

GCC Standardization Organization (GSO)

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General Requirements for the nuts Handling

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Introduction

The GCC Standardization Organization (GSO) is a regional organization comprising the national agencies for specifications and standards in the Gulf Countries in its membership. The Organization has many tasks including, among other things, preparation of Gulf standard specifications by specialized technical committees.

GCC Standardization Organization (GSO) has, within the Gulf Technical Committee Agenda No. (5) "Food and Agricultural Products Specifications Sector", prepared this Gulf Standard Specification by the United Arab Emirates. The project has been prepared after reviewing Arab, foreign and international standard specifications and the relevant reference books.

This Specification has been approved as a Gulf Standard Specification in the Technical Council Meeting No. (23) held on 13-14/11/1432 (11-12/10/2011).

General Requirements for the nuts Handling

1- Scope

This Gulf Standard Specification is concerned with the general requirements of the raw nuts handling or dealing with the different manufacturing processes like peeling, toasting, corning, smoking and the like through the different handling phases. This includes: manufacturing, packing, transporting, storing and offering for sale.

2- Supplementary References:

2-1 GSO 9 : "Filled Foodstuff Cards"

2-2 GSO/CAC/RCP 59 Draft Specification : "Practice Manual for Prevention and Reduction of Aflatoxins Contaminations in the Tree Nuts"

2-3 GSO/CAC 55 "Practice Manual for Prevention and Reduction of Aflatoxins Contaminations in the Peanuts".

2-4 GSO/CAC 193 "General Specifications of Contaminations and Toxins in the Food".

2-5 GSO 168 "Requirements of Dried and Filled Foodstuff Preservation Stores".

2-6 GSO 323 "General Requirements for the Transport and Store of Chilled and Frozen Food".

2-7 GSO 1694 "General Rules for Food Health".

2-8 GSO 839 "Foodstuff Cans – Part 1 – General Requirements".

2-9 GSO 21 "Health Requirements in the Food Factories and Workers".

2-10 GSO 1016 "The Microbiological Limitations of Commodities and Foodstuffs – Part 1".

2-11 GSO 382 "The Permitted Maximums of Insecticide Residues in the Agricultural Products and Food – Part 1".

2-12 ISO 16050 "Foodstuff – The Aflatoxins Estimation B1 and Aflatoxins Aggregation B1, B2, G1, G2 in the grains, nuts and their products – High-Performance Chromatographic Method.

3- Definitions

3-1 Nuts

The foodstuff obtained from the tree nuts, including: *Prunus amygdalus*, *Bertholletia excelsa*, *Anacardium occidentale*, *Corylus spp*, *Macadamia spp*, *Carya spp*, *Pinus spp*, *Castanea spp*, *Pistacia spp* and *Juglans spp*.

2-3 Aflatoxins

Complex of toxins formed by molds of the genus *aspergillus*, like:

Aspergillus flavus and *Aspergillus parasiticus* mold on some foods and fodders within suitable temperature and humidity causing Aflatoxins. This contamination usually spreads in tree nuts, peanut and other oil seeds. The main Aflatoxins are B1 and B2, G1 and G2. These toxins are usually found together in different percentages in the foods and fodders. Nevertheless, Aflatoxins B1 is the most poisonous one.

Aflatoxins M is a main metabolite of Aflatoxins B1 in the animals, it is usually excreted in the livestock milk and urine and all species of mammals eating foods or fodders contaminated with Aflatoxins.

3-3 Damage resulting from the insect pests

Visible damage or contamination resulting from the insects, weevil, rodents, or any other insects including the dead insects and remains of insects and their excretions.

3-4 Odd Smell and/or Taste

The smell or taste not of the product characteristics.

3-5 Unusual external humidity

The water or humidity or water condensation directly on the surface of product.

3-6 Foreign substances:

Any external or visible substances including the dust usually not related to the product.

4- General Requirements

4-1 The nuts and their products should be compliant with the Gulf Standard Specifications in all phases of their handling till they reach the end user.

4-2 The product should be produced, transported, manufactured and filled under the health conditions in accordance with the Gulf Standard Specifications set forth in the clause (9-2), (7-2) and (6-2).

4-3 The imported shipments should be enclosed with the laboratory analysis results certificate and health certificate proving their appropriateness for the human consumption, certified and signed by the official authorities accredited in the export countries.

4-4 It may not import or handle these products without the approval to the product by the competent authorities in the import country.

4-5 The contaminations and toxins should not exceed the permitted limitations in accordance with the Gulf Standard Specification of these products or according to the Gulf Standard Specification set out in the clause (4-2).

4-6 The insecticides residues should not exceed the permitted limitations in accordance with the Gulf Standard Specification set out in the clause (11-2).

4-7 The microbiological limits should not exceed the permitted limitations in accordance with the Gulf Standard Specification set out in the clause (10-2).

4-8 The product should be produced, transported, manufactured, stored and filled in accordance with the Gulf Standard Specifications set forth in the clauses (2-2) and (2-3).

4-9 To comply with the requirements following this clause in relation to manufacturing, packing, transporting, storing, taking the samples, test methods and the explanatory information set out in this Specification.

5- Manufacturing

5-1 The places of reception of raw materials should be separate from the places of preparation of final product or its packaging and such for avoiding contamination to the final product. The nuts peeling should be conducted in a place separate from the main manufacturing area through the partitions. Further, it should take the utmost degrees of care for preventing transfer of dust to other places in the firm through the ventilation system or other openings in order to avoid the Aflatoxins cross contamination to the other fruits during manufacturing.

5-2 It should not accept the raw materials containing decompositions, toxins or other foreign materials that cannot be removed to the permitted levels by the ordinary manufacturing methods of separation and preparation. Moreover, it should take the utmost degrees of care for preventing contamination of the peeled nuts (nuts kernel) with the animal or human beings remains.

6- Packing, Transport and Storage:

6-1 Packing

6-1-1 Without prejudice to the provisions stipulated in the Gulf Standard Specification set forth in the clause (8-2), the product packing should be under a suitable protection, and the materials used for packing and packaging should

be new and clean, and such materials should have a food grade and nontoxic, and the cans should be free from the foreign objects.

6-1-2 The external part of product in the can should reflect all its contents.

6-1-3 The product packing should be under an appropriate protection.

6-1-4 Upon offering the nuts for sale directly to the user, it should comply with the following requirements:

6-1-4-1 The offer should be within a specific clean place away from the sources of contamination, and cooled with a temperature not exceeding 10° Celsius, and the humidity not exceeding 70%. The entity selling the nuts should have reader recording the temperature and humidity.

6-1-4-2 The containers and coolers should be suitable and easy to clean and to be cleaned periodically.

6-1-4-3 It should follow the first in the first out principle during the sale process through designing suitable containers for that.

6-2 Transport

6-2-1 The product should be transported and stored in accordance with the Gulf Standard Specification set forth in the clause (2-6).

6-2-2 The transport containers should be clean and dry and free from the visible fungus and pests and any contaminations, and be tightly closed for preventing the contaminations or pests or any foreign objects.

6-2-3 The nuts should be transported from the transport containers to the store as soon as possible.

6-2-4 The transport should be inside cars or containers cooled with a temperature not exceeding 10° Celsius, and the humidity not exceeding 70%.

6-2-5 The transport cars should be equipped with temperature and humidity reader that records the temperature during all the transport time.

6-3 Storage

6-3-1 It should follow the good storage practices in accordance with the Gulf Standard Specification set forth in the clause (2-5).

6-3-2 It should preserve and store the raw or manufactured nuts according to suitable conditions where the humidity should not exceed 70% and the temperature not exceed 10° Celsius

6-3-3 The stores should be clean and dry with equipments for controlling and measuring the temperature and humidity (The humidity should not exceed 70% and the temperature not exceed 10° Celsius) and to have reader recoding the temperature during all storage time.

6-3-4 The stores should be adequate and meet the following:

6-3-4-1 Protected from rain and pests.

6-3-4-2 The flooring should be washed without water leakage.

6-3-4-3 Equipped with suitable drainages.

6-3-4-4 Good ventilation.

6-3-4-5 Sufficient area with proper division for separating the products.

6-3-4-6 Protected from the rodents and birds in order to reduce the fungus growth during the storage.

7- Taking the Samples

It should take samples in accordance with Gulf Standard Specification set forth in the clause (2-4).

8- Test Methods

Aflatoxins should be assessed in accordance with Gulf Standard Specification set forth in the clause (2-12).

9- Labeling

Without prejudice to the provisions of the Gulf Standard Specification set forth in the clause (2-1), every can should bear a label stating the following:

9-1 Name of product and kind of process carried out to it (toasted, corned, smoked, peeled..... as the case may be)

9-2 To mention in the label or in the documents attached to the imported shipments that the product is 'ready to eat' or 'for further preparation' .

9-3 Conditions of product storage and preservation.