# STANDARDIZATION ORGANIZATION FOR G.C.C (GSO)

مشروع: نهائي

GSO 5/FDS..... /2008

# طحين الذرة الكاملة WHOLE MAIZE (CORN) MEAL

إعداد

اللجنة الفنية الخليجية لقطاع مواصفات المنتجات الغذائية والزراعية

هذه الوثيقة مشروع لمواصفة قياسية خليجية تم توزيعها لإبداء الرأي والملاحظات بشأتها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كمواصفة قياسية خليجية إلا بعد اعتمادها من مجلس إدارة الهيئة الخليجية.

#### Foreword

Standardization Organization for GCC (GSO) is a regional Organization which consists of the National Standards Bodies of GCC member States. One of GSO main functions is to issue Gulf Standards /Technical regulation through specialized technical committees (TCs).

GSO through the technical program of committee TC No 5 " The Gulf Technical Committee for Food and Agricultural Standards Products" has prepared this Standard . The Draft Standard has been prepared by (KINGDOM OF SAUDI ARABIA )

The draft Standard has been prepared based on relevant ADMO, International and National foreign Standards and references.

This standard has been approved as Gulf (Standard / Technical Regulation) by GSO Board of Directors in its meeting No..../.... held on  $\ / \ / \ H$  ,  $\ / \ / \ G$ 

# WHOLE MAIZE (CORN) MEAL

Date of GSO Board of Directors' Approval : Issuing Status :

# WHOLE CORN MEAL

# 1. SCORE AND FIELD OF APPLICATION

This standard applied to whole maize (Corn) meal prepared from kernels of common maize as described in item 3.1. This meal is used for direct human consumption. This standard does not apply to the following products: degermed maize meal, enriched maize meal, maize flour, maize grit, quick grit, hominy grit, self-rising maize meal, bolted maize meal, maize flakes, other maize based ready – to – eat cereals, maize flaking grit, alkaline treated maize products, maize meal for use as a brewing adjunet, maize meal used for manufacturing of starch and industrial use, maize meal for use as an animal feed.

#### 2. COMPLIMENTARY REFERENCES

- 2.1 GSO 9 "Labeling of Prepackaged Foods".
- 2.2 GSO 194 "Wheat Flour".
- 2.3 GSO 193 "Methods of Test for Wheat Flour".
- 2.4 GSO 21 "Hygienic Regulations for Food Plants and Their Personal".
- 2.5 GSO 327 "Methods of Test for Wheat".
- 2.6 GSO 382 "Maximum Limits for Pesticides Residues in Agriculture and Food Products Part 1".
- 2.7 GSO 383 "Maximum Limits for Pesticides Residues in Agriculture and Food Products Part 2".
- 2.8 GSO 168 "Conditions of Storage Facilities for Dry and Canned Foodstuffs".
- 2.9 GSO 841 "Maximum Limits of Mycotoxins Permitted in Food and Animal Feed-Aflatoxin".
- 2.10 GSO 1301/1997 "Food Packages Part II, Plastic Packages, General Regulations".
- 2.11 GSO 988 "Limits of Radiation Levels Permitted in Foodstuffs".
- 2.12 GSO 1016 "Microbiology Limits Permitted in Foodstuffs".
- 2.13 Gulf Standards which shall be approved by the Organization concerning the followings:
- 2.14.1 Permissible Maximum Limits of Heavy Metals in Foodstuffs".
- 2.14.2 "Package of Food Products Part 1 General Requirements".

## 3. **DEFINITIONS**

3.1 Whole maize (Corn) meal: A product prepared from fully mature, sound, ungerminated, whole kernels of maize, *zea mays* L., by a grinding process in

which the entire grain is comminuted to a suitable degree of fineness. In its preparation coarse particles of the ground maize kernel may be separated, reground and recombined with all of the material from which they were separated.

# 4. **REQUIREMENTS**

The following requirements shall be met in whole maize meal:

- 4.1 It shall be safe, clean and suitable for human consumption.
- 4.2 It shall be free from abnormal colors, odors and tastes.
- 4.3 It shall be free from fungus growth and living insects or their life cycle.
- 4.4 It shall be free from impurities, animal, plant or metal origin according to good production practice.
- 4.5 It shall be prepared from whole maize grain that meet the gluf Standard related.
- 4.6 It shall have similar color and fineness.
- 4.7 The moisture content shall not be greater than 14% (m/m).
- 4.8 Ash content shall not be greater than 3% on a dry weight basis.
- 4.9 Protein content (N x 6.25) shall not be lower than 8% on a dry weight bases.
- 4.10 Crude fat content shall not be lower than 3.1% on a dry weight basis.
- 4.11 95% or more of the whole maize meal shall pass through a 1.70 mm sieve.
- 4.12 45% or more of the whole maize meal shall pass through a 0.71 mm sieve.
- 4.13 35% or less of the whole maize meal shall pass through a 0.212 mm sieve.
- 4.14 It shall processed according to hygienic regulations for food plants and their personal prescribed in the GSO mentioned in item 2.4.
- 4.15 Pesticide residues shall not exceed the limits prescribed in the GSO mentioned in items 2.6 and 2.7.
- 4.16 Fungal toxins (Aflatoxin) content shall not exceed the limits prescribed in the GSO mentioned in item 2.10.
- 4.17 Radiation levels shall not exceed the limits prescribed in the GSO mentioned in item 2.11.
- 4.18 Microbiological criteria shall not exceed the limits prescribed in the GSO mentioned in item 2.12
- 4.19 Heavy metals content shall not exceed the limits prescribed in the GSO mentioned in item 2.13.1

#### 5 SAMPLING

Samples shall be drown according to the GSO mentioned in item 2.2.

#### 6. METHODS OF TEST

All necessary tests on the representative sample drown according to item 5, shall be carried out according to the GSO mentioned in items 2.3 and 5.2.

#### 7. PACKAGING TRANSPORTATION AND STORAGE

The following specification shall be observed on packaging transportation and storage:

Packaging: without prejudice to the previsions of the GSO mentioned in items 2.10 and 2.13.2 whole maize meal shall be packaged in suitable safe clean containers which will safe guard the hygienic, nutritional, technological and organoleptic qualities of the products. The packaging material shall not import any toxic substance or undesirable odors, color or taste to the product. When the product packaged in sacks, these must be clean, sturdy and strongly sawn or sealed.

# 7.1 **Transportation**

Product shall be transported in a suitable way to protect its quality characteristics. Transportation methods shall not be used for carrying pesticides or any other harmful or poisonous materials.

## 7.2 **Storage**

Without prejudice to the previsions of the GSO mentioned in item 2.8, whole maize meal shall be stored in such a way to safeguard the quality characteristics and to protect the product from mechanical damage and contamination. Stores shall comply with hygienic requirements and shall prevent whole maize meal exposure to insects, rodents, birds, and high moisture or temperature.

#### 8. LABELLING

Without prejudice to the provisions of the GSO mentioned in 2.1, the followings shall be declared on the packages:

- 8.1 Name of product: whole maize (Corn) meal.
- 8.2 Country of origin.
- 8.3 Date of production (Year).
- 8.4 Date of expiration (Month Year).

# **REFERENCES**

# **Main Reference:**

Codex Alimentarius 1995. Codex Standard For Whole Maize (Corn) Meal. Codex Stan 154-1985 (Rev. 1-1995).