



Technical Specifications for **ETHIOPIA HARICOT BEANS**

Specification reference: **Haricot Beans**

Version: **V1.0**

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1. SCOPE

This specification applies to origin Ethiopia **Haricot 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.

Foreign 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:	14.0% max
• Size	As per contractual agreement
• Total blistered wrinkle and/or broken grains	3.5% max
• Splits:	3.0% max
• Damaged:	3.0% max
• Foreign matters:	0.5% max
• Stone:	0.2% max
• Glasses or metals:	Nil
• Contrasting class:	0.5 % max
• Live insects:	Nil
• 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

Haricot 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	Crotolaria (Crotolaria spp.)	0.05% max.
11	0.05% max.	0.05% max.
12	0.05% max.	0.05% max.
13	0.05% max.	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

Haricot 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 **Haricot 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	14.0% max	ES ISO 605
2	Size	As per contractual agreement	ES ISO 605
3	Total blistered wrinkle and/or broken grains	3.5% max	Visual Examination
4	Splits	3.0% max	Visual Examination
5	Damaged	3.0% max	Visual Examination
6	Foreign matters	0.5% max	ES ISO 605
7	Of which Stone	0.2% max	ES ISO 605
8	Glasses or metals	Nil	Visual Examination
9	Contrasting class	0.5% max	Visual Examination
10	Live insects:	Nil	ES ISO 605 ES ISO 6639 (1-4)
11	Organoleptic:	Clean and bright appearance, Natural odour	ES ISO 605
12	Cooking time	60-90 minutes after overnight soaking	

* Or equivalent