DKS 2686:2016

ICS 67.160

# **Canned fruits - Specification**

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The following organizations were represented on the Technical Committee:

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Victoria Juice Co Itd

Kevian Kenya Ltd

Government chemist

Consumer Information Network

Premier Foods Ltd.

Pest control products board

Kenya Industrial Research and Development Institute

Ministry of Health- Food Safety Unit

Ministry of Agriculture, Livestock and Fisheries

Kenya plant health inspectorate services

National Public Health Laboratory services

Coca-Cola East Africa Ltd

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Horticultural Crops Directorate

Sky foods Itd

Njoro Canning Factory

Kenya Bureau of Standards — Secretariat

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# **KENYA STANDARD**

DKS 2686:2016 ICS 67.160

# **Canned fruits - Specification**

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P.O. Box 2138, Nakuru-20100 Tel.: (+254 051) 210553, 210555 This Kenya Standard was developed by the Technical Committee on Processed Fruits and Vegetables under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

The standard stipulates the essential compositional, quality, microbiological, contaminants and labelling requirements for fruit juices, fruit nectars, concentrated fruit juices and all other products relating and similar to fruit juice as defined in this standard.

In the preparation of this standard useful information was derived from members of the technical committee, Codex I standard for canned fruits (CODEX STAN 319-2015) and local manufacturers

This standard replaces the following standards:

Canned Mangoes (KS CODEX STAN 159-1987) Canned Pears (KS CODEX STAN 61-1981)

# **KENYA STANDARD**

# **Canned Fruits- Specification**

#### SCOPE

This Kenya Standard specifies requirements for certain canned fruits, as defined in Section 2 below t, intended for direct human consumption. The products covered in this standard include canned mango and canned pear. It does not apply to the product when indicated as being intended for further processing.

This Standard does not cover canned applesauce, canned berry fruits, canned citrus fruits, and canned stone fruits which are covered by other Codex standards.

#### 2. Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

KS EAS 38, labeling of prepackaged foods

KS EAS 39, Code of practice for hygiene in the food and drink manufacturing industry

KS EAS 12, Drinking (Potable) water- Specification

KS EAS 803: 2013. Nutrition labeling - Requirements

KS EAS 804:2013 Claims on foods – Requirements

KS EAS 805: 2013 Use of Nutrition and health claims

KS CAC RCP 3; recommended international code of hygienic practice for dried fruits

Codex Stan 195, General Standard for Food Additives

Codex Stan 193, General Standard for contaminants

KS 38, Plantation (mill) white sugar — Specification

KS 05-344, Specification for honey.

KS EAS 5, Refined white sugar — Specification

KS EAS 217-2, Methods for the microbiological examination of foods - Part 2: General Guidance for the Enumeration of Micro-Organisms-Colony Count Technique at 30°C

KS EAS 217-8, Methods for microbiological examination of foods -Part 8: Enumeration of yeasts and moulds

KS ISO 7251, Microbiology of food and animal feeding stuffs - Horizontal method for the detection and enumeration of presumptive Escherichia coli - Most probable number technique

KS ISO 763, Fruits and vegetable products - Determination of ash insoluble in hydrochloric acid

KS ISO 2448, Fruit and vegetable products - Determination of ethanol content

KS ISO 2172, Eruit juice - Determination of soluble solids content - Pyknometric method

KS ISO 2173, Fruit and vegetable products - Determination of soluble solids - Refractometric method

KS ISO 5522, Fruits, vegetables and derived products - Determination of total sulphur dioxide content

## 3. Descriptions

# 3.1. Product definition

#### 3.1.1 Canned fruits are the products:

(1) Prepared from substantially sound fruits, fresh, frozen, thermally processed, or processed by other physical methods, as defined in the corresponding Annexes, having reached appropriate maturity for processing. None of their

essential characteristic elements are removed from them. They undergo operations such as washing, peeling, coring, stemming, grading, cutting, etc., depending on the type of product;

(2)

- (a) Packed with or without a suitable liquid packing medium including other optional ingredients as indicated in Section 3.1.2;
- (b) vacuum packaged with packing medium that does not exceed 20% of the product's net weight and when the container is sealed in such conditions as to generate an internal pressure in accordance with good manufacturing practices <sup>1</sup>; and
- (3) Processed in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage and to ensure product stability in normal storage conditions at ambient temperature.

#### 3.1.2 Canned mango

Canned mango is the product conforming to the characteristics of the fruits of *Mangifera indica* L and from which peel has been removed.

#### 3.1.3 Canned pear

Canned pear is the product conforming to the characteristics of the fruit of *Pyrus communis* or *Pyrus sinensis*, which are peeled or unpeeled, cored, and stemmed, except that whole pears may not need to be peeled, cored, or stemmed and half pears may not need to be peeled

#### 3.2 Styles and Sizing

In addition to the styles and sizes defined in the corresponding Annexes, any other styles should be permitted as indicated in Section 3.2.1.

#### 3.2.1 Other Styles

Any other presentation of the product should be permitted provided that the product:

- (1) is sufficiently distinctive from other forms of presentation laid down in the Standard;
- (2) meets all relevant requirements of the Standard, including requirements relating to limitations on defects, drained weight, and any other requirements which are applicable to that style which most closely resembles the style or styles intended to be provided for under this provision; and
- (3) is adequately described on the label to avoid confusing or misleading the consumer.

#### 3.2.2 Varietal Type

Any commercially cultivated variety or type suitable for canning may be used.

# 5. Essential composition and quality factors

#### 5.1. Composition

#### 5.1.1. Basic Ingredients

Fruits as defined in Section 3 and the corresponding Annexes and liquid packing medium appropriate to the product as per Section 5.1.2.1 below.

#### 5.1.1.1. Other Permitted Ingredients

For Canned Mangoes;

Spices and aromatic plants (in accordance with the relevant Codex standards for spices and culinary herbs), spice oils.

For Canned Pears;

(a) Lemon juice (single strength or concentrated) added as an acidulant or flavour enhancer; and

(b) Spices and aromatic plants (in accordance with the relevant Codex standards for spices and culinary herbs), spice oils.

#### 5.1.2.1 Packing Media

In accordance with the Guidelines for Packing Media for Canned Fruits (CAC/GL 51-2003)

The cut-out strength for any syrup packing medium shall be determined on average, but no container may have a soluble solids (°Brix) value beyond the next category of the medium °Brix.

#### 5.2 Quality Criteria

## 5.2.1 Colour, Flavour and Texture

Canned fruits shall have normal colour, flavour and odour of canned fruits, corresponding to the type of fruits, packing medium, and added optional ingredients used and shall

and maintain the product's essential texture, physical, chemical, organoleptic, and nutritional characteristics of the fruit(s).

Creamed corn should present a fine but not excessively fluid consistency, or which may be dense and thick but not excessively dry or pasty, so that after two minutes a moderate but not excessive separation of free liquid can be seen

#### 5.2.1.1 Colour

Canned mangoes containing optional ingredients shall be considered to be of characteristic colour when there is no abnormal discolouration of the respective ingredient used.

Canned pears shall have normal colour (except for coloured pears as listed in Section 6 of the Standard). A slight pink discoloration should not be regarded as a defective.

#### 5.2.1.2 Flavour

Canned mangoes with optional ingredients shall have the characteristic flavour of the mangoes and the other substances used.

#### **5.2.1.3 Texture**

The mangoes shall have degree of fleshiness and fibre characteristic of the variety. They may be variable in tenderness but shall neither be mushy nor excessively firm in regular pack, and shall not be excessively firm in solid packs.

#### 5.2.2 Uniformity

#### 5.2.2.1 Uniformity of Size for canned Mangoes

**5.2.2.1.1** *Halves styles* - Most of the units shall be reasonably uniform in size. Where a unit has broken within the container, the combined broken pieces are considered as a single unit.

#### Tolerances for uniformity of size for halves

Non uniformity of size for halves	Regular packs	Solid packs	
Non dimonnity of Size for haives	Less than 30% by count	Less than 30% by count	

#### 5.2.2.2 Uniformity of Size for canned Pears

**5.2.2.2.1** Whole", "halves", "quarters" - 95% by count of units that are most uniform in size, the weight of the largest unit should be no more than twice the weight of the smallest unit, but if there are less than 20 units, one unit may be disregarded. Where a unit has broken in the container, the broken pieces are reassembled to approximate a single unit of the appropriate style.

#### 5.2.3 Defects and Allowances

Canned Fruits should be substantially free from defects. Certain common defects should not be present in amounts greater than the limitations fixed in the corresponding Annexes.

#### 5.2.3.1 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in Section 5.2 (except those based on sample averages), should be considered as a "defective".

# 5.2.3.2 Lot Acceptance

A lot should be considered as meeting the applicable quality requirements referred to in Section 3.2 when:

- (1) for those requirements which are not based on averages, the number of "defectives", as defined in Section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5; and
- (2) The requirements of Section 3.2, which are based on sample averages, are complied with.

# 5.2.4.2 Other permitted ingredients

Packing media may contain ingredients subject to labelling requirements of Section 8 and may include, but is not limited to:

#### 5.2.4.2.1 Sugars and Sweetening Agents

Sucrose, glucose (dextrose anhydrous) or fructose with less than 2 % moisture may be added only to products intended for sale to the consumer or for catering purposes.

### 5.2.4.2.2 Honey

The quality of honey used shall comply with KS 05-344, Specification for honey.

- **5.2.4.2.3** Tomato puree.
- **5.2.4.2.4** Regular or concentrated fruit juice;
- **5.2.4.2.5** Vinegar;
- **5.2.4.2.6** Spices and aromatic herbs/plants or extracts thereof, seasoning

Salt and spices and aromatic herbs (and their natural extracts) may be added to

# 5.4.2.7 Oil

#### 5.1.2.8 Nutrients

For the purpose of product fortification, essential nutrients such as vitamins and minerals may be added to products. Such additions shall comply with national legislation established for this purpose.

**NOTE**: any optional ingredients added are subject to ingredient labelling requirements (see Clause 10)

#### 6. FOOD ADDITIVES

Only those food additive classes listed below and in the corresponding Annexes are technologically justified and may be used in products covered by this Standard. Within each additive class only those food additives listed below, or referred to, may be used and only for the functions, and within limits, specified.

- 6.1 Antioxidants, and firming agents may be used in canned mangoes in accordance with Tables 1 and 2 of the General Standard for Food Additives (CODEX STAN 192-1995) in Food Category 04.1.2.4 (Canned or bottled (pasteurized) fruit) or listed in Table 3 of the General Standard are acceptable for use for foods conforming to this Annex
- **6.2** In canned pear, Colours are (permitted only in special holiday packs) used in accordance with Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in Food Category 04.1.2.4 (Canned or bottled (pasteurized) fruit) or listed in Table 3 of the General Standard are acceptable for use for foods conforming to this Annex.
- **6.3** Flavourings used in canned pears should comply with the Guidelines for the Use of Flavourings (CAC/GL 66-2008

#### 6.4 Colours

Only the colours listed below is permitted for use in canned mangoes.

INS No	Name of the Food Additive	Maximum Level
160a(i),a(iii),e, f	Carotenoids	200 mg/kg
160a(ii)	Carotene beta - vegetable	1,000 mg/kg
120	Carmines	200 mg/kg

#### 7. Contaminants

The products covered by this Standard shall comply with the maximum levels of the General Standard for Contaminants and Toxins in Food and Feed (CODEX STAN 193-1995).

#### 7.1 Pesticide residues

The products covered by this Standard shall comply with the maximum residue limits for pesticides established by the Codex Alimentarius Commission.

# 7.2 Heavy Metal Contaminants

The products covered by the provisions of this standard shall conform to those maximum limits for Heavy metals contaminants established by the Codex Alimentarius Commission for these products in table 5 below

	CONTAMINANTS	MAXIMUM LEVEL	Method of Test
Arsenic	(As)	0.2 mg/kg	AOAC 942.17
Lead	(Pb)	0.3 mg/kg	AOAC 972.25 /
			KS ISO 6733
Copper	(Cu)	5.0 mg/kg	AOAC 999.10
Zinc	(Zn)	5.0 mg/kg	AOAC972.25 /
			KS ISO 5738
Iron	(Fe)	15 mg/kg	AOAC 999.10
Tin	(Sn)	250 mg/kg	AOAC 999.10
Mercury	(Hg)	0.01	AOAC 999.10
Cadmium	(cd)	0.05 mg/kg	AOAC 999.11/ KS ISO 6732

**TABLE 5- Contaminants** 

# 7.3 Other contaminants

The products covered by the provisions of this standard shall conform to those maximum levels for contaminants established by the Codex Alimentarius Commission for these products

# 8. Hygiene

### 8.1

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* (CAC/RCP 1-1969), *Code of Hygienic Practice for Low and Acidified Low-Acid Canned Foods* (CAC/RCP 23-1979) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

**8.2** The products shall conform to microbiological criteria in Table 6 and those provided in KS 2455; Food Safety - general standard

Table 6 - Microbiological limits for canned fruits

SL No.	<u>Microorganism</u>	<u>Limit</u>	Method of Test
i.	Total plate count, cfu/g, max	<u>50</u>	KS ISO 4833

ii.	Escherichia coli, (cfu/g), max	<u>Absent</u>	KS ISO 7251
iii.	Staphylococcus aureas, (cfu/25g)	<u>Absent</u>	KS ISO 6888-1
iv.	Shigella, cfu/25g	<u>Absent</u>	KS ISO4833
V.	Salmonella. Cfu/25g	<u>Absent</u>	KS ISO 6579
vi.	Colostridium botulinum, cfu/25g	<u>Absent</u>	KS ISO 4833
vii.	Vibrio cholera, cfu/25g	<u>Absent</u>	KS ISO 4833
viii.	Moulds (cfu/25g), max	<u>Absent</u>	KS ISO 7954

# 9.3 WEIGHTS AND MEASURES

### 9.1 Fill of Container

#### 9.1.1 Minimum Fill

The container should be well filled with the product (including packing medium) which should occupy not less than 90% (minus any necessary head space according to good manufacturing practices) of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20oC which the sealed container will hold when completely filled. This provision does not apply to vacuum packaged vegetables. This shall be carried out in accordance to CAC/RM 46-1972 (Codex General Methodfor processed fruits and vegetables) and ISO 90.1:1999

## 9.1.2 Classification of "Defectives"

A container that fails to meet the requirement for minimum fill of Section 7.1.1 should be considered as a "defective".

#### 9.1.3 Lot Acceptance

A lot should be considered as meeting the requirement of Section 7.1.1 when the number of "defectives", as defined in Section 7.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

#### 9.1.4 Minimum Drained Weight

**7.**1.4.1 The drained weight of the product should be not less than the percentages indicated in the corresponding Annexes, calculated on the basis of the weight of distilled water at 20oC which the sealed container will hold when completely filled.

Table 7 - Drained weight requirements for Canned Asparagus

Product	duct Minimum Drained Weight (%)	
Canned Mangoes:		
a) Regular packs	50	
b) Solid pack	70	
Canned Pears:	52 to 62.5	
a) Whole style	46% to 53%	AOAC 968.30
b) Halves, quarters, slices, pieces	46% to 50%	
c) Diced	50% to 56%	

# 9.1.5 Packaging

The products covered by the provisions of this standard shall be packaged in clean food grade packaging material to protect the product from contamination. The packaging materials and process shall not contaminate the product or otherwise affect its technological, nutritional or sensory quality.

# 10. Labelling

In addition to the Standard for the Labelling of Pre-packaged Foods (KS EAS 38), the following specific provisions apply:

### 10.1 Name of the product

- **10.1.1** The names of the canned fruits shall be those defined in clause 3.
- **10.1.2** When the fruits are sized, the size (or sizes when sizes are mixed), as defined in the corresponding Annexes, may be declared as part of the name or in close proximity to the name of the product.
- 10.1.3 The name of the product shall include the indication of the packing medium as set out in Section 3.2.2
  - (a) For canned fruits packaged in accordance with Section 3.2.2
  - (b) The words "vacuum packaged" shall be affixed to the commercial designation of the product or in close proximity.
- 10.1.4 The name of the product shall the include indication of the style as set out in Section 3.2
- **10.1.5 Other styles** If the product is produced in accordance with the other styles provision (Section 3.2.1), the label should contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.
- **10.1.6** If an added ingredient, as defined in Section 3.1.2, alters the flavour characteristic of the product, the name of the food shall be accompanied by the term "flavoured with X" or "X flavoured" as appropriate. **10.1.7**. The name of the product may include the varietal type
- **10.1.8** In the case of mixed fruits; List of the names of the various vegetables species used in the mix shall be listed in descending order of the proportions

#### 10.2 Additional Requirements

#### 10.2.1 Drain weight declaration content-

Canned fruits must be labelled with a declaration of "Drained weightr content".

#### 10.1.2.6 Ingredient declaration

**10.2.2 Nutrition declaration** - Any added essential nutrients declaration should be labelled in accordance with the Guidelines on Nutrition Labelling (CAC/GL 2-1985), General Guidelines on Claims (CAC/GL 1-1979) and the CAC/GL 23-1997; Guidelines for Use of Nutrition and Health Claims

#### 10.2.3 Tomato juice containing spices and/or aromatic herbs

Where tomato juice contains spices and/or aromatic herbs in accordance with Section 3.1.2(f), the term "spiced" and/or the common name of the aromatic herb shall appear on the label near the name of the juice.

#### 10.2 Non-retail containers

Information for non-retail containers not destined to final consumers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, net contents and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container, except that for tankers the information may appear exclusively in the accompanying documents.

However, lot identification, and the name and address of the manufacturer, packer, distributor or importer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

- **10.3** List of Ingredients a complete list of ingredients including added syrup shall be declared on the label in descending order of proportion.
- **10.4 Net Contents** the net contents shall be declared by volume in metric units (*Systeme Internationale*).

- **Name or business name and Address** of the manufacturer, packager, distributor, importer, exporter or vendor of the product, whichever may apply, shall be declared.
- 10.6 Instructions for use shall be declared
- 10.7 Storage conditions or conditions for use
- **10.8** Lot Identification each container shall be embossed or otherwise permanently marked in code or in clear identity the producing factory and the lot.
- 10.9 Place/country of origin
- 10.8 Date of expiry
- 10.9 irradiation status, where applicable

# 11. Methods of sampling and test

The products covered by the provisions of this standard shall be tested using appropriate standard methods declared in this standard. Other test may be performed as per the methods given in the latest AOAC/ Codex/ ISO and other internationally recognized methods. Sampling shall be as described in the Standard, in the corresponding Annexes

CODEX STAN 319-2015 11

# **ANNEX A: Canned Mangoes**

#### A.1 Definition of Defects

(a) **Blemishes** - surface discolouration and spots arising from physical, pathological, insect or other agents that definitely contrast with the overall colour, and which may penetrate into the flesh. Examples include bruises, scab and dark discolouration.

- (b) **Crushed or mashed** 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. Partially disintegrated halves are not counted as broken. All portions that collectively equal the size of a full size unit are considered one unit in applying the allowance herein.
- (c) Peel considered as a defect. It refers to peel adhering to the pulp of the mango or found loose in the container.
- (d) Pit (or stone) material/fragment considered a defect in all styles except Whole. In Whole mangoes, the whole stone may be present inside the fruit but no loose or broken fragments shall be present beyond the allowances in the table under Section 2.2.7.
- (e) Harmless extraneous material means any vegetable substance (such as, but not limited to a leaf or portion thereof or a stem or portion thereof) that is harmless but which tends to detract from the appearance of the product.
- (f) Trim considered a defect only in halved and sliced canned mangoes in regular 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.

#### A.2 Allowances for Defects

The product shall be reasonably free from defects such as harmless extraneous material, pit (stone) material, blemished and trim, crushed or mashed, peel and spotted slices or chunks to the extent indicated below:

Defects	Regular packs	Solid packs
Blemishes and trim	30% by count	3 units per 500 g
Crushed or mashed	5% by weight	not applicable
Peel and or chunks	not more than 6 cm <sup>2</sup> aggregate area per 500 g	not more than 12 cm <sup>2</sup> aggregate area per 500 g
Pit or pit material (average) <sup>1</sup>	1/8 stone or equivalent per 500 g	1/8 stone or equivalent per 500 g
Harmless extraneous material	2 pieces per 500 g	3 pieces per 500 g

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#### ANNEX B: Canned Pears

#### **B.I Definition of Defects and Allowances**

- **B.1.1 Styles**
- **B.1.1.1 Whole -** "peeled stemmed" or "unstemmed" or "unpeeled stemmed" or "unstemmed" with cores removed "cored" or left in "not cored".
- **B.1.1.2.** Halves peeled or unpeeled, with stems and cores removed, and cut into two approximately equal parts.
- B.1.1.3 Quarters peeled or unpeeled and cut into four approximately equal parts.
- **B.1.1.4 Sliced -** peeled and cut into wedge-shaped sectors.
- **B.1.1.5 Diced -** peeled and cut into cube-like parts.
- B.1.1.6 Pieces or Irregular Pieces peeled and comprising irregular shapes and sizes.

#### **B.2.2 Definition of Defects**

- (a) Blemished and trimmed pear units blemished units with surface discoloration and spots that definitely contrast with the overall colour and which may penetrate into the flesh, such as bruises, scab, and dark discoloration. Trimmed units that have deep gouges, whether due to physical trimming or other means, and which definitely detract from the appearance; trimmed units are considered defects only in whole, halved, and quartered styles.
- (b) **Broken -** a unit severed in two or more parts should be considered as one unit when reassembled to the approximate size and shape of an average unit in the container.
- (c) **Core material** consisting of the seed cell, whether loose or attached, with or without seeds. For the purposes of calculating the defects allowance, all pieces of a core in the sample should be aggregated and pieces totalling approximately one-half of a core should be counted as one unit.
- (d) Harmless plant material stems or stalks and leaf (or similar vegetable material).
- (e) **Peel** peel that adheres to pear flesh or is found loose in the container.
- (f) Seeds any one pear seed or the equivalent in pieces of one seed that are not included in core material.

# **B.2.3 Allowances for Defects**

The product should be substantially free from defects such as harmless plant material, peel (in peeled styles), core material, blemished and trimmed units, seeds and broken units to the extent indicated below:

		Defects	Maximum Limits
			(i) Total, 20% by count; or 3 units per container when count is less than 10; provided the sample average is no more than 20%
(a)	Blemished and tri	mmed pear units	- but limited to -
			(ii) 20% by count blemished; or 2 units per container when count is less than 10; provided the sample average is no more than 10% for blemished.
(b) <b>Broken -</b> in "whole", "halves", and "quartered" styles only.		", "halves", and "quartered" styles only.	20% by count; or 2 units per container when count is less than 10; provided the sample average is no more than 10%.
(c)	(c) Core material (average) - except in "whole-not-cored" styles.		2 units per kg of total contents.
(d)	Harmless plant	(i) Stems or stalks (in styles in which the stem is customarily removed)	2 min and 2 km of total anytonta
	material	(ii) Leaf (or similar vegetable material)	3 pieces per 3 kg of total contents.
(e) <b>Peel</b> (Average) - except in "unpeeled" styles.		cept in "unpeeled" styles.	10 cm <sup>2</sup> (10 sq. cm.) aggregate area per kg of total contents.
(f)	(f) Seeds (average) - except in "whole-not-cored" styles.		8 per kg of total contents.

# DETERMINATION OF WATER CAPACITY OF CONTAINERS (CAC/RM 46-1972)

#### 1. SCOPE

This method applies to glass containers.

#### 2. **DEFINITION**

The water capacity of a container is the volume of distilled water at 20°C which the sealed container will hold when completely filled.

#### 3. PROCEDURE

- **3.1** Select a container which is undamaged in all respects.
- **3.2** Wash, dry and weigh the empty container.
- **3.3** Fill the container with distilled water at 20°C to the level of the top thereof, and weigh the container thus filled.

#### 4. CALCULATION AND EXPRESSION OF RESULTS

Subtract the weight found in 3.2 from the weight found in 3.3. The difference shall be considered to be the weight of water required to fill the container. Results are expressed as mI of water.

# **Sampling Plans**

The appropriate inspection level is selected as follows:

Inspection level I -**Normal Sampling** 

Disputes, (Codex referee purposes sample size), enforcement or need for better lot estimate Inspection level II -

# **SAMPLING PLAN 1 (Inspection Level I, AQL = 6.5)**

<b>N</b> ET WEIG	HT IS EQUAL TO OR LESS THAN	1 KG (2.2 LB)	
Lot Size (N)	Sample Size (n)	Acceptance Number (c)	
4,800 or less	6	1	
4,801 - 24,000	13	2	
24,001 - 48,000	21	3	
48,001 - 84,000	29	4	
84,001 - 144,000	38	5	
144,001 - 240,000	48	6	
more than 240,000	60	7	
NET WEIGHT IS GREATER	R THAN 1 KG (2.2 LB) BUT NOT	MORE THAN 4.5 KG (10 LB)	
Lot Size (N)	Sample Size (n)	Acceptance Number (c)	
2,400 or less	6	1	
2,401 - 15,000	13	2	
15,001 - 24,000	21	3	
24,001 - 42,000	29	4	
42,001 - 72,000	38	5	
72,001 - 120,000	48	6	
more than 120,000	60	7	
NET	WEIGHT GREATER THAN 4.5 KG	(10 LB)	
Lot Size (N)	Sample Size (n)	Acceptance Number (c)	
600 or less	6	1	
601 - 2,000	13	2	
2,001 - 7,200	21	3	
7,201 - 15,000	29	4	
15,001 - 24,000	38	5	
24,001 - 42,000	48	6	
more than 42,000	60	7	

CODEX STAN 319-2015 7

# **SAMPLING PLAN (Inspection Level II, AQL = 6.5)**

NET WEIGHT IS EQUAL TO OR LESS THAN 1 KG (2.2 LB)							
Lot Size (N)	Sample Size (n)	Acceptance Number (c)					
4,800 or less	13	2					
4,801 - 24,000	21	3					
24,001 - 48,000	29	4					
48,001 - 84,000	38	5					
84,001 - 144,000	48	6					
144,001 - 240,000	60	7					
more than 240,000	72	8					
NET WEIGHT IS GREATER THAN 1 KG (2.2 LB) BUT NOT MORE THAN 4.5 KG (10 LB)							
Lot Size (N)	Sample Size (n)	Acceptance Number (c)					
2,400 or less	13	2					
2,401 - 15,000	21	3					
15,001 - 24,000	29	4					
24,001 - 42,000	38	5					
42,001 - 72,000	48	6					
72,001 - 120,000	60	7					
more than 120,000	72	8					
NET WEI	NET WEIGHT GREATER THAN 4.5 KG (10 LB)						
Lot Size (N)	Sample Size (n)	Acceptance Number (c)					
600 or less	13	2					
601 - 2,000	21	3					
2,001 - 7,200	29	4					
7,201 - 15,000	38	5					
15,001 - 24,000	48	6					
24,001 - 42,000	60	7					
more than 42,000	72	8					

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