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**Sesame seeds — 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](mailto:info@rsb.gov.rw)

Website: [www.rsb.gov.rw](http://www.rsb.gov.rw)

ePortal: [www.portal.rsb.gov.rw](http://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 415 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 1628, *Sesame grain— 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 Cereals, 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

World Food Program (WFP)

Zima Enterprise

Rwanda Standards Board (RSB) – Secretariat

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# Sesame grains— Specification

## 1 Scope

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

This Draft Rwanda Standard applies to raw sesame seeds and roasted sesame seeds.

## 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*

ISO 542, *Oilseeds — Sampling*

ISO 659, *Oilseeds — Determination of oil content (Reference method)*

ISO 729, *Oilseeds—Determination of acidity of oils*

RS CAC/RCP 1, *Code of practice — General principles of food hygiene*

RS CODEX STAN 192, *General standard for food additives*

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

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

RS ISO 16050, *Food stuffs — 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*

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

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

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

RS ISO 605, *Pulses — Determination of impurities, size, foreign odours, insects, and species and variety — Test methods*

### 3 Terms and definitions

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

#### 3.1

##### **sesame**

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

#### 3.2

##### **roasted sesame**

sesame seeds which have been subjected to heat

#### 3.3

##### **foreign/extraneous matter**

organic or inorganic materials other than the sesame seeds

#### 3.4

##### **organic matter**

any animal or plant matter other than sesame seed

#### 3.5

##### **inorganic matter**

stones, glass, pieces of soil and other mineral matter

#### 3.6

##### **filth**

impurities of animal origin, including dead insects



**3.7****food grade materials**

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 flavor to the product

**3.8****defective/damaged seeds**

pest damaged, discoloured, stained, rotten and diseased and broken seeds

**3.9****shrivelled/immature sesame seeds**

seeds which are underdeveloped, thin and papery in appearance

**4 Requirements****4.1 General requirements**

Sesame seeds shall:

- a) be practically free from abnormal and undesirable flavours and odours;
- b) be clean;
- c) be wholesome;
- d) have a colour characteristic of the variety;
- e) be practically free from fungal infestation; and
- f) be practically free from live insects.

**4.2 Grading**

Raw sesame seeds shall be classified as grade 1, grade 2 and grade 3 according to table 1 when tested in accordance with test method specified therein.

**Table 1- Grading requirements for raw sesame seeds**

S/N	Characteristic	Requirements			Test methods
		Grade 1	Grade 2	Grade 3	
i.	Filth, % m/m, max.	0.1	0.1	0.1	

ii.	Inorganic matter, % m/m, max.	0.1	0.2	0.2	RS ISO 605
iii.	Extraneous/foreign matter, % m/m, max.	1.0	2.00	2.00	
iv.	Damaged seeds, % m/m, max.	1.0	2.00	3.0	
v.	Shrivelled and immature , percent by weight, max	2.00	4.00	6.00	

### 4.3 Specific requirements

Raw and roasted Sesame seeds shall comply with the specific requirements given in Table 2 when tested in accordance with test methods specified therein

**Table 2 — Specific requirements for raw and roasted sesame seeds**

S/N	Characteristic	Requirements	Test method
i.	Moisture content, % m/m, max.	Raw	RS ISO 665
		Roasted	
ii.	Crude protein on dry matter basis , % m/m, min	15	RS ISO 20483
iii.	Acid insoluble ash, % m/m, max.	0.4	RS ISO 5985
iv.	Total ash% max.	4.0	RS ISO 2171
v.	Free fatty acids % m/m, max	2.0	ISO 729
vi.	Oil content (on moisture free basis), % m/m, min	45	ISO 659

## 5 Contaminants

### 5.1 Pesticide residues

Sesame seeds shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission for this commodity.

### 5.2 Heavy metals

Sesame seeds shall not exceed the maximum limits for heavy metals in Table 3 when tested in accordance with test methods specified therein.

**Table 3 — Heavy metal contaminants in sesame seeds**

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

### 5.3 Mycotoxins

Sesame seeds shall not exceed aflatoxin limits in Table 4 when tested in accordance with test methods specified therein.

**Table 4 — Aflatoxin limits for Sesame seeds**

S/N	Type of aflatoxin	Maximum limit (µg/kg)	Test method
i.	Total aflatoxin	10	RS ISO 16050
ii.	Aflatoxin B <sub>1</sub>	5	

### 6 Hygiene

Sesame seeds shall be produced, prepared and handled in accordance with RS CAC/RCP 1

### 7 Packaging

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

**7.2** Each package shall be securely closed and sealed

### 8 Weights and measures

Sesame seeds shall be packaged in accordance with national legislation on the weights and measures.

NOTE: Rwanda is a signatory of to the ILO (International Labour Organization) for maximum package weight of 50kg where human loading and unloading is involved.

### 9 Labelling

In addition to the requirements of RS EAS 38, the following labelling requirements shall apply and shall be legibly and indelibly labelled:

- a) product name as "Sesame seeds or roasted sesame seeds";
- b) grade;
- c) name and physical address of the producer, packer, importer/distributor;
- d) net weight;
- e) country of origin;
- f) lot/batch/code number;

- g) statement, "Food for Human Consumption", shall appear on the package;
- h) storage instructions as "Store in a cool dry place away from contaminants";
- i) instructions on disposal of used package;
- j) crop year for sesame seeds;
- k) packing date for roasted sesame seeds; and
- l) Best before date".

## **10 Sampling**

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

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ICS 65.020.20