

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية  
STANDARDIZATION ORGANIZATION FOR G.C.C (GSO)

Final Draft

**GSO 05/FDS 986:2014**

الدجاج المجمد  
**FROZEN CHICKENS**

ICS:67.120.30

## تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها الأجهزة الوطنية للمواصفات والمقاييس في دول الخليج العربية ، ومن مهام الهيئة إعداد المواصفات القياسية الخليجية بواسطة لجان فنية متخصصة .

وقد قامت هيئة التقييس لدول مجلس التعاون لدول الخليج العربية ضمن برنامج عمل اللجنة الفنية رقم 5 " اللجنة الفنية الخليجية لقطاع مواصفات المنتجات الغذائية والزراعية " بتحديث المواصفة القياسية الخليجية رقم 986 : الدجاج المجمد، وقامت (دولة الإمارات العربية المتحدة) بإعداد مشروع هذه المواصفة.

وقد اعتمدت هذه المواصفة كلائحة فنية خليجية في اجتماع مجلس إدارة الهيئة رقم ( ) ، الذي عقد بتاريخ هـ ، الموافق / / م على أن تلغى المواصفة رقم ( 1998/986 ) وتحل محلها.

## FROZEN CHICKENS

### 1. Field and Scope of Implementation

This Standard is specifically designed for whole broiler chicken (not egg-laying hens) meats, its pieces and visceral organs that are fit for human consumption, and which are preserved by freezing.

### 2. COMPLEMENTARY REFERENCES

2. 1 GSO CAC/MRL 2 :Maximum residue limits for veterinary drugs in foods.
2. 2 GSO 9 : Labeling of Prepackaged Foodstuffs.
2. 3 GSO 20: Methods for the Determination of Contaminating Metallic Elements in Foodstuffs.
2. 4 GSO 21 :Hygienic Regulations for Food Plants and their Personnel.
2. 5 GSO 22 :Methods of test for coloring matter used in foodstuffs.
2. 6 GSO 87 :Meat and meat products – Determination of nitrogen content – Reference Method.
2. 7 GSO 149 :Un bottled drinking water.
2. 8 GSO 150:Expiration Periods for food products.
2. 9 GSO/CAC 193 :General Standard for Contaminants and Toxins in Food and Feed.
2. 10 GSO 322 :Chilled chicken.
2. 11 GSO 323 :General requirements for transportation and storage of chilled and frozen foods.
2. 12 GSO382, GSO383 :Maximum allowable limits of pesticides residue in agricultural and food products – Part 1 & 2.
2. 13 GSO 384 :Ice for human consumption.
2. 14 GSO 592 :Methods of sampling for meat and meat products.
2. 15 GSO 655 :Method of microbiological examination for meat, fish, and shell fish.
2. 16 GSO 713: Hygienic regulations for poultry processing abattoirs and their personnel.
2. 17 GSO 839 :Food packages – Part 1 : General requirements.
2. 18 GSO 988: Limits of Radiation Levels Permitted in Foodstuffs- Part 1.
2. 19 GSO 993 :Animal slaughtering requirements according to Islamic law.
2. 20 GSO 1016 :Microbiological Criteria of Food Product- Part 1.
2. 21 GSO 1694 :General principles of food hygiene.
2. 22 GSO 1863 :Food packages –Part 2: Plastic package - General requirements.
2. 23 GSO 1193 :Polyethylene bags for food packaging applications.

2. 24 Gulf Standard to be approved by GSO on “Permitted additives in food stuff”.

### 3. Definitions:

#### 3. 1 Frozen Whole Chicken

Whole carcasses of broiler chicken (rather than egg-laying hens) which are fit for human consumption, after being slaughtered, blood drained, defeathered, feet severed at the knee joint, eviscerated and cleaned, then frozen using appropriate freezing methods.

#### 3. 2 Frozen Chicken Cuts:

Chicken cuts include halves, quarters, breasts, drumsticks and thighs, wings and smaller cuts (portions of a cut) that are fit for human consumption. They are defined as follows:

3.2.1 **Halves:** Which is produced by cutting the body in two halves resulting from cutting the bird longitudinally from the middle of the keel bone in the front and through the backbone at the back.

3.2.2 **Quarters:** Produced by splitting each half into two quarters, resulting in breast and leg quarters.

3.2.3 **Thigh:** Contains the thigh and fibula bones, along with the surrounding muscles. Should be cut off at the knee joint.

3.2.4 **Breasts:** Includes the keel (breast bone) and connected ribs extending on both sides with the surrounding muscles.

3.2.5 **Smaller cuts:** (portions of cuts): Includes deboned fillet pieces, and two or three-joint wings featuring wing drumettes, mid-sections and tips or portions thereof.

3.3 **Parts fit for human consumption:** includes the neck and edible giblets; i.e. liver, heart and gizzard, after removing the gallbladder from the liver. Moreover, the horny lining membrane of the gizzard, along with gizzard contents should be removed. The heart may or may not have a protein membrane, the neck cannot be taken as a by-product if left with the body, and should be cut at the shoulder joint.

#### 3.4 Quick freezing process

The product after any suitable preparation shall be subjected to a sudden and fast freezing process. The freezing process shall be carried out in appropriate equipment in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C or colder.

#### 3.5 The application of a protective coating of ice (Glazing)

Applying a protective coating of ice (ice glaze) to the frozen product by dipping or spraying it with water or by using the surface ice glaze solution.

#### 3.6 Dehydration (Freezer burns)

When the sample unit exhibits excessive loss of moisture clearly shown as white or yellow discoloration on the surface, which masks the color of the flesh and reaches beyond the surface, so as it cannot be easily removed by scraping with a knife or other sharp instrument without unduly affecting the appearance of the product.

#### **4. Requirements:**

The following requirements must be fulfilled in Frozen Chickens:

- 4.1 Frozen chickens' meat must be produced from slaughtering broiler chickens that are healthy, disease and pathogen-free, clean and fit for human consumption and conforming with Standard stated in Item 2.10.
- 4.2 Product should be processed from carefully-selected chickens in accordance with animal slaughtering requirements as stipulated by the Standard indicated in Item 2.19, at licensed slaughterhouses (abattoirs) fulfilling requirements of the Standard contemplated in Item 2.16.
- 4.3 Product should be processed in accordance with the requirements of Standard stated in Items 2.21 and 2.4.
- 4.4 Product should be free from foreign matter that may be hazardous to human health.
- 4.5 Product must maintain all of its distinguishing natural characteristics, such as the color, smell and free from signs of rancidity and rotteness.
- 4.6 Product should only be from broiler chickens aging no more than two months.
- 4.7 Primary chilling should be carried out at a maximum of 4°C directly after the removal of visceral organs and washing.
- 4.8 Flash: Freezing should be carried directly after the primary chilling and packaging at a maximum of -30°C, to ensure that the temperature of the carcass tissues reaches -18°C as early as possible.
- 4.9 Ice used in processing and glazing should fulfill requirements of the Standard indicated in Item 2.13.
- 4.10 Water used in processing should be potable and fulfills requirements of the Standard contemplated in Item 2.7.
- 4.11 Product should be free from traces and residues of sterilizers used in washing water.
- 4.12 In all cases, frozen chickens may not be defrosted and refrozen.
- 4.13 Permitted food additives may be used for this product in accordance with Standard stated in Item 2.24.
- 4.14 Total freezer-burned surface area should not exceed 1 cm<sup>2</sup> of the sum of total surface areas of product quantity, or its equivalent in the case of frozen chickens' parts.
- 4.15 Thawing drip should not exceed 5% of the frozen chicken's weight.

4. 16 Volatile Nitrogen should not exceed 20 mg/100 g of the frozen chicken's weight.
4. 17 Microbiological limits should not exceed the limits set forth in standard stated in Item 2.20.
4. 18 Maximum limits for contaminants and toxins should not exceed those stipulated in the Standard contemplated in Item 2.9.
4. 19 Maximum limit for veterinary drugs residue should not exceed the limits stipulated in the Standard contemplated in Item 2.1.
4. 20 Product radioactivity levels should not exceed the limits stipulated by the Standard stated in Item 2.18.
4. 21 Maximum limits of pesticide residue should not exceed the those stipulated by the Standard stated in Item 2.12.
4. 22 The following requirements must be met when rating frozen whole chickens:

Key Quality Determinants		Premium (A)	Good (B)	Acceptable (C)
1	Presence of small feathers, stubs (quill ends)	Nil	Few (less than 6 stubs/1.25 cm)	Many (less than 8 stubs/1.25 cm)
2	Broken Bones	Nil	No more than 1	No more than 3
3	Missing Parts	Nil	Wing tips	Wing tips
4	Discoloration (as a result of flesh blemishes or bruises) or	Max 2.5 cm in breast or thigh or 5 cm over the total surface area	Max 5cm in breast or thigh, or 7.50 cm over the total surface area	Max 8 cm over the total surface area

4. 23 The following requirements must be met when rating frozen chickens' cut parts:

Key Quality Determinants		Premium (A)	Good (B)
1	Presence of small feathers, stubs (quill ends)	Nil	Few (less than 3 stubs/1.25 cm)
2	Broken Bones	Nil	Few
3	Missing or Torn Skin	Nil	Few
4	Discoloration (as a result of flesh blemishes or bruises)	Nil	Few

4. 24 Imported frozen chickens should meet all above requirements in addition to the followings:
- 4.24.1 Frozen chicken may not be imported from epidemic-hit countries; for which a ban has been issued by official authorities in GCC countries and Yemen.

- 4.24.2 Imported shipment must be accompanied by an accredited 'Halal' Certificate, duly authenticated by the importing country's embassy, or any other authority acting on its behalf to certify that poultry slaughtering was carried out in accordance with Islamic Sharia principles.
- 4.24.3 Imported shipment must be accompanied by a Health Certificate, stating that frozen chickens are certified as clinically free of all evidence of infectious and contagious diseases; that they are fit for human consumption and indicating the weight and slaughtering date.
- 4.4 Imported shipment must be accompanied by a certified Certificate of Origin duly attested by the competent authorities.

## **5. Sampling:**

Samples are taken in accordance with the GCC Standard indicated in Item 2.14.

## **6. Testing Methods:**

Testing and examining is carried out according to GCC Standards indicated in Items 2.3, 2.5, 2.6 and 2.15 and any other applicable GCC Standards.

## **7. Displaying, Packaging, Transportation and Storage:**

### **7.1 Displaying:**

7.1.1 Frozen chicken can only be displayed in proper freezers that allow cool air to pass regularly to all parts of chicken meat at a maximum temperature of -18°C.

7.1.2 Fresh chilled chicken may not be frozen in retail stores chillers.

### **7.2 Packaging:**

The following requirements should be observed for packing and packaging:

7.2.1 Frozen chicken or frozen chicken parts should be packaged in suitable packages that conforms with standard indicated in Items 2.17, 2.22 and 2.23.

7.2.2 Whole chicken or chicken parts packaging should be carried out immediately after the primary chilling in tightly sealed packages, to ensure full protection of Whole chicken or chicken pieces during handling, transport or storage.

7.2.3 The packaging material should be transparent so that chicken or chicken parts are visible, materials obscuring the product may not be used.

7.2.4 Packing and packaging materials should be properly stored to avoid contamination.

### **7.3 Transportation:**

The following requirements must be met for product transportation:

7.3.1 Transportation should be carried out in accordance with GCC Standard indicated in Item 2.11.

7.3.2 All vehicles used in the transportation of whole carcasses or chicken parts should be tightly sealed and contain self-contained refrigeration systems, either equipped with a thermometer or any other internationally-recognized means designed to measure temperatures in all conditions, up to the point where the vehicle reaches the retailer.

7.3.3 All vehicle surfaces that may come in contact with the chicken packages must be clean and free from crevices and cracks, withstand rancidity and rust, easily cleaned and disinfected using permitted materials if necessary, prior to transportation.

7.3.4 Loading and unloading should be carried out as quickly and as practically as possible. Methods used in those processes should ensure that meat temperatures are not affected.

7.3.5 Temperature of frozen chicken carcasses and chicken parts' meat within the loading area should not exceed  $-18^{\circ}\text{C}$ .

7.3.6 Temperature of frozen chicken meat during unloading should not exceed by more than 3 grades above the set temperature.

#### **7.4 Storage:**

Frozen chicken or its parts should be stored according to the following conditions:

7.4.1 Storing should be carried out in accordance with GCC Standard contemplated in Item 2.11 hereunder.

7.4.2 Proper health conditions and rules for chicken meat preservation and storage must be observed to avoid deterioration and contamination.

7.4.3 Temperature variation of refrigerators used for chicken meat preservation and storage should not be more than  $+3^{\circ}\text{C}$ . In addition, cooling should be fully controlled, refrigerators should be tightly closed to avoid contamination or thermal leakage.

7.4.4 Cold storage warehouses must be equipped with an automatic device that records temperatures and relative humidity degrees constantly, and maintains such records.

7.4.5 Ice accumulating on refrigeration coils should be thawed regularly so that the refrigerator maintains effective cooling capacity.

7.4.6 Frozen chicken carcasses or their parts should be stored in refrigerators to ensure that such meats maintain a temperature that does not exceed  $-18^{\circ}\text{C}$ .

#### **8. Labeling:**

Without prejudice to GCC Standard contemplated in Item 2.1 hereunder, package labels should contain the following information:

8.1 Product name: Frozen Chicken.

8.2 Name and address of the Facility where it was processed.



8.3 Net weight of the frozen unit, number of frozen units inside the crate or pack as per international system of units.

8.4 A phrase reading “Flash Frozen”, “Frozen” or “To be stored frozen at a temperature of -18°C or less”.

8.5 A “not to be refrozen after defrosting” phrase.

8.6 Date of slaughtering and date of expiration as stipulated by the GCC Standard indicated in Item 2.8 hereof.

8.7 “With Edible Giblets” phrase in case they are available.

8.8 In case a “Halal” sign or any phrase or signal indicating that the product is compliant with Islamic Sharia requirements, approval of competent official authorities in GCC countries and the Republic of Yemen.

FOR STUDY PURPOSES

## Technical Terms

Chicken	الدجاج
Carcass	الذبيحة
Visceral organ	الاحشاء الداخلية
Fillet	الشرائح (الفيلية)
Three joint wing	الجناح المكون من ثلاثة مفاصل
Middle wing	وسط الجناح
Two joint wing	الجناح المكون من مفصلين
Wing tip	رأس الجناح
Thawing drip	السائل الناضح
Stubs	ريش
Neck	رقبة
Bone	عظم
Foreign matter	مادة غريبة
Legs	لجراً
Wing	حانج
Expiry date	انتهاء الصلاحية
Breast meat	لحم الصدر
flesh	كتلة اللحم
Broken bones	العظام المكسورة
Discoloration	تغير اللون
Skin tear	تمزق الجلد

### References:

1. THAI AGRICULTURAL STANDARD TAS 6700-2005
2. Poultry – Grading Manual USDA/ 1998.
3. Thai Agricultural Standard on Pesticide Residues: Maximum Residue Limits (TAS 9002).
4. Thai Agricultural Standard on Pesticide Residues: Extraneous Maximum Residue Limits (TAS 9003)
5. Iraq Standard Frozen Chickens / 1197/2011