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## GOVERNMENT NOTICE

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### DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

No. R. 443

21 June 2013

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

#### REGULATIONS RELATING TO THE GRADING, PACKING AND MARKING OF MALTING BARLEY 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 set out in the Schedule; and
- (b) determined that the said regulations shall come into operation on the date of publication.

#### SCHEDULE

##### *Definitions*

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

“**animal rests**” means dead rodents, dead birds and dung

“**artificially dried barley**” means barley from which moisture has been removed by unnatural and/or mechanical means;

“**bag**” means a bag manufactured from --

- (a) jute or phormium or a mixture of jute and phormium; or
- (b) polypropilene that complies with SABS specification CKS632;

“**badly discoloured and heat-damaged barley**” means barley kernels of which more than half of the kernel's husk has a distinctly lead-grey, brown or black colour or where the endosperm of the germ-end is distinctly brown to black;

“**badly mould infected (rotten) barley**” means barley kernels infected by storage mould and of which more than half of the kernel is covered by mould and/or is visually infected by mould or bacteria and has gone soft or are discoloured;

“**barley**” means kernels and pieces of kernels of the genus *Hordeum*;

“**black-end barley**” means barley kernels in which the colour of the germ-end is clearly dark brown to black and at least one third of the kernel is discoloured and the discolouration is visible on both sides (palea and lemma) of the kernel;

“**black-hulled barley**” means barley kernels in which the glumes are totally black in colour

“**bulk container**” means any vehicle or container in which bulk barley is stored or transported;

“**consignment**” means --

- (a) a quantity of barley of the same class, which belongs to the same owner, delivered at any one time under cover of the same consignment note, delivery note or receipt note, or delivered by the same vehicle or bulk container, or loaded from the same bin of a grain elevator or from a ship's hold; or
- (b) in the case where a quantity referred to in paragraph (a), is subdivided into different subclasses or grades, each such quantity of each of the different subclasses or grades;

"**container**" means a bag or bulk container;

"**cultivar list**" means the list of cultivars determined from time to time by the Executive Officer: Agricultural Product Standards and which is obtainable from the Executive Officer: Agricultural Product Standards, Private Bag X258, Pretoria, 0001, [www.daff.gov.za](http://www.daff.gov.za) ;

"**damaged barley**" means barley --

- (a) which have been damaged by insects;
- (b) which have a ventral, dorsal or lateral split in the kernel that exposes the endosperm. Kernels of which the lemma and palea tends to separate without exposing the endosperm are not regarded as split or damaged kernels;
- (c) which are immature and have a distinctly green colour;

"**ergot sclerotia**" means the sclerotia of the fungus *Claviceps purpurea*; and "**ergot**" has a corresponding meaning;

"**foreign matter**" means all material other than barley and un-threshed ears;

"**insect**" in relation to barley, means any live insect that is injurious to stored barley irrespective of the stage of development of that insect;

"**maize**" means kernels and pieces of kernels of the genus *Zea*;

"**mechanically damaged barley**" means barley kernels that have been damaged in threshing or handling. Barley is considered as mechanically damaged if one or more of the following characteristics are present;

- (a) of which more than half the husk is removed from the kernel; or
- (b) of which the glumes covering the germ are loose and the germ itself is damaged; or
- (c) the kernels are broken; and
- (d) of which any part of the endosperm is exposed.

"**plump barley**" means barley kernels which after sieving do not pass through the slots of the top sieve of the standard barley sieve;

"**poisonous seeds**" means the seeds or bits of seeds of plant species that may in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972) represent a hazard to human or animal health when consumed, including seeds of *Argemone mexicana*, *Convolvulus spp.*, *Crotalaria spp.*, *Datura spp.*, *Ipomoea purpurea*, *Lolium temulentum*, *Ricinus communis* or *Xanthium spp.*;

"**pre-germinated barley**" means barley kernels in which germination has proceeded to such an extent, that –

- (a) the husk adjacent to the embryo on the side of the lemma has been forced open due to the growth of the shoot or primary rootlets with the slit part pointing partially away from the kernel.
- (b) a swelling in the area of the germ is clearly visible and after removal of the husk, growth of the shoot or primary rootlets are clearly visible;

"**rubbing**" means the method by which barley is rubbed to remove awns from the kernels and is as follows:

- (a) Take at least 500g of a well-mixed representative sample of un-rubbed barley which is placed in a bag and then closed;
- (b) Rub the material in the bag thoroughly by hand on a hard surface such as a table or a bench.
- (c) Rubbing shall be done by holding the closed end of the bag in one hand, grasping a handful of the contents through the bag with the other hand and rubbing this against the rest of the bag's contents.
- (d) After each five or six rubs the contents shall be mixed by shaking the bag.
- (e) Rubbing shall be done for one minute.

"**screenings**" means all matter that passes through both sieve(s) of the standard barley sieve;

**"sieves"**

**"standard barley sieve"** means a rectangular hand sieve consisting of a lid, a top sieve, a bottom sieve, and a tray, which fit into each other in the above sequence;

**"top sieve"** means a sieve --

- (a) with a flat bottom of metal sheet of 1,2 mm thickness with six parallel rows of slotted perforations 25 mm long and 2,5 mm wide. The spacing between the slots in the same row must be 2,5 mm wide. The ribs between the slotted perforations run parallel to the long axis of the sieve. The perforations in the different rows run in columnar and not in checkerboard formation;
- (b) of which the upper surface of the bottom is smooth;
- (c) with a rectangular frame of suitable material with an inner width of 115 mm and an inner length of 200 mm and 15 mm high;

**"bottom sieve"** means a sieve --

- (a) with a flat bottom of metal sheet of 1,2 mm thickness with six parallel rows of slotted perforations 25 mm long and 2,2 mm wide. The spacing between the slots in the same row must be 2,5 mm wide. The ribs between the slotted perforations run parallel to the long axis of the sieve. The perforations in the different rows run in columnar and not in checkerboard formation;
- (b) of which the upper surface of the bottom is smooth;
- (c) with a rectangular frame of suitable material with an inner width of 115 mm and an inner length of 200 mm and 15 mm high;
- (d) that fits onto a tray with a solid bottom and must be at least 15 mm above the bottom of the tray;

**"six-row barley"** means kernels and pieces of kernels of the species *Hordeum vulgare* which produce ears with six rows of kernels per ear;

**"smut infection"** means barley that is infected with *Ustilago tritici*. Barley is considered smut infected if one or more of the following characteristics are present:

- (a) contains barley kernels that are smeared with smut; or
- (b) contains more than six smut masses per 100 g of barley;

**"spear grass"** means seeds and pieces of seeds of the species *Bromus diandrus*;

"**sprouted barley**" means barley in which germination has proceeded to such an extent that the husk adjacent to the embryo has been forced open and the shoot and primary rootlets are clearly visible;

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

"**un-threshed ears**" means ears and bits of ears of barley, rye, triticale and wheat that still contain kernels that are completely covered with glumes;

"**weather damaged barley**" means barley that is visibly infected with field mould;

"**wheat**" means the kernels and pieces of kernels of the genus *Triticum*;

"**wild oats**" means kernels and pieces of kernels of the genus *Avena* excluding *Avena sativa*, *A nuda* and *A byzantina*;

**Restrictions on sale of barley**

2. (1) No person shall sell a consignment of barley in the Republic of South Africa --
- (a) unless the barley is sold according to the classes set out in regulation 3;
  - (b) unless the barley complies with the standards for the classes set out in regulation 4;
  - (c) unless the barley, where applicable, complies with the grades of barley and the standards for grades set out in regulations 5 and 6 respectively;
  - (d) unless the barley is packed in accordance with the packing requirements set out in regulation 7;
  - (e) unless the containers or sale documents, as the case may be, are marked in accordance with the marking requirements set out in regulation 8; and
  - (f) if such barley contains a substance that renders it unfit for human consumption or for processing into or utilisation thereof as food or feed.
- (2) The Executive Officer may grant written exemption, entirely or partially, to any person on such conditions as he or she may deem necessary, from the provisions of sub regulation (1).

**PART I**

**QUALITY STANDARDS**

**Classes of barley**

3. The classes of barley are --
- (a) Class Malting Barley; and
  - (b) Class Other Barley.

**Standards for classes**

4. (1) Notwithstanding the provisions of sub regulations (2) and (3), all consignments of barley must --
- (a) be free from any toxin, chemical or other substances that renders it unsuitable for human consumption or for processing into or utilisation thereof as food or feed and may not exceed the permissible deviations regarding aflatoxin in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);
  - (b) contain not more poisonous seeds than permitted in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);
  - (c) be free from organisms of phytosanitary importance as determined in terms of the Agricultural Pest Act, 1983 (Act No. 36 of 1983);
  - (d) be free from musty, extreme mould infected, sour and rancid foreign matter and any other matter;
  - (e) be free from any undesired odour, taste or colour not typical of undamaged and sound barley;
  - (f) be free from animal rests;
  - (g) may not exceed the maximum residue levels prescribed for agricultural remedies that are allowed for the control of pests and diseases on barley in terms of Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);
  - (h) with the exception of Class Other Barley, be free from insects;
  - (i) with the exception of Class Other Barley, be free from smut infection; and
  - (j) with the exception of Class Other Barley, have a moisture content not exceeding 13 per cent.
- (2) A consignment shall be classified as Class Malting Barley if --
- (a) the barley in the consignment consists of at least 95 per cent (m/m) of one of the malting barley cultivars specified in the cultivar list; and
  - (b) it complies with the standards for Grade Malting Barley set out in regulation 6.
- (3) A consignment of barley shall be classified as Class Other Barley if it does not comply with the standards for Class Malting Barley.

**Grades of barley**

5. (1) The grade for Class Malting Barley shall be Grade Malting Barley.
- (2) No grades are determined for Class Other Barley.

**Standards for grades of barley**

6. (1) A consignment of barley shall be graded as --

- (a) Grade Malting Barley if the nature of deviation, specified in column 1 of Table 1 of the Annexure, in that consignment does not exceed the percentage specified in column 2 of the said table opposite the deviation concerned;
- (b) Class Other Barley if it does not meet the requirements for Grade Malting Barley.

## PART II

### PACKING AND MARKING REQUIREMENTS

#### *Packing requirements*

7. Barley of different classes, cultivars and grades shall be packed in different containers, or stored separately.

#### *Marking requirements*

8. (1) Every container or the accompanying sale documents of a consignment of barley shall be marked or endorsed by means of appropriate symbols specified in sub regulation (2), with --

- (a) the class of the barley;
- (b) the cultivar; and
- (c) the grade

(2) The symbols referred to in sub regulation (1) shall appear in the order of class and grade.

(3) The symbols used to indicate the different --

- (a) classes shall be --
  - (i) M in the case of Class Malting Barley; and
  - (ii) O in the case of Class Other Barley;
- (b) grades shall be --
  - (i) M in the case of Grade Malting Barley;

## PART III

### SAMPLING

#### *Taking of sample*

9. (1) A sample of a consignment of barley shall --
- (a) in the case of barley delivered in bags and subject to regulation 10, be obtained by sampling at least ten per cent of the bags, chosen from that consignment at random, with a bag probe: Provided that at least 25 bags in a consignment shall be sampled and where a consignment consists of less than 25 bags, all the bags in that consignment shall be sampled; and

- (b) in the case of barley delivered in bulk and subject to regulation 10, be obtained by sampling that consignment throughout the whole depth of the layer, in at least six different places, chosen at random in that bulk quantity, with a bulk sampling apparatus.
- (2) The collective sample obtained in sub regulation (1) (a) or (b) shall --
- (a) have a total mass of at least 5 kg; and
  - (b) be thoroughly mixed by dividing before further examination.
- (3) If it is suspected that the sample referred to in sub regulation (1)(a) is not representative of that consignment, an additional five per cent of the remaining bags, chosen from that consignment at random, shall be emptied into a suitable bulk container and sampled in the manner contemplated in sub regulation (1)(b).
- (4) If it is suspected that the sample referred to in sub regulation (1)(b) is not representative of that consignment, an additional representative sample shall be obtained by using an alternative sampling pattern, apparatus or method.
- (5) A sample taken in terms of these regulations shall be deemed to be representative of the consignment from which it was taken.

#### ***Sampling if contents differ***

10. (1) If, after an examination of the barley taken from different bags in a consignment in terms of regulation 9 (1) (a), it appears that the contents of those bags differ substantially --
- (a) the bags concerned shall be placed separately;
  - (b) all the bags in the consignment concerned shall be sampled with a bag probe in order to do such separation; and
  - (c) each group of bags with similar contents in that consignment shall for the purposes of these regulations be deemed to be a separate consignment.

(2) If, after the discharge of a consignment of barley in bulk has commenced, it is suspected that the consignment could be of a class, cultivar or grade other than that determined by means of the initial sampling, the discharge shall immediately be stopped and the part of the consignment remaining in the bulk container as well as the barley already in the hopper shall be sampled anew with a bulk sampling apparatus or by catching at least 20 samples, by means of a suitable container, at regular intervals throughout the whole offloading period from the stream of barley flowing in bulk.

#### ***Working sample***

11. (1) A working sample is obtained by dividing the representative sample of the consignment according to the ICC (International Association for Cereal Science and Technology) 101/1 method.

### **PART IV**

#### **DETERMINATION OF OTHER SUBSTANCES**

##### ***Determination of undesirable odours and harmful substances***

12. A consignment of barley or a sample of a consignment of barley shall be sensorial assessed or chemically analysed in order to determine --

- (a) whether it contains a substance that renders the barley unfit for human consumption or for processing into or for utilisation as food or feed; and
- (b) whether it has a mouldy, sour, rancid or other undesirable odour: Provided that a working sample of un-screened barley that is ground in a grain mill to a fine meal may be used for the determination concerned.

## PART V

### DETERMINATION OF CLASS, MOISTURE CONTENT, NITROGEN CONTENT, GERMINATION CAPACITY AND GERMINATION ENERGY

#### ***Determination of class***

13. The class of a consignment of barley shall be determined as follows:
  - (a) Take at least 100 g un-rubbed and un-screened barley and remove all un-threshed ears and foreign matter by hand.
  - (b) Obtain a working sample of at least 25 g after all un-threshed ears and foreign matters have been removed and separate the different cultivars.
  - (c) Determine the mass of the cultivar that belongs according to the cultivar list to the class malting barley and express the mass thus determined as a percentage of the mass of the working sample.
  - (d) Such percentage represents the percentage of the cultivar that belongs according to the cultivar list to the class malting barley in the consignment.

#### ***Determination of moisture content***

14. The moisture content of consignment barley may be determined by any suitable method: Provided that the results thus obtained is 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 72 hour, 103°C oven dried method [AACC (American Association of Cereal Chemists) Method 44-15A].

#### ***Determination of Nitrogen content***

15. The percentage of Nitrogen (on a dry basis) of a consignment of barley may be determined according to any suitable method: Provided that --
  - (a) the determination shall be conducted on a sample which had been sifted using a Nitrogen sieve and from which screenings have been removed through the sieving process and un-threshed ears and foreign matter have been removed by hand; and
  - (b) the results thus obtained are in accordance ( $\pm 0,03$  per cent) with the results obtained by the European Brewery Convention EBC Method 3.3.2 (Dumas Combustion Method)

#### ***Determination of germination capacity***

16. The germination capacity of a consignment of barley shall be determined according to the European Brewery Convention EBC method 3.5.2 (hydrogen peroxide and peeling method, RM)



- (a) which determination shall be conducted on a sample which had been sifted using a standard barley sieve, and from which screenings have been removed through the sieving process, and un-threshed ears and foreign matter have been removed by hand.

***Determination of germination energy***

17. The germination energy of a consignment of barley shall be determined according to the European Brewery Convention EBC method 3.6.2 (BRM method)
- (a) which determination shall be conducted on a sample which had been sifted using a standard barley sieve and from which screenings have been removed through the sieving process and un-threshed ears and foreign matter have been removed by hand.

**PART VI**

**DETERMINATION OF PERCENTAGE DEVIATIONS**

***Determination of the percentage maize and /or stones***

18. The percentage maize and /or stones in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 500 g of rubbed and unscreened barley.
- (b) Remove all maize and /or stones by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage maize and /or stones in the consignment.

***Determination of the percentage plump barley, foreign matter (maize and /or stones excluded) and screenings***

19. The percentage plump barley, foreign matter (maize and /or stones excluded) and screenings in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of 100 g of rubbed and un-screened barley from which maize and /or stones, if present, has been removed by hand.
- (b) Place the sample on the standard barley sieve and screen the sample by moving the sieve 50 strokes to and fro, alternately away from and towards the operator of the sieve, in the same direction as the long axes of the slots of the sieve. Move the sieve, which rests on a table or other suitable smooth surface, 250 mm to 460 mm away from and towards the operator with each stroke. The prescribed 50 strokes must be completed within 50 to 60 seconds: Provided that the screening process may also be performed in some or other container or an automatic sieving apparatus.
- (c) Remove the foreign matter on the top sieve and in the slots of the top sieve. Determine the mass of the barley in and on the top sieve from which the foreign matter have been removed and express it as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage plump barley in the consignment.

- (e) Remove the foreign matter remaining on the bottom sieve and in the slots of the bottom sieve. Add the foreign matter obtained in (c) and determine the combined mass of the foreign matter and express the mass thus determined as a percentage of the mass of the working sample.
- (f) Add the percentage in regulation 18 (d) obtained to the percentage in (e) obtained. Such combined percentage represents the percentage foreign matter in the consignment.
- (g) Remove the wheat and wild oats from the total foreign matter in (e) obtained and determine the mass of the, wheat and wild oats separately. Express the mass of the wheat and wild oats separately as a percentage of the working sample.
- (h) Such percentages represent the percentage wheat and wild oats respectively in the consignment.
- (i) Remove the spear grass from the total foreign matter in (e) obtained and determine the amount of spear grass.
- (j) Such amount represents the amount of spear grass in the consignment.
- (k) Determine the mass of the material that has passed through both sieves and collected in the tray and express it as a percentage of the mass of the working sample.
- (l) Such percentage represents the percentage screenings in the consignment.

***Determination of the percentage mechanically damaged barley***

20. The percentage mechanically damaged barley in a consignment of barley shall be determined as follows:

- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
- (b) Remove all mechanically damaged kernels and husk-less barley by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage mechanically damaged barley in the consignment.

***Determination of the percentage badly discoloured and heat-damaged barley***

21. The percentage badly discoloured and heat-damaged barley in a consignment of barley shall be determined as follows:

- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
- (b) Remove all badly discoloured and heat-damaged kernels by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage badly discoloured and heat-damaged barley in the consignment.

***Determination of the percentage black-end barley***

22. The percentage black-end barley in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
  - (b) Remove all black-end kernels by hand and determine the mass thereof.
  - (c) Express the mass thus determined as a percentage of the mass of the working sample.
  - (d) Such percentage represents the percentage black-end barley in the consignment.

***Determination of the percentage un-threshed ears***

23. The percentage un-threshed in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 100 g of un-rubbed and un-screened barley.
  - (b) Remove all un-threshed ears by hand and determine the mass thereof.
  - (c) Express the mass thus determined as a percentage of the mass of the working sample.
  - (d) Such percentage represents the percentage un-threshed ears in the consignment.

***Determination of the percentage damaged barley***

24. The percentage damaged barley in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
  - (b) Remove all damaged barley by hand and determine the mass thereof.
  - (c) Express the mass thus determined as a percentage of the mass of the working sample.
  - (d) Such percentage represents the percentage damaged barley in the consignment.
  - (e) Remove the split barley, immature barley and insect damaged barley from the total damage barley in (b) obtained and determine the mass of the split barley, immature barley and insect damaged barley separately. Express the mass of the split barley, immature barley and insect damaged barley separately as a percentage of the mass of the working sample.
  - (f) Such percentages represent the percentage split barley, immature barley and insect damaged barley respectively in the consignment.

***Determination of the percentage weather damaged barley***

25. The percentage field weather damaged barley in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
  - (b) Remove all weather damaged barley by hand and determine the mass thereof.
  - (c) Express the mass thus determined as a percentage of the mass of the working sample.

- (d) Such percentage represents the percentage weather damaged barley in the consignment.

***Determination of the percentage ergot***

26. The percentage ergot in a consignment of barley shall be determined by one of the following two methods:

**26.1 Method 1**

- (a) Obtain a working sample of at least 1000 g of un-rubbed and un-screened barley.
- (b) Remove all ergot by hand and determine the mass thereof on a scale with an accuracy of 0.0001g.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage ergot in the consignment.

**26.2 Method 2** (these methods are only to be used if all ergot is from rye grass origin)

- (a) Obtain a working sample of 1000 g of un-rubbed and un-screened barley.
- (b) Remove all pieces of ergot by hand.
- (c) Arrange all the pieces of ergot in a straight line and determine the total length of all the pieces in mm.
- (d) Such length represents the amount of ergot in the consignment.

***Determination of the percentage pre-germinated barley***

27. The percentage pre-germinated barley in a consignment of barley shall be determined as by the following methods:

- (a) Obtain a working sample of at least 25 g of un-rubbed and un-screened barley.
- (b) Remove all pre-germinated barley by hand and determine the mass thereof.
- (c) Express the mass thus determined as a percentage of the mass of the working sample.
- (d) Such percentage represents the percentage pre-germinated barley in the consignment

***Determination of the amount of sprouted barley***

28. The amount of sprouted barley in a consignment of barley shall be determined as follows:

- (a) Obtain a working sample of 1000 g of un-rubbed and un-screened barley.
- (b) Remove all sprouted kernels by hand and determine the amount thereof.
- (c) Such amount represents the amount of sprouted barley in the consignment.

***Determination of the percentage black hulled barley***

29. The percentage black hulled barley in a consignment of barley shall be determined as follows:
- (a) Obtain a working sample of at least 100 g of un-rubbed and un-screened barley.
  - (b) Remove all black hulled barley by hand and determine the mass thereof.
  - (c) Express the mass thus determined as a percentage of the mass of the working sample.
  - (d) Such percentage represents the percentage black hulled barley in the consignment.

**PART VII**

***Offence and penalties***

30. 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.

## ANNEXURE/AANHANGSEL

TABLE 1/TABEL 1

STANDARDS FOR GRADES OF MALTING BARLEY  
/STANDAARDE VIR GRADE VAN MOUTGARS

Nature of deviation/ Aard van afwyking	Minimum and maximum percentage permissible deviation (m/m)/ Minimum en maksimum persentasie toelaatbare afwyking (m/m)
	Grade Malting Barley/ Graad Moutgars
1	2
(a) Purity of variety/Kultivarsuiwerheid [Reg. 13]	95 (min)
(b) Germinative capacity/Ontkiemingskapasiteit [Reg. 16]	98 (min)
(c) Germinative energy/Ontkiemingsenergie [Reg. 17]	95 (min)
(c) Plump barley/Vet gars > 2.50mm [Reg. 19]	70 (min)
(d) Screenings/Sifsels < 2.20mm [Reg. 19]	5 (max/maks)
(e) Total Nitrogen(dry basis)/Totale stikstof (droë basis) [Reg. 15]	Min. 1.50 Max./Maks 2.00
(f) Weather damaged barley/Weerbeskadigde gars [Reg. 25]	3 (max/maks)
(g) Ergot sclerotia [Reg. 26]	0.001 or/of 10mm /1000g (max/maks)
(h) Foreign matter of which specifically/Vreemde materiaal waarvan spesifiek Stones/Klippe Wheat/Koring Maize/Mielies Wild oats/Wilde hawer Spear grass/Predikantsluis [Reg. 18 & 19]	2 (max/maks)  0.5 (max/maks) 0.5 (max/maks) 0.4 (max/maks) 0.5 (max/maks) 30 seeds per 100g/ (max/maks) 30 sade per 100g (max/maks)
(i) Split barley/Gebarste gars Immature barley/Onryp gars Insect damaged barley/Insek beskadigde gars Total damaged barley/Totale beskadigde gars [Reg. 24]	1 (max/maks) 1 (max/maks) 1 (max/maks) 2 (max/maks)
(j) Pre-germinated barley/Voor-uitgeloopte gars [Reg. 27]	1 (max/maks)
(k) Sprouted barley/Uitgeloopte gars [Reg. 28]	2/1000g (max/maks)
(l) Black-end barley/Swartpunt gars [Reg. 22]	20 (max/maks)
(m) Mechanical damage/Meganiese skade [Reg. 20]	6 (max/maks)
(n) Badly discoloured and heat damaged barley/Erg verkleurde en hitte beskadigde gars [Reg. 21]	3 (max/maks)

Nature of deviation/ Aard van afwyking	Minimum and maximum percentage permissible deviation (m/m)/ Minimum en maksimum persentasie toelaatbare afwyking (m/m)
	Grade Malting Barley/ Graad Moutgars
1	2
(o) Un-threshed ears/Ongedorste are [Reg. 23]	2 (max/maks)
(p) Smut/Brand [def]	6 masses per 100g/ (max/maks) 6 massas per 100g (max/maks)
(q) Black-hulled barley/Swart bedekte gars [Reg. 29]	0.5 (max/maks)
(r) Six-row barley/Ses-ry gars [def]	2 (max/maks)
(s) Badly mould infected (rotten) barley/Erg skimmelbesmette gars	Nil/Nul