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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**
August 2012

JOINT FAO/WHO FOOD STANDARDS PROGRAMME

CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES

26th Session
Montego Bay, Jamaica,
15 – 19 October 2012

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)

Codex Members and Observers wishing to submit comments on this proposal should do so in conformity with the Uniform Procedure for the Elaboration of Codex Standards and Related Texts (Codex Alimentarius Procedural Manual) as presented in Annex I before **30 September 2012**. Comments should be addressed:	
to: US Codex Office, Food Safety and Inspection Service, US Department of Agriculture, Room 4861 South Building, 1400 Independence Ave., S.W., Washington, D.C. 20250-3700 USA Fax: +1.202.720.3157; E-mail: uscodex@fsis.usda.gov; ccpfv@fsis.usda.gov - ***preferred*** -	with copy to: Secretariat, Codex Alimentarius Commission, Joint FAO/WHO Food Standards Programme, Viale delle Terme di Caracalla, 00153 Rome, Italy Fax: +39 (06) 5705 4593 E-mail: codex@fao.org - ***preferred*** -
Format for submitting comments: In order to facilitate the compilation of comments and prepare a more useful comments document, Members and Observers, which are not yet doing so, are requested to provide their comments in the format outlined in Annex III to this document.	

BACKGROUND

1. The 25TH CCPFV Session in October 2010 acting on the report of the CCPFV Priorities working group decided to initiate the revision of the existing ten specific Codex standards for Quick frozen Vegetables using the horizontal approach by an electronic working group, working in English and led by the United States.[1] On December 10, 2011, a draft text of the standard in the horizontal format was circulated to CCPFV members for review and their comments by January 30, 2012. Circulated were - General Provisions, eleven annexes and food additives section).[2]

2. The e-Working group initial report was circulated on February 29, 2012 with a deadline for comments of April 30, 2012 with the expectation to have a second round of comments and a second report prior to the 26th CCPFV session. The first report included the General Provisions, eleven annexes each followed by a summary page indicating/explaining the changes made and the comments received from member delegations.

1 REP11/PFV, paras. 109-117.
2 REP11/CAC, Appendix VI.

3. With only one member submitting written comments to the e-Working group initial report, it can be concluded there is consensus on the report. Yet, there were key proposals in seven (7) of the annexes that require attention. Though these pertinent proposals were not commented on in this second round of comments; they are retained in the report and again forwarded for consideration. It is anticipated that they will be discussed a physical meeting of the working group that precludes the CCPFV 26th Plenary session for discussion.

The document circulated consists of:

General Provision	
Annex I:	Broccoli
Annex II:	Brussels sprouts
Annex III:	Carrots
Annex IV:	Cauliflower
Annex V:	Corn-on-the-cob
Annex VI:	French Fried Potatoes
Annex VII:	Green beans & wax Beans
Annex VIII:	Leek
Annex IX:	Peas
Annex X:	Spinach
Annex XI:	Whole Kernel Corn
Proposal on:	METHOD OF DETERMINATION of Drained deglazed weight

Comment and Analysis:

4. Due to the lack of comments by members to the first report of the e-working group report the following decisions were made on:

I. Minor proposals on sizing (expanding size scales), styles and other general requirements in the General Standard and Annexes.

All such proposals were accepted thereby facilitating global industry/trade practices.

II. Food Additive Sections

Since this section of each Annex is less complicated that in other CCPFV standards, it was felt that it should not be left to the CCPFV Food Additives e-working group to resolve, but can be done in conjunction with the standard.

Food additives in Annexes that previously included them were retained. While request to include food additives into Annexes where none previously existed were not added. The food additive section in the annex on French Fried Potatoes that was expanded was retained pending verification by member countries.

III. Method for Determining Drained Deglazed Weight

The delegation of France submitted a proposal for Determining the Drained Deglazed Weight of quick frozen vegetables. This proposal is submitted for evaluation; it is placed after the last annex.

Conclusion:

5. All the comments received in response to the first report were taken into consideration in preparing this e- Working Group report. Some of the comments/proposals received could not be incorporated in the draft standard due to a lack of explanation/justification, or were suggestions without any accompanying proposal. To facilitate the reviews process a “Summary of Comments” is placed at the end of each Annex indicating the major changes made and proposals that require further evaluation/study by working group members.

6. Within each annex proposed changes are placed in square brackets [ ] in blue ink, while deletions with ~~strikethrough~~.

CODEX STANDARD FOR CERTAIN QUICK FROZEN VEGETABLES

1. SCOPE

This Standard shall apply to quick frozen vegetables[1] as defined in the corresponding Annexes and offered for direct consumption including for catering purposes without further processing, except for size-grading[2] or re-packing if required. It does not apply to the product when indicated as intended for further processing, or for other industrial purposes.

2. DESCRIPTION

2.1 PRODUCT DEFINITION

Quick frozen vegetables are the products

(1) Quick frozen vegetables are vegetables which were subjected to a quick freezing process[3], 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.

(3) Packed in suitable containers.

2.2 PROCESS DEFINITION

Quick frozen vegetable is the product subject to a freezing process in appropriate equipment and complying with the conditions laid down hereafter and in the corresponding Annexes. This freezing operation shall be carried out in such a way that the range of temperature of maximum crystallization is passed quickly. The quick freezing process shall not be regarded as complete unless and until the product temperature has reached -18°C (0°F) at the thermal centre after thermal stabilization. The recognized practice of repacking quick frozen products under controlled conditions is permitted.

2.3 HANDLING PRACTICE

The product shall be handled under such conditions as will maintain the quality during transportation, storage and distribution up to and including the time of final sale. It is recommended that during storage, transportation, distribution and retail, the product be handled in accordance with the provisions of the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (CAC/RCP 8-1976).

2.4 PRESENTATION

In addition to the styles provided for in the corresponding Annexes, any other styles should be permitted as indicated in Section 2.2.1.

2.4.1 Other Styles

Quick Frozen vegetables maybe “free flowing” i.e. in which the individual units (Individual Quick Frozen- IQF) are not stuck to one another, stuck together or in blocks to an extent that they cannot easily be separated in a frozen state. A tolerance of 10% m/m shall be allowed for IQF pieces which are stuck together to such an extent that they cannot easily be separated in the frozen state

Any other style in addition to those described in the various annexes should be permitted provided that the product:

(a) is sufficiently distinctive from other styles laid down in the Standard;

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1 Broccoli, Brussels sprouts, Carrots, Cauliflower, Corn-on-the-cob, French Fried Potatoes, Green beans and Wax beans, Leek, Peas, Spinach and Whole Kernel Corn.

2 Size-grading applies to the following quick frozen vegetables: Carrots, Brussels sprouts, Green beans and Wax beans, Leek and Peas.

3 A process, which is carried out in such a way, that the range of temperature of maximum ice crystallization is passed as quickly as possible (CAC/RCP 8 1976).

(b) 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

(c) is adequately described on the label to avoid confusing or misleading the consumer.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

Vegetables as defined in Section 2. Specific provisions are provided for in the corresponding Annexes.

3.1 OTHER PERMITTED INGREDIENTS

In accordance with the relevant provisions in the corresponding Annexes.

3.2 QUALITY FACTORS (CRITERIA)

3.2.1 General Requirements

In addition to the provisions provided for in the corresponding Annexes, quick frozen vegetables shall:

- have a reasonably uniform colour characteristic of the variety;
- be sound, clean, practically free from sand, grit and other foreign material;
- practically free from pests and damage caused by them; and
- have a normal flavour **/taste** and odour smell, taking into consideration any added ingredients as indicated in Section 3.1.

3.2.2 Analytical Characteristics

Analytical characteristics should be in accordance with the provisions provided for in the corresponding Annexes.

3.2.3 Definition of Defects

In accordance with the relevant provisions in the corresponding Annexes.

3.2.4 Defects and Allowances

Quick frozen vegetables should be substantially free from defects. Certain common defects should not be present in amounts greater than the limitations provided for in the corresponding Annexes.

3.3 CLASSIFICATION OF DEFECTIVES

A container that fails to meet one or more of the applicable quality requirements, as set out in Section 3.2 and in the corresponding Annexes (except those based on sample averages), should be considered as a “defective”.

3.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of “defectives” as defined in Section 3.3 and in the corresponding Annexes does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5. For factors evaluated on a sample average, a lot will be considered acceptable if the average meets the specified tolerance, and no individual sample is excessively out of tolerance.

4. FOOD ADDITIVES

Only those food additive classes listed 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 in the corresponding Annexes, or referred to, may be used and only for the functions, and within limits, specified.

5. CONTAMINANTS

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

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides and/or veterinary drugs established by the Codex Alimentarius Commission.

6. HYGIENE

6.1 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 Recommended International Code of Practice – General Principles of Food Hygiene (CAC/RCP 1-1969), the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (CAC/RCP 8-1976), and other relevant Codex texts such as codes of hygienic practice and codes of practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. WEIGHTS AND MEASURES

7.1 NET WEIGHT

The weight of the products covered by the provisions of this Standard shall be indicated in accordance with the Codex General Standard for the Labelling of Pre-packaged Foods (CODEX STAN 1-1985).

When the vegetables are glazed, in conformity with the specific standards, the declaration of net content of the foods shall be exclusive of the glaze.[4]

7.1.2 Classification of "Defectives"

A container that fails to meet the net weight declared on the label should be considered as a "defective".

7.1.3 Lot Acceptance

A lot should be considered as meeting the requirement of Section 8.1.1 when the number of "defectives", as defined in Section 8.1.2, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

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

8.2.1 The name of the product shall be as defined in the corresponding Annexes.

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[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 with approved additives, as appropriate (Code of Practice for Fish and Fishery Products (CAC/RCP 52-2003)).
If glazed, the water used for glazing or preparing glazing solutions shall be of potable quality. Potable water is fresh-water fit for human consumption. Standards of potability shall not be less than those contained in the latest edition of the WHO "International Guidelines for Drinking Water Quality".

8.2.2 The words "quick frozen" shall also appear on the label, except that the term "frozen"[5] may be applied in countries where this term is customarily used for describing the product processed in accordance with Section 2.2 of the Standard.

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.

8.2.4 Styles

8.2.4.1 ***Styles*** – There shall appear on the label in conjunction with, or in close proximity to the name of the product, the style (cut/description/presentation), as defined in the corresponding Annexes.

8.2.4.2 ***Other styles*** – If the product is produced in accordance with the other styles provision (Section 2.2.1), the label shall contain in conjunction with, or in close proximity to the name of the product, such additional words or phrases that will avoid misleading or confusing the consumer.

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.

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.

8.3 LABELLING OF NON-RETAIL CONTAINERS

Information for non-retail containers shall be given either on the container or in accompanying documents, except that the name of the product, lot identification, and the name and address of the manufacturer, packer, distributor or importer, as well as storage instructions, shall appear on the container. 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.

9. PACKAGING

Packaging used for quick frozen vegetables shall be in accordance with the relevant provisions of the Recommended International Code of Practice for the Processing and Handling of Quick Frozen Foods (CAC/RCP 8-1976).

10. METHODS OF ANALYSIS AND SAMPLING

Provision	Method	Principle	Type

[5] The term "frozen" is used as an alternative to "quick frozen" in some English speaking countries.

Sampling Plans

The appropriate inspection level is selected as follows:

Inspection level I - Normal Sampling

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

SAMPLING PLAN 1
(Inspection Level I, 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	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 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

SAMPLING PLAN 2
(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 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

ANNEX I: BROCCOLI

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen broccoli is the product prepared from the fresh, clean, sound stalks or shoots of the broccoli plant conforming to the characteristics of the species *Brassica oleracea* L. var. *italica* Plenck (Sprouting Broccoli) which have been sorted, trimmed, washed and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Styles

(a) ***Spears*** - the head and adjoining portion of the stem, with or without small tender attached leaves, ranging in length from more than 7 cm to 16 cm. The spears may be split longitudinally. Within each sample unit not more than 20% by count fall outside the designated length.

(b) ***Florets*** - the head and adjoining portion of the stem with or without small tender attached leaves ranging in length from 1.5 cm to 8 cm with sufficient attached stem to maintain a compact head. The florets may be split longitudinally. Within each sample unit not more than 20% by count fall outside the designated length.

(c) ***Cut spears*** – spears, which have been cut into portions and which may be irregular in shape. Pieces from 1.5 cm to 5 cm in the longest dimension. Leaf material may be present but shall not exceed 35% m/m and head material shall not be less than 15% m/m.

(d) ***Chopped*** - Broccoli finely cut into pieces less than 1.5 cm in the longest dimension. Leaf material may be present but shall not exceed 35% m/m and head material shall not be less than 15% m/m.

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.

[PROPOSAL]

Size Designation	Size of the smallest diameter of the head of the florets (mm)
Small florets	15 – 40 mm
Florets	30 – 80 mm

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 QUALITY FACTORS

2.1.1 General Requirements

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

With respect to visual or other defects with a tolerance, quick frozen broccoli shall be:

(a) reasonably free from an excessive amount of leaf material, particularly large coarse leaves;

(b) practically free from detached fragments and loose leaves (only for spears and florets);

(c) practically free from extraneous vegetable material;

(d) reasonably free from yellow or brown coloured florets;

(e) reasonably free from damage due to mechanical, pathological, or insect injury;

(f) reasonably free from poorly trimmed units (spears and florets);

(g) practically free from flowered or poorly developed units;

(h) practically free from fibrous or woody units.

2.1.2 Definition of Visual Defects

(a) ***Extraneous vegetable material (E.V.M.)*** means leaf, stem, or similar harmless vegetable material other than from the broccoli plant.	
(b) ***Detached leaves*** (for spears and florets), means broccoli leaves and pieces thereof not attached to a unit.	
(c) ***Fragment*** (for spears and florets), means pieces less than 20 mm in length for spears and weighing less than 5 g for florets.	
(d) ***Blemished*** - A unit or product which is stained, spotted, affected by discolouration or disease or insect injury.	– Minor - Slightly affecting the appearance or eating quality. – Major - Materially affecting the appearance or eating quality. – Serious - Seriously affecting the appearance or objectionably affecting the eating quality to such an extent that customarily it would be discarded under normal culinary preparation.
(e) ***Mechanical Damage*** (for spears and florets), means a unit bearing the general configuration of a spear or floret, but from which more than 50% of the buds have become detached, or otherwise mechanically damaged so as to materially affect the appearance of the product.	
(f) ***Poorly trimmed*** (for spears and florets), means units in which the appearance is seriously affected by attached coarse leaves or pieces thereof, or ragged removal of leaves, or small side shoots, or poor cutting of the stem.	
(g) ***Overmature or poorly developed***, means individual buds are in the flowered stage and with respect to spears and florets branching bud clusters which comprise the head are spread so as to seriously affect the appearance of the unit, or the bud clusters are of such advanced maturity that individual buds and supporting stems form loosely structured clusters.	
(h) ***Fibrous***, means tough fibre that is normally developed near the outside portion of the broccoli stem; such units are tough but still edible.	
(i) ***Woody***, means tough fibre that is normally developed near the outside portion of the broccoli stem, such units are extremely tough and highly objectionable.	

2.1.3 Standard Sample Size

The standard sample size for presentation (styles) shall be 300 g.

2.1.4 Defects and Allowances

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

Styles	Visual Defects
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

Visual Defects	Unit of Measurement	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	
(e) Mechanical damage	Each unit		1		
(f) Poorly trimmed	Each unit	1			
(g) Over-mature/poorly developed	Each unit				
(h) Fibrous	Each unit		2		
(i) Woody	Each unit		2		
TOTAL ALLOWABLE POINTS		25	12	4	25

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.

Table 1 – Spears and Florets

Table 2 - Cut and Chopped Styles

Visual Defects	Unit of Measurement	Defect Categories			
		Minor	Major	Serious	Total
(a) E.V.M.	Each piece		2		
(b) Blemished	Each piece				
– Minor		1			
– Major			2		
– Serious				4	
(g) Over-mature/poorly developed	Each 10 g for cut		2		
	Each 2 g for chopped		2		
(h) Fibrous	Each 2 g		2		
(i) Woody	Each 2 g t			4	
TOTAL ALLOWABLE POINTS		25	12	4	25

[PROPOSAL]

TABLE BY WEIGHT

VISUAL DEFECTS	PERCENTAGE BY MASS		
	spears, florets	cut florets	chopped
a) EVM	1	2	2
b) Detached leaves and stems	10	-	-
c) fragments (for florets)	20	-	-
d) blemished	10	10	10
e) mechanical damage f) poorly trimmed	10	-	-
g) over mature or poorly developed	5	10	10
h) fibrous i) woody	5	5	5

TOTAL ALLOWANCES: 15% FOR SPEARS AND FLORETS, 20% FOR THE OTHERS STYLES

2.2 DEFINITION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 1.2.1, 2.1.1 and 2.1.4 shall be regarded as a "defective".

2.3 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.2 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Sections 2.1.1 and 2.1.4, is treated individually for the respective categories.

3. FOOD ADDITIVES

3.1 None permitted.

[3.1 PROCESSING AIDS]

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

4. LABELLING

4.1 NAME OF THE PRODUCT

The name of the product shall include the designation "Broccoli" and the size or size designation when the broccoli is sized.

Summary of changes made to ANNEX I: BROCCOLI

1.2.2 Sizing

A propose sizing table was included for evaluation.

2.1.1 General Requirements

It was proposed having a general requirement for Broccoli similar Cauliflower; therefore the following text was included.

[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].

2.1.4 Defects and Allowances

The proposal from the first report that seeks to simplify this Section is again submitted for review and comments.

3. FOOD ADDITIVES

A proposal for the inclusion of Citric Acid.

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ANNEX II: BRUSSELS SPROUTS

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen Brussels sprouts are the product prepared from fresh, clean, sound, whole auxiliary buds of the plant conforming to the characteristics of *Brassica oleracea* L. var. *gammier* Gemmifera (DC) Schulz - which buds are trimmed, sorted, washed and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Sizing

(a) Quick frozen Brussels sprouts may be presented sized or unsized.

(b) Whether sized or unsized, the amount of frozen sprouts passing a square holed sieve of 12 mm, shall not exceed 5% by number.

(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
Very small	12 – 22 mm
Small	22 – ~~26~~ **[30]** mm
Medium	~~26~~ **[30]** – 36 mm
Large	over 36 mm

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

(a) Sugars as defined in the Codex Standard for Sugars (CODEX STAN 212-1999).

2.2 QUALITY FACTORS

2.2.1 General Requirements

With respect to visual defects or other defects subject to a tolerance, quick frozen Brussels sprouts shall be reasonably free from:

(a) extraneous vegetable material (E.V.M.);

(b) loosely structured buds;

(c) poorly trimmed or mechanically damaged units;

(d) damage by insects or disease;

(e) loose leaves.

2.2.2 Definition of Visual Defects

(a) ***Extraneous Vegetable Material (E.V.M.)***: Extraneous material from the Brussels sprouts plant including stem and leaf, but excluding bud leaves and fragments thereof; harmless vegetable material from other plants.

(b) ***Yellow Colour***: More than 50% of the outer surface of a sprout yellow in colour due to loss of outer leaves resulting either from overtrimming or mechanical damage.

(c) ***Loosely structured***: Sprout not compact, having loosely packed or open leaves. A sprout in which the leaves form a rosette appearance.

(d) ***Perforated leaves*** (by insects): A sprout with one or more surface perforations (due to insects, etc.), larger than 6 mm in diameter, showing scar tissue at the edge of the perforation(s).

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

(f) ***Seriously Blemished***: A sprout which is stained, spotted, discoloured or otherwise blemished, covering an aggregate area greater than that of a circle 15 mm in diameter, in such a way as to detract seriously from its appearance/eating quality, and to such an extent that it would be discarded under normal culinary preparation.

(g) ***Blemished***: A sprout which is stained, spotted, discoloured, or otherwise blemished to the extent that the aggregate area affected is greater than the area of a circle 6 mm in diameter, or in such a way as to detract materially but not seriously from its appearance. Sprouts with slight blemishes may be ignored.

(h) ***Poorly Trimmed or Mechanically Damaged Unit***: A unit in which:

(i) the butt end is very ragged leaving a heel extending more than **[5]** 10 mm beyond the point of attachment of the lowest outer leaves;

(ii) 4 or more outer leaves have been damaged such that only the petioles remain attached to the butt;

(iii) the butt extends more than **[5]**10 mm below the point of attachment of the lowest outer leaves;

(iv) the appearance is damaged to an extent that the sprout is lacerated, can be separated easily into two pieces, or more than 25% of its volume has been removed;

(i) ***Loose Leaf***: Leaf or leaf fragments detached from the bud.

2.2.3 Standard Sample Size

2.2.3.1 *Presentation (styles and sizing)*

The standard sample size shall be 1 kg.

2.2.3.2 *Visual Defects*

The standard sample size shall be 1 kg for the assessment of E.V.M. and loose leaf, and 100 sprouts for the assessment of other visual defects.

2.2.4 Defects and Allowances

2.2.4.1 *Styles – "Free Flowing"*

When the product is presented as "free flowing" a tolerance of 10% m/m shall be allowed for pieces which are stuck together to such an extent that they cannot easily be separated in the frozen state.

2.2.4.2 *Sizing*

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
(a) Max% 12 – 22 mm	-	-**10**	~~20~~	~~5~~
(b) Max% 22 – **[30]** ~~26~~ mm	20	-	**[20]**	-
(c) Max% ~~26~~ **[30]** – 36 mm	5	20	-	20
(d) Max% over 36 mm	0	~~5~~	~~20~~ **[10]**	-
TOTAL MAX%	20	20	20	20

2.2.4.3 ***Visual Defects***

For tolerances based on the standard sample size indicated in Section 2.2.3.2, visual defects shall be assigned points in accordance with the Table in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories 1, 2 and 3 or the Combined Total of the foregoing categories.

Defect	Unit of Measurement	Defect Categories			Total
		1	2	3	
(a) E.V.M.	Each piece	2			
(b) Loosely structured	Each sprout		2		
(c) Perforated leaves	Each sprout		1		
(d) Decayed	Each sprout			4	
(e) Seriously blemished	Each sprout			2	
(f) Blemished	Each sprout		2		
(g) Poorly trimmed or mechanically damaged	Each sprout		1		
(h) Loose leaf	Each 1% m/m	1			
Maximum Total Allowable Points		**10**	**45**	**10**	**55**

Maximum percentage by count of (b) Yellow Sprouts: 25

[PROPOSAL]

Defect	Tolerances m/m %
(b) Yellow Sprouts	7
(c) Loosely structured	5
(d) Perforated leaves	8
(e) Brown /altered	2
(f) (g) Seriously blemished/ Blemished	5
(h) Poorly trimmed or mechanically damaged	12
(i) Loose leaf (a) EVM Aggregate defects	2 1 by number 20 or if one defect is over 1.5 the allowance

2.3 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.2.1 and 2.2.4 shall be regarded as a "defective".

2.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.3 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Sections 2.2.1 and 2.2.4.3, is treated individually for the respective characteristics.

3. FOOD ADDITIVES

3.1 ~~None permitted.~~

[3.1 PROCESSING AIDS]

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

4. LABELLING

4.1 NAME OF THE PRODUCT

4.1.1 The name of the product shall include the designation "Brussels Sprouts".

4.2 SIZE DESIGNATION

4.2.1 If a term designating the size of the Brussels sprouts is used:

(a) it shall be supported by the sieve size in mm; and/or

(b) the words "very small", "small", "medium" or "large" as appropriate; and/or

(c) by a size representation on the label of the size range to which the Brussels sprouts predominantly conform; and/or

(d) the customary method of declaring size in the country in which the product is sold.

Summary of changes made to ANNEX II: BRUSSELS SPROUTS

1.2.1 Sizing

A proposal to expand the size ranges for small and medium size designations.

2.2.2 Definition of Visual Defects

(e) Decayed: The word “decomposition” replaced “decay” for clarity purposes.

(h) (i) and (iii): proposal to reduce the length of the butt from 10 to 5 mm.

2.2.4.2 *Sizing*

Changes were proposed to the sizing table aligning it with the proposal made in Section 1.2.1.

2.2.4.3 *Visual Defects*

A proposal that seeks to replace the current table is attached.

ANNEX III: CARROTS

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen carrots are the product prepared from fresh, clean, sound, roots of carrot varieties (cultivars) conforming with the characteristics of the species *Daucus carota* L. from which the leaves, green tops, peel and secondary roots have been removed and which have been washed and may or may not be blanched.

1.2 PRESENTATION

1.2.1 Types - only for the styles Whole:

(a) ***Long*** - any suitable variety of conical (e.g. Chantenay) or cylindrical (e.g. Amsterdam) cultivars of carrot.

(b) ***Round*** - any suitable variety which has the appearance of spherical cultivar (e.g. Paris Carrot).

1.2.2 Styles:

(a) ***Whole***

(i) Conical and cylindrical cultivars (e.g. Chantenay and Amsterdam types): consist of carrots which, after processing, retain the approximate conformation of a whole carrot. The shortest diameter at the greatest circumference measured at right angles to the longitudinal axis shall not exceed 50 mm. The variation in diameter between the largest and smallest carrot shall not exceed 4:1.

(ii) Spherical cultivars (e.g. Paris type): consist of fully mature carrots of a roundish shape of which the largest diameter in any direction shall not exceed 45 mm.

(b) ***Finger***: carrots of the cylindrical type, including sections obtained thereof by transverse cutting, being not less than 30 mm long (apart from arising end pieces).

(c) ***Halved***: carrots cut longitudinally into two approximately equal halves.

(d) ***Quartered***: carrots cut longitudinally into four approximately equal sections.

(e) ***Sliced Length-Wise***: carrots sliced approximately longitudinally, either smooth or corrugated into four or more units of approximately equal size. Not less than 20 mm long and not less than 5 mm in width measured at the maximum width.

(f) ***Shoestring or Julienne***: carrots cut longitudinally, either smooth or corrugated, into strips. The cross section shall not exceed 6 mm (measured at the longest side of the cross section).

(g) ***Sliced or Ring Cut or Roundels***: carrots cut, either smooth or corrugated at right angles to the longitudinal axis into rings, having a minimum thickness of 2 mm, a maximum thickness of 10 mm and a maximum diameter of 50 mm.

(h) ***Pieces***: carrots cut cross-wise into sections having a thickness greater than 10 mm but less than 30 mm or whole carrots which are halved and then cut cross-wise into sections or sections of carrots that may be irregular in shape and size and which are larger than ring cut or double diced.

(i) ***Diced***: carrots cut into cubes with edges not exceeding 12.5 mm.

(j) ***Double Dice***: carrots cut into uniformly shaped units having a cross section that is square and of which the longest dimension is approximately twice that of the shortest dimension - the shortest dimension not exceeding 12.5 mm.

1.2.2 Sizing

(a) Quick frozen carrots of the styles whole and finger may be presented sized or unsized.

(b) If presented as size-graded the styles in Section 1.2.2 (a), dependent on the cultivar used, shall conform to one of the three following systems of specification for the size names.

(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.

Size designation	Diameter
Specification for Cylindrical Cultivars	
Small	6 – 23 mm
Medium	23 – 27 mm
Large	Greater than 27 mm
Specification for Conical Cultivars	
Small	10 – 30 mm
Medium	30 - 36 mm
Large	Greater than 36 mm
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

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

(a) Sugars as defined in the Codex Standard for Sugars (CODEX STAN 212-1999);

(b) Aromatic herbs and spices; stock or juice of vegetables and aromatic herbs; garnishes composed of one or more vegetables (e.g. lettuce, onions; pieces of green or red peppers, or mixtures of both) up to a maximum of 10% m/m of the total drained vegetable ingredient.

2.2 QUALITY FACTORS

2.2.1 General Requirements

Quick frozen carrots shall be free from objectionable tough parts; and with respect to visual defects subject to a tolerance shall be:

(a) not misshapen; (this regards whole and finger carrot style only);

(b) reasonably free from blemishes;

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

(d) reasonably free from green tops;

(e) reasonably free from extraneous vegetable materials (EVM);

(f) reasonably free from unpeeled areas.

2.2.2 Analytical Characteristics

Mineral impurities measured on a whole product basis not more than 0.1% m/m.

2.2.3 Definition of Visual Defects

Defect	Definition
Extraneous Vegetable	Harmless vegetable material which does not consist of Material (EVM) carrot roots.
Misshapen	Units showing branching, twisting, or other forms of distortion which detract seriously from the appearance of the product (Styles: Whole and Finger). Units (other than small pieces) not possessing the configuration of the defined style.
Major Blemishes	Units with one or more black, dark brown and other intensely discoloured areas due to disease, insect damage, inadequate topping or physiological factors covering an area or aggregate area greater than that of a circle 6 mm in diameter, which detract in a major way from the appearance of the product.
Blemishes	– Units with one or more black, dark brown or other intensely discoloured areas due to disease, insect damage, inadequate topping or physiological factors covering an area or aggregate area greater than that of a circle 3 mm in diameter but less than 6 mm in diameter. – Other types of discolouration which detract noticeably but not in a major way from the appearance of the product.
Unpeeled	Units showing noticeable unpeeled areas larger than a circle of 6 mm diameter.
Damaged	Units which are crushed or broken.
Cracked	Cracks greater than 2 mm wide or other splits which detract materially from the appearance of the product (Styles: Whole, Finger and sliced).
Greening	– Units showing green colouration extending down the shoulder or green ring at the top (Whole and Finger Styles). – Units showing green colouration (other styles).
Small pieces	– Units less than 25 mm long for the styles “Whole, conical and cylindrical”, “finger”, “halved”, “quartered” and “shoestring or julienne”. – Units less than one third the volume of the standard product for the other styles.

2.2.4 Standard Sample Unit

The standard sample unit for style, sizing and other visual defects should be as follows:

EVM and small pieces	1,000 g
Whole, Finger, Halved, Quartered	100 units
Diced, Double Dice, Shoestring or Julienne, Sliced or Ring Cut, Sliced Lengthwise, Pieces Styles	400 g

2.2.5 Defects and Allowances

A tolerance of 10% by weight of non-conforming units applies to the whole style and 20% for all other styles. If presented size graded the product shall contain not less than 80% by mass of carrots of the declared size.

For tolerances based on the standard sample unit indicated in Section 2.2.4, visual defects shall be assigned points in accordance with the appropriate Tables in this Section. The maximum number of points shall not exceed the Total Allowable Points rating given under Categories A or B or the Overall Total.

Table 1 - Whole, Finger, Halved and Quartered Styles

Defect	Classification	Defect Categories		Overall Total
		A	B	
Misshapen	Each unit	2		
Major Blemishes			2	
Blemishes			1	
Unpeeled Areas			1	
Damaged		2		
Cracked		1		
Greening			1	
Total Allowable Points:		25	30	40
Small Pieces: Not to exceed 15% m/m				
EVM: Not to exceed 2 Pieces or 1 g / 1000 g.				

Table 2 - Ring Cut, Sliced Lengthwise, Diced, Double Diced, Shoestring and Pieces

Defect	Classification	Defect Categories		Overall Total
		A	B	
Misshapen	Each 4 g of affected material	2		
Major Blemishes			2	
Blemishes			1	
Unpeeled Areas			1	
Damaged		2		
Cracked		1		
Greening			1	
Total Allowable Points:	(a) Ring cut, Sliced lengthwise and Pieces;	26	8	26
	(b) Diced and Double Dice;	13	4	13
	(c) Shoestring/ Julienne	20	4	20
Damaged and Small Pieces: Not exceeding 25% m/m. Damaged not exceeding 10% m/m				
EVM: Not to exceed 2 Pieces or 1 g / 1000 g.				

[PROPOSAL]

Table 1 - Whole, Finger, Halved and Quartered Styles

DEFECTS	PERCENTAGE BY NUMBER	PERCENTAGE BY WEIGHT
Misshapen	**3**	
Major Blemishes and Unpeeled Areas	**10**	
Blemishes	**1**	
Damaged and Cracked	**4**	
Small Pieces		**15**
Greening	**12**	
EVM: not to exceed 2 pieces / 1000 g		

TOTAL maximum ALLOWANCE: 22% by number

Table 2 - Ring Cut, Sliced Lengthwise, Diced, Double Diced, Shoestring and Pieces

DEFECTS	PERCENTAGE BY WEIGHT	
	Ring Cut, Sliced Lengthwise	Diced, Double Diced, Shoestring and Pieces
Misshapen	6	-
Major Blemishes and Unpeeled Areas	10	10
Blemishes	5	5
Damaged and Cracked		10
Small Pieces	15	20
Greening	12	-
EVM: not to exceed 1 piece / 1000 g		

TOTAL maximum allowance: 20% by weight for Diced, Double Diced, Shoestring and Pieces, and 25% by weight for Ring Cut, Sliced Lengthwise.

2.3 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.2.1 and 2.2.5 shall be regarded as a "defective".

2.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.3 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Section 2.3, is treated individually for the respective characteristics.

3. LABELLING

3.1 Name of the Product

3.1.1 The name of the product shall include the designation "carrots".

3.1.2 As regard styles declaration, "whole" and "finger" carrots may be simply designated as "carrots" in countries where this is a customary practice.

3.1.3 As regard sizing declaration, carrots meeting the size requirements for "small" may be designated "baby" within countries where this practice is permitted.

3.1.4 When other sizes and size designations not included in this standard are used, they should be indicated on the sales package.

4. FOOD ADDITIVES

4.1 PROCESSING AIDS – Only processing aids listed below may be used in products covered by this standard and shall comply with the Codex Guidelines on Substances Used as Processing Aids (CAC/GL 75-2010).

Table 3 – Processing Aids

INS	Processing Aid	Function
330	Citric Acid	For use in blanching or cooling water.
524	Sodium Hydroxide	

Summary of changes made to ANNEX III: CARROTS

2.2.5 Defects and Allowances:

The delegation of France submitted proposals containing tables for both Table 1 and Table 2. The proposal appear to simplify the existing tables, however, it has a different defect scoring method. Members are therefore asked to study this proposal carefully.

ANNEX IV: CAULIFLOWER

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen cauliflower is the product prepared from fresh, clean, sound heads of the cauliflower plant conforming to the characteristics of the species *Brassica oleracea* L. var. *botrytis* L., which heads may be trimmed and separated into parts, and which are washed and sufficiently blanched to ensure stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Style

(a) ***Whole*** - the whole, intact head, which is trimmed at the base and which may have attached small, tender, modified leaves.

(b) ***Split*** - the whole head, cut vertically into two or more sections.

(c) ***Florets***[1] - segments of the head, which may have a portion of the secondary stem attached, measuring at least 12 mm across the top in the greatest dimension. A maximum tolerance of 20% m/m is permitted for units in which the greatest dimension across the floret is more than 5 mm and less than 12 mm. Small, tender modified leaves may be present or attached to the units.

1.2.2 Sizing

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.]**

1.2.2.2 If presented as size graded they shall conform to the following specifications.

(a) ***Large florets*** - segments of head measuring at least 30 mm across the top in the greatest dimension and of which a portion of secondary stem may be attached. Small tender modified leaves may be present or attached to the unit.

(b) ***Small florets*** - segments of head measuring at least 12 mm but less than 30 mm across the top in the greatest dimension and to which a small portion of secondary stem may be attached. Small tender modified leaves may be present or attached to the unit.

PROPOSAL

Size designation	Size (mm)
(a) **Small florets**	**15 to 35**
(b) **Medium florets**	**30 to 60**
(c) **Large florets**	**40 to 80**
(d) **Florets**	**15 to 80**
(e) **Cut florets**	**5 to 15**

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 QUALITY FACTORS

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.]**

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1 The term “clusters” is used as an alternative to “florets” in some English speaking countries.

The stem or branch portions may be light green or have a tinge of blue; and with respect to visual defects or other defects subject to a tolerance shall be:

(a) reasonably free from discoloured areas confined essentially to the surface;

(b) reasonably free from damaged or blemished areas;

(c) reasonably free from fibrous stems;

(d) reasonably free from poorly trimmed units;

(e) reasonably free from fragments;

(f) reasonably compact and reasonably well-developed;

(g) reasonably free from coarse green leaves;

(h) practically free from loose stems (for floret styles).

2.1.2 Definition of Visual Defects

Table 1 – Definition of Visual Defects

(a) ***Discolouration*** - grey, brown, green or similar discolouration confined essentially to the flower surface of the unit and which materially detracts from the appearance of the product. Branches or stems with a bluish or greenish tinge should not be considered as discoloured.	(i) Light - the discolouration disappears almost entirely upon cooking.
	(ii) Dark - the discolouration does not disappear upon cooking.
(b) ***Blemished*** - A unit affected by pathological or insect injury, and which may extend into the cauliflower.	(i) Minor - the appearance of the unit is only slightly affected.
	(ii) Major - the appearance of the unit is materially affected.
	(iii) Serious - the appearance of the unit is objectionably affected to such an extent that it would customarily be discarded under normal culinary preparation.
(c) **Mechanically damaged**	(i) Major - A unit in which more than 50% of the curd has been mechanically damaged or is missing (for split and floret styles).
	(ii) Major - A unit in which more than 25% of the curd has been mechanically damaged or is missing (for whole style).
(d) **Fibrous**	(i) Major - A unit which possesses tough fibres that are quite noticeable and materially affect the eating quality.
	(ii) Serious - A unit which possesses tough fibres that are objectionable and of such nature that it would be customarily discarded.
(e) ***Poorly trimmed*** - A unit which has deep-knife gouges or a ragged appearance.	
(f) ***Leaves*** - coarse green leaves or parts thereof whether or not attached to the unit.	
(g) ***Fragments*** - portions of the floret 5 mm or less across the greatest dimension.	
(h) ***Not compact*** - A unit in which the florets are spreading, or the flowerhead has a "ricey" appearance or the flowerhead is very soft or mushy.	
(i) ***Loose stem*** - Each piece of stem exceeding 2.5 cm in length detached from a cauliflower unit.	

2.1.3 Standard Sample Size

The standard sample size for presentation[2] shall be 500 g having a minimum of 50 florets.

[2] For whole style, the minimum number of heads weighing in total at least 500 g.

2.1.4 Defects and Allowances

When cauliflower is presented as sized, a tolerance of 20% by weight is permitted as not conforming to the size indicated on the package.

For tolerances based on the standard sample size indicated in Section 2.1.3, visual defects shall be assigned points in accordance with the Tables in Section 2.1.6. 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.

2.2 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.1.1 and 2.1.4 shall be regarded as a "defective".

2.3 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.2 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

Table 2 – Whole Style

Defect		Unit of Measurement	Defect Categories			
			Minor	Major	Serious	Total
Discolouration	Light	Each area or combined area of 8 cm²	1			
	Dark	Each area or combined area of 4 cm²		2		
Blemished	Minor	Each head	1			
	Major			2		
	Serious				4	
Mechanically damaged	Major	Each head		2		
Fibrous	Major	Each head		2		
	Serious				4	
Poorly trimmed leaves		Each head		2		
		Each 2 cm²		2		
Not compact		Each area or combined area of 12 cm²		2		
TOTAL ALLOWABLE POINTS			**10**	**6**	**4**	**10**

Table 3 - Split, Florets and Other Styles

Defect		Unit of Measurement	Defect Categories			
			Minor	Major	Serious	Total
Discolouration	Light	Each area or combined area of 8 cm²	1			
	Dark	Each area or combined area of 4 cm²		2		
Blemished	Minor	Each unit	1			
	Major			2		
	Serious				4	
Mechanically damaged	Major	Each unit		2		
Fibrous	Major	Each unit		2		
	Serious				4	
Poorly trimmed leaves		Each unit	1			
		Each 2 cm²		2		
Fragments		Each 3% m/m		2		
Not compact		Each area or combined area of 12 cm²		2		
Loose stem		Each piece	1			
TOTAL ALLOWABLE POINTS			**25**	**16**	**4**	**25**

[PROPOSAL]

DEFECTS	FLORETS and SPLIT FLORETS		Cut florets
	PERCENTAGE BY NUMBER	PERCENTAGE BY WEIGHT	PERCENTAGE BY WEIGHT
(a)Discolouration - Light - Dark	**8** **7**		**15**
(b)Blemished - Minor - Major	**4** **2**		**6**
(c) **(e)Mechanically damaged and Poorly trimmed**		**4**	**4**
(d) **Fibrous**	**-**	**-**	**-**
(g)fragments		**10**	
(h)Not compact	**5**		
(f) (i)Loose stem and leaves		**3**	

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the product shall include the designation “cauliflower”.

3.1.2 If a term designating the size of the florets is used:

(a) the words “large florets”, “ medium florets”, “small florets” or “cut florets” as appropriate; and/or

(b) by a correct representation on the label of the size range to which the florets predominantly conform; and/or;

(c) the customary method of declaring size in the country of retail sale.

4. FOOD ADDITIVES

4.1 PROCESSING AIDS – Only processing aids listed below may be used in products covered by this standard and shall comply with the Codex Guidelines on Substances Used as Processing Aids (CAC/GL 75-2010).

Table 4 – Processing Aids

INS	Processing Aid	Function
330	Citric Acid	For use in blanching or cooling water.
296	Malic Acid, DL-	

Summary of Changes made to ANNEX IV: CAULIFLOWER

1. DESCRIPTION

1.2.2 Sizing

The following phrase is added to the end sentence on sizing. "Size is determined by the maximum diameter of the equatorial section." Members are requested to evaluate this proposal in line with their industry/trade practices and submit comments.

2.1.1 General Requirements

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

2.1.2 Definition of Visual Defect:-

Members are asked to consider a proposed new table of visual defects that encompasses a wider range of coloured cauliflower such as green, orange, purple and yellow varieties, currently traded. These are either sold singly or mixed.

ANNEX V: CORN-ON-THE-COB

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen Corn-on-the-Cob is the product prepared from fresh, clean, sound, properly matured whole or pieces of ears conforming to the characteristics of the sweet corn variety *Zea mays* L. convar *saccharata* Koern which are trimmed (except for the style "Whole"), separated from husk and silk, sorted and washed and sufficiently blanched to ensure stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Style

1.2.1.1

(a) **Whole** - the whole, intact ear of corn to which a small part of the stalk may be attached. Minimum length not less than 120 mm.

(b) **Trimmed whole** - the product obtainable from one whole ear after trimming of both ends. Minimum length not less than 120 mm.

(c) **Cut Cob** - portions of the whole trimmed ear cut transversely into pieces not shorter than 40 mm.

1.2.1.2 The diameter of the product of any style, measured perpendicularly to the axis at the maximum diameter shall be not less than 30 mm.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 QUALITY FACTORS

2.1.1 General Requirements

With respect to visual defects subject to a tolerance, quick frozen corn-on-the-cob shall be:

(a) of reasonably uniform white, cream to yellow (golden) colour; except for mixed colour varieties

(b) reasonably well developed;

(c) reasonably uniform in size;

(d) reasonably free from blemished or mechanically damaged areas;

(e) reasonably free from poorly trimmed units (except for whole style);

(f) reasonably free from extraneous vegetable matter (EVM).

2.1.2 Analytical Requirements

(a) The Alcohol Insoluble Solids (A.I.S.) content of the whole kernels detached from the cob shall not exceed 32% mm.

(b) The total soluble solids content of the juice pressed from the kernels by refractometer at 20°C, uncorrected for acidity and read as °Brix on the International Sucrose Scale shall be not less than 20.

2.1.3 Definition of Visual Defects

(a) ***Uniform white, cream to yellow (golden) colour*** means, that all kernels on one ear are of the same colour and that the different units in one standard sample unit are of the same colour.

- Light variation - Some difference in colour exists, only slightly affecting the appearance.
- Pronounced variation - difference in colour between the different kernels and/or ears are noticeable and affecting the appearance.

[Uniformity of colour is not applied to mixed coloured varieties.]

(b) ***Uniform in size*** means that the length of the longest ear in the sample unit does not exceed the length of the shortest ear by more than 50 mm for whole and trimmed whole styles or by more than 20 mm for cut style, and that the largest diameter of the largest unit does not exceed the largest diameter of the smallest unit by more than 15 mm.

- Minor - outside one of the limits (length or diameter) by maximum 5 mm = 1 defect;
- Major - outside both limits by maximum 5 mm = 2 defects;
- Major - outside one or both of the limits by more than 5 mm = 4 defects.

(c) ***Well developed*** means that the kernels shall be positioned in a symmetrical pattern in distinct lines or rows which are not seriously affected by missing or shrunken kernels. The whole style may have some shrunken or under-developed parts.

- Minor - Appearance materially affected by irregular pattern of kernels = 1 defect;
- Major - More than 10% but less than 15% by count of the kernels missing or shrunken = 2 defects;
- Serious - 15% or more by count of the kernels missing or shrunken = 4 defects.

(d) In "whole style" the length of the part of ear which is shrunken or underdeveloped shall be considered as follows:

- Minor - more than 20 mm and up to 25 mm = 1 defect;
- Major - more than 25 mm and up to 30 mm = 2 defects;
- Serious - more than 30 mm = 4 defects.

(e) ***Blemished or mechanically damaged areas***

(i) ***Blemished***: A unit affected by pathological or insect injury with associated discolouration which affects the kernels.

(ii) ***Mechanically damaged***: A unit affected by cuts or by crushing of the kernels. Kernels at the ends of the units which are damaged by cutting shall not be considered as damaged by mechanical injury.

- Minor -more than 5% but less than 10% by count of the kernels are slightly affected but not more than 0.5% by count of all kernels are seriously blemished or damaged = 1 defect;
- Major - 10% or more but less than 15% by count of the kernels are slightly affected but not more than 1% by count of all kernels are seriously blemished or damaged = 2 defects;
- Serious - More than 15% by count of the kernels are slightly affected or more than 1% by count of the kernels are seriously affected = 4 defects.

(f) ***Poorly trimmed means*** (i) ears or cut cobs where at the stem end a small part of stalk remains attached and also means (ii) that the top end of the ear or the cut cob is cut too high leaving under-developed kernels on the cob. For the style "whole" the top is untrimmed and a piece of the stalk of maximum 15 mm may remain attached, and not be considered a defect.

- Minor - at one end of unit maximum 5 mm left = 1 defect.
- Major - at one end of unit 5 – 10 mm left = 2 defects.
- Serious - at one end of unit more than 10 mm left = 4 defects.

(g) **EVM (Extraneous Vegetable Material)**

(i) ***Husk*** - means the membranous outer covering and one of the constituent parts of an ear of corn that is removed during processing.

(ii) ***Silk*** - means the coarse thread-like filaments that are one of the constituent parts of an ear of corn. Such silk is found beneath the husk and in immediate contact with the corn kernels (on-the-cob). Corn silk is normally removed during processing. Silk to the total length twice of that of the unit in question are considered normal and not a defect.

- Minor - silk to a total length of 2-6 times the length of the units = 1 defect.
- Minor - husks not more than 2 squares cm in total surface = 1 defect.
- Major - silk to a total length greater than 6 times the length of the units or husks larger than 2 cm^2 square cm in total surface = 2 defects.

2.1.4 Standard Sample Unit[1]

2.1.4.1 *Presentation*

The standard sample unit shall be 4 ears for whole and trimmed whole corn and 8 pieces of ear for the cut cob.

2.1.4.2 *Quality Factors*

The standard sample unit for the respective styles shall be:

(a)	Whole and trimmed whole	4 ears
(b)	Cut Cob	8 pieces of ears

2.1.5 Defects and Allowances

Based on the standard sample unit defined in Section 2.2.4, visual defects shall be assigned points in accordance with Table 1 in this Section. The maximum number of defects permitted in the Total Allowable Points rating is indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

1 "Standard Sample unit": This term should not be confused with individual units of product i.e., whole ear, trimmed whole ear or cut cob.

Table 1 - All Styles

Defect	Unit of Measurement	Defect Categories			
		Minor	Major	Serious	Total
(a) Colour variation (Kernel) **[single colour varieties]** - Light - Pronounced	One ear	1	2		
Colour variation (Ears) - Light - Pronounced	Standard Sample Unit	1	2		
(b) Difference in size outside given range (in standard sample unit)		**1**	2 or 4		
(c) Not well developed	Each ear	**1**	2	4	
(d) Blemished or damaged	Each ear	**1**	2	4	
(e) Poorly trimmed	Each ear	**1**	2	4	
(f) EVM	Standard Sample Unit	**1**	2		
Total Allowable Points		**21**	**6**	**4**	**21**

2.2 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 1.2.1, 2.1.1, 2.1.2 and 2.1.5 shall be regarded as a "defective".

2.3 LOT ACCEPTANCE FOR QUALITY FACTORS

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.2 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Sections 2.1.1, 2.1.2 and 2.1.5, is treated individually for the respective characteristics.

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the product shall include "Corn-on-the-Cob".

3.1.2 In addition, there shall for the styles "whole" and "trimmed whole" appear on the label, in conjunction with or in close proximity to the name a clear indication of the number of units included in the package.

4. FOOD ADDITIVES

4.1 PROCESSING AIDS – Only processing aids listed below may be used in products covered by this standard and shall comply with the Codex Guidelines on Substances Used as Processing Aids (CAC/GL 75-2010).

Table 2 – Processing Aids

INS	Processing Aid	Function
330	Citric Acid	For use in blanching or cooling water.
296	Malic Acid, DL-	

ANNEX VI: FRENCH FRIED POTATOES

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen French fried potatoes are the product prepared from clean, mature, sound tubers of the potato plant conforming to the characteristics of the species *Solanum tuberosum* L and of *Ipomoea batatas*. Such tubers shall have been sorted, washed, peeled or unpeeled, cut into strips, and treated as necessary to achieve satisfactory colour and fried baked / (pre-cooked in edible oil or fat. The treatment and frying operations shall be sufficient to ensure adequate stability of colour and flavour during normal marketing cycles. Following the frying operation the product is quickly cooled and quick frozen.

1.2 PRESENTATION

1.2.1 Styles

The styles of the product shall be determined by the nature of the surface and the nature of the cross section.

1.2.1.1 *Nature of the Surface*

The product may be presented in any one of the following styles including:

(a) Straight cut - strips of potato with practically parallel sides and with smooth surfaces;

(b) Crinkle cut - strips of potato with practically parallel sides and in which two or more sides have a corrugated surface;

(c) Spirals;

(d) Wedges; or

(e) Other shapes.

1.2.1.2 *Dimensions of the cross section*

The cross sectional dimensions of strips of quick frozen French fried potatoes which have been cut on all four sides shall not be less than 5 mm when measured in the frozen condition. The quick frozen French fried potatoes within each pack shall be of similar cross sections.

The product may be identified by the approximate dimensions of the cross sections or by reference to the following system for designations:

Designation	Dimension in mm across the largest cut surface
Shoestring	5 - 8
Medium	8 - 12
Thick cut	12 - 16
Extra large	greater than 16

PROPOSAL

[1.2.13. Dimensions of the length]

Designation	Dimension in mm across the largest cut surface
Long	50% of units with a length over 50 mm, and small Pieces under 6% by number
Short	15% of units with a length over 50 mm, and small pieces under 10% by number

2 ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Uniformity

A tolerance of 10% by weight of non conforming styles units applies.

2.1.1 Basic Ingredients

(a) Potatoes as defined in Section ~~2.1~~ 1.2

(b) Edible fats and oils as defined by the Codex Alimentarius Commission.

2.1.2 Optional Ingredients

(a) Sugars as defined in the Codex Standard for Sugars (CODEX STAN 212-1999);

(b) Salt (sodium chloride);

(c) Condiments, such as herbs and spices;

(d) Batters.

2.2 QUALITY FACTORS

2.2.1 General Requirements

Quick frozen French fried potatoes shall:

- be free from any foreign flavours and odours;
- be clean, sound and practically free from foreign matter;
- have a reasonably uniform colour;

and with respect to visual defects subject to a tolerance shall be:

- without excessive external defects such as blemishes, eyes and discolouration;
- without excessive sorting effects, such as slivers, small pieces and scrap;
- reasonably free from frying defects, such as burnt parts.

When prepared in accordance with the manufacturer's instructions quick frozen French fried potatoes shall:

- have a reasonably uniform colour;
- have a texture characteristic of the product and be neither excessively hard nor excessively soft or soggy.

2.2.2 Analytical Requirements

2.2.2.1 ***Moisture*** - the maximum moisture content of the whole product in the styles shoestring, medium and thick cut shall be 76% m/m; and in extra large and other styles 78% m/m.

2.2.2.2 The fat or oil extracted from the product shall have a free fatty acid content of not more than 1.5% m/m measured as oleic acid or an equivalent fatty acid value based on the predominant fatty acid in the fat or oil.

2.2.3 Definition of Visual Defects

2.2.3.1 ***External defects*** are blemishes or discolouration (either internally or on the surface) due to exposure to light, mechanical, pathological or pest agents, eye material or peeling remnants.

(a) Minor defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peel covering an area or a circle greater that 3 mm but less than 7 mm in diameter; pale brown peel or light discolouration of any area greater than 3 mm in diameter.

(b) Major defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peeling covering an area or a circle greater than 7 mm but less than 12 mm in diameter.

(c) Serious defect - A unit affected by disease, dark or intense discolouration, eye material, or dark peel covering an area or a circle of 12 mm in diameter or more.

Note: "Slight" external defects which in either area or intensity fall below the definition shown for minor defects shall be ignored.

2.2.3.2 ***Sorting Defects***

(a) Sliver - a very thin unit (generally an edge piece) which will pass through a slot the width of which is 50% of the minimum dimension of the nominal or normal size.

(b) Small piece - Any unit less than 25 mm in length.

(c) Scrap - Potato material of irregular form not conforming to the general conformation of French fried potatoes.

2.2.3.3 ***Frying Defects***

Burnt pieces - any unit which is dark brown and hard due to gross over frying.

2.2.3.4 ***Standard Sample Size***

The standard sample size shall be 1 kg.

2.2.5 Tolerances for Visual Defects

For tolerances based on the standard sample size as specified in Section 3.2.4 the visual external defects are classified as "minor" or "major" or "serious". The tolerances in respect of external defects are dependent on the cross section of the French fried potatoes.

To be acceptable, the standard samples shall not contain units in excess of the numbers shown for the respective categories, including total, in Table 1.

Table 1 - Tolerances for external defects

Defect category	Number of Units Affected Cross section of strips	
	5 - 16 mm	over 16 mm
Serious	7	3
Serious + major	21	9
Total (serious + major + minor)	60	27

The tolerances for the other defects (not depending on cross section) are:

Sorting defects (Grades?)

Slivers	max. 12% m/m
Small Pieces and Scraps	max. 6% m/m
Total Sorting Defects	max. 12% m/m
Frying defects	max. 0.5% m/m

2.3 DEFINITION OF "DEFECTIVE"

Any sample unit taken shall be regarded as a "defective" for the respective characteristics when:

(a) it fails to meet any of the requirements given in Section 2.1;

(b) it fails to meet any of the general requirements given in Section 2.2.1;

(c) it exceeds the tolerances for visual defects in any one or more respective defect categories in Section 2.2.5.

2.4 LOT ACCEPTANCE FOR COMPOSITION AND QUALITY FACTORS

A lot will be considered acceptable with respect to Composition and Quality Factors when the number of "defectives" as defined in Section 2.5 does not exceed the acceptance number (c) of an appropriates sampling plan with an AQL of 6.5.

In applying the acceptance procedure each "defective" (as defined in section 2.3(a) to (c)) is treated individually for the respective characteristics.

2.5 DEFINITION OF "DEFECTIVE" FOR ANALYTICAL REQUIREMENTS

See relevant Codex texts on methods of analysis and sampling.

2.6 LOT ACCEPTANCE FOR ANALYTICAL REQUIREMENTS

See relevant Codex texts on methods of analysis and sampling.

[Note: For Sections 2.5 and 2.6 criteria should be established or relevant Codex texts should be identified. The WG should also see the link between this Section and Section 10 in the body of the Standard].

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the product shall be "French Fried Potatoes" or the equivalent designation used in the country in which the product is intended to be sold. Where the sweet potato variety is used, the name of the product shall be "French Fried Sweet Potato".

3.1.2 In addition, there shall appear on the label a designation of the style as appropriate, for example “straight cut” or “crinkle cut” and there may also appear an indication of the approximate dimensions of the cross section or the appropriate designation, i.e. “shoestring”, “medium”, “thick cut” or “extra large”.

3.1.3 If the product is produced in accordance with Section 1.2.1.3. The label shall contain in close proximity to the words “French Fried Potatoes” such additional words or phrases that will avoid misleading or confusing the consumer.

3.1.4 The words “Quick Frozen” shall also appear on the label, except that the term “Frozen”[1] may be applied in countries where this term is customarily used for describing the product processed in accordance with Section 2.2 of this standard.

3.2 ADDITIONAL REQUIREMENTS

The packages shall bear clear directions for keeping from the time they are purchased from the retailer to the time of their use, as well as directions for cooking.

3.3 BULK PACK

In the case of quick frozen French fried potatoes in bulk, the information required above shall either be placed on the container or be given in accompanying documents, except that the name of the food accompanied by the words “quick frozen” (the term “frozen” may be used in accordance with Section 6.1.4 of this Standard) and the name and address of the manufacturer or packer shall appear on the container.

4. FOOD ADDITIVES

4.1 Sequestrants used in accordance with Tables 1 and 2 of the Codex General Standard for Food Additives (CODEX STAN 192-1995) in Food Category 0.4.2.2.1 Frozen Vegetables (including mushrooms and fungi, roots and tubers, pulses and legumes, and aloe vera), seaweeds, and nuts and seeds, are acceptable for use in food conforming to this Standard.

4.2 In addition, the following food additives apply to the products covered by the Standard:

[1] “Frozen”: This term is used as an alternative to “quick frozen” in some English speaking countries.

INS No	Food Additive	Maximum Level
338: 339 (i)-(iii); 340 (i) – (111)-341(i)- (iii); 342(i),(ii); 343(i)-(iii); 450(i)-(iii),(v)-(vii); 451(i), (ii); 452(i)-(v);	Phosphates	100 mg/k singly or in combination (phosphates expressed*as P_2O_5) GMP
330	Citric Acid	GMP
296	Malic acid DL**	GMP
300	Ascorbic acid L***	
	[**Food Enzymes – asparaginase** **Sodium Acid** **Pyrophosphate-** **Sequestering Agent** **Coloring Agents** **Emulsifying agents** **Gelling agents** **Stabilizing agents** **Thickening agents** **Sweeteners** **pH adjusting agents** **Water correcting agents** **Class I, II and III Preservatives**]	

[* The standard had two phosphates listed for use as sequestrants. Based on this, it is typically understood that all phosphates that can be used as sequestrants should be permitted (unless there is a technological reason not to include them). There is a phosphates provision in this category in the GSFA at Step 6 (for a higher use level). Also, the GSFA typically reports phosphate use levels on an 'as phosphorus' basis.

***** Malic acid is not listed as a sequetrant in GSFA. Therefore, users need to provide CCFA with technological justification that malic acid functions as a sequestrants.***

****** Ascorbic acid is not listed as sequestrants in GSFA. Therefore, users need to provide CCFA with technological justification that ascorbic acid functions as a sequestrants]***

4.3 PROCESSING AIDS – Only processing aids listed below may be used in products covered by this standard and shall comply with the Codex Guidelines on Substances Used as Processing Aids (CAC/GL 75-2010).

Table 2 – Processing Aids

INS	Processing Aid	Function
221	Sodium sulfite	For use in blanching or cooling water.
223	Sodium bisulfite	
228	Potassium bisulfite	
224	Potassium metasulfite	
225	Potassium sulfite *	
330	Citric acid	
524	Sodium hydroxide	
525	Potassium hydroxide	
900a	Polydimethylsiloxane **	

* The current standard lists a ML for sulfite. Need to confirm that it is a processing aid.

** The current standard lists a ML for polydimethylsiloxane. Need to confirm that it is a processing aid.

Summary of changes made to ANNEX VI: FRENCH FRIED POTATOES

1.2.1.3 Dimensions of the length: Proposal

A proposal to include a “the length” requirement was made and is included for consideration.

4. FOOD ADDITIVES

There was a proposal to expand the Food additive list in Table to reflect current industry practices. Another proposal was made to delete from Table 1-Citric acid, Malic acid DL and Ascorbic acid L, and from Table 2 “Processing Aids” Sodium sulfite, Sodium bisulfate, Potassium bisulfate, Potassium metasulfite, and Potassium sulfite. Members are asked to consider these proposals.

ANNEX VII: GREEN BEANS AND WAX BEANS

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick Frozen Green Beans is the product prepared from fresh, clean, sound, succulent pods of the plants conforming to the characteristics of suitable varieties of the species *Phaseolus vulgaris* L. or *Phaseolus coccineus* L. Strings (if any), stems, and stem ends are removed, and the pods washed and sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.2 Type

Green Beans or Wax Beans having distinct varietal differences with regard to shape may be designated as:

(a) ***Round*** - pods having a width not greater than 1½ times the thickness.

(b) ***Flat*** - pods having a width greater than 1½ times the thickness.

1.2.3 Styles

Quick frozen green beans and quick frozen wax beans shall be presented in the following styles:

(a) ***Whole***: whole pods of any length.

(b) ***Cut***: transversely cut pods in which 70% or more by count of the units are at least 20 mm long but not longer than 65 mm.

(c) ***Short cut***: transversely cut pods in which 70% or more by count of the units are more than 10 mm but less than 20 mm long.

(d) ***Diagonal Cut***: pods cut approximately 45° to the longitudinal axis in which 70% by count of the units are more than 6 mm long.

(e) ***Sliced***: pods sliced lengthwise or at an angle up to approximately 45° to the longitudinal axis, with a maximum thickness of 7 mm.

1.2.4 Colour

The predominant colour of the pods of wax beans excluding the seeds and immediate surrounding tissue shall be yellow, or yellow with a green tinge.

1.2.5 Sizing

(a) Quick frozen whole and cut green beans and wax beans may be presented sized or unsized.

(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.]**

Size Designations	Bean Pod Diameter in mm measured by passing through parallel bars
Extra small	up to 6.5
Very small	up to 8
Small	up to 9.5
Medium	up to 11
Large	over 11

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

(a) Sugars as defined in the Codex Standard for Sugars (CODEX STAN 212-1999).

2.2 QUALITY FACTORS

2.2.1 General Requirements

With regard to visual defects subject to a tolerance, quick frozen beans shall be:

(a) without excessive small pieces;

(b) normally developed (for whole beans);

(c) reasonably free from extraneous vegetable material (EVM);

(d) reasonably free from stem ends;

(e) reasonably free from damage by insects or disease;

(f) reasonably free from mechanically damaged units;

(g) reasonably free from tough strings and fibrous units.

2.2.2 Definition of Visual Defects

(a) ***Extraneous Vegetable Material***: vegetable material from the bean plant, other than pod, such as leaf or vine, but excluding stem ends; other harmless vegetable material, not purposely included as an ingredient. For the purpose of assessment, EVM comprising bean leaf material will be differentiated from other EVM.

(b) ***Stem End***: a piece of the immediate stem which attaches the pod to the vine stem whether still attached to the unit or loose in the product.

(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.

(e) ***Mechanical Damage***: (Whole and Cut Styles): a unit that is broken or split into two parts, crushed, or has very ragged edges to an extent that the appearance is seriously affected.

(f) ***Undeveloped***: (Whole Style only): each unit which measures less than 3 mm at its widest point.

(g) ***Tough Strings***: tough fibre which will support a weight of 250 g for 5 seconds or more when tested in accordance with the procedure as given in CAC/RM 39-1970.

(h) ***Fibrous Unit***: each piece having parchment - like material formed during the ripening of the pod, to the extent that the eating quality is seriously affected.

(i) ***Small Pieces***: (Cut and Sliced Styles): bean pieces less than 10 mm in length including loose seeds and pieces of seeds;

- (Whole Style) bean pieces less than 20 mm in length including loose seeds and pieces of seeds.

2.2.3 Standard Sample Size

2.2.3.1 ***Presentation***

(a) The standard sample size for sizing shall be 1 kg.

2.2.3.2 ***Visual Defects***

The standard sample size is 1 kg for E.V.M. and stem ends, and 300 g for other defect categories.

2.2.4 Defects and Allowances

2.2.4.1 ***Presentation***

(a) When the product is presented as “free flowing” a tolerance of 10% (m/m) shall be allowed for pieces which are stuck together to such an extent that they cannot easily be separated in the frozen state. When assessing this factor, the sample unit shall be the entire contents of the pack or 1 kg.

(b) If presented as size graded, the product shall contain not less than 80% by number of bean pods of the declared size or smaller sizes. Of the 20% by number which may be of larger sizes, not more than a quarter may be of the second size larger and none may be larger than the second size larger.

2.2.4.2 ***Visual Defects***

For tolerance based on the standard sample size indicated in Section 2.2.3, visual defects shall be assigned points in accordance with the Table in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective categories 1, 2 and 3 or the Combined Total of the foregoing categories.

Defect		Defect Categories			Total
		1	2	3	
(a)	EVM - Bean Leaf (each piece) - Other E.V.M. (each piece)	 1 2			
(b)	Stem end	1			
(c)	Major blemish		3		
(d)	Minor blemish		1		
(e)	Mechanical damage (Whole and cut styles)		1		
(f)	Undeveloped (Whole style)		2		
(g)	Tough strings			3	
(h)	Fibrous unit			1	
(A)	All but whole style	15	50	10	60
(B)	Whole style only	15	30	6	40
(i)	Small pieces (Whole, Cut and Sliced Styles) - maximum 20% m/m				

[PROPOSAL]

DEFECTS	TOLERANCES (%m/m)	TOLERANCES (BY NUMBER)
(a) EVM		**3/ kg**
(b) Stem end		**6/ kg**
(c) Major blemish	**8**	
(d) Minor blemish	**12**	
(e) Mechanical damage (Whole and cut styles)	**5**	
(f) Undeveloped (Whole style)	**2**	
(g) Tough strings and (h)Fibrous unit	**1**	
(h) Small pieces (Whole, Cut and Sliced Styles)	**20**	

TOTAL TOLERANCES: b t o h:20%; and if one of the defects is over 1.5 the tolerance of the table.

2.3 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.2.1 and 2.2.4 shall be regarded as a "defective".

2.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.3 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Sections 2.2.1 and 2.2.4.2, is treated individually for the respective characteristics.

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the product shall include the designations "green beans" or "wax beans" as applicable.

3.1.2 A statement regarding type ("round" or "flat") may be made if customary in the country of retail sale.

3.2 SIZE DESIGNATION

If a term designating the size of the beans is used:

(a) it shall be supported by the size in mm as shown in Section 2.4.5.2; and/or

(b) the words "extra small", "very small", "small", "medium", or "large" as appropriate; and/or

(c) by a correct graphic representation on the label of the size range to which the beans predominantly conform; and/or

(d) the customary method of declaring size in the country in which the product is sold.

4. FOOD ADDITIVES

4.1 None permitted

Summary of changes made to ANNEX VII: GREEN BEANS AND WAX BEANS

2.2.2 Definition of Visual Defects (c) and (d)

A proposal setting the size of defects in extra small green beans and wax beans of: 2mm to 4 mm for the extra small size, is included for consideration

2.2.4.2 A simplified table of Visual Defects was proposed to replace the one in the draft standard. The proposed table is included for member's consideration

ANNEX VIII: LEEK

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen leek is the product prepared from fresh, clean, sound, edible parts of the leek plant conforming to the characteristics of the species *Allium porrum* L., and which have been trimmed, washed, possibly blanched to ensure adequate stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Styles

(a) ***Whole leek*** - the leek plant with roots and non-tender leaves removed.

(b) ***Leek*** - parts of the whole leek with a length, corresponding to the longest dimension of the package, but not less than 70 mm.

(c) ***Cut leek*** - parts of the whole leek, cut perpendicularly to the longitudinal axis, minimum length 30 mm, maximum length 70 mm.

(d) *Leek rings* - parts of the whole leek, cut perpendicularly to the longitudinal axis into slices, not thinner than 10 mm and not thicker than 20 30 mm.

(e) ***Chopped leek*** - the whole leek chopped into pieces, such that the original structure is almost entirely lost, resulting in a "unit" generally smaller than 15 mm in size.

1.2.3 Colour

(a) leek may be presented as white; when not more 10% m/m shall be present of leaves or parts of leaves with a green colour.

1.2.4 Sizing

(a) whole leek and leek, may be presented as sized or unsized;

(b) the minimum diameter of whole leak and leek, measured perpendicularly to the axis immediately above the swelling at the neck shall be not less than 10 mm;

(c) when sized, the difference between the largest and smallest diameter of the leeks in the same package, measured perpendicularly to the axis immediately above the swelling at the neck, shall be not more than 10 mm.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 QUALITY FACTORS

2.1.1 General Requirements

Quick frozen leek shall have similar varietal characteristics and be free from objectionable tough parts; and with respect to visual defects or other defects subject to a tolerance, shall be:

(a) free from yellow and/or yellowish leaves;

(b) reasonably free from damage such as staining, discolouration, or insect injury;

(c) reasonably free from extraneous vegetable material (E.V.M.);

(d) practically free from roots;

(e) reasonably well trimmed;

(f) practically free from loose or detached leaves (in whole style only);

(g) Practically free from hard parts as "seed heads".

2.1.2 Analytical Characteristics

Mineral impurities - not more than 0.1% m/m, measured on the whole product basis.

2.1.3 Definition of Visual Defects

Discolouration	– discolouration of any kind on the product and which materially detracts from the appearance of the product;
(a) Minor	– discolouration which is light in colour. Each area or combined area of 4 cm² = 1 defect; **(or the greatest dimension is less than 20mm)**
(b) Major	– discolouration which is dark in colour. Each area or combined area of 4 cm² = 1 defect, **(or the greatest dimension is over 20 mm).**
Damaged	– each leaf or part of leaf that is affected by blemishes, staining or insect injury;
Extraneous Vegetable Material (EVM)	– each cm² harmless vegetable material other than from the leek;
Roots	– each disk of roots attached to the leek or loose;
Parts of roots	– parts of roots attached to the leek or loose;
Poorly trimmed	– the white or pale green portion is less than one-third of the total product; – for the presentation "white" (Section 1.2.3) not more than 10% m/m of green leaves is permitted; – parts of the seed head;
Loose leaves	– leaf or part of it which is detached from the shaft (in whole style only).

2.1.4 Standard Sample Size

The standard sample size for segregating and evaluating visual defects shall be as follows:

Style	Standard Sample Size
Whole leek	500 g but not less than two pieces (for sizing 10 pieces)
Leek and cut leek	500 g
Leek rings	250 g
Chopped leek	250 g

2.1.5 Method of Examination

For separation and enumeration of visual defects the standard sample (see standard sample size) is placed in water in a deep tray, and the shafts or leaf portions separated one by one.

2.1.6 Defects and Allowances

If size graded, the product shall contain not less than 80% by number of whole leek of the declared size.

For tolerances based on the standard sample unit indicated in Section 2.1.4, visual defects shall be assigned points in accordance with the appropriate Tables in this Section. The maximum number of defects permitted is the Total Allowable Points rating indicated for the respective defect categories Minor and Major or the Combined Total of the foregoing categories.

Table 1 - Whole Leek
(Sample Size 500 g but not less than two pieces)

Defect	Defect Categories		
	Minor	**Major**	**Total**
Discolouration			
(a) Minor	2		
(b) Major		2	
Damaged		2	
E.V.M.	1		
Roots		2	
Parts of roots	1		
Poorly trimmed		2	
Loose leaves	1		
TOTAL ALLOWABLE POINTS	**8**	**6**	**10**

Table 2 - Leek, Cut Leek, Leek Rings and Chopped Leek
Standard Sample Size 500 g (Leek and Cut Leek)
Standard Sample Size 250 g (Leek Rings and Chopped Leek)

Defect	Defect Categories		
	Minor	**Major**	**Total**
Discolouration			
(a) Minor	2		
(b) Major		2	
Damaged		2	
E.V.M.	1		
Roots		2	
Parts of roots	1		
Poorly trimmed		2	

TOTAL ALLOWABLE POINTS				
(a)	Leek and Cut Leek	10	10	12
(b)	Leek Rings and Chopped Leek	5	6	6

[PROPOSAL]

Standard Sample Size 500 g and at least 20 units (Leek and Cut Leek)
Standard Sample Size 250 g (Leek Rings and Chopped Leek)

DEFECTS	LEEKS, CUT LEEKS		LEEK RINGS, CHOPPED LEEK
	BY NUMBER	BY WEIGHT	
Discolouration			
- Minor	3		4
- Major	2		6
Damaged	2		
E.V.M.	1		2
Roots and Parts of roots	1		
Poorly trimmed	2		5
Loose leaves		5	

TOTAL ALLOWANCES: **15 UNITS FOR LEEK RINGS CHOPPED LEEK;**

5 UNITS FOR LEEKS, CUT LEEKS

2.2 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.1.1, 2.1.2 and 2.1.6 shall be regarded as a "defective".

2.3 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.2 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Section 2.2, is treated individually for the respective characteristics.

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the product shall include the designation "leek".

3.1.2 Size Designation

If a term designating the size of whole leek is used, it shall:

(a) be supported by a statement of the predominant range of the maximum diameter of the leek in millimeters, or fractions of an inch in those countries where the English system is in general use; and/or

(b) conform to the customary method of declaring size in the country of retail sale.

4. FOOD ADDITIVES

4.1 None permitted

Summary of changes made to ANNEX VIII LEEK

2.1.3 Definition of Visual Defects

The definition for (a) major and (b) minor discoloration were expanded to include a length parameter

2.1.6 Defects and Allowances:

A simplified table of defects and allowances is proposed.

ANNEX IX: PEAS

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen peas are the product prepared from fresh, clean, sound, whole, immature seeds of peas which have been washed, sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles and which conform to the characteristics of the species *Pisum sativum* L.

1.1.1 Types

(a) Any suitable variety of peas may be used.

(b) The product shall be presented as "peas" or may be presented as "garden peas" provided they meet the organoleptic and analytical characteristics of the type, e.g. "Kelvedon Wonder", "Dark Skin Perfection" and others.

(c) When the peas are of sweet green wrinkled varieties or hybrids having similar characteristics, the name is "sweet green peas".

1.2 PRESENTATION

1.2.1 Sizing

1.2.1.1 Quick frozen peas of either type may be presented sized or un-sized.

1.2.1.2 If peas are size graded they shall conform to one of the two following systems of specifications for the size names. However, other size designations may be used.

Table 1 – Specifications for Sizing

Size Designation	Round Hole Sieve Size In Mm
Specification A	
Small	up to 8.75
Medium	up to 10.2
Large	over 10.2
Specification B	
Extra small	up to 7.5
Very small	up to 8.2
Small	up to 8.75
Medium	up to 10.2
Large	over 10.2

PROPOSAL:

Size Designation	Round Hole Sieve Size in mm	
	Will Not Pass Through	Will Pass Through
Smooth Green Peas		
1) Extra small		**7.5**
2) Very small	**7.5**	8.2
3) Small	8.2	8.75
4) Medium	8.75	9.3
5) Large	9.3	
Wrinkled Sweet Green Peas		
1) Extra small		7.5
2) Very small	7.5	8.2
3) Small	8.2	9.3
4) Medium	9.3	10.2
5) Large	10.2	

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

Sugars as defined in the Codex Standard for Sugars (CODEX STAN 212-1999).

2.2 QUALITY FACTORS

2.2.1 Organoleptic and other characteristics

2.2.1.1 The product shall be of a reasonably uniform green colour according to type, whole, clean, practically free from foreign matter, free from any foreign taste or smell and practically free from damage by insects or diseases.

2.2.1.2 The product shall have a normal flavour, taking into consideration any seasonings or ingredients added.

2.2.1 Analytical Characteristics

The alcohol-insoluble solids content as determined by the method specified in Codex Alimentarius Volume 13 must not exceed:

(a) for Peas /Garden Peas 23% m/m

(b) for Sweet Green Peas 19% m/m

2.2.3 Definition of Defects

(a) ***Blond Peas*** means peas which are yellow or white but which are edible (that is, not sour or rotted).

(b) ***Blemished Peas*** means peas which are slightly stained or spotted.

(c) ***Seriously Blemished Peas*** means peas which are hard, shrivelled, spotted, discoloured or otherwise blemished to an extent that the appearance or eating quality is seriously affected. These shall include worm-eaten peas.

(d) ***Pea fragments*** means portions of peas, separated or individual cotyledons, crushed, partial or broken cotyledons and loose skins, but does not include entire intact peas with skins detached.

(e) ***Extraneous Vegetable Material (E.V.M.)*** means any vine or leaf or pod material from the pea plant, or other vegetable material such as poppyheads or thistles.

2.2.4 Defects and Allowances

2.2.4.1 ***Tolerances for Visual Defects***

Based on a sample unit of 500 g the end product shall have not more than the following:

(a)	Blond Peas	2% m/m
(b)	Blemished Peas	5% m/m
(c)	Seriously Blemished Peas	1% m/m
(d)	Pea Fragments	12% m/m
(e)	E.V.M.	0.5% m/m but not more than 12 cm² in area

2.2.4.2 ***Tolerances for Sizes***

If size graded, the product shall contain not less than 80% either by number or mass of peas of the declared size or of smaller sizes. It shall contain no peas of sizes larger than neither the next two larger sizes nor more than 20% either by number or mass of peas of the next two larger sizes, if such there be. Not more than one quarter of these peas whether by number or mass, shall belong to the larger of the next two sizes.

2.3 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.2.1 and 2.2.2 shall be regarded as a "defective".

In addition, any standard sample unit which fails to comply with the quality requirements shall be regarded as a "defective" when any of the defects listed under 2.2.3 is present in more than twice the amount of the specified tolerance for the individual defect as listed under 2.2.4 or if the total of 2.2.4 from (a) to (d) inclusive exceeds 15% m/m.

2.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.3 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

3. LABELLING

3.1 NAME OF THE PRODUCT

The name of the product shall include the designation "peas", except that where peas are presented in conformity with Section 1.1.1 Types "Garden Peas", Sweet Green Peas, the designation shall be "garden peas" or the equivalent designation used in the country of retail sale.

4. FOOD ADDITIVES

4.1 FLAVOURINGS - The flavourings used in products covered by this standard shall comply with the Codex Guidelines for the Use of Flavourings (CAC/GL 66-2008).

Summary of changes made to ANNEX IX: PEAS

1.2.1.2 Table 1- Specifications for Sizing:

It was proposed – for ease of application and based on trade practices that the sizing table from the Codex Standard for Certain Canned Vegetables – Annex on Canned Peas (*CODEX STAN 297)* be used in for Quick Frozen Peas. Therefore, the said sizing table from (*CODEX STAN 297)* is included for consideration.

ANNEX X: SPINACH

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen spinach is the product prepared from fresh, clean, sound edible parts of the spinach plant conforming to the characteristics of the species *Spinacia oleracea* L., and which have been sorted, washed, sufficiently blanched to ensure adequate stability of colour and flavour during normal marketing cycles and properly drained.

1.2 PRESENTATION

1.2.1 Styles

(a) ***Whole Spinach*** - the intact spinach plant with root removed;

(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.];**

(c) ***Cut-Leaf Spinach*** - parts of leaves of spinach generally larger than 20 mm in the smallest dimension;

(d) ***Chopped Spinach*** - parts of leaves of spinach cut into small pieces generally less than 10 mm in the largest dimension, but not comminuted to a pulp or puree - i.e. pieces smaller than 3 mm in dimension;

(e) ***Pureed Spinach (Spinach Puree)*** - spinach finely divided or finely chopped or having passed through a sieve such that the leaf particles are less than 3 mm dimension.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 QUALITY FACTORS

2.1.1 UNIFORMITY

A tolerance of 10% by weight of non conforming styles applies

2.1.2 General Requirements

Quick frozen spinach shall be practically free from fibrous material and for the styles of “Whole Leaf” and “Cut Leaf” not materially disintegrated due to mechanical damage; and, with respect to visual defects or other defects subject to a tolerance, shall be:

(a) well drained and containing no excess water;

(b) practically free from sand and grit;

(c) practically free from loose or detached leaves in “Whole” style only;

(d) practically free from root material;

(e) reasonably free from discoloured leaves or portions thereof;

(f) reasonably free from flower stems (seed heads);

(g) reasonably free from flower buds;

(h) reasonably free from crown and portion thereof, except for “Whole” spinach;

(i) reasonably free from extraneous vegetable material (E.V.M.).

2.1.3 Analytical Characteristics

(a) Mineral impurities such as sand, grit and silt shall be not more than 0.1% m/m, measured on the whole product basis;

(b) Salt-free dry matter - not less than 5.5% m/m.

2.1.4 Definition of Visual Defects

(a) ***Loose leaves ("Whole" style only)*** - leaves which are detached from the crown;

(b) ***Discolouration*** - discolouration of any kind on the leaves or stem portions and which materially detracts from the appearance of the product;

(i) Minor - discolouration which is light in colour;

(ii) Major - discolouration which is dark in colour.

(c) ***Extraneous Vegetable Matter*** - harmless vegetable material such as grass, (E.V.M) weeds, straw, etc.

(i) Minor - E.V.M. which is green and tender;

(ii) Major - E.V.M. which is other than green or is coarse.

(d) ***Seed heads (flower stems)*** - the flower bearing portion of the spinach plant, which is longer than 25 mm;

(e) ***Flower buds*** - the separate flower buds detached from the seed head;

(f) ***Crowns (exclusive of "Whole" style)*** - the solid area of the spinach plant between the root and the attached leaf clusters;

(g) ***Root material*** - any portion of the root, either loose or attached to leaves.

2.1.5 Standard Sample Size

The standard sample size for segregating and evaluating visual defects shall be as follows:

Style	Standard Sample Size (in grammes)
(a) Whole and Leaf	300
(b) Cut Leaf	300
(c) Chopped	100
(d) Pureed	100

2.1.6 Method of Examination

For separation and enumeration of visual defects the test sample (standard sample size) is placed in water in a deep tray, and the leaves or leaf portion separated one by one.

2.1.7 Defects and Allowances

For tolerances based on the standard sample sizes indicated in Section 2.1.4, 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.

Table 1 - Whole Leaf and Cut Leaf Style

Defect	Unit of Measurement	Defect Categories			
		Minor	Major	Serious	Total
(a) Loose Leaves (Whole Style only)	Each Leaf	1			
(b) Discolouration	Each 4 cm²				
– Minor		1			
– Major			2		
(c) E.V.M.	Each 5 cm				
– Minor		1			
– Major			2		
(d) Seed heads	Each whole head		2		
	Each portion	1			
(e) Crown (exclusive of "Whole" style)	Each whole crown		2		
	Each part				
(f) Root material	Each piece			4	
TOTAL ALLOWABLE POINTS		20	10	4	20

Table 2 - Chopped Style

Defect	Unit of Measurement	Defect Categories		
		Minor	Major	Total
(a) Discolouration	Each cm²			
– Minor		1		
– Major			2	
(b) E.V.M.	Each 1 cm			
– Minor		1		
– Major			2	
(c) Flower buds	Each 50 pieces	1		
(d) Crown material	Each piece		2	
(e) Root Material	Each piece		2	
TOTAL ALLOWABLE POINTS		20	10	20

Table 3 - Pureed Style

Defect	Allowance
Any dark particle or flower bud	Shall not affect the overall appearance of the product

2.2 CLASSIFICATION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.1.1, 2.1.2 and 2.1.6 shall be regarded as a "defective".

2.3 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.2 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each "defective", as indicated in Section 2.2, is treated individually for the respective characteristics.

3. LABELLING

3.1 NAME OF THE PRODUCT

The name of the product shall include the designation "spinach".

4. FOOD ADDITIVES

4.1 None permitted.

Summary of changes made to ANNEX X: SPINACH

1.2.1 Styles (b)

A maximum length of the attached stem is proposed for whole leaf spinach.

ANNEX XI: WHOLE KERNEL CORN

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen whole kernel corn is the product prepared from fresh, clean whole sound, succulent kernels of sweet corn species *Zea mays* L. convar. *saccharata* Koern of either the white or yellow varieties by removing husk and silk; by sorting, trimming and washing; and by sufficiently blanching before or after removal from the cob to ensure adequate stability of colour and flavour during normal marketing cycles.

1.2 PRESENTATION

1.2.1 Colour

(a) Yellow;

(b) White.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Other Permitted Ingredients

(a) Garnishes, such as pieces of green peppers or red peppers, or mixture of both, either of which may be sweet or hot or may be dried. Other vegetables may be used as garnishes. A garnish may not exceed 5% m/m of the finished food.

2.2 QUALITY FACTORS

2.2.1 General Requirements

Quick frozen whole kernel corn shall be:

(a) of similar varietal characteristics;

(b) of a reasonably uniform colour which may be slightly dull;

(c) before and after cooking, free from foreign flavour and odour, taking into consideration any added optional ingredients;

(d) reasonably tender;

(e) reasonably free from loose skins;

and with respect to visual defects subject to tolerances shall be:

(f) reasonably free from ragged, crushed or broken kernels;

(g) reasonably free from damaged or blemished kernels;

(h) reasonably free from pieces of cob, husk or silk;

(i) practically free from harmless extraneous vegetable material; and

(j) reasonably free from pulled kernels.

2.2.2 Analytical Requirements

(a) The Alcohol Insoluble Solids (AIS) content of the whole kernels shall not exceed 32% m/m.

(b) The soluble solids content of the juice pressed from the kernels by refractometer at 20°C, uncorrected for acidity and expressed as degrees Brix on the International Sucrose Scales shall be not less than 20.

2.2.3 Definitions of Visual Defects

(a) ***Damage* or *blemish*** - means any kernel affected by insect injury or damaged by discolouration, pathological injury, mechanical injury, or by any other means to the extent that the appearance or eating quality is affected. This category of defect may be further classified as "minor", "major" or "serious" depending upon the extent to which the appearance is affected.

(i) Minor - means damage or blemish that affects the kernel to only a slight degree.

(ii) Major - means damage or blemish that is quite noticeable and materially affects the kernel.

(b) ***Serious*** - means damage or blemish that is very noticeable and of such nature that it would customarily be discarded under normal culinary preparation.

(c) ***Cob*** - means the very firm to hard cellulose-like material to which the kernels of corn are attached and from which the kernels are removed during processing.

(d) ***Husk*** - means the membranous outer covering and one of the constituent parts of an ear of corn that is removed during processing.

(e) ***Silk*** - means the coarse thread-like filaments that are one of the constituent parts of an ear of corn. Such silk is found beneath the husk and in immediate contact with the corn kernels. Corn silk is normally removed during processing.

(f) ***Harmless extraneous vegetable material*** - means vegetable matter other than cob, husk, or silk which is harmless. Such material may include, but is not limited to, grass, weeds, leaves and portions of stalk. This category of defect may be further classified as "minor", "major" or "serious", depending upon the amount of severity of the material.

(i) Minor - only slightly noticeable and affects the product to only a slight degree.

(ii) Major - readily noticeable and affects the product to a material degree.

(iii) Serious - very noticeable and objectionable and would customarily be discarded under normal culinary preparation.

(g) ***Pulled kernels*** - means kernels of corn that have been so cut or removed from the ear of corn that portions of cob or hard tissue remain. This category of defect may be further classified as "minor or "major" depending upon the amount of adhering cob that is present.

(i) Minor - slight amount of cob material or hard tissue remains around the base of the kernel.

(ii) Major - moderate to noticeable amount of adhering cob material. (If there is an excessive amount of cob material adhering, apply tolerance given in Table 1).

2.2.4 Standard Sample Unit

The standard sample unit shall be 250 g.

2.2.5 Defects and Allowances

For tolerances based on the standard sample unit indicated in Section 2.2.4, visual defects shall be assigned points in accordance with Table 1 in this Section. The maximum number of defects permitted in the Total Allowable Points rating indicated for the respective categories Minor, Major and Serious or the Combined Total of the foregoing categories.

Table 1

Defects	Unit of Evaluation	Defect Categories			Total
		Minor	Major	Serious	
Damage or blemish					
- minor	Each kernel	1			
- major			2		
- serious				4	
Harmless EVM					
- minor	Each piece	1			
- major			2		
- serious				4	
Pulled kernels					
- minor	Each kernel	1			
- major			2		
Total allowable points		60	40	20	60

Pieces of cob - maximum tolerance	0.6 cubic centimetres
Husk - maximum tolerance	4.4 square centimetres
Silk - maximum tolerance	160 cm
Ragged, crushed or broken kernels	(60 pieces)

PROPOSAL

Defects	% m/m
Damage or blemish (Minor, major, serious)	**1**
Harmless EVM (Minor, major, serious)	**0.2**
Pulled kernels	
- minor	**5**
- major	**2**
Total allowable points	**6**

2.3 DEFINITION OF "DEFECTIVES"

Any standard sample unit which fails to comply with the quality requirements, as set out in Sections 2.1.1 (a), 2.2.1, 2.2.2 and 2.2.5 shall be regarded as a "defective".

3.4 LOT ACCEPTANCE

A lot will be considered acceptable when the number of "defectives" as defined in Section 2.3 does not exceed the acceptance number (c) for the appropriate sample plan with an AQL of 6.5.

In applying the acceptance procedure each defective, as indicated in Section 2.3, is treated individually for the respective characteristics.

3. LABELLING

3.1 NAME OF THE PRODUCT

3.1.1 The name of the food shall include the designation "corn".

3.1.2 In addition, there shall appear on the label in conjunction with or in close proximity to the word "corn":

(a) The words "whole kernel" except that the description "whole grain", "cut", "sweet" or "kernels" may be used if this is customary in the country of retail sale.

(b) The colour "yellow" or "white" except that the colour "golden" may be used in lieu of "yellow" if this is customary in the country of retail sale.

4. FOOD ADDITIVES

4.1 PROCESSING AIDS – Only processing aids listed below may be used in products covered by this standard and shall comply with the Codex Guidelines on Substances Used as Processing Aids (CAC/GL 75-2010).

(c) Table 2 – Processing Aids

INS	Processing Aid	Function
330	Citric Acid	For use in blanching or cooling water.
296	Malic Acid, DL-	

Summary of changes made to ANNEX XI: WHOLE KERNEL CORN

2.2.5 Defects and Allowances

A simplified table of tolerances for defects was proposed for member consideration.

PROPOSAL

On

METHOD OF DETERMINATION of Drained deglazed weight (1)

By France

GLAZE PRODUCTS

Glazing is used before the freezing process in order to protect particularly fragile vegetables, as cauliflowers, broccolis.

This procedure is used when checking drained deglazed weight of pre-packed foodstuffs in the range 5 g to 10 kg.

1. PRINCIPLE:

The pre-weighed glazed sample is immersed into a water bath by hand till all glaze is removed (as felt by fingers). As soon as the surface becomes rough, the still frozen sample is removed from the water bath and dried by use of a paper towel before estimating the net product content by repeated weighing. By this procedure thaw drip losses and/or re-freezing of adhering moisture can be avoided.

2. EQUIPMENT:

- Balance - sensitive to 1 g
- Water bath, preferably with adjustable temperature
- 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.
- Paper or cloth towels with smooth surface
- A freezed box should be available at the working place.

3. PREPARATION OF SAMPLES AND WATER BATH:

3.1. TARE WEIGHT

Choose a sieve with the characteristics detailed in Section 1.

Weigh or establish a tare for the clean sieve (weight Pe1).

A subsequent weighing of the same sieve should ensure that it is clean and free of product debris. The sieve does not have to be dry as long as it is weighed accurately before being used.

3.2.THE SAMPLE PRODUCT

Samples should be stored in a freezer kept at a temperature of –18 °C ± 2 °C prior to testing.

After sampling from the low temperature store remove, if present, external ice crystals or snow from the package with the frozen product.

3.3 REMOVAL OF CONTAINER CONTENTS – DEGLAZED WEIGHT

- The water bath shall contain an amount of fresh potable water equal to at least 8 times the weight of sample taken on the sieve. The temperature should be adjusted to 27 °C ± 1 °C
- After removal of the package, the weight of the glazed product is determined P°

- Open the package and pour the contents carefully across the mesh of the sieve(s), distributing them over the surface of the sieve, avoiding product damage. Any solid material adhering to the container's internal surfaces may be removed carefully with a spoon or similar implement and added to the contents of the sieve. Do not shake the material on the sieve.

- Immerse sieve and test sample in vessel containing the specified quantity of water until the end-point of glaze determination is reached i.e. all of the added glaze has been removed and the still-frozen product core remains. It is important that product is not left in the warm water beyond this point to avoid any thawing of the core product with attendant 'drip loss'.

- After all glaze that can be seen or felt is removed (i.e. when the external surface of the sample changes from 'smooth' or 'slippery' to 'rough') and the sample separates easily, remove sieve with sample.

Note: If there are significant clumps of product frozen together, this may well indicate that the product has not been properly stored, and has been subject to varying temperatures. Such temperature abuse can lead to water migration from the product and changes in the apparent glaze level. Samples showing such 'clumping' should not be accepted for analysis

3.4 DRAINING

Tilt the sieve(s) to an angle of 17° – 20° from the horizontal to facilitate draining.

Allow to drain for 2 minutes from the time the deglazing ceases.

3.5 WEIGHING

The deglazed sample, after removal of adhering water by use of a towel (without pressure) is immediately weighed.

Reweigh the sieve plus contents (weight Pe2). Calculate the deglazed product quantity (P) as follows:

P = Pe2 – Pe1 where P is the quantity of the product

Pe1 is the tare weight of the clean sieve

Pe2 is the weight of sieve plus product after draining

The glaze quantity is Pg = P°-P

(1)Codex standards that include consideration of glaze determination (Section 7.3.2 in each case):

• Codex Standard for Quick Frozen Shrimps or Prawns - Codex Stan 092-1981, Rev.

1- 1995

• Codex Standard for Quick Frozen Lobsters - Codex Stan 95-1981, Rev 1 - 1995

• Codex General Standard for Quick Frozen Fish Fillets - Codex Stan 190 - 1995

• Codex Standard for Quick Frozen Blocks of Fish Fillet, Minced Fish Flesh and

Mixtures of Fillets and Minced Fish Flesh - Codex Stan 165-1989, Rev. 1 – 1995

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ANNEX - GENERAL GUIDANCE FOR THE PROVISION OF COMMENTS

In order to facilitate the compilation and prepare a more useful comments' document, Members and Observers, which are not yet doing so, are requested to provide their comments under the following headings:

(i) General Comments

(ii) Specific Comments

Specific comments should include a reference to the relevant section and/or paragraph of the document that the comments refer to.

When changes are proposed to specific paragraphs, Members and Observers are requested to provide their proposal for amendments accompanied by the related rationale. New texts should be presented in underlined/bold font and deletion in ~~strikethrough font~~.

In order to facilitate the work of the Secretariats to compile comments, Members and Observers are requested to refrain from using colour font/shading as documents are printed in black and white and from using track change mode, which might be lost when comments are copied/pasted into a consolidated document.

In order to reduce the translation work and save paper, Members and Observers are requested not to reproduce the complete document but only those parts of the texts for which any change and/or amendments is proposed.