

DEPARTMENT OF AGRICULTURE FORESTRY AND FISHERIES

No. R.

2014

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

REGULATIONS REGARDING CONTROL OVER THE SALE OF POULTRY MEAT: AMENDMENT

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

SCHEDULE

Definition

1. In this Schedule "**the Regulations**" means the regulations published by Government Notice No. R. 946 of 27 March 1992, as amended by Government Notice No. R988 of 25 July 1997.

Amendment of regulation 1 of the Regulations

2. Regulation 1 of the Regulations is hereby amended by --

(a) the insertion, after the definition of "absorbed moisture", of the following definitions:

'**brine**' means a brine solution as defined in the regulations published under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act 54 of 1972);

'**brine based mixture**' means a brine solution to which only permitted phosphate salts and permitted food additives have been added and which is used for, amongst others, tenderizing, flavouring and preserving of poultry meat;";

(b) the substitution of the definition of "food additive" of the following definition:

"'**food additive**' means an enrichment substance, supplement or any other substance as permitted for in the regulations published under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972), which may be added to a foodstuff to effect its keeping quality, consistency, colour, taste, flavour, smell or other technical property (these substances include but is not limited to acids, bases, salts, preservatives, antioxidants, anti-caking agents, colourants, flavourings, emulsifiers, stabilisers and thickeners);";

(c) the insertion, after the definition of "food additive", of the following definitions:

"'**foodstuff**' means a foodstuff as defined by the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);

'**formulated solution**' means a brine solution, brine based mixture, marinade, phosphate solution or any other similar solution/mixture to which food additives and foodstuffs may have been added;

'**fresh**', where used with regard to poultry meat, means poultry meat in its raw, unfrozen state, including meat which is vacuum-wrapped or wrapped in a controlled atmosphere, which --

- (i) has not previously been frozen or undergone any thermal processing;
 - (ii) has not been subjected to any form of preservation process other than chilling; and
 - (iii) contains no added foodstuffs or food additives;”;
- (d) the insertion, after the definition of “frozen”, of the following definition:
- “**further processing**” means poultry meat which is subjected to any process(es) that alters the poultry meat in such a way that it is not recognizable as a carcass or portion anymore;”.
- (e) the insertion, after the definition of “intestines”, of the following definitions:
- “**m/m**’ means the percentage water and/or formulated solution or phosphate solution, as the case may be, calculated on a mass per mass basis of the carcass or portions after water absorption or treatment with a formulated solution;
- ‘**main panel**’ means that part of the label or container bearing the trademark, trade name or brand name in greatest prominence and any other part of the label or container bearing the trademark, trade name or brand name in equal prominence;
- ‘**marinade**’ means a savoury, acidic, brine based sauce with food additives in which poultry meat is soaked only to enrich its flavour and/or to tenderize it;”;
- (f) the insertion, after the definition of “packer”, of the following definition:
- “**permitted**’ means permitted under the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972);”
- (g) the substitution for the definition of “poultry meat” of the following definition:
- “**poultry meat**’ means the slaughtered and sometimes deboned carcasses of *Gallus domesticus* (fowls), *Meleagus gallopavo* (turkeys) and *Anas* (ducks and muscovies) as well as any portions of such carcasses which are usually sold for human consumption, whether as such or in chopped form and which is still recognizable as a carcass or portion and includes raw processed poultry meat;”;
- (h) the insertion, after the definition of “production lot”, of the following definitions:
- “**prohibited articles**’ means prohibited articles as defined in the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972):
- ‘**raw processed poultry meat**’ means poultry meat which has been treated with a formulated solution, has not undergone any thermal processing and is still recognizable as a poultry carcass or portion;
- “**spices**’ means natural spices, herbs and their natural extracts as permitted, which may either be rubbed on or added to raw poultry meat for the purpose of flavouring;”;
- (i) the insertion, after the definition of “trade mark”, of the following definition:

“**treatment**’ or **‘treated**’ means the process whereby a formulated solution is added to raw poultry meat at the factory by means of but not limited to injection (pumping), tumbling, massaging and marinating, which is --

- (a) retained in the poultry meat up till the point of sale and will lead to an increase in its moisture content; and
- (b) ,amongst others, intended to improve the eating quality (juiciness, flavour and tenderness) of the poultry meat:

Provided that water on its own and marinade shall not be injected;”.

Amendment of regulation 2 of the Regulations

3. Regulation 2 of the Regulations is hereby amended by --

- (a) the deletion of the word “and” at the end of paragraph (1)(d);
- (b) the insertion of the wording “; and” at the end of paragraph (1)(e);
- (c) the insertion of the following paragraph after paragraph (1)(e):
 - “(f) the poultry meat is free from any added plant protein, any other source of meat protein or any prohibited articles.”; and
- (d) the substitution for subregulation (2) of the following subregulation:
 - “(2) Poultry meat which is intended for further processing or for use in the manufacturing or preparation of another foodstuff which is not recognisable as a whole carcass or portion, is excluded from the restrictions referred to in subregulation (1).”.

Amendment of regulation 4 of the Regulations

4. Regulation 4 of the Regulations is hereby amended by --

- (a) the substitution of the heading “**Standards for grades**” with the wording “**Standards for carcasses**”;
- (b) the substitution for subregulation (2) of the following subregulation:
 - “(2) A poultry carcass than has been graded as Grade A or Grade B shall, subject to the provisions of subregulations (1) and (8) of regulation 14, contain not more than 7% (m/m) of absorbed moisture.”
- (c) the substitution for paragraph (3)(a) of the following paragraph:
 - “(a) be further processed; or”; and
- (d) the substitution for subregulation (9) of the following subregulation:
 - “(9) (a) In the case of a carcass which is treated with a formulated solution, the mass increase of the carcass as a result of such treatment shall not be more than 10% (m/m): Provided that --

- (i) ,subject to the provision of subregulation (2), the combined percentage of the absorbed moisture and formulated solution shall not exceed 10% (m/m); and
 - (ii) the concentration of the phosphate in case where a phosphate solution is used shall not exceed 0,5% (m/m).
- (b) Records of absorbed moisture after water chilling and treatment with a formulated solution shall be kept for a period of at least one year.”.

Amendment of regulation 5 of the Regulations

5. Regulation 5 of the Regulations is hereby amended by insertion of the following subregulation after subregulation (3):

- “(4) (a) Poultry meat may contain food additives in the amounts permissible in terms of the Foodstuffs, Cosmetics and Disinfectants Act, 1972 (Act No. 54 of 1972).
- (b) **In the case of individual portions which is treated with a formulated solution, the mass increase of the individual portions as a result of such treatment shall not be more than 15% (m/m):** Provided that –
- (i) , subject to the provision of regulation 4(2), the combined percentage of the absorbed moisture and formulated solution shall not exceed 15% (m/m); and
 - (ii) the concentration of the phosphate in case where a phosphate solution is used shall not exceed 0,5% (m/m).
- (c) The provisions in paragraphs (a) and (b) above shall not be permitted on poultry meat which has already been subjected to a treatment referred to in regulation 4(9)(a).
- (d) Records of absorbed moisture after water chilling and treatment with a formulated solution shall be kept for a period of at least one year.”.

Amendment of regulation 8 of the Regulations

6. Regulation 8 of the Regulations is hereby amended by --

- (a) the substitution for paragraph (1)(k) of the following paragraph:
- “(k) (i) In the case of raw processed poultry meat, the applicable class designation or alternative class designation shall either be preceded or followed by the generic name of the added formulated solution, or by any other wording reflecting a true description of the added formulated solution. [E.g. ‘chicken with brine’, ‘sweet ‘n spicy marinated chicken drumsticks’, etc.].
- (ii) In the case of spiced poultry meat, the applicable class designation or alternative class designation shall either be preceded or followed by the generic name(s) of the added spice(s), or by any other wording reflecting a true description of the added spice(s). [E.g. ‘lemon and herb chicken’, ‘chicken breasts with pepper & rosemary’, etc.]”.

Amendment of regulation 14 of the Regulations

7. Regulation 14 of the Regulations is hereby amended by the substitution for regulation 14 of the following regulation:

“Methods and procedures regarding absorbed moisture and carcasses and portions treated with a formulated solution

14. (1) The amount of absorbed moisture of an inspection lot of water chilled carcasses as well as carcasses and portions treated with a formulated solution, shall be determined in accordance with Method A in the Annexure.

(2) If carcasses are chilled with water as well as carcasses and portions treated with a formulated solution, a test for absorbed moisture shall be carried out within one hour after commencement of a work shift in a poultry abattoir and thereafter be repeated at least once every eight hours.

(3) The average absorbed moisture of an inspection lot shall not exceed the limits referred to in subregulations 4(2), 4(9)(a) and 5(4)(b).

(4) In the case of such a test in a -

- (a) Rural poultry abattoir, only 1 out of the 5 carcasses concerned;
- (b) Low Throughput poultry abattoir, only 2 out of the 10 carcasses concerned; and
- (c) High Throughput poultry abattoir, only 3 out of the 20 carcasses concerned, may exceed the limits referred to in subregulations 4(2) and 4(9)(a).

(5) If more than the permissible number of carcasses contains in excess of the limits referred to in subregulations 4(2) and 4(9)(a), the necessary adjustments shall be made immediately and a further test shall be carried out forthwith.

(6) If the limits referred to in subregulation (4) are exceeded, all carcasses in the "water spin chiller" shall only be cut up into portions until such time as a further test produces results that are within those limits.

(7) The results of all tests shall be recorded and kept for at least one year.

(8) The amount of absorbed moisture of an inspection lot of frozen or deep frozen poultry carcasses shall be determined in accordance with Method B in the Annexure.

(9) The amount of absorbed moisture of an inspection lot of frozen or deep frozen poultry cuts may also be determined in accordance with Method C in the Annexure.

Amendment of the Annexure to the Regulations

8. The Annexure to the Regulations is hereby amended by the substitution for the Annexure of the following Annexure:

"ANNEXURE

1. METHOD A**METHOD FOR THE DETERMINATION OF ABSORBED MOISTURE IN WATER CHILLED POULTRY CARCASSES AND POULTRY CARCASSES AND PORTIONS TREATED WITH FORMULATED SOLUTION:**

[Reg. 14(1)]

- (a) (i) In the case of water chilling of carcasses: Identify and determine the mass to the nearest 0,1 gram of each of the prescribed number of eviscerated carcasses [Reg. 14(4)] which have been taken from the production time immediately prior to the water chilling process. This represents the initial mass (I).
 - (ii) In the case of carcasses treated with formulated solution: Identify and determine the mass to the nearest 0,1 gram of each of the prescribed number of eviscerated carcasses [Reg. 14(4)] which have been taken from the production time immediately prior to the treatment process. This represents the initial mass (I).
 - (iii) In the case of portions treated with formulated solution: Identify and determine the mass to the nearest 0,1 gram of portions representing the number of eviscerated carcasses [Reg. 14(4)] which have been taken from the production time immediately prior to the treatment process. For practical reasons the portions may be grouped together depending on the scale capacity. This represents the initial mass (I)
- (b) Replace the identified carcasses or group of portions on the production line at the same point.
- (c) (i) In the case of water chilling of carcasses: After the carcasses have been chilled and drained, at the furthest point away from the chiller just before the next processing step, whether it is treatment or packaging, etc., the mass of each of the prescribed number of recovered carcasses is again determined to the nearest 0,1 gram. This represents the final mass (F).
 - (ii) In the case of carcasses treated with formulated solution: After the carcasses have been treated, at the furthest point away from the treatment machine just before packaging and freezing, the mass of each of the prescribed number of recovered carcasses is again determined to the nearest 0,1 gram. This represents the final mass (F).
 - (iii) In the case of portions treated with formulated solution: After the portions have been treated, at the furthest point away from the treatment machine just before freezing and packaging, the mass of each of the group or groups of portions is again determined to the nearest 0,1 gram. This represents the final mass (F).
- (d) Carcasses with obvious water pockets may be ignored: Provided that the inspection lot requirements shall be adhered to.

- (e) Determine the percentage absorbed moisture of each carcass or portion groups by means of the following formula:

$$\frac{(F - I) \times 100}{F} = \% \text{ absorbed moisture}$$

- (f) Determine the average percentage absorbed moisture of the inspection lot.

2. METHOD B

METHOD FOR THE DETERMINATION OF ABSORBED MOISTURE IN FROZEN AND DEEP FROZEN POULTRY CARCASSES:

[Reg. 14(8)]

- (a) *Object and scope*

This method shall be used to determine the amount of moisture lost from frozen and deep frozen poultry carcasses during thawing. If this drip loss, expressed as a percentage by weight of the carcass (including all the edible offal contained in the pack), exceeds the limit value laid down in paragraph (g), it is an indication that excess moisture has been absorbed during processing.

The technique shall not be applicable to poultry which has been treated with polyphosphate or similar substances in order to increase moisture retention.

- (b) *Definition*

Drip loss determined by this method shall be expressed as a percentage of the total mass of the frozen or deep frozen carcass, including edible offal.

- (c) *Principle*

The frozen or deep frozen carcass, including edible offal present, shall be allowed to thaw under controlled conditions which allow the mass loss resulting from water loss to be calculated.

- (d) *Apparatus*

- (i) A scale with a weighing capacity of up to 5 kg and with an accuracy of 0.1 g.
- (ii) Plastic bags large enough to hold a carcass and with a proper means of fastening.
- (iii) A thermostatically controlled waterbath that --
 - (aa) can contain a volume of water not less than eight times the volume of poultry to be checked; and
 - (bb) can maintain water at a temperature at 42°C.
- (iv) Filter paper or other absorbent paper towels.

- (e) *Method*

- (i) Seven carcasses shall be removed at random from the quantity of poultry to be tested. The carcasses shall be kept at a temperature not higher than -12°C, until each carcass can be tested as described in paragraph (e)(ii) to (xii).
- (ii) The outside of the pack shall be wiped to remove superficial water and ice. The mass of the pack and the contents thereof shall be determined to the nearest gram. This mass shall be expressed as M_0 .
- (iii) The carcass, as well as any edible offal sold with it, shall be removed from the outer wrap. The wrap shall be dried and the mass shall be determined to the nearest gram. This mass shall be expressed as M_1 .
- (iv) The mass of the frozen carcass plus offal shall be calculated by subtracting M_1 from M_0 .
- (v) The carcass, including the offal, shall be placed in a strong waterproof plastic bag with the abdominal cavity facing towards the closed end of the bag. The bag shall be big enough to ensure that it can be fastened properly, but shall not be unduly large. When the carcass and the offal are placed in the bag, as much air as possible shall be removed from the bag by compression and must be fastened properly.
- (vi) The bag containing the carcass and edible offal shall be immersed in a bath of water at 42°C up to the closed end of the bag and shall be positioned so that the water in the bath cannot flow into the bag. It may be held in position by means of weights if necessary.
- (vii) The bag shall be left in the bath of water until the thermal centre of the poultry carcass reaches $\pm 4^\circ\text{C}$. As an indication in the case of poultry at -12°C, the period of immersion during which the temperature of the water shall be maintained at 42°C, would be as follows:

Mass of carcass and offal	Time in minutes
Less than 800 g	65
801 - 900 g	72
901 - 1 000 g	78
1 001 - 1 100 g	85
1 101 - 1 200 g	91
1 201 - 1 300 g	98
1 301 - 1 400 g	105

- (viii) The period of immersion referred to in subparagraph (vii) shall be increased by seven minutes for each additional 100 g or part thereof.
- (ix) The bag and the contents thereof shall be removed from the bath of water. The bottom of the bag shall be pierced in order to allow water inside the bag to drain. The bag and the contents thereof shall be allowed to drip for one hour at an ambient temperature of between 18°C and 25°C.

- (x) The thawed carcass shall be removed from the bag and the pack that contains offal (if present) shall be removed from the abdominal cavity. The inside and outside of the carcass shall be dried with filter paper or paper towels. The pack that contains the offal shall be pierced and, once any liquid has drained away, the bag and thawed offal shall be dried as carefully as possible.
 - (xi) The total mass of the thawed carcass, offal and pack s hall be determined to the nearest gram and shall be expressed as M_2 .
 - (xii) The mass of the pack which contained the offal shall be determined to the nearest gram and shall be expressed as M_3 .
- (f) *Calculation of result*

The amount of water lost through thawing as a percentage by weight of the frozen or deep frozen carcass (including offal) shall be established by --

$$\frac{M_0 - M_1 - M_2}{M_0 - M_1 - M_2} \times 100$$

- (g) *Evaluation of result*

If the average moisture loss on thawing for the seven carcasses in the sample exceeds 7.0% of the average mass of the frozen or deep frozen poultry carcasses, it is an indication that the amount of moisture absorbed during processing exceeds the limit.

3. **METHOD C**

METHOD FOR THE DETERMINATION OF MOISTURE UPTAKE IN FROZEN AND DEEP FROZEN POULTRY PORTIONS:

[Reg. 14(9)]

- (a) *Object and scope*

This method is used to determine the total added water content of certain poultry cuts (breasts, thighs and drumsticks). The method shall involve determination of the water and protein contents of samples from the homogenised poultry cuts. The water-protein ratio is then calculated as in paragraph (f)(i) and (ii) and the value entered in the formulae indicated in paragraph (f)(iii) for the specific portions, to determine whether or not excess water has been taken up during processing (water chilling and other methods of water uptake such as injection, marinating, etc.).

The technique shall be applicable to poultry which has been subjected to processes that may have lead to water uptake during processing such as water used for chilling the carcasses and/or treatment of the carcasses and cuts with any solution that contains water, such as but not limited to injection, tumbling, marinating, etc.

- (b) *Definition*

Moisture content shall be expressed as a percentage of the total mass of the frozen or deep frozen portions (breasts, thighs or drumsticks).

The cuts involved are those referred to in Table 1, referred to as breasts, thighs and drumsticks.

(c) *Principle*

Water and protein contents are determined in accordance with the latest AOAC or other internationally accepted methods of analysis, the water-protein ratio is calculated and the value entered in linear regression formulae which shall give the added water content of the poultry cuts,

(d) *Apparatus*

- (i) A scale with a weighing capacity of up to 5 kg and with an accuracy of 0.1 g.
- (ii) Electric saw for cutting cuts into pieces of appropriate size for the mincing machine.
- (iii) Heavy-duty mincing machine with sufficient power to mince and blend frozen or quick-frozen meat and bones to produce a homogeneous mixture corresponding to that obtained from a mincing machine fitted with a 4-mm hole disc.
- (iv) Apparatus as specified in the latest AOAC or internationally accepted method for the determination of water content.
- (v) Apparatus as specified in the latest AOAC or internationally accepted method for the determination of protein content.

(e) *Method and sampling*

- (i) Two breasts, two thighs or 4 drumsticks are taken at random from the quantity of poultry cuts to be checked and kept frozen. In the case of frozen or quick-frozen bulk products (cuts not individually packed) the large packs from which samples are to be taken may be kept at 0°C until individual cuts can be removed.
The analysis may concern the cuts separately or a composite sample of the cuts.
- (ii) The preparation must commence immediately after the removal of the cuts from the freezer.
- (iii) The cuts are removed from any wrapping material cut into smaller pieces and the weight of the poultry cut is determined to the nearest gram. In the case of a composite sample analysis the total weight of the cuts cut into smaller pieces is determined
- (iv) The whole cuts are minced in a mincing machine as specified in paragraph (d)(iii) and, if necessary, mixed with the use of a blender as well to obtain a homogeneous material from which a sample representative of each cut may then be taken. In the case of a composite sample analysis, all cuts are minced in a mincing machine as specified in paragraph (d)(iii) and, if

necessary, mixed with the use of a blender as well to obtain a homogeneous material from which two samples representative of the cuts may then be taken.

- (v) A sample of the homogenised material is taken and used immediately to determine the water content in accordance to the latest AOAC or internationally accepted method.
- (vi) A sample of the homogenised material is taken and used immediately to determine the nitrogen content in accordance to the latest AOAC or internationally accepted method. This nitrogen content is converted to crude protein content by multiplying it by the factor 6.25.

(f) *Calculation of result*

- (i) Ensure that the weight of water and weight of protein are expressed in grams for the same amount of sample of homogenised material.
- (ii) The water-protein ratio is determined by taking the weight of water and dividing it by the weight of protein.

(g) *Evaluation of result*

Highest permissible W/P ratios

Cut	Highest permissible ratio
Breast	4.36
Thigh	4.82
Drumstick	4.66

COMMENCEMENT

9. These amendments shall come into operation 6 months after the date of publication.