

**CODEX STANDARD FOR CANNED SWEET CORN<sup>1</sup>****CODEX STAN 18-1981****1. SCOPE**

For the purposes of this standard, canned sweet corn does not include corn-on-the-cob.

**2. DESCRIPTION****2.1 Product Definition**

Canned sweet corn is the product: (a) prepared from clean, sound kernels of sweet corn, conforming to the characteristics of *Zea mays* L.; (b) packed with a suitable liquid packing medium, which may be the creamy component from corn kernels, or with suitable nutritive sweeteners, seasoning ingredients, and other ingredients appropriate to the product, and (c) processed by heat, in an appropriate manner, before or after being sealed in a container, so as to prevent spoilage.

**2.2 Colour Type**

2.2.1 Golden or yellow

2.2.2 White

**2.3 Styles****2.3.1 Whole Kernel or Whole Grain or Cut Kernel**

Whole or substantially whole cut kernels packed with a liquid medium.

**2.3.2 Cream style**

Whole or partially whole cut kernels packed in a creamy component from the corn kernels and other liquid or other ingredients to form a product of creamy consistency.

**2.4 Types of Whole Kernel Pack**

Whole Kernel or Whole Grain or Cut Kernel style shall be designated as:

2.4.1 "Brine" or "Liquid Pack" when a salt (NaCl) brine liquid medium is used and except for normal headspace completes the fill of the container; or

2.4.2 "Vacuum pack" or "Vacuum packed" if the liquid packing medium does not exceed 20 percent of the total net weight of product and the container is closed under conditions creating a high vacuum in the container.

**3. ESSENTIAL COMPOSITION AND QUALITY FACTORS****3.1 Other Ingredients**

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<sup>1</sup> Formerly CAC/RS 18-1969 as amended.

3.1.1 Butter: if added it must amount to not less than 3% m/m of the final product;

3.1.2 Salt;

3.1.3 Sucrose, invert sugar;

3.1.4 Pieces of green or red peppers or mixture of both, or other vegetables, not exceeding in total 15% m/m of the product;

3.1.5 Starches - natural (native), physically or enzymatically modified - in cream-style corn in a quantity not more than sufficient to ensure a smooth consistency;

3.1.6 Starches - natural (native), physically or enzymatically modified - in whole kernel style, only when used with butter.

### 3.2 **Quality Criteria**

#### 3.2.1 **Colour**

The colour of the product shall be normal for the colour type. The product shall also be reasonably free from "off-variety" kernels. Canned sweet corn containing other permitted ingredients shall be considered to be of characteristic colour when there is no abnormal discolouration for the respective ingredients used.

#### 3.2.2 **Flavour**

Canned sweet corn shall have a normal flavour and odour free from flavours or odours foreign to the product and canned sweet corn with special ingredients shall have a flavour characteristic of that imparted by the sweet corn and the other substances used.

#### 3.2.3 **Texture**

The kernels in either cream style or whole kernel corn shall be of a reasonably tender texture offering some resistance when chewed but are not hard or tough.

#### 3.2.4 **Consistency - Cream Style**

The product shall possess a consistency which may be thin but not excessively thin or may be thick and heavy but not excessively dry or pasty, and from which (at the end of two minutes) there may be a moderate but not excessive separation of free liquid.

#### 3.2.5 **Defects**

With respect to all styles of corn, the finished product shall be substantially free from cob material, silk, husk, discoloured or blemished kernels, extraneous plant material, or other defects not specifically mentioned. Certain common defects shall not be present in amounts greater than the following limitations:

Whole Kernel or Whole Grain or Cut Kernel Corn Per 400 g drained weight		Cream Style Corn Per 600 g total contents
Pieces of Cob	1 cubic centimetre	1 cubic centimetre
Pieces of Husk	7 square centimetres	7 square centimetres
Blemished Kernels (Brown or black discoloured kernels or pieces)	7 kernels or pieces that are damaged and seriously damaged but not more than 5 may be seriously damaged	10 kernels or pieces that are damaged and seriously damaged but not more than 5 may be seriously damaged
	Per 28 g drained weight	Per 28 g drained weight
All silk	180 mm	150 mm

### 3.2.6 Classification of "Defectives"

A container that fails to meet one or more of the applicable quality requirements, as set out in sub-sections 3.2.1 through 3.2.5, shall be considered a "defective".

### 3.2.7 Acceptance

A lot will be considered as meeting the applicable quality requirements referred to in sub-section 3.2.6 when the number of "defectives", as defined in sub-section 3.2.6, does not exceed the acceptance number (c) of the appropriate Sampling Plan (AQL-6.5) in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (1969) (CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

## 4. FOOD ADDITIVES

### Maximum level of use

4.1	Monosodium glutamate	Limited by GMP
4.2	Citric acid	Limited by GMP
4.3	Vegetable gums as follows:	10g/kg of the additives specified under 4.3 to 4.5 inclusive, singly or in
4.3.1	Arabic gum	
4.3.2	Carrageenan	
4.3.3	Furcellaran	
4.3.4	Guar gum	
4.4	Alginates (Ca, K, Na, NH <sub>4</sub> )	
4.4.1	Propylene glycol alginate combination	
4.5	Modified starches, as follows:	
4.5.1	Acid-treated starches	
4.5.2	Alkali-treated starches	
4.5.3	Bleached starches	
4.5.4	Distarch phosphate (sodium trimeta-	

<sup>1</sup> May be used only in whole kernel style and only when butter is an ingredient.

phosphate treated) )

**Maximum level of use**

4.5.5	Distarch phosphate, phosphated	)	
4.5.6	Monostarch phosphate	)	
4.5.7	Starch acetate	)	10g/kg of the additives
4.5.8	Starch, hydroxypropyl	)	specified under 4.3 to 4.5
4.5.9	Distarch adipate, acetylated combination	)	inclusive, singly or in
4.5.10	Distarch glycerol, hydroxypropyl	)	
4.5.11	Oxidized starches	)	

**5. CONTAMINANTS**

Lead (Pb)	1 mg/kg
Tin (Sn)	250 mg/kg calculated as Sn

**6. HYGIENE**

6.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2 (1985) Codex Alimentarius Volume 1), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

6.2 To the extent possible in Good Manufacturing Practice, the product shall be free from objectionable matter.

6.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

6.4 The product shall have received a processing treatment sufficient to destroy all spores of *Clostridium botulinum*.

**7. WEIGHTS AND MEASURES**

**7.1 Fill of the Container**

**7.1.1 Minimum Fill**

The container shall be well filled with corn, and, except for "vacuum pack" corn, the product (including packing medium) shall occupy not less than 90% of the water capacity of the

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

### 7.1.2 **Classification of "Defectives"**

A container that fails to meet the requirement for minimum fill (90 percent container capacity) of sub-section 7.1.1 shall be considered a "defective".

### 7.1.3 **Acceptance**

A lot will be considered as meeting the requirement of sub-section 7.1.1 when the number of "defectives, as defined in sub-section 7.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan (AQL-6.5) in the Joint FAO/WHO Codex Alimentarius Sampling Plans for Prepackaged Foods (CAC/RM 42-1969) (see Codex Alimentarius Volume 13).

### 7.1.4 **Minimum Drained Weight**

7.1.4.1 The drained weight of Whole Kernel corn shall be not less than 61% of the weight of distilled water at 20°C which the sealed container will hold when completely filled.

7.1.4.2 The requirements for minimum drained weight shall be deemed to be complied with when the average drained weight of all containers examined is not less than the minimum required, provided that there is no unreasonable shortage in individual containers.

## 8. **LABELLING**

In addition to the requirements of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985 (Rev 1-1991), Codex Alimentarius Volume 1), the following specific provisions apply:

### 8.1 **The Name of the Food**

8.1.1 The name of the product shall include:

- (a) the designation: "corn", "sweet corn" or "sugar corn", as appropriate;
- (b) a declaration of any seasoning which characterizes the product, e.g. "with X", when appropriate;
- (c) if the colour type is white, the colour "white".

8.1.2 The following shall be so stated on the label as to be easily discernible to the consumer:

- (a) the type: "whole kernel", "whole grain", "cut kernel" or "cream style", as appropriate;
- (b) where the type is whole kernel, the style of pack: "in brine", "liquid pack", "vacuum pack" or "vacuum packed", as appropriate.

## 9. **METHODS OF ANALYSIS AND SAMPLING**

See Codex Alimentarius Volume 13.