



**THAI AGRICULTURAL STANDARD**

**TAS 6701-2005**

# **DUCK MEAT**

**National Bureau of Agricultural Commodity and Food Standards**

**Ministry of Agriculture and Cooperatives**

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# **DUCK MEAT**

**National Bureau of Agricultural Commodity and Food Standards**

**Ministry of Agriculture and Cooperatives**

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Duck meat is a livestock agricultural commodity sufficiently produced for domestic consumption and for exporting. Therefore, it is deemed necessary for the Ministry of Agriculture and Cooperatives to establish the standard on duck meat so as to be recognized both domestically and internationally. More importantly, it will be of great benefits for safety of consumers as well as for export promotion.

The establishment of this standard is based mainly on the following documents:

1. Department of Livestock Development B.E. 2543 (2000). Establishment of Microbiology for Livestock Commodity, Announcement of the Department of Livestock Development No. 26 B.E. 2543 (2000).
2. Thai Industrial Standard: Frozen Chicken (TIS. 590-1985).
3. Barbut, S. 2002. Poultry Products Processing: An Industrial Guide. CRC Press. Chapter 6: Inspection, Grading, Cut Up and Composition. pp. 129-180.
4. FAO/WHO. 1994. Codex Alimentarius Volume 10. Meat and Meat Products including Soups and Broths. (Part 2 – Codes of Practice and Guidelines for Processed Meat and Poultry Products). Joint FAO/WHO Food Standards Programme, FAO Rome. pp. 33-75.

***Remark:***

The standard title has been revised from “Thai Agricultural Commodity and Food Standard (TACFS)” to “Thai Agricultural Standard (TAS)” in accordance with the enforcement of the Agricultural Standards Act B.E. 2551 (2008).



**NOTIFICATION OF THE NATIONAL COMMITTEE ON  
AGRICULTURAL COMMODITY AND FOOD STANDARDS  
SUBJECT: THAI AGRICULTURAL COMMODITY AND FOOD STANDARD:  
DUCK MEAT  
B.E. 2548 (2005)**

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The resolution of the 2/2547 session of the National Committee on Agricultural Commodity and Food Standards dated 27 July B.E. 2547 (2004) endorsed the Thai Agricultural Commodity and Food Standards entitled Duck Meat. This standard would be of benefits for quality improvement, facilitating trade and protecting consumers.

By virtue of the Cabinet Resolution on Appointment and Authorization of the National Committee on Agricultural Commodity and Food Standards dated 19 November B.E. 2545 (2002), the Notification on Thai Agricultural Commodity and Food Standard entitled Duck Meat is hereby issued as voluntary standard, the details of which are attached herewith.

Notified on 19 May B.E. 2548 (2005)

Khunying Sudarat Keyuraphan

Minister of Agriculture and Cooperatives

Chairperson of the National Committee on Agricultural Commodity and Food Standards

## THAI AGRICULTURAL STANDARD

### DUCK MEAT

#### 1 SCOPE

This standard applies to unprocessed duck meat from the Family *Anatidae* covering fresh meat at slaughtering house and delivery to market.

#### 2 DEFINITIONS

- 2.1 **Carcass** means the body of a duck after bleeding, plucking and eviscerating.
- 2.2 **Duck meat** means carcass taken from cut-up process.
- 2.3 **Visceral organ** means all duck internal organs or offal including edible and inedible organs.
- 2.4 **Giblet** means visceral organs that fit for human consumption i.e. heart, liver, and gizzard.
- 2.5 **Whole duck** means a poultry carcass fully composed of head, body, two legs and two wings.
- 2.6 **Cutting part** means cut-up duck carcass, whether or not deboned or deskinning depending on fabricated process.
- 2.6.1 **Breast meat** means duck meat that is separated from the back of the shoulders through sternum.
- 2.6.2 **Fillet** means round, elongated fusiform duck meat that attaches to each side of the keel bone (sternum).
- 2.6.3 **Bone in leg** means duck meat that includes thigh and drum stick.
- 2.6.4 **Thigh meat** means proximal portion of the upper leg which is separated from body and knee joint.
- 2.6.5 **Drumstick** means distal portion of the leg obtained by cutting off knee joint and ankle joint.
- 2.6.6 **Three joint wing** means the whole wing cut from the carcass at the shoulder joint.
- 2.6.7 **Wing stick** means the proximal portion of the wing next to body, but cut off two joint wing.
- 2.6.8 **Middle wing** means the middle part of the cut off wing stick and wing tip.
- 2.6.9 **Two joint wing** means the distal portion of the wing cut off wing stick.
- 2.6.10 **Wing tip** means the tip of the wing obtained by cutting through the carpal joint.

### 3 TYPE OF DUCK MEAT

Duck meat can be categorized into two types.

#### 3.1 Whole duck

3.2 Cutting part including breast meat, fillet, bone-in-leg, thigh meat, drum stick, three joint wing, wing stick, middle wing, two joint wing, wing tip and others e.g. tongue, beak and feet.

### 4 QUALITY

#### 4.1 Minimum requirements of acceptable duck meat:

4.1.1 Duck meat for the purpose of this standard shall be slaughtered and dressed from hygienic slaughtering house complied with requirements under relevant laws or Thai Agricultural Standard on Good Manufacturing Practice for Poultry Abattoir.

4.1.2 Duck meat shall be clean, firm and have uniform colors. Skin tears and discoloration due to bruising shall not exceed specified quality grading provision with natural smell. The duck meat shall also be free from objectionable odors.

4.1.3 Free from foreign matters which may be harmful to consumers.

4.1.4 Free from food additives

#### 4.2 Classification

Classification of duck meat is based on consumption requirements as follows:

4.2.1 Whole duck is classified into Extra Class and Class I (Table 1).

4.2.2 Cutting part is classified into Extra Class and Class I (Table 2).

**Table 1** Quality criteria for whole duck

Quality Factors	Criteria	
	Extra Class	Class I
1. Conformation	Free of deformities, well-rounded breast	Free of deformities, slightly thin breast
2. Breast bone	Straight along the breast line	Slightly curved breast bone
3. Back	No deformities, neither curved nor crooked	Slightly curved or crooked
4. Leg	Normal shape, neither flesh bruises nor blood congestion at skin.	Irregular shape, slightly bruises or blood congestion at skin.

Quality Factors	Criteria	
	Extra Class	Class I
5. Wing	All parts of wing shall be intact, free of deformities and full fleshed.	All parts of wing shall be intact, slight deformities and full fleshed.
6. Flesh	Breast meat is thick and firm with the flesh embracing the whole breast bone or full-fleshed according to breed.	Moderately thick flesh embracing the whole breast bone
7. Hard feather	None	None
8. Pinfeather	few	Some
9. Exposed flesh (in length)	Breast and legs shall be free of cuts, tears, and missing skin if any, the aggregated length shall not exceed 1.3 cm.	Aggregated length of cuts, tears, and missing skin at breast and legs shall not exceed 1.3 cm. or whole body not exceed 7.6 cm.
10. Bone - disjointed bone - broken bones	Not more than 1 disjointed bone Free from broken bones	Not more than 2 disjointed bones Not more than 1 broken bone, but non protruding broken bones
10. Missing part	None	Wing tips may be absent
11. Skin discoloration	Aggregated breast and leg skin discoloration shall not exceed 2.5 cm. or the total aggregated area of discoloration shall not exceed 5.0 cm.	Aggregated breast and leg skin discoloration shall not exceed 5.0 cm. or the total aggregated area of discoloration shall not exceed 7.6 cm.

**Table 2** Quality criteria for cutting part

Quality factors	Criteria for	
	Extra Class	Class I
1. Flesh	Full fleshed and firm	Reasonably full fleshed and firm
2. Pinfeather and Diminutive feather	A few	Reasonable
3. Skin tears	None	A few
4. Missing skin	None	A few
5. Broken and disjointed bones	None	A few
6. Discoloration (e.g., discoloration from bruising)	None	A few

## 5 TOLERANCES

Tolerances in respect of quality shall be allowed for product not satisfying the requirements of the class indicated.

### 5.1 Extra Class

Not more than five percent by quantity of whole duck not satisfying the requirements of Extra Class, but meeting those of Class I.

### 5.2 Class I

Defects other than specified in the class are not allowed

## 6 CONTAMINANTS

In compliance with the provisions of the relevant laws and requirements under the Thai Agricultural Standard on Contaminants.

## 7 PESTICIDE RESIDUES

In compliance with the provisions of the relevant laws and requirements of TAS 9002: Thai Agricultural Standard on Pesticide Residues: Maximum Residue Limits and TAS 9003: Thai Agricultural Standard on Pesticide Residues: Extraneous Maximum Residue Limits.

## 8 VETERINARY DRUG RESIDUES

In compliance with the provisions of the relevant laws and requirements under the Thai Agricultural Standard on Veterinary Drug Residues: Maximum Residue Limits.

## 9 HYGIENE

9.1 Duck meat covered by the provisions of this standard shall be produced, packed, storage, and transported in accordance with good hygienic practices to prevent contamination that may be harmful to consumer.

### 9.2 Microbiological limits

Contamination of microorganisms in duck meat shall be conformed to the following requirements:

9.2.1 Total count shall not exceed  $5 \times 10^5$  colonies per gram of sample. Methods of analysis shall follow AOAC (2000), 966.23C or equivalent method.

9.2.2 Coliform count shall not exceed  $5 \times 10^3$  colonies per gram of sample. Methods of analysis shall follow AOAC (2000), 966.24 or equivalent method.

9.2.3 *Staphylococcus aureus* shall not exceed  $1 \times 10^2$  colonies per gram of sample. Methods of analysis shall follow AOAC (2000), 975.55 or equivalent method.

9.2.4 *Salmonella* spp. shall be free in 25 gram of duck meat sample. Methods of analysis shall follow AOAC (2000), 995.20 or equivalent method.

## 10 PACKAGING AND STORAGE

10.1 Duck meat shall be packed in clean materials. The package shall be sealed tightly. If the packaging materials are made of plastic, they shall be complied with relevant requirements under Notifications of the Ministry of Public Health. All packaging materials shall be durable during transportation. The materials shall not be torn or broken when keeping in low temperature and shall prevent product from absorbing objectionable odors from environment.

10.2 Packaged duck meat shall be labeled with appropriate details and kept in the cold storage that maintain duck meat temperature at °C or lower at all time. Packaged duck meat storage time shall not exceed 7 days.

## 11 LABELLING

11.1 Labels in each package of duck meat shall be legible and not peeled off the container. Labels shall bear the following information:

11.1.1 Type of duck meat and quality classification

11.1.2 Net weight in gram or kilogram

11.1.3 Storage instruction

11.1.4 Day/Month/Year of production and Day/Month/Year of the minimum durability best before.

11.1.5 Name of producer or production farm or Trade Mark or name and address of Distributor.

11.2 Language on label shall be in Thai except label for export duck meat.

11.3 Official inspection or certification marks shall be complied with provisions and requirements of certification bodies recognized by the Ministry of Agriculture and Cooperatives.

## 12 SAMPLING

In compliance with the provisions of the relevant laws and requirements under the Thai Agricultural Standard on Methods of Sampling for Products of Animal Origin.

### **13 TRANSPORTATION**

13.1 Vehicle for duck meat transport shall be designed such that packaged duck meat shall not direct contact with vehicle's floor and be able to keep its quality during transportation. The appropriate design of vehicle shall be tightly sealed and preventing disease carrier. It shall be designed and constructed in such a way that able to clean both interior and exterior surface thoroughly.

13.2 Vehicle for duck meat transport shall be equipped with cooling unit in the storage area and shall be able to maintain core temperature of duck meat at 4 °C or lower at all time.

13.3 After unloading duck meat, the vehicle shall be cleaned immediately with potable water and/or officially registered disinfectant. The vehicle shall be drained and dried properly and shall be free from objectionable odors.

## Annex

Information on pesticide residues, contaminants and veterinary drug residues in this section are based on relevant laws and standards. It has been provided for informative purpose only. It is not considered as part of section 6, 7 and 8 in this standard. These information may be reviewed and revised regularly, its reference shall be based on the latest version. .

### 1 PESTICIDE RESIDUES

Maximum residues limits in duck meat are as follows:

#### 1.1 Extraneous Maximum Residue Limits, EMRLs

<b>Pesticide Residues</b>	<b>Extraneous Maximum Residue Limits (milligram / kilogram of duck meat)</b>
Chlordane	0.05
DDT	0.3
Dieldrin	0.2
Aldrin	0.2
Endrin	0.1
Heptachlor	0.2

Source: Thai Agricultural Standard on Pesticide Residues: Extraneous Maximum Residue Limits (TAS 9003)

#### 1.2 Maximum Residue Limits, MRLs

<b>Pesticide Residues</b>	<b>Maximum Residue Limits (milligram / kilogram of duck meat)</b>
Chlorpyrifos	0.01 (Fat)
Carbaryl	0.05
Cypermethrin	0.05
Dicofol	0.1 (Fat)
Dimethoate	0.05
Diazinon	0.02
Triazophos	0.01
Profenofos	0.05
Methomyl	0.02
Acephate	0.01

Source: Thai Agricultural Standard on Pesticide Residues: Maximum Residue Limits (TAS 9002)

## 2 CONTAMINANTS

Maximum level of contaminants in duck meat are as follows:

<b>Contaminants</b>	<b>Maximum Level (milligram / kilogram of duck meat)</b>
Lead	0.1

Source: Codex Alimentarius. Maximum Levels for Lead. Codex Stan 230-2001, Rev.1-2003

## 3 VETERINARY DRUG RESIDUES

3.1 Duck meat shall be free from the following veterinary drug residues:

3.1.1 Chloramphenicol and its salts

3.1.2 Nitrofurazone and its salts

3.1.3 Nitrofurantoin and its salts

3.1.4 Furazolidone and its salts

3.1.5 Furaltadone and its salts

Source: Ministry of Public Health Notification on Standard on Food Containing Some Chemical Contaminants, Volume 268, Year 2003.

3.2 Maximum residue limits in duck meat are as follows:

<b>Veterinary Drug Residues</b>	<b>Maximum Residue Limits (milligram / kilogram of duck meat)</b>
Chlortetracycline	0.2
Diclazuril	0.5
Tetracycline	0.2
Neomycin	0.5
Flubendazole	0.2
Levamisole	0.01
Oxytetracycline	0.2

Source : Codex Alimentarius: Veterinary Drug Residues in Food, Maximum Residue Limits, 20 July 2005.