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Instant cereal and cereal based flour — Specification



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Foreword

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- (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 2, *Food and agriculture*, Subcommittee SC 3, *Cereals, pulses and related products*.

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Instant cereal and cereal based flour — Specification

1 Scope

This Draft Uganda standard specifies the requirements, sampling and test methods for instant cereal and cereal based flour intended 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 ISO 24333, *Cereals, and cereal products — Sampling*

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

US EAS 39, *Code of practice for hygiene in the food and drink manufacturing industry* US EAS 803, *Nutrition labelling— Requirements*

US EAS 804, *Claims— General requirements*

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

US ISO 4831, *Microbiology of food and animal feeding stuffs —Horizontal method for the detection and enumeration of coliforms — Most probable number technique*

US ISO 6579, *Microbiology of food and animal feeding stuffs -- Horizontal method for the detection of Salmonella spp.*

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

US ISO 1871, *Agricultural food products — General directions for the determination of nitrogen by the Kjeldahl Method*

US ISO 16649-1, *Microbiology of food and animal feeding stuffs Horizontal method for the enumeration of β glucuronidase-positive Escherichia coli Part 1: Colony-count technique at 44 °C using membranes and 5bromo-4-chloro-3-indolyl β -D-glucuronide*

US ISO 6579, *Microbiology of food and animal feeding stuffs - Horizontal method for the detection of Salmonella spp.*

US ISO 7954, *Microbiology - General guidance for enumeration of yeasts and moulds Colony count technique at 25 °C*

US ISO 11085:2015, *Cereals, cereals-based products and animal feeding stuffs Determination of crude fat and total fat content by the Randall extraction method*

US ISO 2171:2007, *Cereals, pulses and by-products - Determination of ash yield by incineration*

US ISO 6633, Fruits, vegetables and derived products - Determination of lead content Flameless atomic absorption spectrometric method

US ISO 6561-1, Fruits, vegetables and derived products - Determination of cadmium content Part 1: Method using graphite furnace atomic absorption spectrometry

US ISO 6561-2:2005, Fruits, vegetables and derived products - Determination of cadmium content Part 2: Method using flame atomic absorption spectrometry 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

foreign matter

any organic or inorganic matter other than the cereal grains or pulse (s) declared in the product.

3.2

foreign odour

are foreign to the relevant used food materials and which, because of their presence, render the product unfit for their normal usage.

3.3

Insect infestation

means the presence of insects (live or dead) and any of their developmental stages.

4 Description

Instant cereal and cereal based flour is a dehydrated pregelatinized cereal or cereal based product processed to dissolve quickly in hot or cold liquids. The flour can be made from a single cereal or a mixture of cereals and other nutritious foods to result into a nutritionally balanced product.

5 Requirements

5.1 General requirements

Instant cereal and cereal based flour shall;

- a) be from grains of cereals and other complimentary foods conforming to the relevant Uganda standards and have undergone processes of pre-cooking and milling;
- b) have acceptable colour, flavour and aroma characteristic of the foods used;
- c) be free from any rancid, foreign, or other objectionable tastes and odours;
- d) shall be free from any foreign material e.g. stones, husks, metals, glass, insect, fungi and others.

5.2 Specific requirements

Instant cereal and cereal based flour shall conform to the specific requirements when tested with the methods stated in table 1 below.

Table 1: Specific requirements for Instant cereal and cereal based flour

s/n	Parameter	Requirement	Method of test
1	Moisture, by mass, %, max.	10	US ISO 712
2	Fatty acidity, (mg KOH/100g), max, dry matter basis	80	US ISO 7305
3	Total Ash, on dry matter basis, % m/m, max	4.0	US ISO 2171
4	Acid insoluble ash, on dry matter basis, % mass, max.	0.40	US ISO 5985

6 Food additives

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

7 Contamination

7.1 Pesticide

Instant cereal and cereal based flour shall comply with those maximum pesticide residue limits established by CODEX Alimentarius commission for similar commodities.

7.2 Heavy metals

Instant cereal and cereal based flour shall conform to comply with the heavy metal limits in Table 2 when tested in accordance with test methods specified therein those maximum limits for heavy metals established by the Codex Alimentarius Commission as specified in Table 2.

Table 2 — Heavy metals limits for instant cereal and cereal based flour

S/No	Heavy metal	Limits (mg/kg), max	Test methods
i)	Arsenic(As)	0.1	US ISO 27085
ii)	Lead (Pb)	0.2	US ISO 6633
iii)	Cadmium (Cd)	0.1	US ISO 6561-1 or ISO 6561-2

7.3 Aflatoxin

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

8 Hygiene

8.1 Instant cereal and cereal based flour shall be produced, prepared and handled in accordance with the provisions of appropriate sections of US EAS 39.

8.2 Instant cereal and cereal based flour shall conform to the microbial limits stated in table 2:

Table 3: Microbial requirements for instant cereal and cereal based flour

s/n	Requirement	Limits	Test method
1	Total plate count, cfu/m	10 ⁴	US ISO 4833-1
2	E.coli count, per g, Max	Absent	US ISO 11866,
3	Salmonella sp.	Absent	US ISO 6785
4	Yeasts and moulds count per g, max	10 ²	US ISO 661

8 Packaging

Instant cereal and cereal based flour shall be packaged in food grade containers which will safeguard the hygienic, nutritional, and organoleptic qualities of the product.

9 Labelling

In addition to the requirements in US EAS 38, each package shall be legibly and indelibly labelled with the following:

- i. The name of the product shall be "Instant X flour" where X is the main cereal used;
- ii. Brand name/trade name;
- iii. The name and physical address of the manufacturer;
- iv. Lot identification/
- v. batch/code number Net
- vi. volume in metric units;
- vii. List of ingredients in descending order
- viii. list of any additives used;
- ix. Date of manufacture;
- x. Country of origin;
- xi. Storage conditions;
- xii. Expiry date.

10 Sampling

Methods of sampling of instant cereal and cereal based flour shall be accordance with US ISO 24333

Bibliography

- [1] US EAS 741:2010, Cassava composite wheat flour – Specification This
- [2] US EAS 782: 2012, Composite flour — Specification
- [3] ICSB1 instant corn-soy blend for use in export programs, 2010
- [4] Food Standards Regulation, Division - Cereals, pulses, legumes and derived products
And Vegetable Proteins

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Products that conform to Uganda standards may be marked with Uganda National Bureau of Standards (UNBS) Certification Mark shown in the figure below.

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