Technical Specifications for

US BABY LIMA BEANS

and MISCELLANEOUS LIMA BEANS- Grade 2

Specification reference: **US Dry Baby Lima beans and Miscellaneous Lima beans grains- Grade 2**
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1. SCOPE

This specification applies to dry **US Baby Lima bean and Miscellaneous Lima bean grains- grade 2 (Beans)** purchased by WFP.

2. DEFINITIONS

Damaged beans. Damaged beans shall be beans and pieces of beans that are damaged by frost, weather, disease, weevils or other insects, or other causes.

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

Broken beans. Broken beans shall be sound beans with some but less than one-fourth of each bean broken off or with one-fourth or more of the seedcoat removed.

Blistered beans. Blistered beans shall be sound beans with badly blistered or burst seedcoats.

Wrinkled beans. Wrinkled beans shall be sound beans that have deeply wrinkled seedcoats and/or are badly warped or misshapen.

Weevily beans. Weevily beans shall be beans that are infested with live weevils or other insects injurious to stored beans or that contain weevil-bored beans.

Clean-cut weevil-bored beans. Clean-cut weevil-bored beans shall be beans from which weevils have emerged, leaving a clean-cut open cavity free from larvae, webbing, refuse, mold, or stain.

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

Stones. Stones shall be concreted earthy or mineral matter, and other substances of similar hardness that do not disintegrate readily in water.

Foreign material. Foreign material shall be stones, dirt, weed seeds, cereal grains, lentils, peas, and all matter other than beans.

Contrasting classes. Contrasting classes shall be beans of other classes that are of a different color, size, or shape from the beans of the class designated.

Defects. Defects for all other classes of beans shall be splits, damaged beans, contrasting classes, and foreign material.

Classes that blend. Classes that blend shall be sound beans of other classes that are similar in color, size, and shape to the beans of the class designated, and shall include white beans in the class Yelloweye which are similar in size and shape to the Yelloweye beans.

3. REFERENCE

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

United States standard for beans-2008 (http://www.gipsa.usda.gov/fgis/standards/Bean-Standards.pdf)

4. PRODUCT SPECIFICATION

4.1 General requirements

- Organoleptic: **Clean and bright appearance, Natural odour**
- Moisture content: **16.0%** max. by weight
- Badly damaged: **1.5%** max. by weight
- Stones: **0.3%** max. by weight
- Total foreign material (*including stones*): **1.0%** max. by weight
- Contrasting classes: **1.0%** max. by weight
- Total Blistered, Wrinkled, and Defects
  (Total damaged,
  Total foreign material,
  & Contrasting Classes) **4.0%** max. by weight
- Blistered, Wrinkled and/or Broken: **4.0%** max. by weight
- Splits: **4.0%** max. by weight
- Classes that blend: **10.0%** max. by weight
- Live insects: **Nil**
- Crop year: **As per contractual agreement**
- GMO (*only if required*): **Negative** (< 0.9% of GMO material)

4.2 Toxic or noxious seeds

The products covered by the provisions of this specification shall be free from the following toxic or noxious seeds in amounts which may represent a hazard to human health.

– Crotolaria (*Crotalaria* spp.), Corn cockle (*Agrostemma githago* L.), Castor bean (*Ricinus communis* L.), Jimson weed (*Datura* spp.), and other seeds that are commonly recognized as harmful to health.

4.3 Contaminants

4.3.1 Heavy metals

Beans shall be free from heavy metals in amounts which may represent a hazard to health.

4.3.2 Pesticide residues

Beans shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

4.3.3 Mycotoxins

Beans shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

4.4 Hygiene

4.4.1 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* (CAC/RCP 1-1969), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to these products.

4.4.2 To the extent possible in good manufacturing practice, the products shall be free from objectionable matter.

4.4.3 When tested by appropriate methods of sampling and examination, the products:
  − 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.

5. PACKAGING AND MARKING

As per contractual agreement.

6. STORING

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 1*. One laboratory samples of about 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* of ISO 24333-2009.

Table 1: Sampling rules

Lot or sub-lot size (MT)	Number of increment	Place of sampling	Reference *(or equivalent)*
≤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
101-500	3 % of bags *Examples:* *- 120 increments for a lot of 200 MT, packed in 50 kg bag)* *- 180 increments for a lot of 300 MT, packed in 50 kg bag* *-240 increments for a lot of 400 MT, packed in 50 kg bag* *- 300 increments for a lot of 500 MT, packed in 50 kg bag*		

7. ANALYTICAL REQUIREMENTS

The principal analyses/tests in table 2 must be performed in order to check if the quality of the **Beans** meets above requirements. Additional analyses shall be defined in case of further quality assessment.

Table 2: List of compulsory analyses/tests and reference method

No	Analyses/tests	Limit	Reference method *(or equivalent)*
1	Organoleptic	**Clean and bright appearance, Natural odour**	Organoleptic examination
2	Moisture content	**16.0%** max. by weight	ISO 712: 2009
3	Badly damaged	**1.5%** max. by weight	Visual examination
4	Stones	**0.3%** max. by weight	Visual examination
5	Total foreign material *(including stones)*	**1.0%** max. by weight	Visual examination
6	Contrasting classes	**1.0%** max. by weight	Visual examination
7	Total Blistered, Wrinkled, and Defects *(Total damaged, Total foreign material, Contrasting Classes)*	**4.0%** max. by weight	Visual examination
8	Blistered, Wrinkled and/or Broken	**4.0%** max. by weight	Visual examination
9	Splits	**4.0%** max. by weight	Visual examination
10	Classes that blend	**10.0%** max. by weight	Visual examination
11	Live insects	**Nil**	Visual examination
12	GMO *(only if required)*	**Negative** ($< 0.9\%$ of GMO material)	