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Sesame flour — Specification



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Requests for permission to reproduce this document should be addressed to:

Rwanda Standards Board

P.O Box 7099 Kigali-Rwanda

KK 15 Rd, 49

Tel. +250 788303492

Toll Free: 3250

E-mail: info@rsb.gov.rw

Website: www.rsb.gov.rw

ePortal: www.portal.rsb.gov.rw

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Foreword

Rwanda Standards are prepared by Technical Committees and approved by Rwanda Standards Board (RSB) Board of Directors in accordance with the procedures of RSB, in compliance with Annex 3 of the WTO/TBT agreement on the preparation, adoption and application of standards.

The main task of technical committees is to prepare national standards. Final Draft Rwanda Standards adopted by Technical committees are ratified by members of RSB Board of Directors for publication and gazettment as Rwanda Standards.

DRS 416 was prepared by Technical Committee RSB/TC 003, Cereals, pulses, legumes and cereal products.

In the preparation of this standard, reference was made to the following standard:

- 1) US 1953: 2018, *Sesame paste — Specification*

The assistance derived from the above source is hereby acknowledged with thanks.

Committee membership

The following organizations were represented on the Technical Committee on Cereal, pulses, legumes and cereal products (RSB/TC 003) in the preparation of this standard.

Adma International Ltd

Africa Improved Foods (AIF)

Bakhresa Grain Milling

FARMFRESH Ltd

FUCORIRWA

Hope for Families Ltd

International Center for Tropical Agriculture (CIAT)

MINIMEX Ltd

National Industrial Research and Development Agency (NIRDA)

Rwanda Grains and Cereals Corporation Ltd (RGCC)

SOSOMA Industries Ltd

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World Food Program (WFP)

Zima Enterprise

Rwanda Standards Board (RSB) – Secretariat

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Sesame flour — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for sesame flour from the varieties (*Sesamun indicum.L.*) for human consumption.

2 Normative references

The following documents are 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.

AOAC 999.10, *Lead, Cadmium, Zinc, Copper, and Iron in Foods Atomic Absorption Spectrophotometry after Micro wave Digestion*

RS CODEX STAN 193, *General standard for contaminants and toxins in food and feed*

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

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

RS ISO 20483, *Cereals and pulses — Determination of the nitrogen content and calculation of the crude protein content -- Kjeldahl method*

RS 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*

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

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

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

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

RS ISO 660, *Animal and vegetable fats and oils — Determination of acid value and acidity*

RS ISO 6634, *Fruits, vegetables and derived products — Determination of arsenic content — Silver diethyldithiocarbamate spectrophotometric method*

RS ISO 665, *Oilseeds — Determination of moisture and volatile matter content*

3 Terms and definitions

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

3.1

sesame

edible seeds of the sesame plant, which are used whole or have the oil extracted

3.2

roasted sesame

sesame which have been subjected to heat, to which salt (in form of brine) and/or spices may have been added

3.3

sesame flour

product obtained by grinding raw or roasted sesame

3.4

foreign matters

any particles other than sesame flour

3.5

extraneous matter

inorganic matter such as sand, glass, metal, gravel, dirt, pebbles, stones, lumps of earth, clay and mud and organic matter such as chaff, straw, weed seeds and grains of crops, insects or insects' fragments, rodent hairs or any other foreign matter

3.6

food grade packaging 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

Sesame flour shall be obtained from sesame grains complying with relevant standard.

4.2 General requirements

Sesame flour shall:

- a) be free from foreign and extraneous matter;
- b) have distinctive natural flavour and free from rancidity and metallic flavour; and
- c) have homogeneous colour and texture and free from agglomeration.

4.3 Specific requirements

Sesame flour shall comply with the specific requirements stipulated in Table 1 when tested in accordance with test methods specified therein.

Table.1 —Specific requirements for sesame flour

S/N	Characteristic	Requirement	Test method
i.	Moisture, %, m/m, max.	7.0	RS ISO 665
ii.	Fat content %, m/m, min.	6	RS ISO 11085
iii.	Protein (N x 6.25), %, m/m, min.	15.0	RS ISO 20483
iv.	Crude fibers, % m/m, max.	5.0	RS ISO 5498
v.	Total ash, %, max.	6- 4.0	RS ISO 2171
vi.	Acid insoluble ash, %, m/m, max.	0.40	RS ISO 5985
vii.	Free fatty acids% m/m, max.	2.0	ISO 729
viii.	Oil content (on moisture free basis), % m/m, min.	45	ISO 659

5 Hygiene

Sesame flour shall be prepared and handled in accordance with RS CAC/RCP 1.

6 Contaminants

6.1 Heavy metals

Sesame flour shall be free from heavy metals in amounts stipulated in table 2 when tested in accordance test methods specified therein.

Table 2—Maximum limits for heavy metals in sesame flour

S/N	Heavy metal	Limits, max, (mg/kg)	Test method
i.	Lead	0.1	AOAC 999.10
ii.	Arsenic	0.1	RS ISO 6634

6.2 Pesticide residues

Sesame flour shall comply with those maximum residue limits established by the Codex Alimentarius Commission for sesame.

6.3 Mycotoxins

Sesame flour shall comply with the maximum mycotoxin limits stipulated in Table 3 when tested in accordance with test methods specified therein.

Table 3—Mycotoxin limits for sesame flour

S/N	Characteristic	Maximum limit (µg/kg)	Test method
i.	Total Aflatoxin	10.0	RS ISO 16050
ii.	Aflatoxin B ₁	5.0	

7 Microbiological limits

Sesame flour shall comply with the microbiological limits stipulated in Table 4 when tested in accordance test methods specified therein.

Table 4 —Microbiological limits for sesame flour

S/N	Microorganism	Limit	Test method
i.	Total Plate Count (TPC), CFU, per g, max.	10 ³	RS ISO 4833-1
ii.	<i>Escherichia coli</i> cfu/g, max	Absent	RS ISO 16649-2
iii.	<i>Salmonella Spp</i> in 25g	Absent	RS ISO 6579-1
iv.	Yeast and moulds cfu/g, max	10 ²	RS ISO 21527-2

8 Packaging

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

8.2 Each package shall be securely closed and sealed.

9 Labelling

In additional to labelling requirements stipulated in RS EAS 38, Sesame flour packages shall be legibly and indelibly labelled with the following:

- a) name of the product; by indicating whether if it is from roasted or raw sesame such as “roasted sesame flour” or “raw sesame flour”;
- b) name, physical location and address of the manufacturer;

- c) manufacturing date;
- d) expiry date;
- e) storage instructions;
- f) country of manufacture; and
- g) batch/lot number.

10 Sampling

Sampling of sesame flour shall be done in accordance with ISO 542.

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