

Sudanese Standard

Millet flour
SDS 3805:2013



Introduction

The Sudanese Standards and Metrology Organization (SSMO) is a national scientific control organization, one of its rules is to prepare the national standards and adopt the International Standards by technical and specialized committees from governmental and non governmental bodies in liaison with SSMO.

This Standard was translated by SSMO, within the program of the **technical committee for cereal and pulses committee.**

Contents

1. Scope
2. Definitions
3. Requirements
4. Packaging
5. Labeling
6. Shelf life
7. Sampling
8. Test methods
9. Transport
10. Storage
11. References

Millet flour

1. Scope

This standard applies to millet (*Pennisetum glaucum*) flour whole or decorticated for direct human consumption. It shall not apply to fermented or processed millet flour.

2. Definitions

2.1 Whole millet flour

It is the product obtained by grinding millet grains to degree of fineness as specified in item 3.2.8 of this standard.

2.2 Decorticated millet flour

It is the product obtained by removing the bran and the germ of the millet grains then grinding the endosperm into flour with degree of fineness as specified in item 3.2.7 of this standard.

3. Requirements

3.1 General requirements

The following general requirements shall be met by the millet flour:

3.1.1 Suitable for human consumption.

3.1.2 Have the characteristic taste and odor.

3.1.3 Free from living and dead insects, their parts and phases.

3.1.4 Free flowing and not agglomerated.

3.1.5 Free from filth, dirt, metal parts and foreign matter.

3.1.6 The product shall be free from parasites and visible microbiological growth.

3.2 Technical requirements

3.2.1 Millet flour shall comply with quality limits shown below:

Property	Whole millet flour	Decorticated millet flour	Method of analysis
Moisture % (Max.)	13	13	SDS 487:2010 ISO 712:2008
Ash % (Max.)	2.4	1	SDS 1015:2008
Protein % (Min.)	9	8	SDS 1016:2010 ISO 20483:2008
Fat acidity mg KOH/100g flour (Max.)	50	50	SDS 1163:2010 ISO 7305:1998

3.2.2 Heavy metals in millet flour shall not exceed the following limits:

Lead 0.2 mg/Kg.

Cadmium 0.2 mg/Kg.

3.2.3 Pesticide residues content in millet flour shall not exceed the limits that cause health hazards according to Sudanese Standard to be issued in this respect.

3.2.4 Microbiological levels in millet flour shall not exceed the maximum permissible limits of the SDS 2014 (Microbiological limits).

3.2.5 Mycotoxins limits in millet flour shall not exceed the limits stated in the Sudanese Standard SDS 2842 (Contamination with mycotoxins limits).

3.2.6 Radiation level in millet flour shall not exceed 10 Bq/Kg.

3.2.7 Minimum 100 % (by weight) of the flour shall pass through a 1.0 mm sieve.

3.2.8 Food additives added to millet flour shall not exceed permissible limits in food as stated by SDS 0630 (Cereal additives).

4. Packaging

Millet flour shall be packed in sound and strong containers which has never been used before and shall not lead to flour contamination or change of odor, taste or color and shall safeguard the hygienic and technological properties.

5. Labeling

In addition to the requirements stated in SDS 2889:2011 (Packed Food or Label Specification), the following information shall be shown in the package and the paper documents.

5.1 Name of the product (Millet flour).

5.2 Name and address of the producer and trade mark (if any).

5.3 Country of origin.

5.4 Net weight in Kilograms.

5.5 Date of production (Day- month -year).

5.6 Shelf life.

6. Shelf life

6.1 Whole flour: 10 days from date of production.

6.2 Decorticated flour: 15 days from date of production.

7. Transport

7.1 Millet flour shall be transported under good conditions that protect it from weather changes, insect infestation, rodents, contamination and damage.

7.2 Means of transport shall be sound and clean to maintain quality of the Product and its safety. It shall not have been used before for transportation of pesticides, herbicides or any other materials affects the quality of the product.

8. Storage

Millet flour shall be stored in clean and well ventilated premises, not used before for storage of toxic substances, pesticides or substances with pungent odors. It should be sound to the extent that protects flour from damage by insects, rodents, humidity or heat and shall be in accordance with SDS 3891.

9. Sampling

Samples shall be drawn according to the ICC 130 /1980 (Sampling of milled products).

10. Test methods

8.1 Quality properties shall be tested according to the Sudanese Standard included in the table in item 3.2.1.

8.2 Heavy metals shall be tested according to AOAC 2003/999.11.

11. References

- 11.1** Codex Standard 170/1989 , Rev. 1- 1995.
- 11.2** Whole and Decorticated Pearl Millet Grain, Codex Stan. 169/1989, Rev. -1 ,1995.
- 11.3** Selama Hashim Ahmed, Effect of natural fermentation on nutritive value and in - vitro protein digestibility of pearl Millet Msc . University of Khartoum 1992.
- 11.4** Mardia Altaher Alhag Ahmed, Effcet of fermentation and dehulling on nutritive value and in vitro protein digestibility of pearl millet, Msc . University of Khartoum 1999.
- 11.5** Chaudhary, P. and Kapoor, A.C, 1984.Changes in the nutritional value of pearl millet flour during storage,J.Sci .Food Agric 35: 1219 – 1224.