

# CODEX ALIMENTARIUS COMMISSION



**Food and Agriculture  
Organization of  
the United Nations**



**World Health  
Organization**

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Agenda Item 5

CX/PFV 12/26/5-Add.1 (REV)  
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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME  
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES**

**26<sup>th</sup> Session  
Montego Bay, Jamaica,  
15 – 19 October 2012**

**Comments on the**

**PROPOSED DRAFT CODEX STANDARD FOR CERTAIN QUICK FROZEN VEGETABLES  
(revision of individual standards for quick frozen vegetables) (At Step 3)**

**Comments Submitted by: Brazil, Costa Rica, Cuba, Egypt, Ghana, India, Jamaica, Kenya**

## **BRAZIL**

In regard to the aforementioned draft standard, Brazil would like to congratulate USA efforts to revise the Codex Standards for quick frozen broccoli (Codex Stan 110-1981), Brussels sprouts (Codex Stan 112-1981), carrots (Codex Stan 140-1983), cauliflower (Codex Stan 111-1981), corn-on-the-cob (Codex Stan 133-1981), french fried potatoes (Codex Stan 114-1981), green beans and wax beans (Codex Stan 113-1981), peas (Codex Stan 41-1981), spinach (Codex Stan 77-1981) and whole kernel corn (Codex Stan 132-1981), and consolidate them in a single Standard for quick frozen vegetables, and to share some specific comments aiming harmonization for a better understanding and adoption of the Standard.

### **Specific Comments**

#### **Section 2.1 Product Definition (1)**

##### **Rationale**

The adopted text "This freezing process enables the vegetables to retain" may be elusive and/or not clear enough to precisely characterize that vegetables that undergoes freezing are not equivalent to fresh vegetables.

Taking into consideration that even quick freezing will decrease most or part of the nutritional value, and will impact on flavor, texture and appearance of fresh vegetables it is recommended to remove the stated text.

##### **Suggestion**

#### **2.1 Product Definition**

Quick frozen vegetables are the products:

- (1) ~~This freezing process enables the vegetables to retain their flavor, texture, appearance and nutritional value.~~

<b>Section 2.1 Product Definition (2)</b>
<p><b>Rationale</b></p> <p>The adopted terminology “essential elements” may not be clear enough to precisely distinguish vegetables that undergoes processing steps from those that are fresh.</p> <p>Taking into consideration that all processes will remove part or most of the essential elements from fresh vegetables an effort to improve the adopted terminology should be made.</p>
<p><b>Suggestion</b></p> <p><b>2.1 Product Definition</b></p> <p>Quick frozen vegetables are the products:</p> <p>(2) None of their <del>essential</del> <b>characteristic</b> elements <b>for final consumer use</b> are removed from them.....</p>

<b>Section 2.4.1 Other Styles</b>
<p><b>Rationale</b></p> <p>Clarification may be needed as the adopted value of 10% for stuck together IQF units may not be applicable to larger vegetables.</p>
<p><b>Suggestion</b></p> <p>To move the statement to those annexes that may be best referenced to it.</p>

<b>Section 6. Hygiene 6.1</b>
<p><b>Rationale</b></p> <p>As quick frozen vegetables may receive only mild processing and/or cooking prior to consumption, it is recommended to refer to the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53/2003).</p>
<p><b>Suggestion</b></p> <p>6.1 To make a specific reference to the Code of Hygienic Practice for Fresh Fruits and Vegetables (CAC/RCP 53/2003).</p>

<b>Section 7. WEIGHTS AND MEASURES 7.1 NET WEIGHT (footnote 4)</b>
<p><b>Rationale</b></p> <p>Sometimes glazing is made dipping the products into a solution prepared with water and other ingredients, such as salt and sugar.</p> <p>Such procedure will result in a solution of potable water and other ingredients and this should be clear in the document to avoid restrictions.</p>
<p><b>Suggestion</b></p> <p>Footnote 4: Glazing The application of a protective layer of ice formed at the surface of a frozen product by spraying it -with, or dipping it into potable water or potable water <b>solutions</b> with approved additives, as appropriate</p>

<b>Proposal on METHOD OF DETERMINATION of Drained deglazed weight</b>
<p><b>Rationale</b></p> <p>Products that undergo a frying process prior to freezing may not suit to this method.</p>
<p><b>Suggestion</b></p> <p>Include a section detailing the Scope of the method.</p>

<b>Proposal on METHOD OF DETERMINATION of Drained deglazed weight</b>
<p><b>Rationale</b></p> <p>After defrosting, water will be allowed to fill the product and such step will impact the final result.</p> <p>In that sense, the method should detail how to measure glaze removal prior to removal samples from the bath.</p>
<p><b>Suggestion</b></p> <p>Include a weight: time table to specify defrosting time prior to bath removal and weighing of samples.</p>

## **COSTA RICA**

Costa Rica appreciates the opportunity to provide these comments:

1. We believe that the metrological aspects included in the proposed draft standard have taken samples sizes that are too big; therefore, application is difficult.

In view of the aforementioned, we suggest that the lower limit for the lot size should be 150 with 5-unit samples, according to the International Recommendation R 87 (Quantity of product in prepackages) by the International Organization of Legal Metrology (OIML), Edition 2004. This recommendation is based on the fact that sampling plans submitted by the proposed draft standard consider lot sizes that are too big; hence, its application is difficult in developing countries.

2. Regarding the annexes, we submit the following comments:

### **ANNEX I: BROCCOLI**

In section 3.1 PROCESSING AIDS, we suggest the inclusion of the following additives: **sodium bicarbonate and magnesium bicarbonate (as a pH regulator and as a colour retention agent, respectively.)**

### **Annex III: CARROTS**

In section 4 on food additives, we suggest the inclusion of **sulfites as antioxidants**, as per the General Standard for Food Additives.

### **ANNEX V: CORN-ON-THE-COB**

Regarding the labeling declaration in section 3.1, Costa Rica requests the inclusion of a term such as “baby” or “mini” in countries where this is allowed.

Finally, Costa Rica urges the Committee to continue working according to the request made by the Codex Committee on Food Additives (CCFA), not to include additive lists in the specific commodity standards, but to refer to the General Standard for Food Additives.

## **CUBA**

### **(i) General Comments**

#### **STANDARD'S TITLE**

**CODEX STANDARD FOR CERTAIN QUICK FROZEN VEGETABLES** [This comment only applies to the Spanish version].

**Rationale:** In the Spanish version we suggest to change the term “hortalizas” to “vegetables”, to include foods like potatoes and not only vegetables. The term should be change all through the Standard.

2.2 Define “controlled conditions” to allow such a repacking practice, because this repacking could deeply damage the product's quality and therefore the product received by the consumer.

2.4 Does not correspond to Section 2.2.1 but with Section 1.2.1 of the Annexes. We propose to change the title to “Formas de presentación” that is the term used in other Codex Standards. [This comment only applies to the Spanish version].

2.4.1 The 10% m/m tolerance should be mention on the Defects and Allowances Section.

**3. ESSENTIAL COMPOSITION AND QUALITY FACTORS** - We suggest, in general, to review each Annex in Section 3.1.2 Other Permitted Ingredients, because some of the Annexes do not allow any, nevertheless others do not allow the use of salt or sugar, but these two ingredients could be used in any of the vegetables covered by the Standard. Also, Section 3.1.2 numbering should be amended, because Section 3.1.2 appears as 3.1 This section does not cover the Standard Sample Size, but it is included in each of the Annexes, therefore we suggest to include this Section with an explanation pertaining to the presentation of each product (individual units or in a pack). We noticed that the sample size is defined for very small lots, but in most of the Annexes the product will be damaged during testing leaving little product for the inspection.

**3.2.2 Analytical Characteristics** - Needs to be define the same way as the net content determination method (Section 7.1), if the sensory characteristics (appearance, odor, colour, taste) are determined by the frozen or thawed sample.

**10. Methods of Analysis and Sampling** - We recommend to add the kind of inspection, by attributes to complete the sampling plan information in the Standard.

**ANNEX I: BROCCOLI (BRÓCULIS)** [This last new term only applies to the Spanish version].

**1.2.2 Sizing** - Should have an analytical method to determine broccoli's size.

2.1.3 The standard sample size should consider if the product presentation is in individual units or in blocks.

**ANNEX II: BRUSSELS SPROUTS**

**1.2.1 Sizing** - Should have an analytical method to determine Brussels sprouts size.

2.2.3.1 The standard sample size should consider if the product presentation is in individual units or in blocks.

**ANNEX III: CARROTS**

**1.2.2 Sizing** - Should have an analytical method to determine carrots' size in the different style presentations.

2.2.2 It should provide an analytical method to measure Mineral impurities.

2.2.4 The standard sample size should consider if the product presentation is in individual units or in blocks.

**ANNEX IV: CAULIFLOWER**

2.1.3 The standard sample size should consider if the product presentation is in individual units or in blocks.

**ANNEX V: CORN-ON-THE-COB**

2.1.4 The standard sample size should be reconsider depending if the product presentation is in individual units or in blocks.

**ANNEX VI: FRENCH FRIED POTATOES**

2.1.1 (b) Make a reference to Codex standard for named vegetable oils.

2.1.2 Make a reference to Codex standard for food grade salt.

2.2.2.1 y 2.2.2 should provide an analytical method for both humidity and oil content.

2.2.3.4 The standard sample size should be reconsider depending if the product presentation is in individual units or in blocks.

**ANNEX VII: GREEN BEANS AND WAX BEANS**

2.2.3.1 The standard sample size should be reconsider depending if the product presentation is in individual units or in blocks.

**ANNEX VIII: LEEK**

2.1.2 It should provide an analytical method to measure Mineral impurities.

**ANNEX IX: PEAS**

2.2.1 This is the first time the title "Organoleptic and other characteristics" is used. We think this is correct and suggest to use it in all Sections of the Standard and the Annexes.

The Standard Sample Size is missing.

**ANNEX X: SPINACH**

2.1.3 Needs to provide an analytical method for mineral impurities and dried extract of added salt. Change this Section's title to "Physical Characteristics".

2.1.5 Does not provide the standard sample size for product in a block. Considering the sample size in the Table, the values are very small and it would destroy the product.

#### **ANNEX XI: WHOLE KERNEL CORN**

We suggest moving this Annex immediately after the one for Corn-on-the-Cob.

2.2.2 Should provide an analytical method for alcohol insoluble solids determination and soluble solids content.

**PROPOSAL ON METHOD OF DETERMINATION OF ~~DRENADO~~ “ESCURRIDO” DRAINED DEGLAZED WEIGHT OF FROZEN VEGETABLES.** [The first part of this comment only applies to the Spanish version].

We propose to unify all the sub paragraphs in one layout. If this method is accepted by the Committee, it should be recognized as a Codex method with its corresponding identification.

#### **(ii) Specific Comments**

##### **STANDARD BODY TEXT**

2.1 (1) ..... and maintained at  $-18\text{ }^{\circ}\text{C} \pm \text{XX C in it's thermal core}$  .....

**Rationale:** Specify the temperature unit to use. The standard needs to set the temperature's tolerances to maintain the cold chain, because this is a key issue to guarantee the shelf life and quality of the finished product. This paragraph mentions the tolerances but they are not anywhere in the document.

(3) Packed in suitable containers that guarantee the product's shelf life and quality in storage conditions.

**Rationale:** Needs to emphasize the importance of a suitable container.

3.2.1 have a ~~normal~~ characteristic **appearance**, flavour /- colour and smell....

**Rationale:** The appearance and colour should be added and delete the word taste, as the technical term in the sensory evaluation field is flavour. On the other hand, change the word normal for characteristic, because the later is more suitable than the first.

3.2.2 ~~Analytical~~ Chemical-physical Characteristics

**Each Annex establishes the standard sample size, and will take into account the kind of vegetable and if the vegetable's presentation is in individual units or blocks.**

**Rationale:** We consider this title is better suited and in accordance with other Committee documents. Each Annex needs to establish the standard sample size.

#### **ANNEX I: BRÉCOLES o BRÓCULIS**

**Rationale:** Most of the Spanish speaking countries use the term brócoli to name this vegetable. [This comment only applies to the Spanish version].

2.1.2 d) ~~graves~~ **críticos** [This comment only applies to the Spanish version].

**Rationale:** This is the technical term used to this kind of defect, at least in the Spanish language.

2.1.3 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

2.1.4 Change the term “serios” to “críticos” in the Table. [This comment only applies to the Spanish version].

**Rationale:** To unify the text.

#### **ANNEX II: BRUSSELS SPROUTS**

2.2.3 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX III: CARROTS****1.1 PRODUCT DEFINITION**

..... washed, **cut** and may not...

**Rationale:** It needs to include this technological step.

2.2.4 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX IV: CAULIFLOWER**

2.1.3 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX V: CORN-ON-THE-COB**

2.1.2 Chemical-physical Characteristics ~~Requisitos analíticos~~

**Rationale:** We consider this title is better suited and in accordance with other Committee documents.

(b) ..... and read as **a percentage** ~~°Brix on the international Sucrose Scale...~~

**Rationale:** The established measurement for the soluble solids is percentage and not °Brix.

2.1.4 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX VI: FRENCH FRIED POTATOES****1.1 PRODUCT DEFINITION**

..... cut into ~~strips~~

**Rationale:** It should only mention the technological operation, because there are many different cut styles and/or presentations.

2.2.2 Chemical-physical Characteristics ~~Requisitos analíticos~~

**Rationale:** We consider this title is better suited and in accordance with other Committee documents.

**ANNEX VII: GREEN BEANS AND WAX BEANS****1.1 PRODUCT DEFINITION**

..... washed, **cut**

2.2.3 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX VIII: LEEK**

2.1.2 Chemical-physical Characteristics ~~Requisitos analíticos~~

**Rationale:** We consider this title is better suited and in accordance with other Committee documents.

2.1.4 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term.

**ANNEX XI: WHOLE KERNEL CORN**

2.1.1 b) Food grade salt, in accordance to the Codex Standard for Food Grade Salt.

**Rationale:** This ingredient could be used in this kind of product.

2.2.2 (b) ..... and read as **a percentage** ~~°Brix on the international Sucrose Scale...~~

**Rationale:** The established measurement for the soluble solids is percentage and not °Brix.

2.2.4 **Tamaño de la muestra de ensayo** ~~Tamaño de la unidad uniforme de muestra~~ [This comment only applies to the Spanish version].

**Rationale:** This is the right term. The sample size is too small.

## 10 METHODS OF ANALYSIS AND SAMPLING

Provision	Method	Principle	Type
<u>Net Weight</u>	<u>OIML R 87 Quantity of product in prepackages</u>	<u>Weighing</u>	<u>!</u>
<u>Drained Weight</u>	<u>Method proposed by the Standard</u> <u>OIML R 87 Quantity of product in prepackages</u>	<u>Weighing</u>	<u>!</u>
<u>Soluble solids content</u>	<u>ISO 2173:1998</u> <u>(Fruits and Vegetables products Determination of soluble solids content Refractometry Method)</u> <u>AOAC 932.14C</u> <u>Solids in Syrups Hydrometers, pycnometers)</u>	<u>Refractometry</u>	<u>!</u>
<u>Mineral impurities</u>	<u>ISO 762:2003</u> <u>(Fruits and Vegetables products Determination of mineral impurities soluble solids content</u>		
<u>Method for alcohol insoluble solids determination</u>			
<u>Humidity</u>			
<u>Water content</u>			
<u>Extraneous Vegetable Material</u>			
<u>Dry extract</u>			
<u>Lead</u>	<u>ISO 6633:1984</u> <u>(Fruits, vegetables and derived products - Determination of Lead Content - Flame atomic absorption spectrometric method).</u> <u>AOAC 972.25</u> <u>(Lead in foods Spectroscopy / Atomic Absorption Spectroscopy</u>	<u>Spectrometry</u>	<u>!</u>
<u>Cadmium</u>	<u>ISO 6561:2005</u> <u>Section 1: (Fruits and vegetable products - Levels of Cadmium Content Atomic Absorption Spectroscopy Method, using a graphite furnace</u> <u>Section 2: (Fruits and vegetable products - Levels of Cadmium Content Atomic Absorption Spectroscopy Method, using a graphite furnace</u>	<u>Spectrometry</u>	<u>!</u>

**PROPOSAL ON METHOD OF DETERMINATION OF ~~DRENADO~~ “ESCURRIDO” DEGLAZED WEIGHT OF FROZEN VEGETABLES.** [The first part of this comment only applies to the Spanish version].

**Rationale:** We suggest modifying the analytical Method’s title. In Spanish is better to use the word “escurrido” (drained) in accordance with other Committee Standards, as well as to specify that the purpose is aimed to deglazed quick frozen vegetables in the title. Cuba does not agree with the term “quick frozen” because this method could be used for other frozen vegetables that are not frozen by this quick frozen technology.

**1. PURPOSE**

**This analytical method is used to verify deglazed frozen vegetables net weight, in the range 5 g up to 10 Kg.**

**Rationale:** Add this new Section to the Analytical Method. There is not need to mention that this is to protect particularly fragile vegetables, because the purpose of this method is to verify the weight.

**2. PRINCIPLE**

..... and dried by use of a ~~paper towel~~ **suitable paper or a dry rag** ..... net weight<sup>1</sup>.....

**Rationale:** Delete the term “paper towel” and add the possibility to use a dry rag. Insert a footnote to mention the Codex Analytical Method for net weight determination in this kind of product.

**3. EQUIPMENT:**

- **Precision** Balance - sensitive up to 1 g.
- .....
- .....
- Paper ~~towels~~ **or rag both** with a smooth surface.

**Rationale:** Specify balance's kind regarding the paper towel and rag, it's the same comment as Section 2 Principle above.

**4. PREPARATION OF SAMPLES AND WATER BATH:**

**4.1 TARE WEIGHT**

**4.2 THE SAMPLE PRODUCT**

**The sample product amount will be the one established by the Standard sample plan (with an AQL of 6.5, Inspection level of I or II depending on each case, attribute sampling, simple sampling).**

**Rationale:** Amend the numbering. 4.2 needs to mention the sample amount to be analyzed according to the established sampling plan.

**4.3 REMOVAL OF CONTAINER CONTENTS / DEGLAZED WEIGHT**

- .....
- .....
- After removal of package, the **net** weight of the glazed product is determined P<sup>o</sup>

**Rationale:** Amend the numbering.

**4.4 DRAINING**

**4.5 WEIGHING**

~~(1) Codex Standards that include consideration of glaze determination (Section 7.3.2 in each case).~~

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<sup>1</sup> Insert a reference to the Codex Analytical Method for net weight determination.

**EGYPT**

**8.2.3** Egypt agreed on the proposal to specify & declare any flavouring or ingredient (other than salt) added to the product, this is to avoid any customer confusion or misleading.

**ANNEX 1: BROCCOLI****2.1.1 General requirement**

Egypt agreed on the proposed item which lead to product quality keeping.

**ANNEX III: CARROTS****2.2.5 Defects and Allowances**

The new proposal (1 and 2) need more studies & clarification in practical calculation of defects according to these new tables.

**ANNEX IV: CAULIFLOWER****1.2.2 Sizing**

Egypt agreed on the proposed addition to put size designation when sized that is to expand the size and to be more sensible for the producer.

**2.1.1 General requirement**

Egypt not agreed, the current General requirement is more clear.

**2.3 LOT ACCEPTANCE****Proposed table**

Egypt agreed on the proposed table where it is more clear, easy to understand and give a wider range of defects.

**ANNEX V: CORN –ON- THE –COB****2.1.3 Definition of Visual Defects**

[Uniformity of color is not applied to mixed colored varieties.]

Egypt agreed.

**ANNEX VII: GREEN BEANS AND WAX BEANS****2.2.2 Definition of Visual Defects**

**Proposal:** table defects

Egypt agreed on the proposed table of defects.

**ANNEX VIII: LEEK****2.1.3 Visual Defects**

Egypt agreed to add the proposed amendment for discoloration defect to be added to the existed parameters in case of minor & major defects.

**ANNEX IX: PEAS****1.2.1.2 Proposed table**

We agree on the proposal where it is simple way for size differentiation

**Note:**

We required to develop new specifications for frozen Molokhia, frozen okra where these vegetables are consumed in large Scale.

## GHANA

### Comment: Section 2.1 Product definition

Ghana proposes that the phrase “Quick frozen vegetables are vegetables” and “frozen” are deleted as follows:

Quick frozen vegetables are the products

(1) ~~Quick frozen vegetables are the vegetables which were~~ **Subjected** to a quick freezing process, and maintained at -18°C or colder at all points in the cold chain, subject to permitted temperature tolerances. This freezing process enables the vegetables to retain their flavor, texture, appearance and nutritional value.

(2) Prepared from substantially sound, fresh (barring mature processed peas) or ~~frozen~~ vegetables, as defined in the corresponding Annexes, having reached appropriate maturity for processing. None of their essential elements are removed from them but they shall be washed and prepared appropriately, depending on the product to be produced. They undergo operations such as washing, peeling, grading, cutting, etc., depending on the type of product.

**Rationale:** To avoid repetition of the subject. The product should be from a sound, fresh or chilled vegetable and not “frozen”. A frozen vegetable would have some cells denatured resulting in a poor physiological characteristic. The vegetable would not be “free flowing” as referred in Section 2.4.1.

### Comment: SECTION 8.2 NAME OF THE PRODUCT

Ghana agrees with the proposed text.

**8.2.3** When any **flavouring or** ingredient, **other than salt**, has/have been added which impart(s) the distinctive flavour to the food, the **flavouring or** ingredient, the name of the product shall be accompanied by the term “with X” or “X flavoured”, as appropriate.

**Rationale:** This provides information and direction to the purchaser.

### Comment: Section 8.2.5 Size Designation

Ghana agrees with the proposed text (b) and recommends the deletion of option (a)

~~(a) When the vegetables are sized, the size, as defined in the corresponding Annexes, the size may be declared in conjunction with, or in close proximity to the name of the product.~~

Or

**(b) When the vegetables are sized, the size, as defined in the corresponding Annexes, shall be declared in conjunction with, or in close proximity to the name of the product in accordance with the customary method of declaring size in the country of retail sale.**

**Rationale:** This ensures uniformity of sizes and enhances presentation of the vegetable.

## ANNEX 1: BROCCOLI

**Comment:** Ghana supports the proposed tables in Section 1.2.2, Sizing and Section 2.1.4, Table 2 - Cut and Chopped Styles – Table by weight.

### Comment: Section 2.1.1 General requirements

We agree with the inclusion of the proposed text.

**“Quick frozen Broccoli shall be of reasonably uniform green colour over the tops of the units which may be slightly dull. The inflorescences must be firm, compact, of fine/ close grained with floral buttons completely closed.”**

**Rationale:** Inclusion of the proposed text is considered appropriate.

### Comment: Section 3 Food additives

We support the use of citric acid as an antioxidant at the blanching operation.

**“Citric acid (INS 330) used as antioxidant at the blanching operation.”**

**Rationale:** This is suitable since some consumers have allergic reactions to other antioxidants such as sodium metabisulphite.

## ANNEX II: BRUSSELS SPROUTS

**Comment:** Ghana supports the proposed tables in Section 1.2.1 and Section 2.2.4.2.

**Comment: Section 2.2.2 Definition of Visual Defects**

We propose the phrase “decomposition” be retained.

(e) **Decayed:** A sprout which shows significant internal or external ~~decay~~ **decomposition**.

**Rationale:** Decomposition is a process where organic substance including vegetables breakdown, thus the introduction of the word “decomposition” is more appropriate and provides clarity.

**Comment: Section 2.2.2(h) Poorly Trimmed or Mechanically Damaged Unit:**

We support the proposed inclusions.

(i) the butt end is very ragged leaving a heel extending more than 5 ~~40~~ mm beyond the point of attachment of the lowest outer leaves;

(iii) the butt extends more than 5 ~~40~~ mm below the point of attachment of the lowest outer leaves;

**Rationale:** The product will be more presentable and in line with Good Manufacturing Practice (GMP).

**ANNEX III: CARROTS**

**Comment:** Ghana supports the proposed tables in Section 2.2.5 Defects and allowances.

**ANNEX IV: CAULIFLOWER**

**Comment:** Ghana supports the proposed tables in Section 1.2.2.2 and Section 2.3.

**Comment:** We consider the proposed text in Section 1.2.2.1, Styles and Section 2.1.1, General requirements as appropriate.

**1.2.2.1** Quick frozen cauliflower florets may be presented sized or un-sized. **When sized, Size is determined by the maximum diameter of the equatorial section.**

**2.1.1 General Requirements**

Quick frozen cauliflower shall be of reasonably uniform white to dark cream colour over the tops of the units which may be slightly dull and have a tinge of green, yellow or pink. **The inflorescences must be firm, compact, of fine / close grained.**

**Rationale:** To improve the document.

**ANNEX V: CORN-ON-THE-COB**

**Comment:** We support the inclusion of the proposed text in Section 2.1.3 Definition of Visual Defects.

**Uniformity of colour is not applied to mixed coloured varieties.**

**ANNEX VI: FRENCH FRIED POTATOES**

**Comment:** Ghana agrees with the proposed table for dimensions in length, Section 1.2.1.3.

**ANNEX VII: GREEN BEANS AND WAX BEANS**

**Comment:** Ghana seeks clarity on the other designations to be used as proposed in Section 1.2.5.

“(b) If round type beans are presented as size graded on diameter, they shall conform when measured in the frozen conditions, to the following system of specifications for the size names. **However, other size designations may be used.**”

**Comment:** Ghana agrees with the proposed text under Section 2.2.2, Definition of Visual Defects.

“(c) **Major Blemish:** each piece blemished due to insect or pathological damage affecting an area greater than a 6 mm diameter circle, **but 2 mm to 4 mm for the extra small size** or blemished by other means to a degree which seriously detracts from its appearance.

(d) **Minor Blemish:** each piece blemished due to insect or pathological damage affecting an area greater than a 3 mm diameter circle but less than a 6 mm diameter circle, **but 2 mm to 4 mm for the extra small size** or blemished by other means to a degree which noticeably detracts from its appearance.”

**ANNEX X: SPINACH**

**Comment:** Ghana supports the proposed maximum length of the attached stem for whole leaf spinach as in under Section 1.2.1, Styles.

(b) **Leaf Spinach** - substantially whole leaves most of which are separated from the root crown **with a maximum length of the stem of 10 cm.**

**ANNEX XI: WHOLE KERNEL CORN**

**Comment:** Ghana recommends that the proposed table be retained since it is simplified and provides information on the tolerances for defects.

**Proposal on Method of Determination of Drained Deglazed Weight (1) – Glaze Products****Comment: Section 2 Equipment**

We propose that the square brackets be removed.

- Circular sieve with a diameter of 20 cm and **1-3 mm mesh apertures (ISO R 565), square mesh of 2.5 mm (nominal wire thickness 1.0 mm)** for prepackages with drained quantities up to 450 g and use a 300 mm diameter sieve for prepackages greater than 450 g.

**Rationale:** To provide information on the different mesh types that can be used in glazing products.

**INDIA****SECTION 2 DESCRIPTION****Subsection 2.1 Product Definition:**

Amend the last sentence in the Point (2) as follows:

*'They undergo operations such as washing, peeling, grading, cutting, **blanching/deactivation of enzyme activity etc.,** depending on the type of product.'*

**Rationale:** Blanching/deactivation of enzyme activity is required to maintain the product shelf life during storage in some products.

**Section 8 LABELLING****Subsection 8.2 Name of the Product**

Add the following at the end of the sub-subsection 8.2.2:

**'The type of freezing process should be mentioned on the label'**

**Rationale:** Product shall have declaration on the label mentioning the type of processing the product has gone through e.g. Individual Quick Frozen/Blast Frozen instead of only "Quick Frozen".

**ANNEX I BROCCOLI****Section 2 ESSENTIAL COMPOSITION AND QUALITY FACTORS****Subsection 2.1 Quality Factors**

In the proposed 'Table by Weight' below the Table 1, the value 20 for percent by mass in the second column for the visual defect c) fragments (for florets) and the value 15 % for total allowance for spears and florets provided below the Table need to be aligned with each other.

**Rationale:** 20% of individual defect fragments (for florets), where as total allowances 15% for spears and florets contradict each other and are confusing.

**ANNEX V CORN-ON-THE-COB****Section 2 ESSENTIAL COMPOSITION AND QUALITY FACTORS****Subsection 2.1.2 Analytical Requirements:**

The value of total soluble solids of 20 Brix needs to be reconsidered to include varieties with naturally lower total soluble solids content.

**Rationale:** Currently grown varieties in India have a total soluble solids content of around 10-16 degree Brix.

## ANNEX XI WHOLE KERNEL CORN

### Section 2 ESSENTIAL COMPOSITION AND QUALITY FACTORS

#### Subsection 2.2.2 Analytical Requirements:

The value of total soluble solids of 20 Brix needs to be reconsidered to include varieties with naturally lower total soluble solids content.

**Rationale:** Currently grown varieties in India achieve a total soluble solids content of around 10-16 degree Brix.

## JAMAICA

### GENERAL COMMENTS:

Jamaica thanks the working group led by the United States of America for providing a comprehensive and detailed document for the Codex Committee on Processed Fruits and Vegetables. The overall numbering of the document needs to be revised and references were made to incorrect sections within the document.

### SPECIFIC COMMENTS:

#### Section 2.1 Product Definition

To provide a better flow, it is proposed that items one and two be rearranged so that the requirements for raw materials come first. Additionally, in the formatting of the document, the minus sign should fall beside the 18°C to prevent any possibility of misinterpretation. Also, to provide consistency within the document, the corresponding temperature value in Fahrenheit should be placed in bracket beside -18°C as this was done in section 2.2

“Quick frozen vegetables are the products:

(1) ~~(2) Prepared~~ **prepared** from substantially sound, fresh (barring mature processed peas) or frozen vegetables, as defined in the corresponding Annexes, having reached appropriate maturity for processing. None of their essential elements are removed from them but they shall be washed and prepared appropriately, depending on the product to be produced. They undergo operations such as washing, peeling, grading, cutting, etc., depending on the type of product.

(2) ~~(1) Quick frozen vegetables are vegetables which were~~ subjected to a quick freezing process, and maintained at -18°C (**0°F**) or colder at all points in the cold chain, subject to permitted temperature tolerances. This freezing process enables the vegetables to retain their flavor, texture, appearance and nutritional value.

(3) ~~Packed~~ **packed** in suitable containers.”

#### 2.4 Presentation

“In addition to the styles provided for in the corresponding Annexes, any other styles should be permitted as indicated in Section ~~2.2.4.~~ **2.4.1**”

##### 2.4.1 Other Styles

“Quick Frozen vegetables ~~maybe~~ **may be** “free flowing”

##### 3.2.1 General Requirements

“have a normal flavour /taste and **odour/ smell**, taking into consideration any added ingredients as indicated in Section 3.1.”

##### 8.2.3

“ When any flavouring or ingredient, other than salt, has/have been added which impart(s) the distinctive flavour to the food, ~~the flavouring or ingredient~~, the name of the product shall be accompanied by the term “with X” or “X flavoured”, as appropriate.”

##### 8.2.5 Size Designation

“(a) When the vegetables are sized, the size, as defined in the corresponding Annexes, ~~the size~~ may be declared in conjunction with, or in close proximity to the name of the product.”

## ANNEX III: CARROTS

### 1.2.2 Sizing

The size range specified for one category cannot overlap with the size range for the subsequent category.

<b>“Size designation</b>	<b>Diameter</b>
<b>Specification for Cylindrical Cultivars</b>	
Small	6 – 23 mm
Medium	<del>23</del> <b>24</b> – 27 mm
Large	Greater than 27 mm
<b>Specification for Conical Cultivars</b>	
Small	10 – 30 mm
Medium	<del>30</del> <b>31</b> - 36 mm
Large	Greater than 36 mm
<b>Specification for Spherical Cultivars</b>	
Very Small	Less than 18 mm
Small	<del>18</del> <b>19</b> - 22 mm
Medium	<del>22</del> <b>23</b> - 27 mm
Large	<del>27</del> <b>28</b> - 35 mm
Extra Large	Over 35 mm”

### 2.2.1 General Requirements

“(c) reasonably free from mechanical damage (this regards whole and finger carrot style only)”

### 2.2.3 Definition of Visual Defects

<b>“Defect</b>	<b>Definition</b>
Extraneous Vegetable Material (EVM)	Harmless vegetable material which does not consist of <del>Material (EVM)</del> carrot roots.”

### 2.2.5 Defects and Allowances

Jamaica is in favour of Tables 1 and 2 proposed by France.

## KENYA

### PROPOSED DRAFT CODEX STANDARD FOR CERTAIN QUICK FROZEN VEGETABLES

(revision of individual standards for quick frozen vegetables)

(At Step 3)

(Prepared by the Electronic Working Group on Canned Fruits led by the United States of America)

## 8. LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the Codex General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985). In addition, the following specific provisions apply:

### 8.2 NAME OF THE PRODUCT

8.2.3 When any [flavouring or] ingredient, [other than salt], has/~~have been added which impart(s) the distinctive~~ flavour to the food, the [flavouring or] ingredient, the name of the product shall be accompanied by the term “with X” or “X flavoured”, as appropriate.

**Comment:**

Kenya would like to amend the statement of clause 8.2.3 as follows:

**8.2.3** When any **flavouring agent or ingredient, other than salt**, ~~has~~ **have been added which impart(s) the distinctive** flavour to the food, the **flavouring agent or ingredient**, the name of the product shall be accompanied by the term “with X” or “X flavoured”, as appropriate.

**Justification:**

**The ingredient may not be necessarily a flavour but has the effect of imparting or affecting the taste of the food.**

**ANNEX I: BROCCOLI**

In addition to the general provisions applicable to quick frozen vegetables, the following specific provisions apply:

**1.2.2 Sizing**

Quick frozen Broccoli florets may be presented sized or un-sized.

When sized, a size name designation and size parameter in mm should be indicated on the package. The package shall contain no less than 80.0 percent by weight of the declared size.

**COMMENT**

**Kenya propose that the table below be given title and numbered and add the word “sizing” as the title as indicated in the table below:**

**[PROPOSAL] sizing**

<b>Size Designation</b>	<b>Size of the smallest diameter of the head of the florets (mm)</b>
<b>Small florets</b>	<b>15 – 40 mm</b>
<b>Florets</b>	<b><del>30—80 mm</del></b> <b>41-80</b>

**2.1 QUALITY FACTORS****2.1.1 General Requirements****COMMENT**

**We propose to delete the opening and closing square brackets and accept it the way it.**

~~{ Quick frozen Broccoli shall be of reasonably uniform dark green to light green depending on the varieties. The inflorescences must—shall be firm, compact of fine/ close grained with floral buttons completely closed }.~~

**2.1.4 Defects and Allowances****COMMENT**

**Kenya proposes to add the word ‘sample size for Visual Defects’ in the top right row so that it reads ‘sample size for visual defects’ to the table for clarity purposes.**

In addition, the following sample size applies for visual defects:

<b>Styles</b>	<b><u>Sample size for Visual Defects</u></b>
Spears, florets	300 g for detached fragments, loose leaves, and E.V.M.; for other defects 25 units
Cut spears and other styles	300 g
Chopped	100 g

**COMMENT: TABLE 1**

**Kenya proposes the table indicated below to be named and numbered and the abbreviation of 'E.V.M' to be written in full to avoid confusion.**

**Table 1: Spears and Florets Defects allowances**

Visual Defects	Unit Measurement	of Defect Categories			
		Minor	Major	Serious	Total
(a) E.V.M. Each piece			2		
(b) Detached leaves Each 5 g	1				
(c) Fragments					
Spears Each 20 mm	1				
Florets Each 5 g	1				
d) Blemished Each unit					
Minor		1			
Major			2		
Serious				4	

For tolerance based on the standard sample sizes indicated in Section 2.1.3, visual defects shall be assigned points in accordance with the appropriate Table in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

**COMMENT: ON THE TABLE BELOW**

**We recommend table 1 and its title to be moved to the upper table as table 1 and table 2 below be added title as "classification of defects by count"**

~~Table 1—Spears and Florets~~

~~Table 2—Cut and Chopped Styles~~

**Table 2: Classification of defects by count**

Visual Defects	Unit Measurement	of Defect Categories			
		Minor	Major	Serious	Total
(a) <del>E.V.M.</del> <b>to be written in full</b> Each piece			2		
(b) Blemished Each piece					
Minor		1			
Major			2		
Serious				4	
(g) Over-mature/poorly developed Each 10 g for cut			2		

**COMMENT:ON THE TABLE BELOW**

Kenya accepts the proposed table indicated below and recommends the title of the table to be changed to read “Table 3: visual defects by mass [%]”

**justification**

We have accepted the table 3 above since it gives an alternative way of quantifying the defects.

**[PROPOSAL]****TABLE BY WEIGHT Table 3:visual defects by mass [%]**

VISUAL DEFECTS	PERCENTAGE BY MASS		
	spears, florets	cut florets	chopped
a) EVM –Extraneous veg.material	1	2	2
b) Detached leaves and stems	10	-	-
c) fragments (for florets)	20	-	-
d) blemished	10	10	10
e) mechanical damage	10	-	-
f) poorly trimmed			
g) over mature or poorly developed	5	10	10
h) fibrous	5	5	5
i) woody			
<b>TOTAL ALLOWANCES: 15% FOR SPEARS AND FLORETS, 20% FOR THE OTHERS STYLES\</b>			

**1.2.1 Sizing****Comment on the table below**

We would like to comment on the table below as indicated in the table on the right row

The figures are overlapping causing confusion. The mixed sizes shall individually have uniform colours.

Measurement should be by weight but not diameter for it is time consuming and tedious, particularly when mixed sizes is allowed in the same container.

(c) If quick frozen Brussels sprouts are presented as size graded, they shall conform to a, size name designation and size parameter in mm should be indicated on the package when measured in the frozen condition. The following system of size designations and diameters is a guide. Other designations including mixtures of sizes is allowed

Size Designation	Diameter of sprouts in mm using a square hole sieve or calliper	KENYA COMMENTS
Very small	12 – 22 mm	ACCEPTED AS IS
Small	<del>22</del> 23 – 26 [30] mm	23-26mm
Medium	<del>26</del> 27-[30] – 36 mm	27- 36mm
Large	over 36 mm	Over 36mm

**2.2.4.2 Sizing**

**COMMENT**

Measurement should be by weight but not diameter for it is time consuming and tedious, particularly when mixed sizes is allowed in the same container. The figures are overlapping causing confusion.

If represented as size graded, of the sprouts 12 mm or larger, a minimum of 80% by number shall be of the declared size and a maximum of the following percentages by number of other sizes:

Size Designation	Very Small	Small	Medium	Large	COMMENT ON SIZE DESIGNATION
(a) Max% 12 – 22 mm	-	-10	20	5	(a) Max% 12 – 22 mm - Accepted
(b) Max% 22 – [30] 26 mm	20	-	[20]	-	(b) Max% 23 – 26 mm
(c) Max% 26 [30] – 36 mm	5	20	-	20	(c) Max% 27 – 36 mm
(d) Max% over 36 mm	0	5	20 [10]	-	(d) Max% over 36 mm
<b>TOTAL MAX%</b>	20	20	20	20	

**ANNEX II: BRUSSELS SPROUTS**

**3. FOOD ADDITIVES**

3.1 None permitted.

~~[3.1 PROCESSING AIDS]~~

~~Citric acid (INS 330) used as antioxidant at the blanching operation.~~

**COMMENT**

We recommend the citric acid to be avoided for blanching is sufficient for the purpose.

**ANNEX III: CARROTS**

**1.2.2 Sizing**

(c) The diameter shall be measured at the point of largest transverse cross-section of the unit in accordance with the following table. However, when other sizes and size designations are used they should be indicated on the sales package.

**COMMENT**

Measurement should be by weight but not diameter for it is time consuming and tedious, particularly when mixed sizes is allowed in the same container. The figures are also overlapping causing confusion. A new table to be inserted indicating the cultivars and the weight.

<del>Size designation</del>	<del>Diameter</del>
<b><del>Specification for Cylindrical Cultivars</del></b>	
<del>Small</del>	<del>6–23 mm</del>
<del>Medium</del>	<del>23–27 mm</del>
<del>Large</del>	<del>Greater than 27 mm</del>
<b><del>Specification for Conical Cultivars</del></b>	
<del>Small</del>	<del>10–30 mm</del>
<del>Medium</del>	<del>30–36 mm</del>
<del>Large</del>	<del>Greater than 36 mm</del>

**Specification for Spherical Cultivars**

Very Small	Less than 18 mm
Small	18–22 mm
Medium	22–27 mm
Large	27–35 mm
Extra Large	Over 35 mm

**ANNEX IV: CAULIFLOWER****2.1.1 General Requirements****COMMENT**

We recommend the word “shall” to be used instead of “must” in the statement indicated below.

*The inflorescences “**shall**” be firm, compact, of fine/ close grained.*

The following color and texture requirement was added at the end of the opening paragraph. **[The inflorescences ~~must~~ “shall” be firm, compact, of fine/ close grained.]**