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**DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES**

NO. R. 405

05 MAY 2017

AGRICULTURAL PRODUCT STANDARDS ACT, 1990  
(ACT No. 119 OF 1990)

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

The Minister of Agriculture, Forestry and Fisheries acting under section 15 of the Agricultural Product Standards Act, 1990 (Act No. 119 of 1990) –

- (a) made the regulations in the Schedule;
- (b) determined that the said regulations shall come into operation six (6) months after the date of publication; and
- (c) read together with section 3(2) of the said Act, repealed the Regulations published by Promulgation No. R 576 of 15 March 1991, Government Notice R 577 of 15 March 1991, R2133 of 30 August 1991 and No. R 186 of 22 February 2008.

**SCHEDULE****Definitions**

1. In these regulations, unless inconsistent with the context, any word or expression, to which a meaning has been assigned in the Act, shall have a corresponding 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;

**"all-purpose wheat flour"** means wheat flour which typically has a colour between that of darker cake wheat flours and lighter white bread wheat flours and complies with the requirements prescribed in regulation 4(10);

**"ash content"** means the amount of mineral matter, usually expressed in percentage (%), and is determined by incinerating a weighed amount of flour and weighing the residue;

**"brown bread"** means wheat bread obtained by baking fermented or otherwise leavened dough made from brown bread wheat flour which complies with the requirements prescribed in regulation 8(1)(b);

- "brown bread wheat flour"** means wheat flour which complies with the requirements prescribed in regulation 4(12);
- "cake wheat flour"** means wheat flour which complies with the requirements prescribed in regulation 4(7);
- "chlorinated flour"** means wheat flour which has been treated with Chlorine according to the regulations promulgated under Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);
- "composite cereal flour"** means wheat flour, which has been blended with non-wheat flours and/or grains and / or seeds and or pulses and or legumes, which complies with the requirements prescribed in regulation 4(16);
- "confectionery"** means all products containing wheat flour and a minimum of 5% sugar produced in a bakery with the exclusion of wheat bread;
- "container"** means a bag and/or a pack or bulk container or other suitable packing unit which wheat products is sold;
- "cracked wheat, crushed wheat, cut wheat, toasted wheat"** means whole wheat kernels that have been processed by cutting, coarse milling, rolling or heat processed to produce a broken kernel;
- "dry solid content"** means the measurement of the amount of dry solids of wheat bread in grams, as determined by the method set out in the Regulation 17, and which complies with provisions of Table 1;
- "flour improver"** means a product or mixture approved for inclusion in flour regulated in terms of Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) which improves the processing quality and shelf life of flour;
- "fortification"** means the addition of one or more micronutrients by means of a fortification mix to wheat products regulated in the terms of Foodstuffs, Cosmetic and Disinfectants Act, 1972 (Act No. 54 of 1972);
- "high bran brown bread"** means wheat bread which is obtained by baking fermented or otherwise leavened dough made from high bran wheat flour and which complies with the requirements prescribed in regulation 8(1)(e);
- "high bran wheat flour"** means flour which complies with the regulations prescribed in regulation 4(13);
- "industrial wheat flour"** means wheat flour which has a darker colour than white wheat flour as it contains small particles of bran and germ and complies with the requirements prescribed in regulation 4(8);
- "inspector"** means the Executive Officer from the department or an officer under his or her control, or an assignee or suitably qualified employee of an assignee;
- "leavening agent or raising agent"** means any one of a number of food additives regulated in terms of Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) that, through a chemical process or fermentation by yeast, produces carbon dioxide (CO<sub>2</sub>) in dough or batter that causes them to rise;

**"milling"** is a process through which the components of a wheat kernel (endosperm, bran and germ) are separated and the particle size of the endosperm or starch component is milled or ground down to flour fineness;

**"non-wheat flour"** means any flour which has been produced from any food source other than wheat seeds;

**"percent"** means percent calculated mass per mass on "as is" basis in the case of bran and germ, and on a moisture free basis in the case of ash;

**"prescribed mass of bread"** means wheat bread with a mass as regulated under the Legal Metrology Act, 2014 (Act No. 9 of 2014);

**"screenings"** means all material that passes through a standard slotted sieve contemplated in regulation 6(1)(a);

**"self-raising wheat flour"** means wheat flour that is premixed with leavening agent or raising agent which complies with the requirement prescribed in regulation 4(9);

**"separation"** means the separating of the various components of the wheat kernel through milling process;

**"soft wheat flour"** means wheat flour which complies with the requirements prescribed in regulation 4 (6);

**"speciality bread"** means wheat bread which consist of dough made of wheat flour or composite cereals flour and may contain ingredients providing specific sensory characteristics and /or functional and /or nutritional value which comply with the requirements prescribed in regulation 8(3);

**"stabilised wheat products"** means wheat flour subjected to further processes such as heat treatment in order to inactivate enzymes and/or modify (denature) wheat proteins, yet it retains the flavour and nutritional quality, which comply with the requirements prescribed in regulation 7;

**"standard sieve"** means a round stainless wire mesh sieve with aperture dimensions of 212 microns;

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

**"wheat"** means the kernels of the species *Triticum aestivum* (bread wheat and soft wheat), *Triticum durum* (durum wheat), *Triticum polonicum* (durum wheat) and *Triticum turgidum* (durum wheat);

**"wheat bran"** means a product obtained from the milling of wheat consisting mainly of the outer layers of wheat kernels;

**"wheat bread"** means a baked or partially baked product consisting mainly of wheat products and which--

- (a) is normally sold as bread or under the designation of bread, or which is intended to be used as bread;
- (b) is of any form, size or shape; and
- (c) has a mass of more than 100 g;

Provided that wheat products which are intended to be used as confectionery shall not be regarded as bread, notwithstanding the fact that they may have descriptive designations which include the word "bread" or "loaf";

**"wheat flour"** means a product obtained from the milling of cleaned wheat to which no wheat bran, wheat germ or wheat semolina has been added;

**"wheat germ"** means a product obtained from the milling of wheat consisting mainly of the seed embryo;

**"wheat products"** means wheat products obtained from the milling, rolling or crushing of cleaned wheat including baked or partially baked products which consists mainly of wheat meal or wheat flour;

**"wheat semolina"** means a coarse granular endosperm product obtained from the milling of wheat which complies with the requirements prescribed in regulation 5;

**"white bread"** means wheat bread which is obtained by baking fermented or otherwise leavened dough made from white bread wheat flour which complies with the requirement prescribed in regulation 8(1)(a);

**"white bread wheat flour"** means wheat flour which complies with the requirements prescribed in regulation 4(11);

**"whole and/or processed wheat kernels"** means cleaned wheat kernels which are intact or processed by cutting, coarse milling or rolling to produce broken kernels which comply with the regulations prescribed in regulation 6(3);

**"whole wheat"** means cleaned wheat kernels in their natural form;

**"whole-wheat bread"** means wheat bread obtained by baking fermented or otherwise leavened dough made from whole-wheat flour which complies with the requirements prescribed in regulation 8(1)(c);

**"whole-wheat brown bread"** means wheat bread obtained by baking fermented or otherwise leavened dough made from whole wheat brown flour which complies with the requirements prescribed in regulation 8(1)(d);

**"whole-wheat brown flour"** means wheat flour which includes all components present in a wheat kernel obtained through the milling of the whole wheat kernel, whole wheat, cracked wheat, crushed wheat and cut wheat which complies with the requirements prescribed in regulation 4(14); and

**"whole-wheat flour"** means wheat flour which includes all components present in a wheat kernel obtained through the milling of the wheat, which complies with the requirements prescribed in regulation 4 (15).

***Restrictions on sale of wheat products***

2. (1) No person shall sell any wheat product in the Republic of South Africa --
- (a) unless the wheat product concerned is sold according to the classes set out in regulation 3;
  - (b) unless the wheat product concerned complies with the standards for the classes set out in regulations 4, 5, 6, 7, and 8;
  - (c) unless the containers in which the wheat product concerned is packed comply with requirements set out in regulation 9;
  - (d) unless the wheat product concerned is packed in accordance with the packing requirements set out in regulation 9;
  - (e) unless the wheat product concerned is marked in accordance with the marking requirements set out in regulations 10, 11 and 12;
  - (f) unless the samples drawn by an inspector for inspection are drawn in accordance with the requirements as set out in regulations 14 and 15; and
  - (g) unless the consignment sampled by an inspector is analysed in accordance with the methods of analysis as set out in regulations 16,17,18,19,20, and 21.
- (2) The Executive Officer may exempt a person in writing entirely or partially and on such conditions as he or she may deem necessary, from the provisions of subregulation 1: Provided that such exemption is done in terms of section 3(1) (c) of the Act.

**QUALITY STANDARDS*****Class for wheat products***

3. The class of wheat products shall be classified as follows:
- (a) **White wheat flour**, which are divided into the following classes --
    - (i) white bread wheat flour or white bread flour made from wheat;
    - (ii) cake wheat flour or cake flour made from wheat;
    - (iii) soft wheat flour or soft flour made from soft wheat;
    - (iv) industrial wheat flour or industrial flour made from wheat; and
    - (v) all –purpose wheat flour or all-purpose wheat flour made from wheat.

- (b) **Brown wheat flour**, which are divided into the following classes --
  - (i) brown bread wheat flour or brown bread flour made from wheat;
  - (ii) whole-wheat brown flour;
  - (iii) high bran brown wheat flour or high bran flour made from wheat; and
  - (iv) whole wheat flour.
- (c) **White wheat bread** which is divided into the following class --
  - (i) white bread.
- (d) **Brown wheat bread**, which are divided into the following classes --
  - (i) brown bread;
  - (ii) whole-wheat brown bread;
  - (iii) high bran brown bread; and
  - (iv) whole-wheat bread.
- (e) **Speciality bread.**
- (f) **Self-raising wheat flour** or self-raising flour made from wheat.
- (g) **Composite cereals flour** or composite flour made from cereals.
- (h) **Stabilised wheat products** or stabilised products made from wheat, which are --
  - (i) stabilised wheat flour;
  - (ii) stabilised wheat bran; and
  - (iii) stabilised wheat germ.
- (i) **Wheat semolina** or semolina made from wheat.
- (j) **Wheat non-flour products** which are divided into the following classes --
  - (i) Wheat bran or bran made from wheat;
  - (ii) Wheat germ or germ made from wheat; and
  - (iii) Whole and/or processed wheat kernels.

**Standards for white wheat flours, brown wheat flours, whole-wheat flours and composite cereal flours.**

4. Subject to the provisions of regulation 2 these wheat flours --
- (1) shall have a moisture content not exceeding 14 percent;
  - (2) shall contain the fraction of the milled wheat below the standard sieve when sieved through a 212 micron wire mesh sieve, and therefore shall contain no separated wheat semolina;
  - (3) shall contain a fraction of wheat bran above the 212-micron standard sieve in the case of flour classes with a defined wheat bran content;
  - (4) shall be pure, sound, and free from rancid or off- flavour, odours and insects;
  - (5)
    - (i) shall be fortified in terms of the Foodstuffs, Cosmetics Disinfectants Act, 1972 (Act No. 54 of 1972); and
    - (ii) may contain flour improvers.
  - (6) in the case of soft wheat flour --
    - (a) be a white wheat flour milled from a soft wheat; and
    - (b) not contain separated wheat bran, wheat germ or wheat semolina.
  - (7) in the case of cake wheat flour --
    - (a) have an ash content not exceeding 0,65 percent; and
    - (b) shall not contain separated wheat bran, wheat germ or wheat semolina.
  - (8) in the case of industrial wheat flour --
    - (a) have an ash content of not less than 0,85 percent;
    - (b) contain a maximum of 1,0 percent wheat bran with a particle size greater than 212 micron; and
    - (c) shall not contain separated wheat germ or wheat semolina.
  - (9) in the case of self-raising wheat flour --
    - (a) contain a leavening or raising agent which has been added according to the regulations promulgated in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972); and
    - (b) contain wheat flour which complies with the applicable requirements in subregulations 4(6), (7), (8), (9), (10), (11), (12), (13), (14) and (15).

- (10) in the case of all-purpose wheat flour --
- (a) have an ash content of not less than 0,55 percent and not exceeding 0,75 percent; and
  - (b) contain no separated wheat bran, wheat germ or wheat semolina.
- (11) in the case of white bread wheat flour --
- (a) have an ash content of not less than 0,60 percent and not exceeding 1,0 percent; and
  - (b) contain no separated wheat bran, wheat germ or wheat semolina.
- (12) in the case of brown bread wheat flour --
- (a) have an ash content not exceeding 1,0 percent obtained from the flour fraction that passed through a 212 micron standard sieve;
  - (b) have a wheat bran content of not less than 10 percent and not exceeding 15 percent; and
  - (c) contain no separated wheat germ or wheat semolina.
- (13) in the case of high bran wheat flour --
- (a) have an ash content not exceeding 1,0 percent obtained from the flour fraction that passed through a 212 micron sieve;
  - (b) have a wheat bran content of not less than 15 percent; and
  - (c) contain no separated wheat germ or wheat semolina.
- (14) in the case of whole-wheat brown flour --
- (a) contains all the components present in a wheat kernel including one or more of the following ingredients which shall be in the flour at a level not less than 10 percent; whole wheat, cracked wheat, crushed wheat and cut wheat;
  - (b) have an ash content not exceeding 1,0 percent obtained from the flour fraction that passed through a 212 micron sieve;
  - (c) have a wheat bran content of not less than 10 percent;
  - (d) may contain wheat germ; and
  - (e) contain no separated wheat semolina.
- (15) in the case of whole-wheat flour --
- (a) includes all the components present in a wheat kernel obtained through the milling of the whole wheat kernel.



- (16) in the case of composite cereals flour --
- (a) contain at least 50 percent wheat flour which has been blended with non-wheat flours and/or grains and/or seeds and/or legumes and/or pulses; and
  - (b) have a wheat flour component made up of wheat flour(s) which complies with the applicable requirements in subregulations 4(6), (7), (8), (9), (10), (11), (12), (13), (14) and (15).

***Standards for wheat semolina***

5. Subject to the provisions of regulation 2 wheat semolina shall --
- (a) have a minimum of 50 percent of the total white endosperm particle content that does not pass through a 212 micron standard sieve; and
  - (b) have a moisture content of not more than 15 percent.

***Standards for wheat non-flour products***

6. Subject to the provisions of regulation 2 wheat non-flour products shall --
- (1) in the case of wheat bran;
    - (a) consist mainly of the bran fraction of wheat, provided that it may contain a quantity of ground screenings and vegetable matter other than wheat; and
    - (b) have a moisture content of not more than 15 percent.
  - (2) in the case of wheat germ --
    - (a) consist mainly of the seed embryo; and
    - (b) have a moisture content of not more than 15 percent.
  - (3) In the case of whole and/or processed wheat kernels --
    - (a) consist of cleaned kernels in intact or processed form; and
    - (b) have a moisture content of not more than 15 percent.

***Standards for stabilised wheat products***

7. Subject to the provision of regulation 2 stabilised wheat products --
- (a) shall have been subjected to further processes such as heat treatment or chemical treatment in order to inactivate enzymes and/or modify (denature) wheat components such as wheat proteins and wheat carbohydrates;
  - (b) or chemical treatment such as chlorination treatment to lower the pH of the dough;
  - (c) a wheat product component included in the classes for wheat products; and
  - (d) have a moisture content of not more than 14 percent.

**Standards for wheat bread**

8. (1) (a) Subject to the provision of subregulation 2, **white bread** shall consist of a dough made from white wheat flour and water, with or without other ingredients, and may contain ingredients providing specific nutritional value, that has been fermented by yeast or otherwise leavened, baked in any form, size or shape and which has been treated, prepared and processed in such a manner that the bread, if it is of a prescribed mass specified in column 2 of the Table, contains the applicable minimum dry solids mass specified opposite thereto in column 3 of the Table. The minimum dry solid content for white bread shall be calculated at 58% of the prescribed mass of bread.
- (b) Subject to the provision of subregulation 2, **brown bread** shall consist of a dough made from brown wheat flour and water, with or without other ingredients, and may contain ingredients providing specific nutritional value, that has been fermented by yeast or otherwise leavened, baked in any form, size or shape and which has been treated, prepared and processed in such a manner that the bread, if it is of a prescribed mass specified in column 2 of the Table, contains the applicable minimum dry solids mass specified opposite thereto in column 3 of the Table. The minimum dry solid content for brown bread shall be calculated at either 58% of the prescribed mass of bread.
- (c) Subject to the provision of subregulation 2, **whole-wheat bread** shall consist of a dough made from whole-wheat flour and water, with or without other ingredients, and may contain ingredients providing specific nutritional value that has been fermented by yeast or otherwise leavened, baked in any form, size or shape and which has been treated, prepared and processed in such a manner that the bread, if it is of a prescribed mass specified in column 2 of the Table, contains the applicable minimum dry solids mass specified opposite thereto in column 4 of the Table. The minimum dry solid content for whole wheat bread shall be calculated at 50% of the prescribed mass of bread.
- (d) Subject to the provision of subregulation 2, **whole-wheat brown bread** shall consist of a dough made from whole-wheat brown flour and water, with or without other ingredients, and may contain ingredients providing specific nutritional value, that has been fermented by yeast or otherwise leavened, baked in any form, size or shape and which has been treated, prepared and processed in such a manner that the bread, if it is of a prescribed mass specified in column 2 of the Table, contains the applicable minimum dry solids mass specified opposite thereto in column 4 of the Table. The minimum dry solid content for wholewheat brown bread shall be calculated at 50% of the prescribed mass of bread.
- (e) Subject to the provision of subregulation 2, **high bran brown bread** shall consist of dough made from high bran brown wheat flour and water, with or without other ingredients, and may contain ingredients providing specific nutritional value, that has been fermented by yeast or otherwise leavened, baked in any form, size or shape and which has been treated, prepared and processed in such a manner that the bread, if it is of a prescribed mass specified in column 2 of the Table, contains the applicable minimum dry solids mass specified opposite thereto in column 4 of the Table. The minimum dry solid content for high bran brown bread shall be calculated at 50% of the prescribed mass of bread.

(2) Notwithstanding the provision of paragraphs (a), (b), (c), (d) and (e) of subregulation 1, white bread, brown bread, whole wheat bread, whole wheat brown bread and high bran brown bread shall be deemed to comply with the applicable requirements set out in the paragraph concerned of that subregulation in the case of a requirement relating to the dry solids content, deviates with not more than 1% from the minimum prescribed for white bread, brown bread, whole-wheat bread, whole wheat brown bread and high bran bread as the case may be: Provided on average the minimum dry solid content complies with the prescribed minimum dry solid.

(3) **Speciality bread**, which excludes all bread covered by regulation 8(1), shall consist of dough made of wheat flour or composite cereal flour and may contain ingredients providing specific sensory characteristics and/or functional and/or nutritional value as well as whole or crushed grain kernels and/or seeds, that has been fermented by yeast or otherwise leavened, baked in any form, size or shape.

### PACKING AND MARKING REQUIREMENTS

#### *Requirements for containers*

9. (1) Wheat products shall, where appropriate, be packed in containers which --
- (a) are intact, clean, dry, suitable and strong enough for packing and normal handling of wheat products;
  - (b) shall not impart an undesirable taste or odour to the contents thereof; and
  - (c) shall properly be closed in a manner permitted by the nature of the container and the contents thereof.
- (2) If the containers are packed in outer containers, such containers shall be clean and intact.
- (3) Subject to the provisions of subregulation 1 the specifications for the different containers for different wheat products shall be as prescribed in the Legal Metrology Act, 2014 (Act No. 9 of 2014).

#### *Marking requirements for white wheat flour and brown wheat flour*

10. A container containing white wheat flour or brown wheat flour shall be clearly and legibly marked with the following particulars:

- (a) The class of the product;
- (b) The name and/or trademark and physical address of the manufacturer, or packer or processor, or distributor and or importer of the wheat products concerned;
- (c) The mass of the contents as prescribed in terms of the Legal Metrology Act, 2014 (Act No. 9 of 2014);
- (d) the names and quantities of nutrients as identified in the food fortification programmes in terms of the Foodstuffs, Cosmetics and Disinfectant Act, 1972 (Act No. 54 of 1972); and
- (e) Particulars shall be printed in English or both in English and any other official language.

**Marking requirements for wheat bran**

11. A container containing wheat bran shall be clearly and legibly marked with the following particulars:

- (a) The class of the product;
- (b) The name and/or trademark and physical address of the manufacturer, or packer or processor, or distributor and or importer of the wheat bran; and
- (c) The mass of the contents as prescribed in terms of the Legal Metrology Act, 2014 (Act No. 9 of 2014).

**Marking requirements for wheat bread**

12. (1) Every wheat bread, excluding speciality bread shall be clearly and legibly marked with the following particulars:

- (a) The class of the wheat bread;
- (b) The name and/or trademark and physical address of the manufacturer of the wheat bread or the name and physical address of the person on whose behalf the wheat bread was baked; and
- (c) The mass of the wheat bread.

(2) The provisions of subregulation 1 shall not apply to:

- (a) wheat bread packed by the manufacturer thereof: Provided that the particulars referred to in subregulation 1 shall be clearly and legibly marked on the packing material of each bread thus packed; and
- (b) wheat bread presented for sale at a point where a notice in type of not less than 30 mm high clearly and legibly indicates the particulars referred to in subregulation 1.

(3) Speciality wheat bread shall be clearly and legibly marked with the following particulars:

- (a) The name and/or trademark physical address of the manufacturer of the wheat bread or the name and physical address of the person on whose behalf the wheat bread was baked; and
- (b) The mass of the speciality bread

(4) Wheat bread which complies with the requirements of subregulation 1 and is packed in a transparent container by the manufacturer thereof is exempted from the requirements of subregulation (2) (a).

**Prohibited particulars**

13. (i) 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 wheat products or on a label affixed thereto or which is displayed therewith.

**SAMPLING****Obtaining a sample**

14. (1) An inspector shall for the purpose of the application of these regulations, draw random sample of wheat 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 wheat products packed in retail quantities, samples shall be taken in accordance with the table below:

Number of containers comprising quantity of wheat products	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 wheat products which are presented for inspection in bulk containers, excluding grain elevators, shall be drawn at six different places with a bulk probe 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 (1) (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, 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 is considered to 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 wheat 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 wheat 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 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**

15. (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.

### **METHODS OF ANALYSIS FOR WHEAT PRODUCTS**

#### **General**

16. (1) In order to determine whether a wheat product complies with the requirement for such product, the product shall--

- (a) be analysed in duplicate;
- (b) where necessary, be ground to such a fineness as to allow all the material to pass through a round hole sieve with aperture of 2 mm;
- (c) be mixed thoroughly before any determination is made;
- (d) be measured out in grams accurately to the fourth decimal place unless where otherwise specified; and
- (e) in the case of baked products, be treated in such a manner that, except in the case of the determination of the dry solids mass, the 2 crust end are first separated from the product and the remaining portion is then cut into thin slices and the crust and crumb are air-dry, ground to such a fineness as to allow the sample to pass through a 1.0 mm sieve.

#### **Determination of the dry solids content of bread**

17. The dry solids content of bread shall be determined as set out below:

- (1) The apparatus used for the determination of the dry solids contents of bread, is as follows:
  - (a) Hot-air oven, the temperature of which may be regulated at 105°C (with a variation not exceeding 5°). The oven must be so constructed that the hot air passes evenly and horizontally through the oven over the drying trays. The oven must be provided with vents to allow moist air to escape;
  - (b) drying trays made from stainless steel and covered with gauze which is sufficiently fine to prevent any crumbs from passing through; and
  - (c) laboratory mass meter which can measure accurately to 0,1 g.

- (2) The method that is used in the determination of the dry solids content of bread, is as follows:

Measure the mass of the whole bread unit accurately to 0,1 g. In the case of uncut bread, cut into slices of approximately 10 to 15 mm thick. Place and spread the slices as well as any crumbs, onto the drying tray. Set the vent of the oven in order to allow the moist air to escape without the temperature variation exceeding 5°C and so that the bread will dry to constant mass after six hours. Place the drying trays with bread into the oven and increase the temperature within 45 minutes to 105°C (with a variation not exceeding 5°C). Remove the bread from the oven after six hours; allow cooling for three minutes and measuring the dry mass of the bread and crumbs accurately to 0,1 g. Where more than one loaf of bread is analysed, report the average dry solid mass. Any fraction of a gram is increased to the next whole gram.

***Determination of the bran content of brown wheat flour***

18. The bran content of brown wheat flour shall be determined as set out below.

- (1) The apparatus used for the determination of the bran content of brown wheat flour is as follows:

- (a) An electrically driven laboratory plansifter fitted with an automatic time switch. This sifter must have a throw of 75-77 mm and the drive must run at a speed of 180-190 r.p.m. The sieving motion must be horizontal and circular when sieving and the sieves must not have a precession action;
- (b) A round sieve, 200 mm in diameter covered with a 212 micron stainless steel wire mesh. The sieve must be fitted with a tight-fitting lid and receiver in order that no material is lost during sieving; and
- (c) Nylon cubes with 13 mm to 18 mm sides.

- (2) The method that is used in the determination of the bran content of brown wheat flour is as follows:

- (a) Fit the 200 mm round sieve into the receiver. Place 200 g (with a variation not exceeding 0,1 g) of a representative sample of brown wheat flour and two nylon cubes into the sieve. Cover the sieve with the lid and mount in the plansifter. Sieve for five minutes. Remove the sieve, lid and receiver from the plansifter. Remove the lid and brush any material adhering to it back into the sieve. Tap the sieve lightly five to ten times with the palm of the hand so that any material adhering to the bottom of the sieve will drop back into the receiver. Remove the sieve from the receiver and determine the mass of the material remaining above the sieve to the nearest 0,1 g. Record this mass (A grams). Measure the mass of the material in the receiver to the nearest 0,1 g. Record this mass (B grams). The total mass of the material recovered (A + B) must equal 200 g (with a variation not exceeding 0,2 g). If the total mass of the material recovered falls outside the tolerance of 200 g (with a variation not exceeding 0,2 g) the test must be repeated; and
- (b) Calculate the percentage material which remains on the sieve as follows:

$$\text{Bran percentage} = \frac{A}{2}$$

Take the average of the duplicate percentages thus obtained as the bran percentage (m/m) of the brown wheat meal and report it to the nearest 0,1. Repeat the determination if the duplicate percentages differ by more than 0,4.

***Determination of the Ash content***

19. The ash content of a consignment of wheat products may be determined by any suitable method: Provided that the results thus obtained is in accordance (0.05%) with the results obtained by means of the Magnesium Acetate method [AACC (American Association of Cereal Chemists) method 08.02].

***Determination of the moisture content***

20. The moisture content of a consignment of wheat products may be determined according to any suitable method: Provided that the results thus obtained are in accordance ( $\pm 0,3$  percent) with the results obtained by means of the Air Oven method [AACC (American Association of Cereal Chemists) method 44-15.02].

***Tolerances for the moisture, bran and ash contents for the various classes of wheat products***

22. The following tolerances shall apply where applicable:

- (a) A **moisture** content tolerance of not more than **0,2** percentage units above the maximum moisture content prescribed.
- (b) A **bran** content tolerance of not more than **0,5** percentage units from the minimum or maximum bran content prescribed.
- (c) An **ash** content tolerance of not more than **0,05** percentage units from the minimum or maximum ash content prescribed.

**OFFENCES AND PENALTIES**

23. Any person who contravenes or fails to comply with any provision of these regulations shall be guilty of an offence and upon conviction be liable to a fine of not exceeding R50 000 or to imprisonment for a period not exceeding two years, or to both that fine or imprisonment.

***Other Legislations***

24. The provisions of these regulations shall be in addition to and is not in substitution for regulations published under the following Acts –

- (a) Foodstuffs, Cosmetics and Disinfectants Act, 1972 (**Act No. 54 of 1972**); and
- (b) Legal Metrology Act, 2014 (**Act No.9 of 2014**).



TABLE 1

## MINIMUM DRY SOLIDS MASS FOR WHEAT BREAD

Class of wheat product	Prescribed mass of bread (g)	Minimum dry solids mass (g) (White bread and Brown bread)	Minimum dry solids mass (g) (Whole wheat bread, Whole wheat brown bread and High bran brown bread)
1	2	3 @58%	4 @50%
White bread, Brown bread, whole wheat brown bread, Whole wheat bread and high bran brown bread	400	232	200
	500	290	250
	600	348	300
	700	406	350
	800	464	400
	1 200	696	600
	1 600	928	800

\*\*\* No minimum dry solids for speciality bread.