



**RWANDA
STANDARD**

DRS

388

Second edition

yyyy-mm-dd

Roasted soybean flour — Specification

ICS 67.060

Reference number

DRS 388: 2023

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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.

RS 388 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 (s):

- 1) RS EAS 799: 2014, Edible full fat soybean flour — Specification
- 2) RS EAS 762: 2017, Dry soybeans — Specification

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

This second edition cancels and replaces the first edition (RS 388: 2018) which has been technically revised.

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.

Enterprise URWIBUTSO/SINA GERARD

MANOSALIWA Food Industries Ltd

MINIMEX Ltd

National Agricultural Export Development Board (NAEB)

National Industrial Research and Development Agency (NIRDA)

Nyarutarama Business Incubation Center

One Acre Fund-Tubura

Rwanda Food and Drugs Authority

Zamura Feeds Ltd

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Roasted soybean flour — Specification

1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods for roasted soybean flour made from varieties (cultivars) grown from *Glycine max* (L.) Merr. intended 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.

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

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

RS EAS 38, *Labelling of Pre-packaged Foods — General requirements*

RS EAS 762, *Dry soybeans — Specification*

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 14902, *Animal feeding stuffs — Determination of trypsin inhibitor activity of soya products*

RS 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*

RS 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*

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 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*

RS ISO 24333, *Cereals and cereal products — Sampling*

RS ISO 4833-1, *Microbiology of food and animal feeding stuffs — Horizontal method for the enumeration of microorganisms — Part 1: Colony count at 30 degrees C by the pour plate technique*

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 665, *Oilseeds – determination of moisture content and volatile matter content*

RS ISO 7305, *Milled cereal products — Determination of fat acidity*

3 Terms and definitions

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

3.1

roasted soybean flour

flour produced from dry soybean which have been roasted and ground to flour

3.2

soybean

mature dry grains of variety grown from *Glycine max* (L.) Merr

3.3

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 Ingredients

4.1.1 Essential ingredient

Roasted soybean flour shall be prepared from soybeans complying with RS EAS 762.

4.1.2 Optional ingredients

The following optional ingredients including but not limited to the following may be used in roasted soybean flour and shall comply with relevant standards::

- a) Salt complying with RS EAS 35; and

- b) Spices.

4.2 General requirements

Roasted soybean flour shall:

- a) be of colour characteristic of the variety of the roasted soybean used;
- b) be free from off flavours and odours;
- c) be free from extraneous and foreign matter; and
- d) be free from live insect and filth.

4.3 Specific requirements

Roasted soybean 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 roasted soybean flour

S/N	Characteristic	Requirement	Test method
i.	Moisture content , %, m/m, max.	7.0	RS ISO 665
ii.	Crude Protein (N x 6.25), %, m/m, min.	35.0	RS ISO 20483
iii.	Crude fibre, % m/m, max.	3.0	
iv.	Soy oil (on dry basis), %, m/m, max.	25	RS ISO 11085
v.	Fat acidity, mg KOH/100 g, max.	80	RS ISO 7305
vi.	Total ash, %,m/m max.	4	RS ISO 2171
vii.	Acid insoluble ash, %, m/m, max.	0.40	RS ISO 5985

4.4 Antinutritional factors

The urease activity in the roasted soybean flour shall not exceed 0.3 mg N/g/min (for trypsin inhibitor activity, 5 mg/g) when tested in accordance with ISO 5506 and RS ISO 14902

4.5 Particle size

Not less than 90 % shall pass through a 0.60-mm sieve for fine flour and not less than 90 % shall pass through a 1.20-mm sieve for coarse flour.

4.6 Microbiological requirements

Roasted soybean flour shall comply with the microbiological limits stipulated in Table 2 when tested in accordance with the test methods specified therein.

Table 2 — Microbiological limits for roasted soybean flour

S/N	Microorganism	Maximum limit	Test method
i.	Total Viable Count, CFU/g	10 ⁴	RS ISO 4833-1
ii.	<i>Escherichia coli</i> , CFU/g	Absent	RS ISO 16649-2
iii.	<i>Salmonella spp.</i> , in 25g	Absent	RS ISO 6579-1
iv.	Yeasts and moulds, CFU/g	10 ³	RS ISO 21527-2

5 Food additives

Food additives which may be used in roasted soybean flour shall comply with RS CODEX STAN 192.

6 Hygiene

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

7 Contaminants

7.1 Pesticide and veterinary drug residues

Roasted soybean flour shall comply with those maximum pesticide and veterinary drug residue limits established by Codex Alimentarius Commission

7.2 Heavy metals

When tested in accordance with appropriate test methods roasted soybean flour shall not contain heavy metal contaminants in amounts which exceed those specified in Table 3 when tested in accordance with test methods specified therein.

Table 3 — Heavy metal limits in roasted soybean flour

S/N	Heavy metals	Maximum limit (mg/kg)	Test method
i.	Lead	0.1	AOAC 999.11
ii.	Cadmium	0.1	

7.3 Aflatoxins

Roasted soybean flour shall comply with the aflatoxin levels specified in Table 4 when tested in accordance with test methods specified therein.

Table 4 — Aflatoxin limits for roasted soybean flour

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

8 Packaging

Roasted soybean flour shall be shall be packaged in food grade packaging materials that do not affect the quality of the product.

9 Labelling

In addition to the requirements specified in RS EAS 38, each pack of Roasted soybean flour shall be legibly and indelibly marked with the following:

- a) name of the product shall be 'Roasted soybean flour'; accompanied by whether "fine flour" or "Coarse flour";
- b) name and address of the manufacturer/packer/distributor/ importer/exporter/vendor ;
- c) list of ingredients in descending order;
- d) food additives used;
- e) batch number;
- f) net content shall be declared in the metric system;
- g) date of manufacture;
- h) expiry date;
- i) country of origin;
- j) instructions for use;
- k) storage conditions;
- l) instructions for use; and
- m) the statement 'Human Food' shall appear on the package.

10 Sampling

Sampling shall be done in accordance with RS ISO 24333.

Bibliography

[1] RS 388: 2022 Roasted soya bean flour-Specification, First edition

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