
Teff Grain - Specification



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Teff Grain – Specification

1. Scope

This African Standard specifies the requirements and methods of sampling and test for teff grain (*Eragrosties teff*) for human consumption.

2. Normative references

The following referenced documents are indispensable for the application 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.

ARS 56, *Prepackaged foods — Labelling*

ISO 711, *Cereals and cereal products - Determination of moisture content (Basic Reference method)*.

ISO 712, *Cereals and cereal products - Determination moisture content (Routine reference method)*.

ISO 24333, *Cereals and cereal product – Sampling*.

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

ISO 6639-1, *Cereal and pulses – Determination of hidden insect infestation - Part 1:*

General principles.

ISO 6639-2, *Cereal and pulses – Determination of hidden insect infestation - Part 2:*

Sampling.

ISO 6639-3, *Cereal and pulses – Determination of hidden insect infestation - Part 3: Reference method.*

ISO 6639-4, *Cereal and pulses – Determination of hidden insect infestation - Part 4: Rapid method.*

ISO 27085, *Animal feeding stuffs — Determination of calcium, sodium, phosphorus, magnesium, potassium, iron, zinc, copper, manganese, cobalt, molybdenum, arsenic, lead and cadmium by ICP-AES*

ISO 3367, *Determination of mercury, content- flameless atomic absorption method*

ISO 6561-1, *Fruits, vegetables and derived products — Determination of cadmium content — Part 1: Method using graphite furnace atomic absorption spectrometry.*

ISO 6561-2, *Fruits, vegetables and derived products — Determination of cadmium content — Part 2: Method using flame atomic absorption spectrometry.*

3. Terms and definitions

For the purpose of this standard the following definitions shall apply.

3.1 teff grain

grain obtained from plant *Eragrosties teff*

3.2 foreign matter

any substance which is found in teff grain such as weed seeds, other grains, stone, soil particles, dung, chaff and sand

3.3 food grade packaging material

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

4. Classification

Teff grain is classified as follows:

- 4.1. Very white (Megna) teff -This class include >98% to 100%, very white teff grain.
- 4.2. White: (Nech) teff- This class include >95 to 98% or more of white teff grains
- 4.3. Brown: (Quey) teff- This class include 94 to 100% of brown teff grains
- 4.4. Mixed (Sergegna) teff–This class includes mixture of white and brown teff grain in a lesser proportion of the above classes.

5 Requirements

5.1 General requirements

5.1.1 Each class of teff grain shall be graded in relation to the degree of impurities presented and admixtures of other coloured classes of teff or other grains.

5.1.2 Teff shall be free from foreign odours, moulds, live pests, rat droppings, non-toxic weed seeds and other injurious contaminants as determined from sample representative of the lot.

5.1.3 Each class of teff grain shall be free from any silt substances and shall not contain more than 0.05%, by mass of harmful and /or toxic seeds such as *Crotalaria* (*Crotalaria* spp. Corn cockle) (*Agrostemma githago* L.) Jimson weed (*Datura* spp.) from the given sample weight of teff when determined in accordance with the method of test specified in the ISO 605.

5.1.4 Each class of teff shall be free from insect infestation, living insect, and dead insect fragments and rodent contamination which are visible to the naked eyes when determined in accordance with ISO 6639 Parts 1,2,3 and 4.

Table 1. Grade requirements for all classes of teff

	Characteristics	Maximum Limit of impurities in %				Methods of test
		Grades				
		1	2	3	4	
	Moisture content	12.5	12.5	12.5	12.5	ISO 712 or ISO 711
	Foreign matter	1.5	2.5	3.5	5.0	ISO 5223

6 Contaminants

6.1 Pesticides

Teff grain shall comply with those maximum pesticide residues established by the Codex Alimentarius Commission for this commodity.

6.2 Heavy metals

Teff grain shall comply with levels for heavy metals given in Table 2 when tested in accordance with the test methods specified therein.

Table 2. Heavy metals requirements

Parameters	Requirement	Test method
Lead, ppm max.	0.2	ISO 27085
Cadmium, ppm max.	0.1	ISO 6561-1 or 6561-2

6.3 Aflatoxins

Teff grain shall comply with levels for aflatoxins given in Table 2 when tested in accordance with the test methods specified therein.

Table 3 — Mycotoxin limits for teff grain

S/N	Aflatoxin	Maximum limit (µg/kg)	Test method
i.	Total aflatoxins (AFB1+AFB2+AFG1+AFG2)	10	ISO 16050
ii.	Aflatoxin B1	5	

7 Packaging

Teff grain shall be packed in new, suitable, clean, sound and moisture proof food grade packaging material as specified in ARS 56.

8 Labelling

In addition to the requirements of ARS 56, each container of teff grain shall be marked (labelled) with the following information:

- Name of the grain crop.
- Name and address of producer.
- Crop year.
- Class and grade of the grain.
- Net mass in kilograms.
- Batch or identification code; and
- Any other requirements required by the purchaser.

9 Sampling

Sampling shall be carried out in accordance with ISO 24333.

Bibliography

ES 671: 2001 Teff – Specification

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