**DEPARTMENT OF AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT**

No. R.

AGRICULTURAL PRODUCT STANDARDS ACT, 1990

 (ACT No. 119 OF 1990)

**REGULATIONS RELATING TO THE GRADING, PACKING AND MARKING OF SORGHUM PRODUCTS INTENDED FOR SALE IN THE REPUBLIC OF SOUTH AFRICA**

The Minister of Agriculture, Land Reform and Rural Development has, under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990), made the regulations in the Schedule.

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**MRS AT DIDIZA, MP**

**MINISTER FOR AGRICULTURE, LAND REFORM AND RURAL DEVELOPMENT**

**SCHEDULE**

***Definitions***

1. Unless the context otherwise indicates, any word or expression in these regulations to which a meaning has been assigned in the act shall have that meaning, and --

"**address"** means a physical address which includes the street or road name, number, and the name of the town, village, or suburb and in case of a farm, the name or number of the farm and of the magisterial district in which it is situated;

**"bag"** means a bag made from suitable material;

**"bulk container"** means, any vehicle or container in which bulk sorghum product is stored or transported;

**"bulk probe"** means a double-tube probe of suitable length with multiple apertures on the one side thereof or other similar bulk probe which is suitable for taking a sample of a sorghum product kept in bulk, by means of probing;

**"bulk quantities"** means a quantity of more than 50 kg of sorghum products, whether sold in containers or bulk containers;

**"consignment"** means a quantity of sorghum products of the same kind or grade which is delivered at any one time under cover of the same consignment note, delivery note or receipt note, or delivered by the same container, or which is loaded from the same bin of a grain elevator or from a ship hold or railway truck, or if such a quantity is subdivided into different classes, each quantity of each of the different classes;

**"container"** means a bag or a bulk container or other suitable packing unit or container;

**"foreign matter"** in relation to sorghum products, means any material which does not naturally form part of sorghum products;

**"grits"** means the product obtained by coarsely grinding the sorghum grain;

**"insect"** means any stored product insect which is injurious to grain and milled products, irrespective of the stage of development of the insect;

**"inspector"** means the Executive Officer or an officer under his or her control, or an assignee or suitably qualified employee of an assignee;

**"meal"** means the product obtained by the grinding and sifting process of sorghum grain/kernel;

**"milling"** is a process through which the components of a sorghum grain/ kernel (endosperm, bran,

and germ) are separated, and the particle size of the endosperm or starch component is milled or ground down to different granulations;

**"pearled grain sorghum"** means the sorghum grain with the bran partially removed and/or

 completely removed;

**"pre-cooked sorghum meal"** means a sorghum product defined in terms of its cooking properties using the word, expression, reference, particulars, or indication such as, but not limited to “par-cooked, quick-cook, and cooking time”;

**"retail quantities"** means a quantity of 50 kg or less of sorghum products;

**"sieve"** means a utensil with a woven mesh bottom or perforated metal, constructed from a suitable rigid material used for separating material of varying granulation (grit gauze or wire)) square or round sieve (hand, rotary and automatic sieves);

**"2.0 mm sieve"** means a sieve with a wire cloth screening bottom with apertures of 2.0 mm by 2.0 mm and a wire diameter of 0.9 mm;

**"1.8 mm sieve"** means a slotted sieve with a flat bottom of metal sheet of 1.00mm thickness with rectangular slots of 12.7 in length;

**"1.4 mm sieve"** means a sieve with a wire cloth screening bottom with apertures of 1.4 mm by 1.4 mm and a wire diameter of 0.71 mm;

**"1.0 mm sieve"** means a sieve with a wire cloth screening bottom with apertures of 1.0 mm by 1.0 mm and a wire diameter of 0.56 mm;

**"0.5 mm sieve"** means a sieve with a wire cloth screening bottom with apertures of 0.5 mm by 0.5 mm and a wire diameter of 0.315 mm;

**"0.85 mm sieve"** means a sieve with a wire cloth screening bottom with apertures of 0.850 mm by 0.850 mm and a wire diameter of 0.50 mm;

**"0.25 mm sieve"** means a sieve with wire cloth screening bottom with apertures of 0.25 mm by 0.25 mm and a wire diameter of 0.16 mm;

**"0.71 mm sieve"** means a sieve with wire cloth screening bottom with apertures of 0.71 mm by 0.71 mm and a wire diameter of 0.42 mm;

**"sorghum"** means the threshed, ripe seeds of plant of *sorghum bicolor* (L) Moench but exclude

 broom sorghum, hay sorghum and cane sorghum;

**"sorghum bran"** means a mixture of grain pericarp and variable amount of grain fragments;

**"sorghum product"** means a commodity derived from the milling of sorghum grain and

 which includes enriched, and pre-cooked sorghum meal;

**"speciality sorghum product"** means products which are derived from the sorghum grains with

unique properties providing specific sensory characteristics and/or functional and/or nutritional quality;

**"the Act"** means the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990); and

**"unspecified sorghum product"** means a sorghum product which in form or texture is similar to any of the mentioned products but which does not comply with the requirements of any of the grades as prescribed in this regulation.

***Scope of the Regulations***

***2.*** These regulations are the minimum standards applicable to products from sorghum bicolor (L) Moench through a process of industrial milling during which the seed coat is removed and the germ is removed to a large extent and the endosperm is comminuted to a suitable degree of fineness. (grits and meal)

***Restrictions on the sale of sorghum products***

**3**. (1) No person shall sell any sorghum products in the Republic of South Africa --

(a) unless the sorghum products are sold according to the classes referred to in regulation 4;

(b) unless the sorghum products complies with the standards for the classes referred to in regulation 5;

(c) unless such sorghum products are packed in a container and in the manner prescribed in regulation 5; and

(d) unless such sorghum products are marked with the particulars and in the manner prescribed in regulation 6.

 (2) The Executive officer may grant written exemption, entirely or partially, to any person on such condition as he or she may deem necessary, from the subregulation (1).

**QUALITY STANDARDS**

***Classification of sorghum products***

**4.** There are 9 classes of sorghum products for sale in the Republic of South Africa, namely:

(a) Pearled grain sorghum. (decorticated)

(b) Sorghum grits; (Snack, Brewing and Cereal grits).

(c) Coarse sorghum meal.

(d) Fine sorghum meal.

(e) Super fine sorghum meal.

(f) Sorghum flour.

(g) Sorghum Bran.

(h) Speciality sorghum products.

(h) Unspecified sorghum product.

***Standards for sorghum products***

5. (1) All classes of sorghum products mentioned in regulation 4 shall --

1. be free from a mouldy, sour, or rancid smell or taste;
2. be pure and sound

(c) be free from wet and caked patches or lumps;

(d) have a moisture content not exceeding **14** percent

(e) be free from foreign matter;

(f) be free from grain insects; and

(g) not exceed the permissible deviations regarding toxins, chemical or other substance that renders it unfit for human consumption as prescribed in terms of Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).

(2) Subject to the provisions of subregulation (1), all classes of sorghum products mentioned in regulation 4, shall also comply with the specifications for particle size or Granulation as set out in the Table 1 of the Annexure.

***PACKING AND MARKING REQUIREMENTS***

***Packing requirements***

6. (1) Sorghum products shall, where appropriate, be packed in containers which--

(a) are intact, clean, dry, suitable and strong enough for packing and normal handling of sorghum products;

(b) shall not impart an undesirable taste or odour to the contents thereof;

(c) shall properly be closed in a manner permitted by the nature of the container and the contents thereof.

 (2) Sorghum products of different classes shall not be packed in the same container.

***Marking requirements***

7. (1) Each container in which a sorghum product is packed shall be marked in clearly legible symbols, letters, and figures with --

(a) the class of the product as mentioned in regulation 3

(b) the name and/or Trademark and physical address of the manufacturer, packer, processor, distributor and/or importer of the sorghum product concerned;

(c) net weight of the sorghum product packed therein; and

(d) particulars shall be printed in English or both English and any other official language.

(2) The provisions of this sub-regulation (1) shall not apply with regard to a sorghum product which --

(a) is sold in bulk; or

(b) is repacked in quantities of less than 50 kg, where the mass concerned is measured in the presence of the buyer of that sorghum product or his agent and is taken from a container which is marked as contemplated in subregulation (1).

***Prohibited particulars***

8. No wording, illustration or other device of expression which constitutes a misrepresentation or which directly or by implication can create a misleading impression of the contents shall appear on the container containing any grade of sorghum products or on a label affixed thereto or which is displayed therewith.

***SAMPLING***

***Obtaining a sample***

9. (1) An inspector shall for the purpose of the application of these regulations, take random sample of sorghum product in the following manner and shall satisfy himself/herself that the samples so drawn are the representative of the consignment concerned.

 (a) In the case of sorghum products packed in **retail quantities**, samples shall be taken in accordance with the table below:

**SAMPLING FREQUENCY**

|  |  |
| --- | --- |
| **1****Number of containers comprising quantity of sorghum products** | **2****Minimum number of containers to be selected at random** |
| < 10 | 2 |
| 10-50 | 4 |
| > 50 | 6 |

(b) In the case of a consignment in **bulk quantities** --

samples of sorghum products which are presented for inspection in bulk containers, excluding grain elevators, shall be drawn at six different places with a bulk probe or automated auger in such a manner that the samples taken will be representative of the contents of the bulk container. Samples may also be taken with a suitable container at regular intervals while a bulk container is being emptied.

 (2) The collective sample obtained in subregulation (b) shall --

 (a) Have a total mass of at least 10 kg; and

 (b) Be thoroughly mixed.

(3) Samples drawn as prescribed in subregulation (1) shall first be examined for deviations in quality standards as set out in regulation 4 and 5, which can be determined by feeling, smelling and visual inspection and shall subsequently be subjected to further examination. A sample taken in terms of these regulations shall be representative of the consignment from which it was taken.

(4) If an inspector should notice during the course of obtaining the representative samples that any of the quantities of sorghum products drawn from any bag or portion of a bulk container are obviously inferior to, or differ from, that drawn from the remainder of the bags or from the other parts of the bulk container, she/he shall draw samples only out of such bags or portion of the bulk container from which the inferior or differing sorghum products have been taken, place them in a collecting tray and mix them thoroughly. Samples drawn in this manner shall, in the application of this regulation be considered as deviating samples.

(5) Any bags or containers of which the contents of sorghum products do not comply in any respect with the require­ments of this regulation or bags and containers from which deviating samples have been taken, shall be marked with a distinguishing mark.

***Obtaining of a working sample***

10. (1) A working sample shall be obtained by dividing the representative or deviating sample of the consignment according to ICC (International Association for Cereal Science and Technology) 101/1 (approved 1982) method.

***Determination of undesirable odours and harmful substances, poisonous seeds, mites and insects***

11. The consignment or sample of the consignment of sorghum products shall be sensorially assessed or chemically analyzed in order to determine whether the sample has an undesirable odour, harmful substances, poisonous seeds, mites and insects.

***Determination of particle size or Granulation***

12. The particle size of sorghum products shall be determined by any suitable sieving method in accordance with the prescribed apertures and diameter of the sieve as specified in the table below. Provided that the results thus obtained are in accordance with the results obtained by AOAC 965.22 Type I method with sieves specifications as in ISO 3310/1-1982 test sieves.

**Table 2: Sieve Specifications**

|  |  |  |
| --- | --- | --- |
| DIMENSION OF SIEVE  | SIZE OF APERTURE | DIAMETER OF WIRE |
|  | 1 | 2 | 3 |
| 1 | 2.0 mm | 2.0 mm by 2.0 mm | 0.9 mm |
| 2 | 1.8 mm | 12.7 mm | - |
| 3 | 1.4 mm | 1.4 mm by 1.4 mm | 0.71 mm |
| 4 | 1.0 mm | 1.0 mm by 1.0 mm | 0.56 mm |
| 5 | 0.5 mm | 0.5 mm by 0.5 mm | 0.315 mm |
| 6 | 0.85 mm | 0.85 mm by 0.85 mm | 0.50 mm |
| 7 | 0.25 mm | 0.25 mm by 0.25 mm | 0.16 mm |
| 8 | 0.71 mm | 0.71 mm by 0.71 mm | 0.42 mm |

***Determination of the percentage of whole sorghum kernels in the meal***

13. The percentage of whole sorghum kernels shall be determined as follows:

(a) Obtain a working sample of at least 50 g from either a representative or a deviating sample, as the case may be.

(b) Sort out the working sample by hand in such a manner that the whole sorghum kernels are retained.

(c) Determine the mass of whole kernels so obtained and express it as a percentage of the mass of the working sample.

***Determination of the moisture content***

14. The moisture content of a consignment of sorghum products may be determined according to any suitable method: Provided that the results thus obtained are in accordance with the maximum permissible deviation for a class 1 moisture meter as detailed in ISO 7700/1 based on the results of the applicable oven dried method (AACC International Approved Method 44-15A).

***Offences and Penalties***

18. Any person who contravenes or fails to comply with the provisions of these regulations shall be guilty of an offence and upon conviction be liable to a fine or imprisonment for a period not exceeding two years or both such fine and imprisonment.

***Other Legislation***

19. The provisions of these regulations shall be in addition to and not in substitution for regulations published under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) and Legal Metrology Act 2014 (Act No, 9 of 2014).

***Commencement date***

20. The regulations shall come into operation six months after the date of publication.

ANNEXURE

**TABLE 1.**

**COMPOSITION OF SORGHUM PRODUCTS**

|  |  |  |
| --- | --- | --- |
|  | **Class of Sorghum Products** | **Particle size****(Granulation by mass)** |
|
| A | Pearled Sorghum grain | More than 95% shall be whole grain, and not more than 5% shall pass through a 1.8 mm sieve. |
| B | Sorghum Grits |  |
| * Cereal grits
 | Not more than 5% shall be whole grain and at least 90% shall pass through a 1.8 mm sieve and not more than 5% shall pass through a 1.4 mm sieve.  |
| * Brewing
 | At least 90% shall pass through a 2.0 mm sieve and not more than 5% shall pass through a 0.85 mm sieve. |
| * Snack grits
 | At least 90% shall pass through a 1.0 mm sieve and not more than 5% shall pass through a 0.85 mm sieve. |
| C | Coarse Sorghum Meal  | At least 90% shall pass through a 2.0 mm sieve, and not more than 20% shall pass through a 0.71 mm sieve. |
| D | Fine Sorghum Meal  | At least 80% shall pass through a 0.85 mm sieve. |
| E | Super Fine Sorghum Meal | At least 90% shall pass through a 0.85 mm sieve and atleast 40% shall pass through 0.5 mm sieve. |
| F | Sorghum Flour | At least 90% shall pass through a 0.85 mm sieve and atleast 40% shall pass through 0.5 mm sieve. |
| G | Sorghum Bran | milled |  At least 80% shall pass through a 0.5 mm sieve. |
| coarse |  - |
| H | Speciality Sorghum Products | Comply with the sieve specifications of the class |