

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

Final draft:

GSO5/FDS.../2013

CANNED STONE FRUITS

Prepared by:

Gulf technical committee for sector standards of
Food and agriculture products

This document is a draft Gulf standard circulated for comments, it is therefore, subject to alteration and modification, and may not be referred as a Gulf standard, until approved by the Board of Directors.

ICS: 67.140.20

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” Gulf technical committee for sector standards of food and an agricultural product "has prepared this Standard. The Draft Standard has been prepared by 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 a Gulf (Standard / Technical Regulation) by GSO Board of Directors in its meeting No.(),held on
// H , // G.

CANNED STONE FRUITS

1. SCOPE

This Standard applies to canned stone fruits of the genus *Prunus*, as defined in Section (3.1.1) below, and offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

2. Complementary Standards:

2.1 GSO 21 "Hygienic regulation for food plants and their personal".

2.2 GSO 1791 "Three piece steel round cans used for canning food stuffs".

2.3 GSO 9 "Labeling of prepackaged food stuffs".

2.4 GSO 382 "Maximum limits for pesticide residues in agricultural food products - Part 1."

2.5 GSO 382 "Maximum limits for pesticide residues in agricultural food products - Part 2."

2.6 GSO 988 "Limits of radio nativity levels permitted in foods stuff part 1".

2.7 GSO 998 "Method for detection of permissible radionuclides limits in food part 1:

Gamma spectrometry analysis A – Cs – 134, Cs – 137".

2.8 GSO 1025 "Bottled drinking water".

2.9 GSO "packing media for canned fruits".

3. DESCRIPTION

3.1 PRODUCT DEFINITION

3.1.1 Canned stone fruits is the product:

3.1.1.1 prepared from fresh or frozen or previously canned, mature stone fruits of commercial canning varieties of the genus *Prunus*, stemmed, pitted or un-pitted, and conforming to the characteristics of the stone fruits suitable for human consumption;

3.1.1.2 packed with or without a suitable liquid packing medium, sugars and/or other carbohydrate sweeteners such as honey, and other permitted ingredients as indicated in Section (5.1.2) below; and:

3.1.1.3 Processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

3.1.2 Definition of Defects

3.1.2.1 **Blemishes** - means surface discoloration and spots arising from physical, pathological, insect or other agents that definitely contrast with the overall color and which may penetrate into the flesh. Examples include bruises, scab and dark discoloration.

3.1.2.2 **Crushed or broken** - considered a defect only in whole or halved canned fruits in liquid media pack; means a unit which has been crushed to the extent that it has lost its normal shape (not due to ripeness) or has been severed into definite parts. Halves partially split from the edge to the pit cavity and whole apricots split along the suture are not considered broken. All portions that collectively equal the size of a full size unit are considered one unit in

applying the allowance herein. In the case of plums and cherries blemishes should not seriously affect the appearance of the products.

3.1.2.3 **Harmless extraneous material** - means any vegetable substance (such as, but not limited to, a leaf or portion thereof, or a stem) that is harmless and which tends to detract from the appearance of the product.

3.1.2.4 **Peel** - considered as a defect except in “Unpeeled” styles; means peel that adheres to the fruit flesh or is found loose in the container.

3.1.2.5 **Pit (or stone) material** - considered a defect in all styles except whole; means whole pits and pieces that are hard and sharp.

3.1.2.6 **Split** (cherries and plums) - any split that seriously affect the appearance of the product.

3.1.2.7 **Trim** - considered a defect only in whole and halved canned fruits in liquid media packs. The trimming must be excessive and includes serious gouges (whether due to physical trimming or other means) on the surface of the units which definitely detract from the appearance.

3.2 SPECIES

The following species may be used:

Apricot - *Prunus armeniaca* L.

Peach - *Prunus persica* L.

Plum - *Prunus domestica* L.

greengage - *Prunus italica* L.

Mirabelle or damson - *Prunus insititia* L.

cherry plum - *Prunus cerasifera* Ehrh.

sweet cherry including Bigarreaux - *Prunus avium* L.

sour cherry including grottoes - *Prunus cerasus* L., var. *austera* L.

3.3 VARIETAL TYPE

Distinct varietal types should be designated for peaches, plums and cherries.

3.3.1 Peach

3.3.1.1 Type by the ease of separation of pit

- **Clingstone** - where the pit adheres to the flesh; or
- **Freestone** - where the pit separates readily from the flesh.

3.3.1.2 Type by color

- **Green:** varietal types in which the predominant color of the flesh of the ripe fruit ranges from pale green to green when fully ripe;

- **Red:** varietal types in which the predominant color of the flesh of the ripe fruit ranges from pale yellow to orange red and with variegated red coloring other than that associated with the pit cavity;
- **White:** varietal types in which the predominant color of the flesh of the ripe fruit ranges from white to yellow-white; and
- **Yellow:** varietal type in which the predominant color of the flesh of the ripe fruit ranges from pale yellow to rich red orange.

3.3.2 Plum

3.3.2.1 Yellow Plums;

3.3.2.2 Red Plums;

3.3.2.3 Purple Plums;

3.3.2.4 Greengages;

3.3.2.5 Cherry Plums;

3.3.2.6 Mirabelle's;

3.3.2.7 Quashes;

3.3.3 Cherries

3.3.3.1 Sweet Light (Bigarreaux).

3.3.3.2 Sweet Dark;

3.3.3.3 Sour (Griottes);

3.4 STYLES

3.4.1 Peaches

3.4.1.1 Whole – un-pitted or pitted whole fruit.

3.4.1.2 Halves - pitted and cut into two approximately equal parts.

3.4.1.3 Quarters - pitted and cut into four approximately equal parts.

3.4.1.4 Slices - pitted and cut into wedge shaped sectors.

3.4.1.5 Dices - pitted and cut into cube-like parts.

3.4.1.6 Pieces (or mixed pieces or irregular pieces) - pitted and comprising irregular shapes and sizes.

3.4.1.7 In addition, solid pack of apricots may be prepared using a combination of both peeled and unpeeled apricots in the same pack.

4. Requirements:

The following shall be met in the Canned stone fruits:

- 4.1 the stone fruits prepared for canning shall be completed growth and maturity and have distinctive sensory properties of each class.
- 4.2 Fruits of stone fruits used for canning should be good solid and free from any Damage, tender and also free from insect or fungietc. damage.
- 4.3 the fruits shall be fairly free from porosity or any fermentation or analysis in its tissues or components
- 4.4 It shall be free from any foreign taste or odor.
- 4.5 The color of the product should be normal and typical especially for the Variety
- 4.6 The water used in packaging conforms to the GSO standard mentioned in item (2.8).
- 4.7 All raw materials and food additives used in manufacturing the product shall be comply with the relevant GSO standard.
- 4.8 The product shall be manufactured and canning according to hygienic conditions complying with GSO standard mentioned in item (2.1).
- 4.9 Pesticide residues content shall not exceed what is stated in with GSO standard mentioned in item (2.4) (2.5).
- 4.10 Radio activity levels in the product shall not exceed what is stated in GSO standard mentioned in item (2.6)(2.7).
- 4.11 the products covered by the provisions of this standard shall comply with those maximum levels for heavy metals established by the GCC Standardization Organization for these products.

5. ESSENTIAL COMPOSITION AND QUALITY FACTORS

5.1 COMPOSITION

5.1.1 Basic Ingredients

Stone fruits as defined in Section (3.1.1) and liquid packing medium appropriate to the product.

5.1.2 Other Permitted Ingredients

- Spices;
- Vinegar.

5.1.3 Packing Media

You can refer to GSO mentioned in (2.9).

5.2 QUALITY CRITERIA

Canned stone fruits shall have normal flavor, odor and color and shall possess a texture characteristic of the product. The product shall be substantially free from pits or pieces of pit if greater than 2 mm in dimension, except in the case that the product is un-pitted.

5.2.1 Other Quality Criteria

5.2.1.1 Color

The color of the product, except for that of artificially colored canned plums or cherries should be normal for the varietal type of the fruit used. Canned stone fruit containing special ingredients should be considered to be of characteristic color when there is no abnormal discoloration for the respective ingredient used.

Portions of peaches which are obviously near or part of the pit cavity and which after canning may become slightly discolored are considered to be normal characteristic color.

5.2.1.2 Flavor

The product should have a normal flavor or odor free from flavors and odors foreign to the product. The product with special ingredients should have a flavor characteristic of that imparted by the fruit canned and the other substances used.

5.2.1.3 Texture

The canned fruit should be reasonably fleshy of uniform texture and may be variable in tenderness but should neither be mushy nor excessively firm.

5.2.1.4 Uniformity of Size

The fruit should be reasonably uniform in size

5.2.1.5 Defects and Allowances

The product should be substantially free from defects such as extraneous material, pit (stone) material, peel (in peeled styles only), blemished units, and broken units. Certain common defects should not be present in amounts greater than the following limitations:

(a) Canned Apricots Defects

	Maximum Limit in Drained Weight	
	Liquid Media Packs	Solid Pack
Blemish and Trim	30% by count	3 units per 500 g
Broken (whole, halves)	15% by count	not applicable
Total of the foregoing defects	35% by count	Not applicable
Peel (average in peeled styles only)	Not more than 6 cm ² aggregate area per 500 g	Not more than 12 cm ² aggregate area per 500 g
Harmless extraneous material	2 pieces per 500 g	3 pieces per 500 g
Pit or pit material (average)	1 pit or its equivalent ³ per 500 g	1 pit or its equivalent ³ per 500 g

(b) Canned Peaches Defects¹

	Maximum Limit in Drained Weight	
	Liquid Media Packs	Solid Pack
Blemish and Trim	30% by count	3 units per 500 g
Broken (whole, halves, quarters)	5% by count	not applicable
Total of the foregoing defects	32% by count	Not applicable
Peel (average)	Not more than 15 cm ² aggregate area per kg	Not more than 30 cm ² aggregate area per kg
Pit or pit material (average)	1 pit or its equivalent ³ , per 5 kg	1 pit or its equivalent ³ , per 5 kg

(c) Canned Peach / Canned Cherries

Defects	Maximum Limit in Drained Weight
Blemish	30% m/m
Broken (whole, halves)	25% m/m
Total of the foregoing defects	35% m/m
Extraneous plant material	1 piece per 200 g (based on averages)
Loose pits (whole)	3 per 500 g (based on averages)
Pit or pieces of pits (whole, halves)	2 per 500 g (based on averages)

6. CLASSIFICATION OF “DEFECTIVES”

A container that fails to meet one or more of the applicable quality requirements, as set out in Sections (5.2.1.1) through (5.2.1.5) (except peel and pit material which are based on an average), should be considered as a “defective”.

7. FOOD ADDITIVES

³ one pit for this allowance is: one whole pit: or one large piece, the equivalent of one – half pit or larger: or up to three small hard pieces, the total mass of which is smaller than one – half pit.

7.1 ACIDIFYING AGENTS

INS No.	Name of the Food Additive	Maximum Level
260	Acetic acid	Limited by GMP
270	Lactic acid	
296	Malice acid	
330	Citric acid	
334	Tartaric acid	1300 mg/kg

7.2 ANTIOXIDANTS

INS No.	Name of the Food Additive	Maximum Level
300	L-Ascorbic acid	Limited by GMP

7.3 COLOURS

INS No.	Name of the Food Additive	Maximum Level
127	Erythrosine (for sweet cherries only)	200 mg/kg of the final product
129	Allura Red AC (for canned “Red” or “Purple” plums only)	

7.4 FLAVOURINGS

Natural and artificial flavor's except those which reproduce the flavor of the respective stone fruit	Limited by GMP
---	----------------

8. WEIGHTS AND MEASURES**8.1 FILL OF CONTAINER****8.1.1 Minimum Fill**

The container should be well filled with the product (including packing medium) which should occupy not less than 90% of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20^o C which the sealed container will hold when completely filled.

(a) Canned Apricots

In heavily sweetened fruit juice(s) or nectar(s) “heavy” and “extra heavy” syrup	54%
In lightly sweetened fruit juice(s) or nectar(s) “light” and “extra light” syrup	55%
Solid Pack	82%
Whole fruits	46%

(b) Canned Peaches

	Clingstone type	Freestone type
In “heavy” and “extra heavy” syrup	57%	54%
In “light” and “extra light” syrup	59%	56%
Solid Pack	84%	82%
Whole fruits	52%	

(c) Canned Plum

Whole styles	50%
Halves styles	55%

(d) Canned Cherries

All varieties	53%
---------------	-----

9. LABELLING

Without prejudice to what is mentioned in GSO standard mentioned in (2.3) the following information shall be declared on the labels:

9.1 NAME OF THE PRODUCT

9.1.1 The name of the product shall be the name of the fruit used as defined in Section (3.2).

9.1.2 The name of the product should include:

(a) the varietal type as appropriate:

Peach: “freestone” or “clingstone” as appropriate; and “yellow”, “white”, “red” or “green” as appropriate.

Plum: “yellow” or “golden”, “red” or “purple” as appropriate; or specific name of the cultivars or “Greengage plums”, “Damson plums”, “Cherry plums”, “Mirabelle plums”, for the appropriate cultivars specified in Section (3.3.2) of this Standard, except that the names “Greengages”, “Damsons”, “Mirabelle’s” and “Quashes” need not be accompanied by the word “plums” in countries where its omission would not mislead or deceive the consumer.

Cherry: the name of the cherry product should include the varietal type as appropriate/or the specific name of the cultivars specified in Section (3.3.3), except that the names “bigarreaux” and “grottos” need not be accompanied by the word “cherries” in countries where its omission would not mislead or deceive the consumer.

(b) The name should include a declaration of any flavoring which characterizes the product, e.g. “with X”, when appropriate.

9.1.3 The following, as appropriate, should be declared as part of the name or in close proximity to the name:

(a) The style as defined in Section (3.4) of the Standard.

(b) A declaration of whether the fruits are “peeled” or “unpeeled”.

10. Packaging, transportation and storage:

The following shall be met during packing, transportation and storage:

10.1 The containers shall be clean, hygienic, suitable, dry and hermetically sealed. In case of using tin cans it shall comply with GSO standard mentioned in item (2.2).

10.2 Transportation shall be carried out in such a way to protect the container from mechanical damage and contamination.

10.3 The containers shall be stored in well ventilated stores far away from sources of heat and contamination.

TECHENICAL TERMS

المصطلحات الفنية

Caned Stone Fruit	الفاكهة ذات النواة الحجرية المعلبة
Harmless extraneous material	المواد الغريبة غير الضارة
Blemishes	التشوهات
Crushed or broken	المتهدكة أو المهروسة
Peel	القشور
Pit (or stone) material	النواة (المواد الصلبة)
Split	المجزأة
Food additives	المضافات الغذائية
Trim	بقايا التشذيب
Un-pitted	غير منزوعة النواة
Pitted	منزوعة النواة
Clingstone	نواة ملتصقة
Freestone	نواة غير ملتصقة
Packing media	وسط التعبئة

References

Codex stander for caned
stone fruit NO 242-2003

مواصفة لجنة دستور الأغذية (الكودكس)
للفواكه ذات النواة الحجرية المعلبة رقم ٢٤٢/٢٠٠٣