



## Technical Specifications for WHITE BEAN – YEMEN & SYRIA

Version: 1

Replacing Version: White Beans V.1 specification

Date of issue: 02/09/2022

*The key adjustments are:*

*This document replaces White Beans V.1 generic specification, adjusting only its heading and the application scope. All the requirements of the document have not been modified.*

### 1. Introduction

This specification applies to **White Bean** (hereafter called the product) purchased internationally by WFP for distribution in Yemen and Syria.

### 2. Definition

*Table 1: Definition of terms*

Terms	Definition
Total damaged	Damaged white beans are sprouted, frost damaged, heated, damaged by insects distinctly deteriorated or discoloured by weather or by disease, or that are otherwise damaged in a way that seriously affects their quality.
Seeds with serious defects including insect damaged	Seeds in which the cotyledons have been affected or attached by pests; seeds with very slight traces of mould or decay; or slight cotyledon staining.
Broken or split	White beans that are split beans without their seedcoat, with the two cotyledons separated one from the other, and those with any broken cotyledons.
Immature grains (wrinkled/shrunk)	White beans that are immature which are hard and have wrinkled surface and low water absorbance.
Filth	Impurities of animal origin, including dead insects.
Toxic-noxious seeds	Any seeds which if present in quantities in amount which may have damaging or dangerous effect on health, organoleptic properties or technological performance such as Jimson weed —Datura (D. fastuosa Linn and D. stramonium Linn.) corn cokle (Agrostemma githago L., Machai Lallium remulenum Linn.) Akra (Vicia species), Argemone mexicana, Khesari, Crotonaria (Crotonaria spp), Castor bean (Ricinus communis L.), Bellardia spp. (except Bellardia Trixago), Coronopus Didymus, Solanum Carolinense, Solanum Heterodoxum, Solanum Rostratum, Striga spp. and other seeds that are commonly recognized as harmful to health.
Inorganic matter	Includes metallic pieces, shale, glass, dust, sand, gravel, stones, dirt, pebbles, lumps or earth, clay, mud.
Foreign matter	Mineral or organic matter (dust, twigs, seedcoats, seeds of other species, dead insects, fragments, or remains of insects, other impurities of animal origin) other than white beans or part of white beans.
Mouldy and sprouting grains	White beans are considered sprouted when the seed coat splits and the primary root emerges from between the cotyledons. Mouldy white beans are grains with visible mycelial growth on their surface and have bad smell;
Contrasting varieties	Contrasting varieties/class shall be white bean of other classes that are of a different color, size, or shape from the white beans
Discoloured	Includes white bean which are distinctly blemished and / or off colour from the characteristic colour of the predominating class.

Other edible grains	Edible grains from other plants (wheat, barley, corn, lentils, peas, chickpeas, etc.).
Other colour grains	All white bean whose colour is different than colour of the designated white bean.
Heat-damaged	Heated damaged white bean are usually dark tan to black in appearance. If the sample contains white bean with tan-coloured cotyledons and a distinct heated odour, then the grading factors is heated.
Bulk density (mass by Hectoliter)	Weight of 100 liters of white beans in kilograms.

### 3. Standards and references

Except when specified otherwise in the contract, the product shall comply with latest versions of recognized international standards and best practices and/or guidelines such as:

- CODEX STANDARD FOR CERTAIN PULSES GRAINS (CXS 171-1989)
- CODEX GENERAL PRINCIPLES OF FOOD HYGIENE INCLUDING ANNEX "HAZARD ANALYSIS AND CRITICAL CONTROL POINT (HACCP) SYSTEM AND GUIDELINES FOR ITS APPLICATION" (CXC 1-1969)
- CODEX GENERAL STANDARD FOR CONTAMINANTS AND TOXINS IN FOOD AND FEED (CXS 193- 1995)

Additionally, the supplier shall comply with relevant local regulations/standards of the food originating and recipient countries. Foods destined for Syria shall comply with the national Decree # 158 dated 25/4/2017 by Syrian Ministry of Agriculture, including the annexes (e.g. requirements for quarantine and nonquarantine pests and weed seeds).

### 4. Product Specification

#### 4.1 General requirements

The commodity shall meet following quality characteristic requirements:

- Shall be safe and suitable for human consumption.
- Shall be free from abnormal flavours, odours, and living insects.
- Shall be free from filth (impurities of animal origin, including dead insects) in amounts which may represent a hazard to human health.
- Shall be free of sprouted and mouldy grains.
- Shall be stored at the supplier under dry, ventilated and hygienic conditions away from direct sunlight. Only authorized insecticides (e.g. phosphine) may be used for fumigation control. Where needed, fumigation shall be performed by certified operators and as specified in the GAFTA Standard for Fumigation.
- Shall comply with other requirements specified in this document.

#### 4.2 Contaminants and Toxins

The product shall be free from contaminants in amounts which may represent a hazard to health. The product shall comply with those maximum contaminant limits established by the Codex Alimentarius for this commodity. This includes compliance with Codex General Standard for Contaminants and Toxins in Food and Feed (CXS 193-1995) and Codex Maximum Residue Limits for pesticide residues. Additionally, the product shall meet the requirements stated in Table 2 and 3.

Table 2: Microbiological requirements

	n	c	m	M	Reference methods (latest versions) <sup>1</sup>
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<sup>1</sup> or equivalent validated methods

Yeast & Mould	5	2	10 <sup>3</sup>	10 <sup>4</sup>	ISO 21527-2
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### 4.3 Hygiene

It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice – General Principles of Food Hygiene (CXC 1-1969), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to these products. To the extent possible in good manufacturing practice, the products shall be free from objectionable matter. When tested by appropriate methods of sampling and examination, the product:

- shall be free from micro-organisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from micro-organisms in amounts which may represent a hazard to health.

### 4.4 Fit for human consumption guarantee

Suppliers shall have to check the quality of their products and guarantee that the product is 'fit for human consumption', in line with International Federation of Inspection Agencies requirements.

### 4.5 Shelf life

As per contract.

### 5. Packaging and Marking

Unless otherwise stated in the contract, the product shall be packed in a suitable PP woven bag complying with the packaging and marking requirements separately available under "[4.5 to 90 kg PP woven bag specification with or without PE inner liner](#)" on <http://foodqualityandsafety.wfp.org/specifications>.

Weight and quantity tolerance must meet The International Organization of Legal Metrology International Recommendation OIML R 87<sup>2</sup>.

### 6. Storing

The product must be stored under cool, dry, ventilated, hygienic conditions, away from direct sunlight and free from insect infestation and all other sources of contaminations.

### 7. Analytical requirements

As per contractual agreement, WFP can appoint an inspection company to check that the food matches requirements of this specification. Analytical tests in Table 3 are usually utilized, and additional tests might be performed. Suppliers should follow its own food safety and quality management plan. WFP reserves the rights to change the testing plan at any time.

<sup>2</sup> OIML R 87 Quantity of commodity in prepackages [https://www.oiml.org/en/files/pdf\\_r/r087-e04.pdf](https://www.oiml.org/en/files/pdf_r/r087-e04.pdf) (latest edition)

Table 3: List of tests and reference methods

No	Tests	Requirements	Reference methods (latest versions) <sup>3</sup>
1	Moisture	14% max	ISO 24557
2	Organoleptic	Clean and bright appearance, natural odor	Organoleptic examination
3	Cooking test	90 min for 12-hour soaking	Cooking
4	Bulk density (Mass by hectoliter)	Min. 750 g/l	ISO 7971-2:2019
5	Size	10% max pass 6 mm sieve or as per contract	ISO 605
6	Color	As per contract	
7	Total damaged	4% max	
8	Seeds with serious defects including insect damaged	1% max	
9	Broken or Split	2 % max	
10	Immature grains (wrinkled/shrunk)	2 % max	
11	Filth	0.1 % max	
12	Dead insects (whole or fragment)	5 insect/kg max	
13	Toxic-noxious seeds <sup>4</sup> Live insect	Free/Nil	
14	Inorganic matter	0.2% max	
15	Foreign matter	1% max	
16	Contrasting varieties	1% max	
17	Other edible grains	0.2 % max	
18	Heat Damaged	0.2% max	
19	Discoloured	1% max	
20	Other colour grain (other than discoloured seeds)	1% max	
21	Aflatoxin (B1+B2+G1+G2)	4 ppb max	ISO 16050; EN 12955
22	Aflatoxin B1	2 ppb max	ISO 16050; EN 12955
23	Lead	0.1ppm max	AOAC 2013.06
24	Cadmium	0.1ppm max	AOAC 2013.06
25	Radiation (Only for foods originated from Ukraine & Russia or as per contract)	10 Bq/kg Max (Cs137&134)	WEAC.RN.METHOD3.0 (Cs and other)
26	GMO (only if required)	As per contract	ISO 21570

<sup>3</sup> or equivalent validated methods

<sup>4</sup> All nonquarantine weed seeds listed in Syrian Decree # 158 shall be reported (e.g. *Hordeum vulgare*, *Brassica ssp.* and *Polygonum convolvulus*)