

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



GSO 1387 / 2002

اللحوم المجهزة : برجر السمك
FISH BURGER

ICS: 67.120.30

FISH BURGER

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FISH BURGER**1. SCOPE AND FIELD OF APPLICATION**

This standard is concerned with fish burger prepared from lean or fatty fishes. The burger may or may not be coated with batter and/ or bread crumb and it may be cooked or uncooked.

2. COMPLEMENTARY REFERENCES

- 2.1 GSO 9/1995 “Labeling of Prepackaged Foods”.
 - 2.2 GSO 48/1977 “Methods of Sampling for Fish, Shellfish and Their Products”.
 - 2.3 GSO 589/1995 “Methods of Physical and Chemical Examination of Fish, Shellfish and Their Products”.
 - 2.4 GSO 655/1996 “Methods for the Microbiological Examination of Meat, Fish, and Shellfish “.
 - 2.5 GSO 20/1984 “Methods for the Determination of Contaminating Metallic Elements in Foodstuffs”.
 - 2.6 GSO 21/1994 “Hygienic Regulations for Food Plants and Their Personnel”.
 - 2.7 GSO 22/1994 “ Methods of Test for Colouring Matter Used in Foodstuffs”.
 - 2.8 GSO 323/1994 “General Requirements for Transportation and Storage of Chilled and Frozen Foods”.
 - 2.9 GSO 357/1994 “Antioxidants Permitted for Use in Food Products”.
 - 2.10 GSO 380/1994 “Chilled Fish”.
 - 2.11 GSO 795/1997 “Methods of Test for Antioxidants Permitted for Use in Food Products”.
 - 2.12 GSO Standard ON “Frozen Fish”.
 - 2.13 GSO 836/1997 “Fishery Products Coated with Batter and /or Bread Crumb and Frozen”.
 - 2.14 GSO 988/1998 “Limits of Radioactivity Levels Permitted in Foodstuffs”.
 - 2.15 GSO 998/1998 “Detection Methods of Limits of Radioactivity Levels Permitted in Foodstuffs”.
 - 2.16 GSO 1016/1998 “Microbiological Criteria for Foods – Part 1”.
- GSO STANDARD DRAFTS TO BE APPROVED BY THE ORGANIZATION CONCERNING:**
- 2.18 GSO Standard ON “Frozen Fish Mince”

- 2.19 GSO Standard ON “Frozen Fish Fillets”.
- 2.20 GSO Standard ON “Maximum Limits for Pesticide Residues in Agricultural and Food Products – Part 3”.
- 2.21 GSO Standard ON “Detection Methods of Preservatives Permitted in Foodstuffs”.
- 2.22 GSO Standard ON “Detection methods of maximum Limits for Pesticide Residues in Agricultural and Food Products”.

3. DEFINITIONS

3.1 Plain fish burger

Food product prepared from fish block, chilled or frozen fish mince or from minced fish fillets obtained from chilled or frozen fish. Fish meat is mixed with salt and spices, other material like onion, fillers and/or binders may be added. The product is formed so that the units are of similar shape, size and thickness.

3.2 Fish burger coated with batter and/or bread crumb

Fish burger (item 3.1) coated with batter and/or bread crumb. The burger weight shall not be less than 50g.

3.3 Fish fillets

Fish slices of regular or irregular shape which are removed from fresh fish carcass by cuts made parallel to the back bone.

3.4 Fish mince

It is the product of grinding chilled or frozen skinless and boneless fish fillets or it may be a mechanically deboned fish meat.

3.5 Lean fish

Fish meat with a fat content of less than 5%

3.6 Fatty fish

Fish meat with a fat content of more than 5%.

3.7 Coating layer (Batter):

A liquid blend of egg, milk, wheat flour or starch, with suitable viscosity used to coat the burger.

4. PRODUCT CLASSIFICATION

4.1 Based on the presence or absence of the coating layer, the product is classified into the following:

4.1.1 Plain burger (item 3.1).

- 4.1.2 Coated burger (item 3.2).
- 4.2 Based on the fat content, the product is classified into the following:
 - 4.2.1 Low fat burger which is made from lean fish (item 3.5).
 - 4.2.2 High fat burger which is made from fatty fish (item 3.6).

5. REQUIREMENTS

The following requirements shall be met in fish burger:

- 5.1 The product shall be prepared according to the hygienic regulations stated in GSO Standard mentioned in items 2.6
- 5.2 The fish meat used to process the product shall comply to the specifications stated in GSO Standard mentioned in items (2.11, 2.13, 2.17 and 2.18).
- 5.3 All the other raw materials used in the product preparation shall comply to the particular standard concerning each.
- 5.4 Upon processing the product, different fish meat types shall not be mixed.
- 5.5 It shall be free from objectionable smell, dirtiness or dung and spoilage signs.
- 5.6 The product shall have the characteristic flavor of the fish type from which it is produced and shall be free from foreign smell and rancidity.
- 5.7 The product texture shall be firm and free of unusual defects like gelatinous or milky or chalky defects.
- 5.8 The % of meat in the burger without or with fillers or binders shall be not less than 70% and 65% (by mass) respectively.
- 5.9 Plain burger shall be free from artificial colouring materials.
- 5.10 When mechanically deboned meat is used its percentage shall not exceed 10% of the total raw fish meat used to produce the product.
- 5.11 The percentage of the coating layer shall not exceed 40% of the final product weight.
- 5.12 Additives
 - The following materials may be added:
 - 5.12.1 Binding materials like vegetable proteins and their derivatives—egg proteins – dried milk – caseins – whey in amounts (singly or collectively) not to exceed 3.5%.
 - 5.12.2 Filling materials like starch – wheat flour – bread crumbs in amounts (singly or collectively) not to exceed 3.5%.
 - 5.12.3 Table salt content shall not exceed 3%.

- 5.12.4 Spices and natural flavouring materials according to good manufacturing practice.
- 5.12.5 Antioxidants: Without prejudice to the provisions of GSO Standard mentioned in item 2.9:
- Ascorbic acid and its sodium or potassium salts } 500 ppm
 - Isoscorbic acid and its sodium or potassium salts } singly or in
} combination
 - Erythorbic acid and its sodium or potassium salts: in amount not to exceed 500 ppm singly or in combination.
- 5.12.6 Moisture retention agents
- Sodium or potassium mono-, di-, tri-, or polyphosphates } 3000 ppm singly or in combination (Expressed as P^2O^5).
- 5.12.7 Sodium and/or potassium nitrite shall not exceed 125 ppm.
- 5.12.8 Flavour enhancers
- Sodium monoglutamate shall not exceed 5000 ppm.
- 5.13 Amount of all additives to the plain burger shall not exceed 15%.
- 5.14 Percentage of acid insoluble ash shall not exceed 1.5% by weight.
- 5.15 The maximum limits of heavy metals contaminants shall be as follows (ppm):
- | | |
|---------|-------|
| Cadmium | 0.50 |
| Mercury | 0.5 |
| Arsenic | 0.50 |
| Lead | 1.00 |
| Copper | 20.00 |
- 5.16 Total volatile nitrogen compounds shall not exceed 30 mg/100 g.
- 5.17 Trimethyl amine shall not exceed 3 mg/100 g of fish meat.
- 5.18 Histamine content shall not exceed 30 mg/100 g of fish meat.
- 5.19 Microbiological criteria shall not exceed the limits stated in GSO Standard mentioned in item 2.16.
- 5.20 The limits of pesticide residues shall not exceed the limits stated in GSO Standard mentioned in item 2.19
- 5.21 The limits of radioactivity levels shall not exceed the maximum limits stated in GSO Standard mentioned in item 2.14.

5.22 Fish burger coated with batter and/or bread crumb

In addition to items 5.1– 5.20, the following shall be met:

5.22.1 The components of the coating layer shall be in compliance with GSO Standard mentioned in item 2.14.

5.22.2 Fish meat content in the final product shall not be less than 60% by mass.

5.22.3 The final product shall be frozen immediately after cooking.

5.22.4 The product shall be cooked in vegetable oil immediately after the addition of the coating layer.

5.22.5 The final product shall freeze quickly after being cooked..

6. SAMPLING

Samples shall be taken according to GSO Standard mentioned in item 2.2.

7. METHODS OF TESTING AND EXAMINATION

7.1 Examination methods

7.1.1 Detection of microbiological limits shall be carried out according to GSO Standard mentioned in item 2.4.

7.1.2 Contaminating metallic elements shall be determined according to GSO Standard mentioned in item 2.5.

7.1.3 Detection of colouring matter shall be carried out according to GSO Standard mentioned in item 2.12.

7.1.4 Detection of antioxidants shall be carried out according to GSO Standard mentioned in item 2.9.

7.1.5 Detection of preservatives shall be carried out according to GSO Standard mentioned in item 2.20.

7.1.6 Detection of pesticide residues shall be carried out according to GSO Standard mentioned in item 2.21.

7.1.7 Detection of limits of radioactivity levels shall be carried out according to GSO Standard mentioned in item 2.15.

7.1.8 The rest of the tests shall be carried out according to GSO Standard mentioned in item 2.3.

7.2 Tests

All necessary tests shall be carried out on the representative sample taken according to item (6) to determine its compliance with this standard.

8. PACKAGING, TRANSPORTATION AND STORING

The following shall be met in packaging, transporting and storage of the fish burger.

8.1 Packaging

8.1.1 Burger units of similar size, shape, and thickness shall be packed in water proof paper.

8.1.2 It shall be packed in suitable, hygienic, clean and sound packages to protect the product without affecting its characteristics during storage, transportation and handling conditions.

8.1.3 The units in each box shall be uniform in kind, size and weight.

8.2 Transportation and storage

8.2.1 The requirements stated in GSO Standard mentioned in item 2.8 shall be observed.

8.2.2 The temperature in the transportation and storage areas of chilled burger shall be $-0.5 \pm 1^{\circ}\text{C}$.

8.2.3 The temperature in the transportation and storage areas of frozen burger shall not exceed -18°C .

9. LABELING

Without prejudice to what is stated in GSO Standard mentioned in items 2.1 and 2.10, the following information shall be clearly declared on each package:

9.1 Product name and type (lean or fatty) and the statement "Plain" or "Coated with batter and/or bread crumb".

9.2 Added fillers or binders.

9.3 Preservatives and their limits.

9.4 Storage conditions (to be kept chilled or frozen).

9.5 Expiry date of chilled and frozen product shall not exceed 3 days and 12 months from the production date respectively.