



**RWANDA  
STANDARD**

**DRS  
288**

Second edition

yyyy-mm-dd

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**Mixed dry beans — Specification**

ICS 67.060

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Reference number

DRS 288: 2023

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<b>Contents</b>	<b>Page</b>
Foreword .....	iv
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Requirements .....	3
4.1 General requirements .....	3
4.2 Specific requirements .....	4
5 Contaminants .....	4
5.1 Pesticide residues .....	4
5.2 Heavy metals .....	4
6 Hygiene .....	5
7 Packaging .....	5
8 Labelling .....	5
8.1 General .....	5
8.2 Labelling of non-retail containers .....	6
9 Sampling .....	6

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

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

This second edition cancels and replaces the first edition (RS 288: 2015), 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

Rwanda Standards Board (RSB) – Secretariat

# Mixed dry beans — Specification

## 1 Scope

This Draft Rwanda Standard specifies requirements, sampling and test methods for mixed dry common beans (*Phaseolus vulgaris* Linn.) 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.

AOAC 999.11, *Lead, Cadmium, Copper, Iron, and Zinc in foods, Atomic absorption spectrophotometry after dry ashing*

RS 226, *Guidelines for post-harvest handling and storage (PHHS) of common bean*

RS CAC/RCP 1, *Code of practice – General Principle for Food Hygiene*

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

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

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

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

## 3 Terms and definitions

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

### 3.1

#### dry beans

dry threshed field and garden beans of the species *Phaseolus vulgaris* Linn.

### 3.2

#### damaged

beans and pieces of beans that are materially damaged or discoloured by frost, weather, disease, weevils or other insects, or other causes so as to materially affect the appearance and quality of the beans

### 3.3

#### **broken/chipped/loose coat and split**

beans with some but less than one-fourth of beans broken off or with one-fourth or more of the seed coat removed

### 3.4

#### **caps**

parts of the seed coat adhering to split or broken seed

### 3.5

#### **clean-cut weevil-bored**

beans from which weevils have emerged, leaving a clean-cut open cavity free from larvae, webbing, refuse, mould, or stain

### 3.6

#### **germinated**

beans which have sprouted

### 3.7

#### **mouldy**

beans with visible mycelial growth on their surface

### 3.8

#### **shrivelled**

beans which are under-developed and wrinkled over their entire surface excluding wrinkled beans

### 3.9

#### **defective**

pest damaged, discoloured, diseased, germinated, mouldy, immature and shrivelled grains, or otherwise materially damaged, which specifically do not include broken grains

### 3.10

#### **foreign matter**

extraneous matter than dry beans or other food grains comprising of:

- a) "inorganic matter" includes metallic pieces, shale, glass, dust, sand, gravel, stones, dirt, pebbles, lumps or earth, clay, mud and animal filth etc; and
- b) "organic matter" consisting of detached seed coats, straws, weeds and other inedible grains etc.

### 3.11

#### splits

pieces of beans that are not damaged, each of which consists of three-fourths or less of the whole bean, and that include any sound beans the halves of which are held together loosely

### 3.12

#### food grade material

packaging material, made of safe and suitable substances for their intended use and which cannot impart any toxic substance or undesirable odour or flavour to the product

### 3.13

#### mixed dry beans

dry beans that consist of a mixture of same size groups, different colour and shape groups irrespective of varieties.

## 4 Requirements

### 4.1 General requirements

Mixed dry beans shall be:

- a) the dried mature seeds of *Phaseolus vulgaris* Linn;
- b) of same size groups, as specified in Table 1

**Table 1 — Description of size groups**

Type	Description of beans size group per100 g (G)
Large	$G \leq 140$
Medium	$140 < G \leq 365$
Small	$365 < G \leq 760$

- c) well-filled, clean, wholesome,
- d) free from substances which render them unfit for human consumption
- e) be free from toxic or noxious weed seeds

f) be free from live pests and diseases;

g) free from off flavours, musty, sour or other undesirable odour, obnoxious smell and discolouration; and

## 4.2 Specific requirements

Mixed dry beans shall be categorized into three grades on the basis of the tolerable limits established in Table 2 when tested in accordance with test method specified therein.

**Table 2 — Specific requirements for mixed dry beans**

S/N	Characteristics	Maximum limits			Method of test
		Grade 1	Grade 2	Grade 3	
i.	Foreign matter, % m/m	0.5	0.75	1	RS ISO 605
ii.	Inorganic matter, % m/m	0.1	0.2	0.3	
iii.	Other edible grains, % m/m	0.1	0.2	0.5	
iv.	Pest damaged beans, % m/m	1	2	3	
v.	Broken/split % m/m	1	2	3	
vi.	Rotten and diseased beans, % m/m	2.0	4.0	5.0	
vii.	Discoloured % m/m	1			
viii.	Total defectives beans, % m/m	2.6	4.34	5.9	
ix.	Filth	0.1	0.1	0.1	
x.	Moisture, % m/m	14			RS ISO 24557

NOTE The parameter, Total defective grains is not the sum total of the individual defects. It is limited to 70 % of the sum total of individual defects

## 5 Contaminants

### 5.1 Pesticide residues

Mixed dry beans shall comply with those maximum pesticide residue limits established by the Codex Alimentarius Commission for this commodity.

### 5.2 Heavy metals

Mixed dry beans shall comply with the maximum heavy metal limits indicated in Table 3 when tested in accordance with test method specified therein.

**Table 3 — Heavy metals limits in mixed dry beans**

S/N	Characteristics	Maximum limits mg/kg	Test methods
i.	Lead	0.1	AOAC 999.11
ii.	Cadmium	0.1	



## 6 Hygiene

Mixed dry beans shall be produced, handled and stored in accordance with RS CAC/RCP 1 and RS 226.

## 7 Packaging

7.1 Mixed dry beans shall be packaged in food grade packaging materials that do not affect the quality of the product.

7.3 Each package shall contain mixed dry beans of the same grade designation.

## 8 Labelling

### 8.1 General

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

- a) product name as “Mixed dry beans”;
- b) size group;
- c) grade;
- d) name, and address of the producer/packer/ distributor/ importer/exporter/vendor;
- e) net content shall be declared in the metric system;
- f) batch number;
- g) the declaration “Food for Human Consumption”;
- h) storage instruction;
- i) crop year;
- j) packing date;
- k) instructions on disposal of used package; and
- l) country of origin.

## 8.2 Labelling of non-retail containers

Information in 8.1 shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the processor or packer as well as storage instructions, shall appear on the container. However, lot identification, and the name and address of the processor or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

## 9 Sampling

Sampling shall be done in accordance with the RS ISO 24333.

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## Bibliography

[1] RS 288: 2015, Mixed dry beans — Specification (First edition)

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