

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية  
GCC STANDARDIZATION ORGANIZATION (GSO)

مشروع مواصفة نهائي  
Final Draft of Standard FDS

إعداد اللجنة الفنية الخليجية رقم TC05

Prepared by GSO Technical Committee No. TC05

GSO 05/FDS/ GSO 814 :2022

اللحوم المجهزة – النقانق والسجق  
PREPARED MEAT —SAUSAGE

ICS: ٦٧.١2٠

This document is a draft Gulf Technical Regulation circulated for comments. It is, therefore, subject to alteration and modification and may not be referred to as a Gulf Technical Regulation until approved by GSO.

هذه الوثيقة مشروع للائحة فنية خليجية تم توزيعها لإبداء الرأي والملاحظات بشأنها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كلائحة فنية خليجية إلا بعد اعتمادها من الهيئة.

**Foreword**

GCC Standardization Organization (GSO) is a regional organization which consists of the national standardization bodies of GCC member states. One of GSO main functions is to issue gulf standards and technical regulations through specialized technical committees.

GSO Ministerial Committee in its meeting number (.....) held on ..../...../.....H, which corresponds to ..../...../....., has approved the update of the translation of Gulf Technical Regulation GSO 814: titled " Prepared Meat —Sausage" in English language which was studied through the technical program of GSO Technical Committee for Food and Agricultural Products (.....) in ..... schedule . (Arabic) text is considered the official text in case of any conflicts between the two. This document will cancel and replace the Gulf Technical Regulation GSO 1328:2016

**1- Scope and Field of Application**

This standard is concerned with cooked and uncooked, chilled, and frozen sausages and does not include dried, canned and poultry meat sausages.

**2- Complementary References**

- 2.1 GSO 9 “Labelling of Prepackaged Foods”.
- 2.2 GSO 592 “Methods of Sampling for Meat and Meat Products”.
- 2.3 GSO 1882 “Methods for Physical and Chemical Analysis of Meat and Meat Products”.
- 2.4 GSO 986 “Frozen Chicken”.
- 2.5 GSO 20 “Methods for the Determination of contaminating Metallic Elements in Foodstuffs”.
- 2.6 GSO 21 “Hygienic Regulation for Food manufacturers and their employees”.
- 2.7 GSO 22 “Methods that test the color additives which used in the foodstuffs”.
- 2.8 GSO ISO 1443 “Meat and Meat Products – Determination of Total Fat Content”.
- 2.9 GSO ISO 5553 “Meat and Meat products – Detection of Polyphosphate”
- 2.10 GSO ISO 937 “Meat and Meat Products - Determination of Nitrogen Content (Reference Method)”.
- 2.11 GSO 88 “Meat and Meat Products - Determination of Chloride Content (Reference Method)”.
- 2.12 GSO CAC MRL 2 “Maximum Residue Limits (MRLs) and Risk Management Recommendations (RMRs) for Residues of Veterinary Drugs in Food”.
- 2.13 GSO 91 “Meat and Meat Products – Determination of Moisture Content (Reference Method)”
- 2.14 GSO ISO 2918 “Meat and Meat Products - Determination of Nitrite Content (Reference Method)”.
- 2.15 GSO 322 “Chilled Chicken”.
- 2.16 GSO 323 General Requirements for Transportation and Storage of Chilled and Frozen Foods.
- 2.17 GSO 993 “Animal Slaughtering Requirements According to Islamic Rules”.
- 2.18 GSO 149 “Unbottled Drinking Water”.
- 2.19 GSO 384 “Edible Ice”.
- 2.20 GSO 795 “Methods of Antioxidant Tests which Permitted for Use in Foodstuff”.
- 2.21 GSO 1389 “Chilled and Frozen Domesticated Birds and Rabbits”.
- 2.22 GSO 707 “Flavourings Permitted for Use in Foodstuff”

- 2.23 GSO 1016 “Microbiological limits of commodities and Foodstuffs”.
- 2.24 GSO 382 “Maximum Limits of Pesticide Residues in Agricultural and Food Products”.
- 2.25 GSO 150-1 “Expiration Dates for Food Products - Part 1: Mandatory Expiration Dates”.
- 2.26 GSO 193 “Contaminants and Toxins in Food and Feed”.
- 2.27 GSO 839 “Food Packages - Part 1: General Requirements”.
- 2.28 GSO 2276 “Detection of Lard in Food”.
- 2.29 GSO 1694 “General Principles of Food Hygiene”.
- 2.30 GSO 1863 “Food Packages - Part 2: Plastic Packages – General Requirements”.
- 2.31 GSO 2481 “Maximum Residues Limits (MRLs) Of Veterinary Drugs in Food”.
- 2.32 GSO 2500 “Additives Permitted for Use in Foodstuffs”.
- 2.33 GSO 150-2 “Expiration Dates for Food Products - Part 2: Voluntary Expiration Dates”.
- 2.34 GSO 2233 “Requirements of Nutritional Labeling”.
- 2.35 GSO OIML R87 “Quantity of Product in Prepackages”.
- 2.36 GSO 2055-1 “HALAL FOOD - Part 1: General Requirements”.
- 2.37 GSO 2333 “Requirements for Nutrition and Health Claim in the Foods”.
- 2.38 GSO 1816 “Ground Meat”.
- 2.39 GSO 2600 “General Requirements for Places of Packaging and Re-packaging of food”

### **3- Definitions**

- 3.1 Poultry sausage: a product prepared from one or more types of chilled or frozen boneless poultry meat, minced with spices and other permitted ingredients, and stuffed in natural or manufactured casings in various shapes.
- 3.2 It includes the following:
  - 3.2.1 Chilled sausage; Sausage that has been refrigerated at 4.4°C or less
  - 3.2.2 Frozen sausage: Sausage that has been frozen at a temperature of no more than -35°C so that the temperature of the thermal center of the product reaches -18 ° C in the shortest possible time after entering the freezer.
  - 3.2.3 Cooked sausage; Sausage may be smoked and treated with heat to an appropriate degree and for a sufficient period and then kept cooled or frozen.
  - 3.2.4 Smoked sausage; Sausage cooled, frozen or cooked after being treated in one of the ways of smoking for the purpose of adding the color and flavor.

- 3.3 Cured meat: Meat resulting from the separation and removal of most of the bones and cartilage with the musculoskeletal tissue of the carcass by manual or mechanical methods.
- 3.4 Natural casings of animal origin: The bowels of slaughtered animals in accordance with Islamic law as stated in clause (2/17) are valid for human consumption. It does not include the ear, scalp, animal nose, mucous membranes, nerves, reproductive organs, udder, bladder, and lung, and does not include poultry
- 3.5 Artificial casings: Membranes made of safe materials. Food grade and removed before eating.
- 3.6 Organs and casings which edible for eating: organs and Viscera which extracted from animals that are suitable for human consumption and were slaughtered in accordance with Islamic law as stated in clause (2/17), which include: liver, heart, rumen parts (first stomach, second stomach, third stomach, rennet or true stomach), intestines, brain, Tongue, trotters, testicles, spleen, head (except: ear, nose, mucosa, and scalp), tail, and It does not include poultry.

#### **4- Requirements**

The following shall be met in sausage

- 4.1 Meat which is used in the product must be driven from poultry slaughtered according to the GSO standard mentioned in 2.17
- 4.2 Meat which is used in processing the product shall follow the GSO standards mentioned in 2.4, 2.15 and 2.26.
- 4.3 The product must be prepared according to the hygienic requirements stated in the GSO standard mentioned in 2.6 and 2.29
- 4.4 All ingredients used in the product preparation shall be in compliance with their relevant GSO standards.
- 4.5 The product must be free from everything that contradicts the provisions of Islamic law and in a manner that does not contradict with the GSO standard mentioned in 2.36
- 4.6 The product must be free from foreign materials and any undesirable flavor.
- 4.7 Allow to add any of the internal organs or viscera such liver, heart, rumen parts (first stomach, second stomach, third stomach, rennet or true stomach), intestines, brain, Tongue, trotters, testicles, spleen, head

(except: ear, nose, mucosa, and scalp), tail, and It does not include poultry.

- 4.8 The total fat must not exceed 15% by mass in the finished poultry product, and 30% by mass in the finished meat product.
- 4.9 In the case of prepare product from Frozen poultry, meat ground process have to be at temperature not exceeding  $-4^{\circ}\text{C}$ .
- 4.10 The total content of calcium must not exceed (based on dry matter) 1% by mass content in the finished product.
- 4.11 The ratio of insoluble ash in acid have not exceed 1.5% by mass in the finished poultry product, and 1% by mass in the finished meat product.
- 4.12 The weight ratio (weight/weight) of salt in poultry have not exceed 3% in the poultry product, and 2.5% in the meat product.
- 4.13 The percentages of polluting elements of the product shall not exceed the limits according to the GSO standards mentioned in 2.26.
- 4.14 The microbiological limits of the product shall not exceed the limits stated in the GSO standard mentioned in 2.23.
- 4.15 Pesticide residue content must not be more than the limits permitted according to the GSO standard mentioned in 2.24.
- 4.16 Radiation level content must not be more than limits permitted according to the GSO standard mentioned in 2.26.
- 4.17 Veterinary medicine level content must not be more than limits permitted according to the GSO standard mentioned in 2.12.
- 4.18 The product must be free of artificial colors according to the GSO standard mentioned in (2.32).
- 4.19 Poultry must not be mixed with red meats.
- 4.20 In sausage, the following basic ingredients must be met:
  - 4.20.1 Poultry meat must not be less than 70% of the product final weight.
  - 4.20.2 Spices and herbs are added according to good manufacturing practices, and flavorings are added in a manner that does not contradict with the GSO standard mentioned in (2.22 and 2.32).
  - 4.20.3 Water and ice used in manufacturing must comply to the requirements of the GSO standard mentioned in 2.18 and 2.19.
- 4.21 One or more optional components may be used, not exceeding 30% of the total weight of the final product:
  - 4.21.1 Filling materials such as: wheat rusk, potato starch, rice starch, ground rice, bread, biscuits in corn flour.

- 4.21.2 Binders such as: screening milk powder, caseinate, whey powder, egg protein, wheat gluten, soy proteins.
- 4.21.3 Natural carbohydrate sweeteners such as: sucrose, dextrose, glucose syrup.
- 4.21.4 The percentage of additives must not exceed according to the GSO standard mentioned in 2.32.
- 4.21.5 Natural smoking solutions to be added according to good production.
- 4.21.6 Must not add any materials containing oils or fats from a source other than the animal source used in the manufacture.
- 4.22 Uncooked sausages “without prejudice to what was mentioned in 4.1” must fulfill the following requirements:
  - 4.22.1 The product should be prepared from one type of meat.
  - 4.22.2 The total protein content in the poultry product must not be less than 12% by mass and in meat not less than 9% by mass.
  - 4.22.3 The moisture content of the product must not be more than four times the protein content  $\pm 3\%$ .
- 4.23 Cooked sausages and smoked sausages “without prejudice to what is mentioned in 4.1 and 4.2” must fulfill the following requirements:
  - 4.23.1 The total protein content of the poultry product must not be less than 15% by mass and in meat not less than 11% by mass.
  - 4.23.2 The moisture content of the product must not be more than four times its protein content  $\pm 10\%$ .
- 4.24 The imported sausage must comply with all requirements in clause 4, in addition to the following:
  - 4.24.1 It is prohibited to import sausages from any country that has epidemic diseases stipulated in the veterinary quarantine in force in the countries of the Cooperation Council for the Arab States of the Gulf and Yemen.
  - 4.24.2 The imported shipment must be accompanied by an approved health certificate according to the regulations and legislation of GCC countries
  - 4.24.3 The imported consignment must be accompanied by a certificate of origin approved according to the regulations and legislation in force in the countries of the Cooperation Council for the Arab States of the Gulf, indicating the entity from which the product is imported.
  - 4.24.4 The imported shipment must be accompanied by an approved halal certificate according to the regulations and legislation of GCC countries, in accordance with what is stated in items (2.17, 2.36)

- 4.25 The quantity of the product in the package must comply to the requirements of the GSO standard mentioned in 2.53.
- 4.26 Temperature of the processing vicinity shall not exceed 12°C during preparation of products.
- 4.27 Internal organs or entrails of poultry, such as the liver, heart, and gizzard, as well as other organs such as the neck, legs, skin, bones, cartilage and intestines should not be added to poultry sausage.

## **6- Sampling**

Samples must be taken according to the GSO standard mentioned in 2.2.

## **7- Methods of Test**

7.1 Methods of tests:

- 7.1.1 Total fat content must be determined according to the GSO standard mentioned in 2.8.
- 7.1.2 Total protein content must be determined according to the GSO standard mentioned in 2.10.
- 7.1.3 Sodium chloride must be determined according to the GSO standard mentioned in 2.11.
- 7.1.4 Phosphate must be determined according to the GSO standard mentioned in 2.9
- 7.1.5 Moisture content must be determined according to the GSO standard mentioned in 2.13.
- 7.1.6 Nitrite content must be determined according to the GSO standard mentioned in 2.14.
- 7.1.7 Lard must be detected according to the GSO standard mentioned in 2.28
- 7.1.8 Microbiological examination must be carried out according to the GSO standard mentioned in 2.22
- 7.1.9 Contaminating metallic elements must be determined according to the GSO standard mentioned in item 2.5.
- 7.1.10 Detection of limits of radioactivity levels must be determined according to the GSO standard mentioned in 2.26
- 7.1.11 Detection of Veterinary Drug Residue must be carried out according to the GSO standard mentioned in 2.31

- 7.1.12 Detection of Pesticide residue must be carried according to the GSO standard mentioned in 2.24
- 7.1.18 Detection of antioxidants must be determined according to the GSO standard mentioned in 2.23.
- 7.1.13 Detection of matter industrial colorants must be carried out according to the GSO standard mentioned in 2.7
- 7.1.14 Detection of antioxidants must be determined according to the GSO standard mentioned in 2.20
- 7.1.15 Determination of the Physical and chemical examinations must be according to the GSO standard mentioned in 2.3

## 7.2 Tests

All the necessary tests must be carried out on representative samples taken according to clause (5) in this standard to determine their compliance with all items of this standard.

## **8- Packaging Transportation and Storage**

### 8.1 Packaging

Without prejudice to the provisions of the GSO standard mentioned in 2.27 and 2.30 the following must be considered:

- 8.1.1 The packaging used in the fill must be Food grade
- 8.1.2 Products must be well packed, identical in shape and free of air pockets.
- 8.1.3 The product in each package must be the same in shape, size, and weight.

### 8.2 Transportation and storage

Without prejudice to the provisions of the GSO standard mentioned in 2.16 the following must be considered during transportation and storing of the sausage:

- 8.2.1 Transportation must be carried out by suitable way, not previously used in transpiration of poisonous or substances harmful to the health.
- 8.2.2 The packaged product must be transported and stored in such a way as to ensure its protection against spoilage and mechanical damage.
- 8.2.3 Chilled sausage (not heat treated) or chilled cooked sausage or cooked sausage which filled under air discharge must be stored at -4°C or less.
- 8.2.4 Store frozen cooked sausage at a temperature not higher than -18°C.
- 8.2.5 The shelf life of the product must not be increased in accordance with the GSO Standard clause 2.25 and 2.32.

**9- Labelling**

Without prejudice to the provisions of the GSO standards mentioned in 2.1 and 2.15 the following information must be declared on the product label:

- 9.1 Product name and condition (cooked, smoked, refrigerated, frozen) and depending on the case.
- 9.2 The kind of meat used.
- 9.3 Instructions for use, preservation, transportation, and storage.
- 9.4 In the case of packaging the product in non-edible manufactured membranes as 3.4 defined in clause 3.4, this must be noted appropriately.
- 9.5 The shelf life as stated in the GSO standard specifications mentioned in clause 2.2 and 2.33.
- 9.6 Nutritional data as contained in the standard mentioned in clause 2.34.

Technical Terms

Natural casings .....	أغلفة طبيعية
Artificial casings.....	أغلفة مصنعة
Bone chips .....	شظايا عظام
Air pockets .....	جيوب هوائية
Curing salts.....	أملاح الإنضاج
Binders.....	مواد رابطة
Fillers.....	مواد مالئة

**References:**

- Syrian Standard Specification 2721: Meat - Uncanned Sausages.
- Jordanian Standard Specification 816: Meat and its products - Sausage products.
- Indian Standard 13400: Poultry sausages - Specification.
- New Zealand Standard Handbook 2.2.1: Meat and Meat Products.