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## Pumpkin pulp flour— Specification



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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 419 was prepared by Technical Committee RSB/TC 038, *Processed fruits and vegetables*.

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

## Committee membership

The following organizations were represented on the Technical Committee on Processed fruits and vegetables (RSB/TC 038) in the preparation of this standard.

JD LIUAR

National Agricultural Export Development Board (NAEB)

NETRAPI Ltd

Nyarutarama Incubation Center

Shekina Enterprise

TUZAMURANE Cooperative

ZIMA Enterprise

Rwanda Standards Board (RSB) – Secretariat

# Pumpkin pulp flour— Specification

## 1 Scope

This Draft Rwanda Standard specifies the requirements, sampling and test methods of for pumpkin pulp flour intended for human consumption or for other use in the food industry.

This Draft Rwanda Standard is not applicable to pumpkin seed flour.

## 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 2001.13, *Determination of Vitamin A (Retinol) in Foods*

AOAC 923.03, *Ash of Flour (Direct Method)*

EAS 901, *Cereals and pulses — Test methods.*

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 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 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 24333, *Cereals and cereal products — Sampling*

RS ISO 24557, *Pulses — Determination of moisture content — Air oven method*

RS ISO 4833-1, *Microbiology of the food chain — Horizontal method for the enumeration of micro-organisms — Part 1: Colony-count at 30 degrees C — Pour plate technique*

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

### 3 Terms and definitions

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

#### 3.1

##### **pumpkin**

cultivar of a squash plant, most commonly of *Cucurbita pepo*.

#### 3.2

##### **pumpkin pulp**

fresh part of the pumpkin fruit

#### 3.3

##### **pumpkin pulp flour**

flour obtained by grinding dried pumpkin pulp into fine powder

#### 3.3

##### **food grade packaging material**

packaging material, made of substances which are safe and suitable for their intended use and which will not alter the quality and safety of the product

### 4 Requirements

#### 4.1 Raw material

Pumpkin pulp flour shall be made from pumpkin fruit of sound quality, free from sand.

#### 4.2 General requirements

Pumpkin pulp flour shall be:

- a) fit for human consumption;
- b) of characteristic odour, colour and taste of pumpkin variety used;

- c) clean, safe, of good quality and free from signs of spoilage; and
- d) free from insects, larvae, fungal infestation, rodent contamination, dirt and other extraneous matter.

### 4.3 Specific requirements

Pumpkin pulp flour shall comply with the specific requirements given in Table 1 when tested in accordance with test methods specified therein.

**Table 1—Specific requirements for pumpkin pulp flour**

S/N	Characteristic	Requirement	Test method
i.	Moisture content, % m/m max	13	RS ISO 24557
ii.	Total ash, % m/m max	6.0	AOAC 923.03
iii.	Crude fiber, % m/m max.	4.0	RS ISO 5498
iv.	Acid insoluble ash, % m/m max	0.1	RS ISO 5985
v.	Vitamin A (µg/100 g),min	262	AOAC 2001.13
vi.	Residues through 1000 micron sieve, % m/m max	0.5	EAS 901

## 5 Food additives

Food additives which may be used in the manufacture of Pumpkin pulp flour shall comply with RS CODEX STAN 192.

## 6 Hygiene

**6.1** Pumpkin pulp flour shall be manufactured and handled in accordance with the hygienic requirements stipulated in RS CAC/RCP 1.

**6.2** Pumpkin pulp flour shall not exceed the microbiological limits in Table 2 when tested in accordance with test methods specified therein.

**Table 2— Microbiological limits for Pumpkin pulp flour**

S/N	Microorganisms	Limit	Test method
i.	Total Plate Count cfu/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 25 g max.	Absent	RS ISO 6579-1
iv.	<i>Staphylococcus</i> , cfu/ g, max.	Absent	RS ISO 6888-1
v.	Yeasts and moulds, cfu/g, max.	$10^2$	RS ISO 21527-2

## 7 Contaminants

### 7.1 Pesticides residues

Pumpkin pulp flour shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission

### 7.2 Heavy metal

Pumpkin pulp flour shall not contain any metal contaminants in excess of the levels established in RS CODEX STAN 193.

### 7.3 Mycotoxins

Pumpkin pulp flour shall not exceed aflatoxin limits in Table 3 when tested in accordance with test method specified therein.

**Table 3—Aflatoxin limits for Pumpkin pulp flour**

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

## 8 Packaging

Pumpkin pulp flour shall be packaged in food grade materials which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

## 9 Labelling

In addition to the requirements of RS EAS 38, each pack of pumpkin pulp flour shall be legibly and indelibly marked with the following:

- name of the product shall be "Pumpkin pulp flour";
- name and physical address of the manufacturer/ packer and/or distributor;
- date of manufacture and packing;
- best before date;
- country of origin;
- list of ingredients;



- g) net content;
- h) lot/ batch number;
- i) if used, food additives shall be declared;
- j) statement "Human food";
- k) storage conditions; and
- l) instructions for use.

## 10 Sampling

Sampling of pumpkin pulp flour shall be done in accordance with RS ISO 24333.



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