

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

مشروع مواصفة نهائي  
Final Draft of Standard FDS

إعداد اللجنة الخليجية رقم TC05

Prepared by GSO Technical Committee No. TC05

GSO 05 /FDS/ 2228:2020  
GSO 2228/2012

الدهون والزيوت الصالحة للاستهلاك الادمي غير مشمولة المواصفات  
المستقلة

Standard for edible fats & oils not covered by individual standards

ICS: 67.200.10

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

هذه الوثيقة مشروع لمواصفة قياسية/لائحة فنية خليجية تم توزيعها لإبداء الملحوظات بشأنها، لذلك فإنها عرضة للتغيير والتبديل، ولا يجوز الرجوع إليها كمواصفة قياسية/لائحة فنية خليجية إلا بعد اعتمادها من الهيئة.

## Foreword

GCC Standardization Organization (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 regulations through specialized technical committees (TCs).

GSO through the technical program of committee TC No. (5) " Technical committee for standards of food and agriculture products " has adopted the International Standard No. GSO 2228/2012" STANDARD FOR EDIBLE FATS& OILS NOT COVERED BY INDIVIDUAL STANDARDS" issued by (Codex Alimentarius Commission) in its original language. The Draft Standard has been prepared by (State of Kuwait). This standard has been approved as a Gulf Technical regulation without any technical modifications by GSO Board of Directors in its meeting No. ( ), held on / / h ( / / ).

### تقديم

هيئة التقييس لدول مجلس التعاون لدول الخليج العربية هيئة إقليمية تضم في عضويتها أجهزة التقييس الوطنية في الدول الأعضاء، ومن مهام الهيئة إعداد المواصفات القياسية واللوائح الفنية الخليجية بواسطة لجان فنية متخصصة.

قرر (المجلس الفني ل/ مجلس إدارة) هيئة التقييس لدول مجلس التعاون لدول الخليج العربية في اجتماعه رقم ( ) الذي عقد بتاريخ / / هـ ، الموافق / / م اعتماد تحديث اللائحة الفنية الخليجية رقم (GSO 2228/2012) الدهون والزيوت الصالحة للاستهلاك الإدمي غير مشمولة المواصفات المستقلة باللغة (العربية والانجليزية) التي تم دراستها وتبنيها عن (هيئة الدستور الغذائي) رقم (GSO 05 /FDS/ 2228:2020) دون ادخال تعديلات فنية عليها ضمن برنامج عمل اللجنة الفنية الخليجية رقم TC05 "اللجنة الفنية الخليجية للمواصفات الغذائية والزراعية" المدرجة في خطة دولة الكويت.

ويعتبر النص (الإنجليزي) هو المرجع الأساسي في حال وجود اختلاف بين النصين.

## **1 Scope**

This Gulf Standard applies to oils and fats and mixtures therefore in a state for human consumption . It includes oils and fats that have been subjected to processes of modification (such as trans- esterification or hydrogenation) or fractionation .

This Standard does not apply to any oil or fat which is covered by one of the following Standards:

- 1.1** GSO 18601 " Processed Edible Animal Tallow “.
- 1.2** GSO 1929, GSO 1754 " Named vegetable oils Part 1 and Part 2 " .
- 1.3** GSO 1019 " olive oils and Olive-Pomace Oils “.
- 1.4** GSO 991 " Vegetable ghee “.

## **2 COMPLEMENTARY References**

- 2.1** GSO 9 " Labeling of prepackaged foods ".
- 2.2** GSO 15 " Methods of sampling for edible oils and fats ".
- 2.3** GSO 19 " permitted food additives in edible oils and fats "
- 2.4** GSO 20 " Methods for the determination of contaminating metallic elements in foodstuffs ".
- 2.5** GSO 2500 " General Standard for food Additives in food stuffs " .
- 2.6** GSO 993 " Animal Slaughtering requirements according to the Islamic law ".
- 2.7** GSO 382 GSO 383 " Maximum limits for pesticide residues in agricultural food products – Part 1 and Part 2 ".
- 2.8** GSO CAC 193" General standard for Contaminants in food and feed " .
- 2.9** GSO 1016 " Microbiological limits in food and food stuff " .
- 2.10** GSO 988 " Limits of radioactivity levels permitted in foodstuff – Part 1"
- 2.11** GSO 21 " Hygic regulation for food plants and their personal ".
- 2.12** GSO 1694 " General Principles of food Hygiene " .
- 2.13** GSO 707:1997/Cor 1:2015 "Flavorings Permitted For Use In Food Stuffs"

### 3 DESCRIPTIONS

- 3.1** Edible fats and oils are foodstuffs defined in Section 1 which are composed of glycerides of fatty acids. They are of vegetable, animal or marine origin. They may contain small amounts of other lipids such as phosphatides, of unsaponifiable constituents and of free fatty acids naturally present in the fat or oil. Fats of animal origin must be produced from animals slaughter according to the Gulf standard in section 6.2 and they should be in good health at the time of slaughter and be fit for human consumption.
- 3.2** Virgin fats and oils are edible vegetable fats and oils obtained, without altering the nature of the oil, by mechanical procedures, e.g. expelling or pressing, and the application of heat only. They may be purified by washing with water, settling, filtering and centrifuging only.
- 3.3** Cold pressed fats and oils are edible vegetable fats and oils obtained, without altering the oil, by mechanical procedures, e.g. expelling or pressing, without the application of heat. They may have been purified by washing with water, settling, filtering and centrifuging only.

### 4 FOOD ADDITIVES

No additives are permitted in virgin or cold pressed oils covered by this Standard.

#### 4.1 Colours

No colours are permitted in vegetable oils covered by this Standard.

The following colours are permitted for the purpose of restoring natural colour lost in processing or for the purpose of standardizing colour, as long as the added colour does not deceive or mislead the consumer by concealing damage or inferiority or by making the product appear to be of greater than actual value:

<b>INS N.o.</b>	<b>Additive</b>	<b>Maximum Use Level</b>
100(i)	Curcumin	5 mg/kg
160a(ii)	beta-Carotenes (vegetable)	25 mg/kg
160a(i)	beta-Carotenes (synthetic)	25 mg/kg
160a(iii)	beta-Carotenes ( <i>Blakeslea trispora</i> )	(Singly or in combination)
160e	beta-apo-8'-Carotena	

160f	beta-apo-8'-Carotenoic acid, methyl or ethyl ester	
160b(i)	Annatto extracts, bixin-based	10 mg/kg (as bixin )

#### 4.2 Flavourings

The flavourings used in products covered by this standard shall comply with the Guidelines for the Use of Flavourings mentioned in section 2.13.

#### 4.3 Antioxidants

INS No.	Additive	Maximum Use Level
304	Ascorbyl Palmitate	500 mg/kg (Singly or in combination)
305	Ascorbyl Stearate	
307a	Tocopherol, d-alpha-	300 mg/kg (Singly or in combination)
307b	Tocopherol concentrate, mixed	
307c	Tocopherol, dl-alpha	
310	Propyl gallate	100 mg/kg
319	Tertiary butyl hydroquinone (TBHQ)	120 mg/kg
320	Butylated hydroxyanisole (BHA)	175 mg/kg
321	Butylated hydroxytoluene (BHT)	75 mg/kg
Any combination of gallates, BHA, BHT, and/or TBHQ		200 mg/kg but limits above not to be exceeded
322 (i)	Lecithin	GMP
389	Dilauryl thiodipropionate	200 mg/kg

#### 4.4 Antioxidant synergists

INS No.	Additive	Maximum Use Level
330	Citric acid	GMP
331(i)	Sodium dihydrogen citrate	GMP
331(iii)	Trisodium citrate	GMP
332(ii)	Tripotassium citrate	GMP
333 (iii)	Tricalcium citrate	GMP
384	Isopropyl citrates	100 mg/kg (Singly or in combination)
472c	Citric and fatty acid esters of glycerol	

#### 4.5 Anti-foaming agents (for oils and fats for deepfrying)

INS No.	Additive	Maximum Use Level
INS 471	Mono- and di-glycerides of fatty acids	GMP
900a	Polydimethylsiloxane	10 mg/kg

## 5 CONTAMINANTS

The products covered by the provisions of this standard shall comply with maximum limits being established by the GSO standard mentioned in Item 2.8 but in the meantime the following limits will apply :

Heavy Metals	Maximum permissible concentration
<b>Lead (pb)</b>	<b>0.1 mg/kg</b>
<b>Arsenic (As)</b>	<b>0.1 mg/kg</b>

### 5.1 Pesticide residues

The products covered by the provisions of this Standard shall comply with those maximum residue limits mentioned in section 2.7.

## 6 HYGIENE

It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the General Principles of Food Hygiene mentioned in section 2.12. The products should comply with any microbiological criteria established in accordance with the Principles and Guidelines for the Establishment and Application of Microbiological Criteria Related to Foods section 2.9.

## 7 LABELLING

The product shall be labelled in accordance with the General Standard for the Labelling of Prepackaged Foods mentioned in section 2.1.

### 7.1 Name of the food

7.1.1 The designation "virgin fat" or "virgin oil" may only be used for individual fats or oils conforming to the definition in Section 3.2 of this Standard.

7.1.2 The designation "cold pressed fat" or "cold pressed oil" may only be used for individual fats or oils conforming to the definition in Section 3.3 of this Standard.

## **7.2 Labelling of non-retail containers**

Information on the above labelling requirements shall be given either on the container or in accompanying documents, except that the name of the food, lot identification and the name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.



**APPENDIX****OTHER QUALITY AND COMPOSITION FACTORS**

These quality and composition factors are supplementary information to the essential composition and quality factors of the standard. A product, which meets the essential quality and composition factors but does not meet these supplementary factors, may still conform to the standard.

**1- QUALITY CHARACTERISTICS****Color:**

Characteristic of the designated product.

**Odor and taste:**

Characteristic of the designated product and free from foreign and rancid odor and taste.

	<b><u>Maximum level</u></b>
Matter volatile at 105°C:	0.2% m/m
Insoluble impurities:	0.05 % m/m
Soap content:	0.005 % m/m
Iron (Fe):	
Refined fats and oils	2.5 mg/kg
Virgin fats and oils	5.0 mg/kg
Cold pressed fats and oils	5.0 mg/kg
Copper (Cu):	
Refined fats and oils	0.1 mg/kg
Virgin fats and oils	0.4 mg/kg
Cold pressed fats and oils	0.4 mg/kg

**Acid value:**

Refined fats and oils	0.6 mg KOH/g fat or oil
Virgin fats and oils	4.0 mg KOH/g fat or oil
Cold pressed fats and oils	4.0 mg KOH/g fat or oil

**Peroxide value:**

Virgin oils and cold pressed fats and oils	up to 15 milliequivalents of active oxygen/kg oil
Other fats and oils	up to 10 milliequivalents of active oxygen/kg oil

**2- METHODS OF ANALYSIS AND SAMPLING**

Taking samples should be related to the Gulf standard mentioned in section 2.2.

**Determination of acid value (AV)**

According to IUPAC 2.201 or ISO 660: 1996.

**Determination of peroxide value (PV)**

According to IUPAC 2.501 (as amended), AOCS Cd 8b - 90 (97) or ISO 3961: 1998.

**Determination of matter volatile at 105°C**

According to IUPAC 2.601 or ISO 662: 1998.

**Determination of insoluble impurities**

According to IUPAC 2.604 or ISO 663: 1999.

**Determination of soap content**

According to BS 684 Section 2.5.

**Determination of iron**

According to IUPAC 2.631, ISO 8294: 1994 or AOAC 990.05.

**Determination of copper**

According to IUPAC 2.631, ISO 8294: 1994 or AOAC 990.05