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(Acts whose publication is obligatory)

**COUNCIL REGULATION (EEC) No 2967/76
of 23 November 1976**

laying down common standards for the water content of frozen and deep-frozen chickens, hens and cocks

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community,

Having regard to Council Regulation (EEC) No 2777/75 of 1 November 1975 on the common organization of the market in poultrymeat ⁽¹⁾, as amended by Regulation (EEC) No 369/76 ⁽²⁾, and in particular Article 2 (2) thereof,

Having regard to the proposal from the Commission,

Whereas the marketing standards provided for in Article 2 (2) of Regulation (EEC) No 2777/75 must be aimed in particular at improving the quality and, hence, promoting the sale of products; whereas, pending the adoption of more comprehensive Community rules, the maximum water content of frozen and deep-frozen whole chickens, hens and cocks should be defined immediately, since most of the marketed products in which water content is a significant factor would thus be covered;

Whereas the absorption of water at the production establishment should be checked; whereas a rapid detection method should be established for checking purposes, together with reliable methods for the precise determination of the water content added during poultry processing; whereas no distinction should be made between physiological liquid and extraneous water from poultry processing since such a distinction would present practical difficulties;

Whereas it is for each Member State to designate the authorities responsible for checking that the provisions of this Regulation are complied with;

Whereas provision should be made for the possibility of adopting pertinent common rules with a particular

view to ensuring that marketing standards are uniformly applied;

Whereas the provisions of this Regulation do not affect existing and future provisions in the veterinary and foodstuffs sector aimed at protecting human and animal health;

Whereas transitional arrangements should be prescribed before the application of this Regulation in full, to take into account poultry at present in stock,

HAS ADOPTED THIS REGULATION:

Article 1

1. Frozen and deep-frozen chickens, hens and cocks may be marketed by way of business or trade within the Community only if the water content absorbed during preparation does not exceed the technically unavoidable minimum determined by the methods of analysis described in Annexes III and IV.

Transitionally, this Regulation shall not cover frozen or deep-frozen chickens, hens and cocks treated with polyphosphates, provided that individual and bulk packaging bear a clear and legible description of the treatment applied. Before 1 July 1978, the Council, acting on a proposal from the Commission, shall decide whether to extend or to abolish this exemption. The provisions of this subparagraph shall not affect the national laws, regulations and administrative provisions prohibiting the use of such substances in poultrymeat or in foodstuffs in general.

The description 'dry chilled poultry' may be shown on the individual and bulk packaging of frozen or deep-frozen poultry which does not absorb any extraneous water during chilling. This reference may be supplemented by the words 'without addition of water either

⁽¹⁾ OJ No L 282, 1. 11. 1975, p. 77.

⁽²⁾ OJ No L 45, 21. 2. 1976, p. 3.

during or after chilling'. The conformity check shall be conducted in accordance with the test methods set out in Annexes III and IV.

2. The provisions of this Regulation shall not affect any existing or future provisions concerning veterinary and health matters and foodstuffs laid down to ensure the hygiene and health standards of the products or to protect animal or public health.

3. For the purposes of this Regulation :

'Poultry' means : chickens, cocks and hens ;

'Chickens' means : birds which have not reached sexual maturity at the time of slaughter and in which the tip of the sternum is not ossified ;

'Cocks and hens' means : birds which are slaughtered after reaching sexual maturity and in which the tip of the sternum is ossified ;

'Marketing' means : every kind of marketing, including in particular possession with a view to selling, putting up for sale, sale, delivery and importation ;

'Dry chilling' means : chilling during which no water has been added.

Article 2

1. In order to comply with the provisions of this Regulation, slaughterhouses shall, during processing, carry out regular checks, in accordance with the method referred to in Annex I, on the water absorbed by the poultry and shall record the results of these checks in a register.

2. Where it is found that the amount of water absorbed is greater than the total water content permitted under the terms of this Regulation, account being taken of the water absorbed by the poultry carcasses during the stages of processing which are not subject to checking, and where, in any case, the amount of water absorbed is greater than the levels referred to in Annex I (9), the necessary technical adjustments shall be made immediately by the slaughterhouse to the process.

3. The checks on the absorption of water during processing shall be carried out on the responsibility of the authorities designated to this end by each Member State.

The responsible authorities may, in specific cases :

— apply the provisions of Annex I (1) and (9) more stringently in respect of a given slaughterhouse, where this proves necessary to ensure compliance

with the total water content permitted under this Regulation,

— relax the provisions of Annex I (1) in respect of a given slaughterhouse, where the latter can, by other appropriate measures, ensure compliance with the maximum water content permitted under this Regulation.

Article 3

1. Checks on the water content referred to in Article 1 may be conducted at every marketing stage.

The checks may cover only chickens or cocks and hens from the same slaughterhouse.

2. Checks on the water content may be conducted by sampling.

The Member States shall adopt practical measures for these checks, ensuring that :

— the conditions under which checks are conducted are such that it shall be possible to safeguard the condition of the frozen and deep-frozen poultry from which the sample has been taken,

— they do not result in unjustified obstacles being placed in the way of the marketing of the poultry concerned.

Poultry checked during transport may proceed normally to its destination once the appropriate sample has been taken, without prejudice to the measures adopted in accordance with the procedure laid down in Article 7.

Article 4

1. The water content may be checked initially in accordance with the rapid detection method described in Annex II.

Where there are grounds for assuming that, during processing, substances having the effect of increasing water retention in the poultry have been used, the water content shall be determined directly in accordance with one of the methods of analysis described in Annexes III and IV, the choice being made by the Member State.

If the result of the rapid detection method does not exceed the level fixed in Annex II (7), the poultry concerned shall be deemed to comply with this Regulation.

2. If the result of the checks using the rapid detection method is in excess of the level fixed in Annex II (7), or if this checking method is not used, a chemical analysis shall be carried out using one of the methods described in Annexes III and IV, the choice being made by the Member State.

If the result of the checks using one of the methods of analysis described in Annexes III and IV is in excess of the admissible limits, the poultry concerned shall be deemed not to comply with this Regulation. In that event, however, the holder of the poultry concerned may request that a counter analysis be carried out using the same method.

Article 5

Where, if necessary after counter-analysis, the poultry is deemed not to comply with this Regulation, the responsible authority shall take the appropriate measures, on the understanding that the poultry concerned may not be marketed as such or without an appropriate description on the individual and bulk packaging.

If the poultry which does not comply with the Regulation originated in another Member State, the Member State in which the checks were conducted shall immediately inform thereof the competent authority in the Member State of origin.

Article 6

Compliance with the provisions of this Regulation shall be verified by authorities designated by each Member State.

Each Member State shall forward a list of these authorities to the other Member States and to the Commission not later than one month before this Regulation enters into force. Any changes to this list shall be notified to the other Member States and to the Commission.

Article 7

The following shall be adopted in accordance with the procedure laid down in Article 17 of Regulation (EEC) No 2777/75:

- (a) technical adjustments to the Annexes to take account of progress made in methods of detection and analysis;
- (b) implementing provisions for this Regulation.

Article 8

Before 1 July 1977, the Commission shall report to the Council on the result of its research into the correlation between the methods described in Annexes III and IV. The formulae in Annex III may be adjusted by the Council, on a proposal from the Commission, in the light of this result.

The method described in Annex IV is based on the assumption that poultry may contain no more than 6 % of extraneous water.

On the basis of the statistical data and technical documentation supplied by the Member States and collected during the first six months in which this Regulation is applied in full, the Commission shall submit to the Council before 1 July 1978 a report on its implementation, with a view to making a reduction equivalent to at least one percentage point during each of the following two years.

Article 9

Member States and the Commission shall hold regular exchanges of views on the application of this Regulation, in particular under the procedure provided for in Article 18 of Regulation (EEC) No 2777/75.

Article 10

This Regulation shall apply from 1 July 1977, with regard to the slaughterhouse checks provided for in Article 2.

The other provisions shall apply from 1 December 1977.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 23 November 1976.

For the Council

The President

A. P. L. M. M. van der STEE

*ANNEX I***CHECK ON ABSORPTION OF WATER IN THE PRODUCTION ESTABLISHMENT**

1. At least once each working period of four hours :
Select at random 25 carcasses from the evisceration line immediately after evisceration and the first successive washing and before the washing preceding chilling.
2. If necessary, remove the neck by cutting, leaving the neck skin attached to the carcass.
3. Identify each carcass individually. Weigh each carcass and record its weight to the nearest gramme.
4. Re-hang the test carcasses on the evisceration line to continue through the normal processes of washing, chilling, dripping, etc.
5. Remove identified carcasses at the end of the drip line without allowing them any longer time to drip than that allowed normally for poultry from the lot from which the sample was taken.
6. The sample shall consist of the first 20 carcasses recovered. They shall be re-weighed. Their weight to the nearest gramme shall be recorded against the weight recorded on first weighing. The test shall be declared void if less than 20 identified carcasses are recovered.
7. Remove identification from sample carcasses and allow the carcasses to proceed through normal packing operations.
8. Determine percentage moisture absorption by subtracting the total weight of the 20 test carcasses before washing from the total weight of these same carcasses after washing, chilling and dripping, dividing the difference by the initial weight and multiplying by 100.
9. The result shall not exceed 5 % of the initial weight of the sample or any other figure allowing compliance with the total permitted extraneous water content.

*ANNEX II***RAPID DETECTION METHOD****1. Object and scope**

This method shall be used to determine the amount of water lost from frozen or deep-frozen chickens, hens and cocks during thawing. If this drip loss, expressed as a percentage by weight of the carcase (including all the edible offal contained in the pack) exceeds the limit value laid down in paragraph 7, it is likely that excess water has been absorbed during processing.

The technique shall not be applicable to poultry which has been treated with polyphosphates or similar substances, the effect of which is to increase water retention. Poultry suspected of having been treated with such substances shall be subjected immediately to the method of analysis described in Annex III or IV.

2. Definition

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

3. Principle

The frozen or deep-frozen carcase, including edible offal present, shall be allowed to thaw under controlled conditions which allow the weight of water lost to be calculated.

4. Apparatus

- 4.1. Scales capable of weighing up to 5 kg with an accuracy better than ± 1 g.
- 4.2. Plastic bags large enough to hold the carcase and having a secure means of fastening.
- 4.3. Thermostatically controlled water bath capable of both containing a volume of water not less than eight times that of the poultry to be checked and of maintaining the water at a temperature of 42 °C.
- 4.4. Filter paper or other absorbent paper towels.

5. Technique

- 5.1. Twenty carcases shall be removed at random from the quantity of poultry to be checked. Until each can be tested as described in 5.2 to 5.11, they shall be kept at a temperature no higher than -12 °C.
- 5.2. The outside of the pack shall be wiped to remove superficial ice and water. The pack and its contents shall be weighed to the nearest gramme; this weight shall be M_0 .
- 5.3. The carcase, together with any edible offal sold with it, shall be removed from the outer wrap, which shall be dried and weighed to the nearest gramme; this weight shall be M_1 .
- 5.4. The weight of frozen carcase plus offal shall be calculated by subtracting M_1 from M_0 .
- 5.5. The carcase, including the offal, shall be placed in a strong waterproof plastic bag with the abdominal cavity facing towards the bottom, closed, end of the bag. The bag shall be of sufficient size to ensure that it can be fastened securely but shall not be unduly large. When the carcase and offal are in the bag, as much air as possible shall be removed by compression and the bag then fastened securely.

- 5.6. The bag containing the carcase and edible offal shall be immersed in a bath of water at $42^{\circ}\text{C} \pm 2^{\circ}\text{C}$ up to the fastening and shall be so positioned that the water in the bath cannot enter it. It shall be held there, by weighting if necessary.
- 5.7. The bag shall be left in the bath of water until the thermal centre of the poultry reaches $+4^{\circ}\text{C}$. As an indication, in the case of poultry at -12°C , the period of immersion during which the water temperature shall be maintained at $42^{\circ}\text{C} \pm 2^{\circ}\text{C}$ would be as follows:

Weight of carcase + 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

with, thereafter, an increase of seven minutes for each additional 100 g or part thereof.

- 5.8. The bag and its contents shall be removed from the bath of water; the bottom of the bag shall be pierced to allow any water produced on thawing to drain. The bag and its contents shall be allowed to drip for one hour at an ambient temperature of between $+18^{\circ}\text{C}$ and $+25^{\circ}\text{C}$.
- 5.9. The thawed carcase shall be removed from the bag and the pack containing offal (if present) shall be removed from the abdominal cavity. The carcase shall be dried inside and out with filter paper or paper towels. The bag containing the offal shall be pierced and, once any water has drained away, the bag and thawed offal shall also be dried as carefully as possible.
- 5.10. The total weight of thawed carcase, offal and pack shall be determined to the nearest gramme and expressed as M_2 .
- 5.11. The weight of the pack which contained the offal shall be determined to the nearest gramme and expressed as M_3 .

6. Calculation of result

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

$$\frac{M_0 - M_1 - M_2}{M_0 - M_1 - M_3} \times 100$$

7. Evaluation of result

If the average water loss on thawing for the 20 carcasses in the sample exceeds 5.2% of the average weight of the frozen or deep-frozen poultry, it is highly probable that the amount of water absorbed during processing exceeds the limit figure. In this case, an analysis shall be conducted in accordance with the method described in Annex III or Annex IV.

*ANNEX III***DETERMINATION OF THE TOTAL WATER CONTENT OF CHICKENS, HENS AND COCKS****1. Object and scope**

This method shall be used to determine the total extraneous water content of frozen and deep-frozen chickens, hens and cocks. The method shall involve determination of the water and protein contents of samples from the homogenized poultry carcass. The total water content as determined shall be compared with the limit value given by the formulae indicated in paragraph 6 to determine whether or not excess water has been taken up during processing. This method shall also be applicable to poultry which has been treated with polyphosphates or other substances the effect of which is to increase water retention. If the analyst suspects the presence of any substance which may interfere with the assessment, it shall be for him or her to take the necessary appropriate precautions.

2. Definitions

Water and crude protein contents shall be expressed in grammes.

3. Principle

Water and protein contents shall be determined in accordance with recognized ISO methods or other methods of analysis approved by the Council.

4. Apparatus and reagents

- 4.1. Scales for weighing the carcasses and wrappings, capable of weighing with an accuracy better than ± 1 g.
- 4.2. Meat axe or saw for cutting carcasses into pieces of appropriate size for the mincer.
- 4.3. Heavy-duty mincing machine and blender capable of homogenizing complete frozen or deep-frozen poultry pieces.

Note: No special mincer shall be recommended. It should have sufficient power to mince frozen or deep-frozen meat and bones and should be fitted with a 4 mm-hole disc.

- 4.4. Apparatus as specified in ISO 1442, for the determination of water content.
- 4.5. Apparatus as specified in ISO R 937, for the determination of protein content.

5. Procedure

- 5.1. Seven carcasses shall be taken at random from the quantity of poultry to be checked and kept at a temperature no higher than -12 °C until each carcass is analyzed in accordance with the method described in 5.2 to 5.6.
- 5.2. The carcass shall be removed from the freezer and preparation carried out within the hour.
- 5.3. The carcass shall be removed from any wrapping material. Any edible offal included with the carcass and any wrapping material around it shall be removed. After cutting up of the carcass into smaller pieces, the total weight of the carcass and offal, excluding any wrapping, shall be determined to the nearest gramme to give 'P₁'.
- 5.4. The whole carcass and all of the edible offal which is free of any wrapping material but includes ice from the carcass shall be minced twice through a 4 mm-hole disc (and, if necessary, with the use of a household blender as well) to obtain a homogeneous sample representative of the original carcass and offal.

- 5.5. A sample of the homogenized material shall be taken and used immediately to determine the water content in accordance with ISO 1442, to give the water content 'a %'.
- 5.6. A sample of the homogenized material shall also be taken and used immediately to determine the nitrogen content in accordance with ISO R 937. This nitrogen content shall be converted to crude protein content 'b %' by multiplying it by the factor 6.25.

6. Calculation of results

- 6.1. The weight of water in the carcass shall be given by $aP_1/100$ and the weight of protein by $bP_1/100$.
- 6.2. The sums of the weights of water and of the weights of protein in the seven analyzed carcasses shall be determined. The average weight of water and protein shall be calculated by dividing each total by seven.
- 6.3. In the case of chickens, the water content in grammes as determined by this method shall be given by $3.84 bP_1/100 + 59$, the highest permissible limit.
- 6.4. In the case of hens or cocks, the water content in grammes as determined by this method shall be given by $3.78 bP_1/100 + 33$, the highest permissible limit.
- 6.5. If the average water content of the seven carcasses as determined exceeds the value given in 6.3 (chickens) or 6.4 (hens and cocks), the carcasses shall be assumed to contain in excess of the technically permissible extraneous water minimum.
- 6.6. If the analysis on seven carcasses gives a lower result using this method of analysis, the quantity of poultry subjected to the check shall be considered up to standard.
- 6.7. The analysis results in the case of cocks, hens and chickens bearing the description 'dry chilled poultry' may not exceed the following limits:
- Chickens : $3.38 bP_1/100 + 55.1$,
Cocks and hens : $3.34 bP_1/100 + 22.9$.
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ANNEX IV

DETERMINATION OF THE TOTAL WATER CONTENT OF CHICKENS, HENS AND COCKS

1. Object and scope

This method shall be used to determine the total extraneous water content of frozen and deep-frozen chickens, hens and cocks.

The method shall also be applicable to poultry which has been treated with polyphosphates or other substances the effect of which is to increase water retention.

2. Definitions

Meat: the poultry carcase without bones, cartilage or offal.

Offal: the viscera removed from the carcase and the neck without skin.

3. Principle

The total water content, determined on the basis of the water loss during thawing and of the water content of the thawed carcase without bones, cartilage or offal, shall be compared with the physiological water content, which depends in a constant proportion on the dry fat-free mass of the meat. That part of the total water content in excess of the physiological water content shall represent the extraneous water content, expressed as a percentage by weight of the unthawed carcase without wrapping or offal.

4. Apparatus and reagents

4.1. Scales for weighing the carcasses and wrappings, capable of weighing with an accuracy better than ± 1 g.

4.2. Knife for cutting into pieces of appropriate size for the mincer.

4.3. Heavy-duty mincer with 3 mm holes capable of homogenizing complete poultry pieces.

4.4. Apparatus as specified in ISO 1442 for the determination of water content.

4.5. Apparatus as specified in ISO 1444 for the determination of fat content.

5. Procedure

5.1. Seven carcasses shall be taken at random from the quantity of poultry to be checked and the water loss shall be determined by means of the apparatus and procedure specified in Annex II (4) and (5).

Where the check by this method is the second check performed, i.e. where it is carried out after that described in Annex II, the sample required may be taken from that already used for the first check, provided that the seven carcasses in question were selected at random for that purpose before the first check.

5.2. The weight of the offal contained in the carcase shall be determined, after deduction of the weight of the wrapping containing it, and calculated in accordance with paragraph 5.11 of Annex II, to give M_4 .

5.3. The meat shall be carefully removed from the thawed carcase.

5.4. The weight of the meat and the weight of the bones and cartilage respectively shall be determined to the nearest gramme, to give M_5 (for meat) and M_6 (for bones and cartilage). The difference $(M_2 - M_3 - M_4) - (M_5 + M_6)$ shall give the loss during preparation = M_7 .

- 5.5. The meat shall be frozen in a polythene bag; after freezing, the polythene bag shall be removed and the meat cut into discs, approximately 3 mm thick, which shall then be minced three times in the mincer. If necessary, blending shall be continued by hand in order to obtain a homogeneous mixture.
- 5.6. Samples shall be taken from this homogeneous mixture and the water and fat contents determined in accordance with ISO 1442 and ISO 1444. The water and fat contents of the samples shall be expressed as a percentage.
- 5.7. From the percentage water and fat contents, the absolute water and fat contents of the meat shall be calculated, to give M_8 and M_9 respectively.

6. Calculation of results

- 6.1. The total water content shall be determined using the following formula:

$$(M_0 - M_1 - M_2) + M_7 + M_8 = M_{10}.$$

- 6.2. The physiological water content shall be determined using the following formula:

- (a) in the case of chickens:

— with edible offal: $[(M_5 + M_4) - M_8 - M_9] \times 3.48 + 39.9 = M_{11}$

— without offal: $(M_5 - M_8 - M_9) \times 3.5 = M_{11}$

- (b) in the case of cocks and hens:

— with offal: $[(M_5 + M_4) - M_8 - M_9] \times 3.36 - 34.5 = M_{12}$

— without offal: $(M_5 - M_8 - M_9) \times 3.0 = M_{12}$

- 6.3. The percentage extraneous water content shall be determined using the following formulae:

- (a) in the case of chickens:

— with edible offal: $\frac{M_{10} - M_{11}}{M_0 - M_1 - M_3} \times 100$

— without edible offal: $\frac{M_{10} - M_{11}}{(M_0 - M_1 - M_4 - M_3)} \times 100$

- (b) in the case of cocks and hens:

— with edible offal: $\frac{M_{10} - M_{12}}{M_0 - M_1 - M_3} \times 100$

— without edible offal: $\frac{M_{10} - M_{12}}{(M_0 - M_1 - M_4 - M_3)} \times 100$

- 6.4. If the seven carcasses contain on average 6 % or less of extraneous water, the quantity of the poultry checked shall be considered up to standard.

- 6.5. The analysis results in the case of cocks, hens and chickens bearing the description 'dry chilled poultry' may not exceed the following limits:

1. in the case of chickens:

— with offal: $[(M_5 + M_4) - M_8 - M_9] \times 3.48 + 39.9 = M_{11}$

— without offal: $(M_5 - M_8 - M_9) \times 3.5 = M_{11}$

2. in the case of cocks and hens:

— with offal: $[(M_5 + M_4) - M_8 - M_9] \times 3.36 - 34.5 = M_{12}$

— without offal: $(M_5 - M_8 - M_9) \times 3 = M_{12}$