



Technical Specifications for **ETHIOPIA WHITE BEANS**

Specification reference: **White Beans**

Version: **V1.0**

Date of issue: **30th May, 2011**

1. SCOPE

This specification applies to origin Ethiopia **White Beans** purchased by WFP.

2. DEFINITION

Damaged beans include whole, split, or broken beans that are sprouted, very immature, perforated, distinctly deteriorated or discoloured by weather or disease and Beans that are otherwise damaged in a way that seriously affects appearance or quality.

Extraneous matter includes all materials other than beans.

Splits include split beans, broken pieces of beans that are less than three-quarters of whole kernels, and halves of beans that are loosely held together by cracked seed coats.

3. REFERENCE

Codex Standard for certain pulses grains (Codex Stan 171-1989, rev. 1-1995).

Ethiopian Standard ES 18:2001, Pulses- Grading of chickpeas.

Canadian Grain Commission: <http://www.grainscanada.gc.ca>

4. PRODUCT SPECIFICATION

4.1 General requirements

- Moisture content: **14% max**
- Size **As per contractual agreement**
- Extraneous matter: **1% max**
- Broken or damaged: **6% max**
- Of which insect damaged: **2% max**
- Live insects: **Nil**
- Dead weevils: **10/kg max**
- Organoleptic: **Clean and bright appearance, Natural odour**
- Cooking time **60-90 minutes after overnight soaking**
- Production year: **As per contractual agreement**

4.2 Contaminants and Toxins

White Beans shall not contain contaminants and toxins in amounts which may represent a hazard to human health. Specific limit of some contaminants and toxins is presented in table 1.

Table 1: Limit of contaminants and toxins

No	Contaminant and toxin	Limit
Heavy metal		
1	Arsenic (As)	0.10 ppm max.
2	Copper (Cu)	2.0 ppm max.
3	Lead (Pb)	0.10 ppm max.
4	Cadmium (Cd)	0.02 ppm max.
5	Mercury (Hg)	0.01 ppm max.
Pesticide residues		
6	Carbamate	< 10 ppb
7	Organochlorine	< 10 ppb
8	Organophosphorus	< 10 ppb
9	Pyrethroid	< 10 ppb
Toxic or noxious seeds		
10	Crotalaria (Crotalaria spp.)	0.05% max.
11	Corn cockle (Agrostemma githago L.)	0.05% max.
12	Castor bean (Ricinus communis L.)	0.05% max.
13	Jimson weed (Datura spp.)	0.05% max.
Radiation		
14	Radiation	10 Bq/Kg max.
Mycotoxins		
15	Aflatoxin (total B1+B2+G1+G2)	20 ppb max.
16	Fumosin	5 ppb max.
17	Zearalenone	100 ppb max.
18	Ochratoxin A	5 ppb max.

5. PACKAGING AND MARKING

As per contractual agreement.

6. STORING

White Beans must be stored under dry, ventilated and hygienic conditions.

7. SAMPLING REQUIREMENTS

Representative samples can be drawn according to international sampling method standards at the bagging section or in the warehouse.

For packed units, sampling frequency and reference method are showed in *table 2*. One laboratory samples of 3 kg is required by lot or sub-lot of 500MT maximum.

For the bulk (static and flowing), the sampling must follow the rules described in paragraphs 5.2 and 5.3 of ISO 24333-2009.

Table 2: Sampling rules

Lot or sub-lot size (MT)	Number of increment	Place of sampling	Reference
≤100	3 % of bags and minimum 50 bags (e.g. 60 increments for a lot of 100 MT, packed in 50 kg bag)	Warehouse or during production	GAFTA 124-2
101-200	3 % of bags (e.g. 120 increments for a lot of 200 MT, packed in 50 kg bag)		
201-300	3 % of bags (e.g. 180 increments for a lot of 300 MT, packed in 50 kg bag)		
301-400	3 % of bags (e.g. 240 increments for a lot of 400 MT, packed in 50 kg bag)		
401-500	3 % of bags (e.g. 300 increments for a lot of 500 MT, packed in 50 kg bag)		

7. ANALYTICAL REQUIREMENTS

The principal tests in table 3 must be performed in order to check if the quality of the **White Beans** meets above requirements. Additional analyses shall be defined in case of further quality assessment.

Table 3: List of compulsory tests and reference methods

No	Parameters	Recommended level	Reference methods
1	Moisture content	14% max	ES ISO 605
2	Size	As per contractual agreement	ES ISO 605
3	Extraneous matter	1% max	ES ISO 605
4	Broken or damaged	6% max	Visual Examination
5	Of which insect damaged	2% max	Visual Examination
6	Live insects	Nil	ES ISO 605 ES ISO 6639 (1-4)
7	Dead weevils	10/kg max	ES ISO 605 ES ISO 6639 (1-4)
8	Organoleptic	Clean and bright appearance, Natural odour	ES ISO 605
9	Cooking time	60-90 minutes after overnight soaking	

* Or equivalent