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

US ISO 4833-1, *Microbiology of the food chain -- Horizontal method for the enumeration of microorganisms -- Part 1: Colony count at 30°C by the pour plate technique*

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

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

US ISO 6888-3, *Microbiology of food and animal feeding stuffs -- Horizontal method for the enumeration of coagulase-positive staphylococci (Staphylococcus aureus and other species) -- Part 3: Detection and MPN technique for low numbers*

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

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

US ISO 21527-2, *Microbiology of food and animal feedstuffs — 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*

US ISO 21415-1, *Wheat and wheat flour - Gluten content - Part 1: Determination of wet gluten by a manual method*

US ISO 24333, *Cereals and cereal products -- Sampling*

US ISO 24557, *Pulses – Determination of moisture content – Air oven method*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

banana (matooke) flour

fine gluten-free flour made from *Musa acuminata* East African highland *banana* (AAA-EA) and is useful for its moisture absorbing and holding properties

3.2

food grade material

packaging material, made of substances which are safe and suitable for their intended use and which will not impart any toxic substance or undesirable odour or flavour to the product

4 Requirements

4.1 Raw material

The banana (matooke) from which the flour shall be made shall conform to US 997.

4.2 General requirements

Banana (*matooke*) flour shall be:

- a) safe and suitable for human consumption;
- b) free from abnormal flavours, odour, and living insects;
- c) free from filth; and;
- d) shall have a colour characteristic of the variety from which it is produced.

4.3 Specific requirements

The product shall comply with the limits specified in Table 1 when tested in accordance with the methods specified therein.

Table 1 — Specific quality requirements for banana (*matooke*) flour

S/N	Characteristic	Limit	Test method
i.	Moisture, %, max	11	US ISO 24557
ii.	Total ash, %, max.	4	US ISO 2171

iii.	Acid insoluble ash, %, max	0.40	US ISO 5985
iv.	Fibre, %, max	5.0	US ISO 5498
v.	Gluten free content %,	[20ppm], [0]	US ISO 21415-1

4.3 Particle size

Not less than 90% shall pass through a 600 µm (0.60mm) sieve for fine flour and not less than 90% shall pass through a 1200 µm (1.20mm) sieve for coarse flour.

5 Food additives

Only the food additives specified in US 45 may be used.

6 Hygiene

6.1 Banana (*matooke*) flour shall be produced and handled in accordance with US 28 EAS 39.

6.2 Banana (*matooke*) flour shall comply with the microbiological requirements given in Table 2 when tested in accordance with the methods specified therein.

Table 2 — Microbiological requirements for banana (*matooke*) flour

S/N	Characteristic	Requirement	Test method
i.	Total plate count, cfu/g, max.	10 ⁵	US ISO 4833-1
ii.	<i>Staphylococcus</i> , cfu/g, max	10 ³	US ISO 6888-1
iii.	<i>Escherichia coli</i> *, MPN, max.	Absent	US ISO 7251
iv.	Yeasts and moulds, cfu/g, max.	10 ³	ISO 21527-2

7 Contaminants

7.1 Pesticide residues

Banana (*matooke*) flour shall comply with those maximum pesticide residue limits established by Codex Alimentarius commission for similar commodities.

7.2 Other contaminants

Banana (*matooke*) flour shall conform to those maximum limits of contaminants stated specified in US 738.

7.3 Aflatoxins

The maximum aflatoxin content of in banana (*matooke*) flour, when determined in accordance with the method described in US ISO 16050, shall not exceed 10 µg/kg for total aflatoxins and 5 µg/kg (ppb) for aflatoxin B₁.

8 Packaging

Banana (*matooke*) flour shall be packaged in food grade materials that will safeguard the hygienic, nutritional and organoleptic qualities of the product.

9 Labelling

9.1 General

In addition to the requirements in US EAS 38, the following specific labelling requirements shall apply and shall be legibly and indelibly marked;

- a) name of the product shall be “Banana (*matooke*) flour“;
- b) name and physical address of the manufacturer;
- c) batch or code number;
- d) net weight in metric units;
- e) list of any additives used;
- f) date of manufacture;
- g) “best before date“;
- h) country of origin;
- i) the statement “human food“;
- j) storage conditions; and
- k) indication whether flavoured or spiced.
- l) gluten free declaration (allergen information)

9.2 Nutritional labelling

The amount of micronutrients in the Banana (*matooke*) flour shall be declared on the label in accordance with US EAS 803.

9.3 Nutrition and health claims

Banana (*matooke*) flour may have claims on the importance of the micronutrients in nutrition and health. Such claims when declared shall be consistent with US EAS 804 and US EAS 805.

9 Sampling

Sampling of banana (*matooke*) flour shall be done in accordance with US ISO 24333.

Bibliography

- [1] US 983:2015, Banana (matooke) flour - Specification

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Certification marking

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