



MALAYSIAN STANDARD

DMS 361

Poultry — Specification

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DEPARTMENT OF STANDARDS MALAYSIA

DMS 361

Poultry – Specification

1. Scope

This Malaysian Standard specifies the requirements for fresh, chilled and frozen poultry. It applies to poultry primary processing products for commercial purposes.

2. Normative Reference

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative reference (including any amendments) applies.

Food Act 1983 and its regulations

Arahan Prosedur Tetap Veterinar Malaysia (APTVM 16(C):1/2011)

Animal Act

Meat Inspection Rules

Garis Panduan Peraturan Penternakan Ayam Kampung

Code of Veterinary Practice for Poultry Processing Plant

3. Term and Definition

For the purposes of this document, the following terms and definitions apply.

3.1

carcass

the whole body of poultry after bleeding, plucking and evisceration.

3.2

category

an individual species of poultry, divided into groups of the same physical characteristics associated with age such as young, mature, fryer, roasting, etc.

3.3

chilled

carcass and parts with the internal between 0 °C to 4 °C.

3.4

conformation

refers to the shape of carcass or parts which is free of deformities that detract from its appearance or that affect the normal distribution of flesh

3.5

dressed

product after the removal of feathers, head, feet, oil gland, viscera, mature reproductive organs and with or without the giblets

3.6

dressing

the removal of feathers, head, feet, oil gland, viscera, mature reproductive organs and with or without the giblets.

3.7

evisceration

process where the carcass is opened to remove the viscera (internal organs and intestines) from the bird, which can be done manually, semi-automated or fully automated.

3.8

frozen

carcass and parts which is in a frozen state with the internal temperature of -18 °C or below.

3.9

frozen thawed

carcass and parts with the internal temperature of not more than 10 °C which has been previously frozen.

3.10

giblets

liver from which the bile sac has been removed, the heart from which the pericardial sac has been removed and the gizzard from which the contents and lining have been removed

3.11

internal temperature

refer to the temperature taken at the core of the product

3.12

lot

an individual carcass or a quantity of carcasses of the same species, category and grade having other essential similarities as to make all items within a grouping identifiable as a single unit.

3.13

parts

refer to poultry cuts including giblets

3.14

poultry

any domesticated species of birds raised for the production of meat or eggs or both.

3.15

poultry primary processing products

any poultry slaughtered for human consumption from which the blood, feathers, head, feet, shanks, protruding pinfeathers, vestigial feathers (hair or down as the case may be), crop, trachea, oesophagus, entrails, reproductive organs, and lungs have been removed, with or without the giblets, and include any cut-up or disjointed portion of such poultry or any edible part thereof.

3.16
quality

refers to the inherent properties of a product that determine its relative degree of excellence or value.

NOTE. The properties include a good proportion of meat to bone ratio, adequate skin covering, absence of feathers, discoloration and free from defect and injury. Refer to Meat Inspection Rules 1985.

3.17
relevant authority

it shall be the relevant government authority having jurisdiction to carry out specified work according to prescribed rules and regulations

3.18
skeletal frame

the remains of a dressed poultry after deboning. The skeletal frame may still contain some fat, skin and remnants of the musculature.

3.19
sound

free from external evidence of any disease or condition as verified by the veterinary authority and in conformity with the bacteriological standard as specified in the *Arahan Prosedur Tetap Veterinar Malaysia* (APTVM 16(C):1/2011) which may render a carcass or part unfit for human consumption.

NOTE. Condition means any condition, including but not being limited to, the state of preservation, cleanliness, or soundness of any product; or any condition, including but not limited to, the processing, handling, or packaging which affects such product.

3.20
unsound

evidence of any disease or condition (as certified by an authority) which may render a carcass or part unfit for human consumption.

3.21
unwholesome

- a) Unsound, injurious to health, or otherwise rendered unfit for human consumption.
- b) Consisting in whole or in part of any filthy, putrid, or decomposed substance.
- c) Processed, prepared, packaged, or held under unsanitary conditions whereby a carcass or parts thereof may have become contaminated with filth, ingesta, faeces, extraneous material or whereby they may have been rendered injurious to health.
- d) Produced in whole or in part from poultry which has died otherwise than by slaughter.
- e) Packaged in a container composed of any poisonous or deleterious substance which may render the contents injurious to health.

3.22
veterinary inspected

poultry, parts thereof or poultry product has been through the ante mortem and post mortem inspection and has been found to be free from diseases, wholesome and fit for human consumption.

3.23

wholesome

Sound, healthful, clean, and otherwise fit for human consumption

4 Classes of poultry

Classes of poultry to which this standard applies are as follows:

4.1 Chicken

The following are the categories of chicken:

4.1.1 Spring chicken

A young chicken of either sex which is well fleshed and less than 800 g ready-to-cook weight. A chicken that is of ill-thrift and small in size for its age shall not be classified as spring chicken.

4.1.2 Broiler chicken

A young chicken of either sex and not under 800 g ready-to cook weight. The breastbone cartilage is usually flexible. The broiler may be sold as ready to-cook poultry without the head, neck, shank and feet.

4.1.3 Culled layer (spent hen)

A matured hen that has finished its useful life span as a commercial layer, and is usually more than 75 weeks of age.

4.1.4 Culled breeder chicken (spent breeder)

A matured breeder chicken that has finished its useful life span as a breeder chicken, and is usually 60-75 weeks of age.

4.1.5 Ayam Kampung

Refers to indigenous chicken resulting from crossbreeding of the Red jungle fowl with mixed exotic domestic breeds. Classification of *Ayam Kampung* shall refer to *Garis Panduan Peraturan Penternakan Ayam Kampung*.

4.2 Turkey

The following are the categories of turkey:

4.2.1 Fryer turkey

A "fryer turkey" in the context of reproduction refers to a young turkey, usually 12-16 weeks old, that is raised primarily for meat production. The term "fryer" indicates that the turkey is of a suitable age and size for frying or roasting.

4.2.2 Roasting turkey

A roasting turkey refers to young turkey usually more than 16 weeks to 30 weeks of age of either sex which is tender-meated with soft, pliable, smooth-textured skin and with breastbone cartilage that is less flexible than that of a fryer turkey.

4.2.3 Mature turkey and old turkey

A mature turkey is a productive adult turkey usually more than 24 weeks of age. Old turkey refers to non-productive adult turkey. For turkey that age more than 65 weeks of either sex will produce coarse skin and toughened flesh.

4.3 Duck

The following are the categories of duck:

4.3.1 Broiler duck

Young duck (more than 7 weeks of age) that is tender-meated and has a bill that is not completely hardened and an easily dented trachea at the entrance of the thoracic cavity.

4.3.2 Mature Duck and Old Duck

A mature duck is an adult duck usually more than 24 weeks of age. Old duck refers to non-productive adult duck. For duck that age more than 65 weeks of either sex with toughened flesh, a hardened bill, and a hardened windpipe.

4.3.3 Culled layer duck (spent duck)

A matured duck that has finished its useful life span as a commercial layer, and is usually more than 65 weeks of age.

4.3.4 Culled breeder duck (spent breeder)

A matured duck that has finished its useful life span as a breeder duck, and is usually more than 65 weeks of age

4.4 Goose

The following are the categories of goose:

4.4.1 Gosling

A gosling of either sex which is tender-meated and which has a trachea that is easily dented.

4.4.2 Goose

A goose of either sex which has less tender flesh and a hardened trachea.

5. Condition of carcass and parts

- 5.1 Condition of any poultry primary processing products to which this standard applies are as follows:
- i. Chilled
 - ii. Frozen
 - iii. Frozen thawed
- 5.2 Temperature, cooling and freezing, and handling procedures shall comply with the requirements of Annex A.
- 5.3 Thawing process should refer to Code of Veterinary Practice for Poultry Processing Plant.

6. Quality requirement

- 6.1 General
- 6.1.1 The following factors are to be considered in ascertaining the quality of an individual carcass or its part:
- a) conformation;
 - b) fleshing;
 - c) fat covering;
 - d) defeathering;
 - e) exposed flesh (exclusive of normal processing cuts);
 - f) disjointed and broken bones and missing parts;
 - g) bruises and discolouration of the skin and of the flesh; and
 - h) freezing defects.
- 6.1.2 For poultry products such as boneless and skinless meat, factors include absence of bones, tendons, cartilage, discolouration, blood clots and other extraneous material.
- 6.1.3 Unsound carcass and parts thereof found to be unsound, unwholesome, or unfit for human consumption in whole or in part shall not be included in any of the quality designations.
- 6.2 Quality grading
- 6.2.1 'A' Quality
- 6.2.1.1 Conformation

The carcass or its part shall be of good conformation and free from abnormalities. Slightly curved or dented breastbones and slightly curved backs may be present.

6.2.1.2 Fleshing

The carcass or its part shall be well fleshed. The breast shall be moderately long and deep and shall have sufficient flesh to give it a rounded appearance with the flesh carrying well up to the crest of the breastbone along its entire length.

6.2.1.3 Fatcovering

The carcass or its part, considering the species and class of poultry shall have a sufficient layer of subcutaneous fat. This fat shall be well distributed including the areas between the heavy feather tracts.

6.2.1.4 Defeathering

The carcass or its part shall have a clean appearance, especially on the breast. The carcass or its part shall be free from protruding pinfeathers, diminutive feathers, and vestigial feathers which are visible.

6.2.1.5 Exposed flesh

Other than the cuts occurring during normal processing, the breast and legs shall be free from exposed flesh resulting from cuts, tears, and missing skin (other than slight trimming on the edge). Elsewhere, the carcass may have exposed flesh due to slight cuts, tears, and missing skin, provided that the aggregate of the areas of flesh exposed does not exceed the area of a circle, of the diameter of which the diameter is given Table 1. A guide for estimating the relative size of exposed flesh is given in Annex B.

Table 1. Permissible areas of exposed flesh in poultry of 'A' quality (chairman/members to double check the unit and diameter)

Carcass weight		Maximum aggregate area permitted		
Minimum	Maximum	Breast and legs	Elsewhere	
			cm	inch
None	0.70 kg	None	1.9	($\frac{3}{4}$)
Over 0.70kg	2.70 kg	None	3.8	(1 $\frac{1}{2}$)
Over 2.70kg	7.30 kg	None	5.0	(2)
Over 7.30kg	None	None	7.6	(3)

6.2.1.6 Disjointed and broken bones and missing parts

Parts of poultry shall be free from broken bones. The carcass shall be free from broken bones and shall not have more than one disjointed bone. The wing tips may be removed at the joint and, in the case of geese, the parts of the wing beyond the second joint may be removed if removed at the joint and both wings are so treated. The tail may be removed. Cartilage separated from the breastbone may be accepted.

6.2.1.7 Bruises and discoloration of the skin and flesh

The carcass or its part shall be practically free from discoloration of the skin and flesh. Discoloration due to bruising, shall be free from blood clots. Flesh or skin bruises and discoloration of the skin such as 'blue black' shall not be permitted to the breast or legs of the carcass or on these individual parts and only lightly shaded discoloration shall be permitted elsewhere. The total areas affected by flesh bruises, skin bruises, and discoloration such as 'blue black' singly or in any combination shall not exceed half the total aggregate area of permitted discoloration. The aggregate area of all discoloration of a carcass or part shall not exceed the area of a circle of which the diameter is given in Table 2. A guide for estimating the relative size of discoloration is given in Appendix B.

Table 2. Permissible areas of all discoloration in poultry of 'A' quality

Carcass weight		Maximum aggregate area permitted			
Minimum	Maximum	Minimum		Maximum	
		cm	in	cm	in
None	0.70 kg	1.3	(½)	2.5	(1)
Over 0.70kg	2.70 kg	2.5	(1)	5.0	(2)
Over 2.70kg	7.30 kg	3.8	(1½)	6.4	(2½)
Over 7.30kg	None	5.0	(2)	7.6	(3)

6.2.1.8 Freezing defects

With respect to frozen or thawed poultry, the carcass or their parts shall be practically free from defects which result from handling or occur during freezing or storage.

Improper freezing promotes ice formation on the outside of the meat tissue cells, possibly preventing the tissue from over freezing and causing the tissue to dehydrate and shrink. Also larger ice crystals are formed that may rupture the cells causing the release of the cell content, increasing drip loss, and resulting in a less juicy and softer textured product as the muscle structure breaks down. This could adversely affect the shelf life of the product.

Improper freezing also affects product colours, it causes bone darkening as bone marrow material is released into the bone structure and adjacent meat. It caused darkening of the carcass as the transparency of the skin increases, thus allowing the dark colour of the meat to show through the skin.

The following defects shall be permitted if they, alone or in combination, detract only very slightly from the appearance of the carcass or its part:

- Slight darkening over the back and drumsticks, provided that the frozen poultry or part has a generally bright appearance;

- b) Occasional pockmarks due to drying of the inner layer of skin provided that none shall exceed the area of a circle 0.32 cm in diameter for poultry weighing 2.72 kg or less and 0.64 cm in diameter for poultry weighing over 2.72 kg;
- c) Occasional small areas of clear, pinkish, or reddish colored ice;
- d) Occasional small areas of dehydration, white to light grey in colour, on the flesh of skinless carcasses, parts or specified poultry food products not to exceed the permitted aggregate area for discolorations.

6.2.2 'B' Quality

6.2.2.1 Conformation

The carcass or its part shall be of good conformation and may have only moderate abnormalities, such as dented, curved or crooked breast, or crooked back, or misshapened legs or wings which do not materially affect the distribution of flesh or the appearance of the carcass or its part.

6.2.2.2 Fleshing

The carcass or its part shall be moderately fleshed considering the species, class and part of the poultry. The breast shall be well developed with the flesh carrying up to the crest of the breastbone sufficiently to prevent a thin appearance.

6.2.2.3 Fat covering

The carcass or its part shall have sufficient fat covering to prevent a distinct appearance of the flesh through the skin, especially on the breast and legs.

6.2.2.4 Defeathering

The carcass or its part may have a few non-protruding pinfeathers or vestigial feathers. An occasional protruding pinfeather or diminutive feather shall be allowed.

6.2.2.5 Exposed flesh

Other than the cuts occurring through normal processing, parts may have exposed flesh resulting from cuts, tears and missing skin, provided that not more than a moderate amount of the flesh normally covered by skin is exposed. The carcass may have exposed flesh due to cuts, tears, and missing skin, provided that the aggregate of the areas of exposed flesh does not exceed the area of a circle of which the diameter is given in Table 3. A guide for estimating the relative size of exposed flesh is given in Annex B.

Table 3. Permissible areas of exposed flesh in poultry of 'B' qualify

Carcass weight		Maximum aggregate area permitted			
Minimum	Maximum	Minimum		Maximum	
		cm	in	cm	in
None	0.70 kg	1.9	(¾)	3.8	(1½)
Over 0.70kg kg	1.70 kg	3.8	(1½)	7.6	(3)
Over 2.70kg kg	7.30 kg	5.0	(2)	10.2	(4)
Over 7.30kg kg	None	7.6	(3)	12.7	(5)

6.2.2.6 Disjointed and broken bones and missing parts

The carcass or its part may have two disjointed bones, and only one non-protruding broken bone may be allowed.

6.2.2.7 Bruises and discoloration of the skin and flesh

The carcass or its part shall be free from serious defects such as extensive bruising and discoloration arising therefrom shall be free from clots. Moderate areas of discoloration due to bruises in the skin or flesh and moderately shaded discoloration of the skin such as 'blue black' shall be permitted, but the total area affected by such discoloration singly or in any combination shall not exceed half the total aggregate area of permitted discoloration. The aggregate area of all discoloration of a carcass or part shall not exceed the area of a circle of which the diameter is given in Table 4. A guide for estimating the relative size of discoloration is given in Appendix B. Evidence of incomplete bleeding shall be very slight.

Table 4. Permissible areas of discoloration in poultry of 'B' quality

Carcass weight		Maximum aggregate area permitted					
Minimum	Maximum	Minimum		Maximum		Minimum	
		cm	in	cm	in	cm	in
None	0.70 kg	2.5	(1)	5.0	(2)	1.3	(½)
Over 0.70kg	2.70 kg	5.0	(2)	7.6	(3)	2.5	(1)
Over 2.70kg	7.30 kg	6.4	(2½)	10.2	(4)	3.8	(1½)
Over 7.30kg	None	7.6	(3)	12.7	(5)	3.8	(1½)

6.2.2.8 Freezing defects

With respect to frozen or thawed poultry, carcass or its parts may have moderate defects which result from handling or occur during freezing or storage. The skin and flesh shall have a sound appearance but may lack brightness. The carcass or its parts may have a few pockmarks due to drying of the inner layer of skin, provided that no single area of overlapping pockmarks shall exceed that of a circle 1.3 cm (½ in) in diameter.

6.2.3 'C' Quality

6.2.3.1 A part of the carcass that does not meet the requirements for 'A' quality and 'B' quality as specified in 6.2.1 and 6.2.2 respectively, may be of 'C' quality provided the flesh is substantially intact and fit for food.

6.2.3.2 A carcass that does not meet the requirements for 'A' quality and 'B' quality as specified in 6.2.1 and 6.2.2 respectively, may be of 'C' quality. Both wings may be removed or neatly trimmed. Trimming of the breast and legs is permitted, but not to the extent that the normal yield is materially affected and unfit for food.

6.3 Microbial contaminant limits

The products covered by this standard shall not exceed those microbial contaminant limits, refer to the *Arahan Prosedur Tetap Veterinar Malaysia APTVM 16(c)*.

6.4 Pesticides, heavy metals, veterinary drugs and residues

The products covered by this standard shall comply with those maximum residue limits for poultry established by the *Arahan Prosedur Tetap Veterinar Malaysia APTVM 16(c)* and Food Regulations 1985

7. Grading of poultry primary processing products

- 7.1 Grading of poultry primary processing products shall comply with quality requirements in clause 6.
- 7.2 Each poultry or its part shall be graded and identified in an unfrozen state on an individual poultry basis.
- 7.3 All poultry for commercial purposes shall be inspected for wholesomeness before grading, in accordance with the existing regulations.
- 7.4 All poultry primary processing products for commercial purposes shall be individually graded before sale.
- 7.5 The final quality rating is based on the factor with the lowest rating. If the requirements for 'A' quality are met in all factors except one, and this factor is 'B' quality, the final grade designation shall 'B'. If the requirements for 'B' quality are met in all factors except one, and this factor is 'C' quality, the final grade designation shall be 'C'.

8. Hygiene and safety

The product shall be processed and packaged under hygienic conditions and food safety requirement in licensed premises as imposed by the competent authorities from time to time in accordance with the local government by laws, Food Act 1983 and its regulations and codes of practice as well as guidelines in force in Malaysia where relevant.

9. Sampling

- 9.1 Selection of samples for testing of a lot of carcass for compliance with this standard for grading shall be taken at random in accordance with Table 6.

Table 6. Selection of samples for compliance of grade

Number of carcass in lot	Percentage and number of carcass to be examined for compliance with grade
First 100	50%
101 to 500	25 % for each subsequent 100 or fraction thereof
Over 600	150, plus 10 carcass for each subsequent 100 carcass or fraction thereof in each lot over 500 carcass

- 9.2 If more than 5 % of the samples drawn from any lot fail to comply with the requirements specified for the grade which has been assigned to the lot from which the samples were drawn, the lot shall be considered as not in compliance with this standard and the entire lot shall be subjected to regrading by the producer.

10. Packaging

- 10.1 Poultry primary processing products can be individually packed or bulk packed as follows:
- All poultry to be packaged shall be well drained to avoid unsightly bloody water or ice in the pack.
 - Unfrozen, poultry primary processing products shall be packed in such a manner as to prevent contamination of the poultry.
 - Frozen poultry primary processing products shall be packed in such a manner as to prevent rancidity.
 - All packaging materials for individual wrapping of poultry shall be clean, sufficiently strong, and of a type recognised as a suitable wrap for poultry primary processing products.

- e) All containers, including inner wrapping materials, used for the purposes of primary containers for bulk packing of both non-individually wrapped carcass and individually wrapped carcasses shall be clean, sufficiently strong and of a type recognised as a suitable container for such purposes.

10.2 Ice-pack containers shall be covered and shall have an adequate number of drain holes to permit the water to drain out.

11. Labelling

11.1 All individual or bulk packaging shall bear a label in compliance with Food Regulation 1985

11.2 The following logos may also be included on the packaging:

- a) Veterinary logo

The packaging of any poultry, parts thereof or poultry product may bear the Veterinary Logo depicting that the product has been veterinary inspected and produced from an establishment inspected by the relevant authority. The poultry, as such shall be clean and wholesome, veterinary inspected and fit for human consumption at the time of processing.

- b) Halal Logo

The packaging of any poultry, parts thereof or poultry product may bear the Halal Logo if the processing of the poultry, parts thereof or poultry product comply with the requirements of the relevant authority in Malaysia.

- c) HACCP Logo

The packaging of any poultry, parts thereof or poultry product may bear HACCP Certification Logo if the processing of the poultry, parts thereof or poultry product comply with the requirements of the relevant authority in Malaysia.

12. Compliance

Upon testing and inspection, when each sample is found to conform to the requirements specified in this standard, the lot, batch or consignment from which the sample has been drawn shall be deemed to comply with this standard.

13. Legal requirements

The product shall in all other aspects comply with the requirements of the legislation currently in force in the country.

ANNEX A (normative)

Packaging requirements, temperature, and cooling and freezing procedures

A1. General

A1.1 Temperatures and procedures necessary for cooling and freezing ~~ready-to-cook poultry~~, including all edible portions thereof, shall be in accordance with MS 1514 Good Manufacturing Practices (GMP) which will ensure the prompt removal of the animal heat and which will preserve the condition and wholesomeness of the poultry.

A2. General cooling requirements

A2.1 Cooling shall be done immediately after evisceration so that the internal temperature is reduced to less than 4 °C.

A2.2 Chilled, (packaged or not packaged) shall be maintained between 0 °C to 4 °C. However, the internal temperature may rise during processing and packaging operations to a maximum of 7 °C, provided that the poultry is immediately placed under normal refrigeration between 0 °C to 4 °C.

A3. Ice and water chilling

A3.1 Only ice manufactured or produced from potable water may be used for ice-water chilling. The ice shall be handled and stored in a sanitary manner, and crushed before use.

A3.2 Poultry primary processing products shall be chilled between 0 °C and 4 °C within the times specified in Table A1.

Table A1. Ice and water chilling requirements

Weight of carcass		Time (max)
		Hours
Under	1.80 kg	2
	1.80 kg-3.60 kg	2
Over	3.60 kg	4

A3.2.1 Such chilled poultry shall be maintained constantly between 0 °C and 4 °C until removed from the vats or tanks for immediate packaging. Poultry may be removed from the vats or tanks prior to being cooled to 0 °C and 4 °C for freezing.

A3.3 In order to facilitate continuous operations, poultry may be held overnight in cold rooms or chilling tanks with cooling media that will maintain all poultry at a temperature of between 0 °C and 4 °C.

A3.3.1 Poultry which is to be held in chilling tanks in excess of 24 h shall be immediately packaged and maintained at a temperature of between 0°C and 4 °C.

A3.4 Poultry washing, chilling, and draining practices and procedures shall be such as will minimise moisture absorption and retention at the time of packaging.

A3.4.1 With respect to poultry that is to be individually packaged or frozen or both, the maximum moisture absorption and retention during the washing, chilling, and draining processes shall not exceed, at the time of packaging, the percentage tolerances set out in Table A2.

Table A2. Percentage tolerances for moisture absorption

Species and weight of ready-to-cook poultry	Percentage increase in weight
Chicken, 2.30 kg and under	8%
Turkey, over 9.10 kg	4½%
Turkey, 4.50 kg to 9.10 kg	6%
Turkey, under 4.50 kg	6%
All other kinds and weights of poultry	6%

A3.4.2 With respect to poultry that is to be ice packaged, the maximum amount of moisture permitted to be absorbed shall not exceed 8 % at time of ice packing, provided that the loss of moisture during holding and transportation results in moisture retention within the tolerances specified in A3.4 1.

A4. Air chilling

A4.1 In air chilling, the carcass shall be hung on racks in a refrigeration room or they shall be placed on shelves in the cooler. The refrigeration room for this purpose shall be odourfree, and shall have moderate air movement. The temperature shall be maintained at 0 °C to 4 °C at all times.

A4.2 In air chilled poultry, the internal temperature of the poultry primary processing products carcass shall be reduced to a temperature between 0 °C and 4 °C within 2 h.

A5. Cooling giblets

A5.1 Giblets shall be chilled between 0 °C and 4 °C within 2 h from the time they are removed from the inedible parts. If they are cooled with the poultry, the requirements of A3.2, A3.2.1, A4.1 and A7.3 shall apply.

A5.2 Any of the chilling methods prescribed in this standard for poultry primary processing products may be followed in cooling giblets as long as giblets retain their normal characteristics.

A5.3 When poultry primary processing products are to be individually packaged, the giblets shall be separately wrapped and handled in a manner that will prevent water from being included in the giblet package.

A5.4 The giblet wrap or package shall be of a material that is impervious to liquids and grease.

A6. Other chilling procedures

Any other chilling procedure or the combination of procedures in clauses A3 and A4, which will effect chilling in a manner equal to that obtained by the processes herein prescribed may also be permitted.

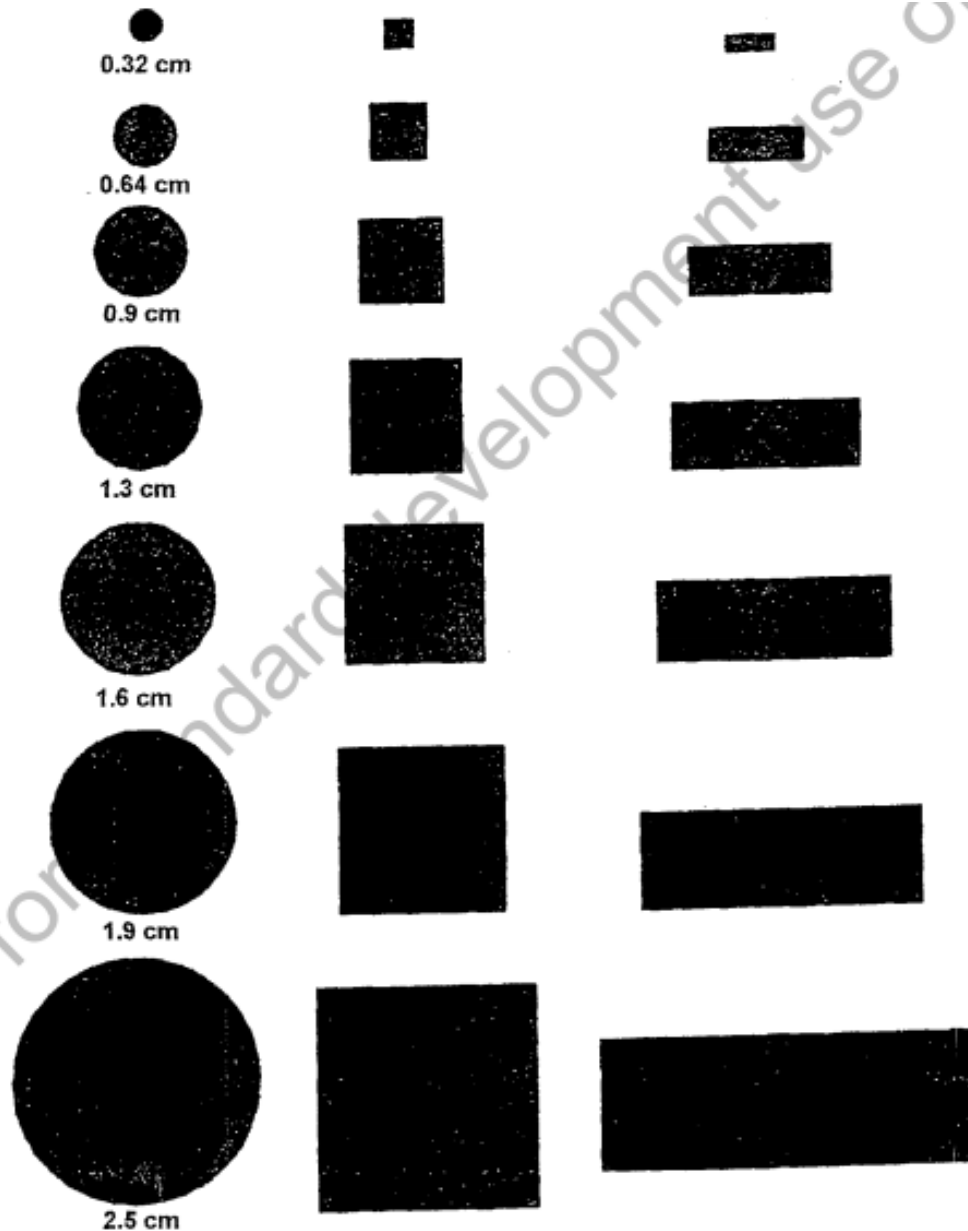
A7. Freezing

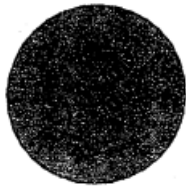
- A7.1** poultry primary processing products shall be frozen after grading and wrapping in such a manner so as to bring their internal temperature to be -18 °C or below in the shortest time possible.
- A7.2** Frozen poultry shall be held under conditions which will maintain the product in a solid frozen state with temperature maintained as constant as possible.
- A7.3** Immersion or spray freezing equipment shall be constructed of such materials that are resistant to corrosion by propylene glycol or similar secondary refrigerants commonly used in immersion freezers for the preparation of human foodstuffs. The use of chloride for immersion or spray freezing of poultry products or both is prohibited. Immersion or spray freezing of poultry products or both shall be conducted in a separate room from slaughtering and dressing.

ANNEX B (informative)

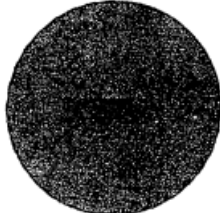
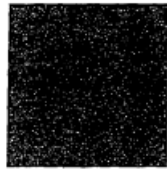
Guide for estimating the relative size of exposed flesh and discoloration of poultry

The area of the exposed flesh and discoloration of the poultry is as given below. The area of the centre and right hand columns correspond to the area of the circle given in the left hand column of the same row.

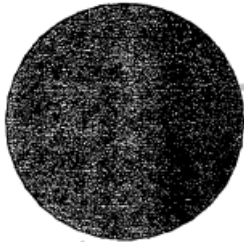
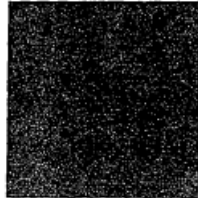




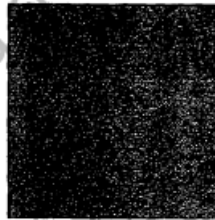
3.14 cm

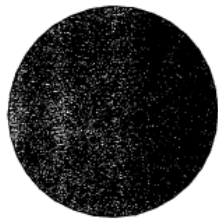


3.8 cm

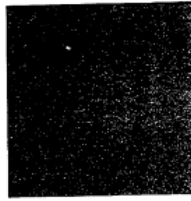


4.4 cm





5 cm



5.64 cm



6.4 cm



7.6 cm