

CODEX ALIMENTARIUS COMMISSION



Food and Agriculture
Organization of
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World Health
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Agenda Item 7

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**JOINT FAO/WHO FOOD STANDARDS PROGRAMME
CODEX COMMITTEE ON PROCESSED FRUITS AND VEGETABLES**

**28th Session
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**EXAMPLES OF STANDARDS FOR CANNED BERRY FRUITS,
CANNED FRUIT SALADS,
QUICK FROZEN FRUITS**

(Prepared by the Codex Secretariat)

INTRODUCTION

1. Due to time constraints, the 27th Session of the Committee on Processed Fruits and Vegetables (September 2014) could not consider thoroughly the paper of the Codex Secretariat on status of work on the review of Codex standards for processed fruits and vegetables. The Committee therefore agreed to consider prioritization of work on the review of remaining individual standards for processed fruits and vegetables including ways to deal with the standardization of dry and dried produce at its next session.
2. In order to assist the Committee in its deliberation on future work on the review of remaining standards for processed fruits and vegetables, the Committee agreed that the Codex Secretariat will proceed with the editorial amendment of the 17 standards awaiting review in particular as to the horizontal provisions applying across commodity standards, e.g. hygiene, contaminants, food additives, etc. The section on food additives will be updated in line with the template laid down in the Procedural Manual, including a proposal for a general reference to the General Standard for Food Additives (CODEX STAN 192-1995).
3. Examples of possible merging of existing standards would also be presented to facilitate discussion on work prioritisation as recommended by the Committee.¹
4. Examples on possible merging of existing standards for canned fruit salads, canned berry fruits AND quick frozen fruits are therefore presented in Annexes I, II and III for information to aid the discussion on future work on the review of Codex standards for processed fruits and vegetables.

¹ REP15/PFV, paras 115-120

ANNEX I**STANDARD FOR CANNED FRUIT SALADS****1. SCOPE**

This Standard applies to canned fruit salads, as defined in Section 2, and offered for direct consumption, including for catering purposes or for repacking if required. It does not apply to the product when indicated as being intended for further processing.

2. DESCRIPTION**2.1 PRODUCT DEFINITION**

2.1.2 Canned fruit salads may be classified as follows:

(a) **Canned fruit cocktail** is the product prepared from a mixture of small fruits and small pieces of fruits as specified in Section 2.2 which may be fresh, frozen or canned.

(b) **Tropical fruit salad** (also known as “tropical fruit cocktail” or “tropical fruit mix”) is the product prepared from a mixture of basic fruits as specified to which may be added one or more optional fruits as specified in Section 2.2 which may be fresh, frozen or canned;

2.1.3 Canned fruit salads may be packed with water and other suitable liquid packing medium as defined in Section 3.1.2, sugars as defined in the *Codex Standard for Sugars (CODEX STAN 212-1999)*, honey as defined in the *Codex Standard for Honey (CODEX STAN 12-1981)*, and, in the case of canned fruit cocktail, may contain seasonings or flavourings appropriate to the product.

2.1.4 Canned fruit salads shall be processed by heat, in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage.

2.2 VARIETAL TYPES AND STYLES**2.2.1 Canned Fruit Cocktail**

(a) **Peaches** - Any firm yellow variety of the species *Prunus persica* L. including clingstone and freestone types but excluding nectarines, peeled, pitted and diced.

(b) **Pears** - Any variety of the species *Pyrus communis* L. or *Pyrus sinensis* L. peeled, cored, and diced.

(c) **Pineapple** - Any variety of the species *Ananas comosus* L., peeled, cored, in sectors, or diced.

(d) **Cherries** - Any variety of the species *Prunus cerasus* L., halves or whole, pitted or unpitted, and which may be:

(i) any light, sweet variety; or

(ii) artificially coloured red; or

(iii) artificially coloured red and flavoured, whether natural or artificial.

(e) **Grapes** - Any seedless variety of the species *Vitis vinifera* L. or *Vitis labrusca* L., whole.

2.2.2 Tropical Fruit Salad

The fruit ingredient shall consist of each of the three fruit groups listed under “Basic Fruits” to which may be added any one or more of the fruits listed under “Optional Fruits”.

2.2.2.1 Basic Fruits

(a) **Pineapple** (*Ananas comosus* (L.) Merrill) - tidbits, pieces, dices, chips or crisp cut.

(b) **Papaya** (*Carica papaya* L.) or **Mango** (*Mangifera indica* L.) - singly or in combination - slices, dices or sections.

(c) **Banana** (cultivated edible species of *Musa*) - slices or dices.

2.2.2.2 Optional Fruits

- (a) **Litchi** (*Litchi chinensis* SONN.) - whole or broken segments.
- (b) **Cashew** (*Anacardium occidentale* L.) - as flesh.
- (c) **Guava (Guayaba)** - (*Psidium guajava* L.) - quarters, slices, dices or puree.
- (d) **Longan** (*Euphoria longan*) (LOUR. STEUD.) - whole or broken segments.
- (e) **Oranges** (*Citrus sinensis* (L.) OSBECK and *Citrus reticulata* BLANCO) (including **Mandarin**) whole segments.
- (f) **Grapefruit** (*Citrus paradisi* MACFAD) - whole or half segments.
- (g) **Grapes** (Cultivated edible species of *Vitis*) - whole grapes of any seedless variety.
- (h) **Maraschino Cherries** - (Prepared from fruit conforming with the characteristics of *Prunus avium* L.) - whole or halves (and pitted).
- (i) **Passion Fruit** (Cultivated edible species of *Passiflora*) - pulp (flesh) with or without seeds.
- (j) **Jack Fruit** (*Artocarpus integrifolia* L.) - slices.
- (k) **Melon** (*Cucumis melo* L.) - slices, dices or balls.
- (l) **Rambutan** (*Nephelium lappaceum* L.) - whole or broken segments.
- (m) **Peach** (*Prunus persica* L. BATSCH) - pieces, dices or slices.
- (n) **Pears** (*Pyrus communis* L.) - pieces, dices or slices.

2.3 PRESENTATION

Canned fruit cocktail may be packed as follows:

2.3.1 Five Fruits - Fruit cocktail

A mixture of the five fruits of the kinds and styles described in Section 2.2.1.

2.3.2 Four Fruits - Fruit Cocktail

A mixture of four fruits of the kinds and styles described in Section 2.2.1 except that cherries or grapes may be omitted.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 COMPOSITION

3.1.1 Basic Ingredients

Fruits, as defined in Section 2.1, and liquid packing medium appropriate to the product.

3.1.2 Packing Media

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

The cut-out strength of sweetened juice or syrup shall be determined on sample average, but no container may have a Brix value lower than that of the minimum of the next category below, if such there be.

3.1.3 Other Ingredients (canned fruit cocktail only)

- Spices;
- Mint.

or

Any appropriate food ingredient of plant origin may be used in the products covered by this Standard. This includes, but it is not limited to, fruit, herbs, spices, nuts, essential oils and vegetable oils as long as they do not mask poor quality and mislead the consumer.

3.2 FORMULATION

3.2.1 Fruit Cocktail

The products shall contain fruits in the following proportions, based on the individual drained fruit weights in relation to the total drained weight of all the fruits:

Fruits	5 Fruits - Fruit Cocktail	4 Fruits - Fruit Cocktail
Peaches	30% to 50%	30% to 50%
Pears	25% to 45%	25% to 45%
Pineapple	6% to 16%	6% to 25% - and either -
Grapes	6% to 20%	6% to 20% or
Cherries	2% to 6%	2% to 15%

3.2.2 Tropical Fruit Salad

3.2.2.1 Basic Fruits

	Minimum	Maximum
Basic Fruits		
Pineapple	45%	65%
Papaya or Mango (singly or in combination)	25%	50%
Banana	5%	20%
Optional Fruits		
Litchi	5%	20%
Melon	5%	20%
Longan	5%	20%
Guava (except puree, as specified in Section 3.2.2.1)	5%	20%

3.2.2.1 Optional Fruits

The following optional fruits are not considered in the determination of proportions of fruit as their consistency after processing prevents an accurate determination of their drained weight. However, it is recommended that they make up following percentages of the fruit ingredients present:

	Minimum	Maximum
Guava puree (see Section 3.2.2.1)	5%	20%
Cashew	2%	5%
Passion Fruit	1%	5%
Jack Fruit	5%	15%
Grape	3%	20%
Rambutan	5%	20%
Oranges (including Mandarins)	3%	15%

	Minimum	Maximum
Maraschino Cherries	1%	4%
Peach	5%	20%
Grapefruit	3%	15%
Pears	5%	20%
Water melon	5%	15%
Carambola	5%	20%

3.3 SIZES AND SHAPES OF FRUITS (canned fruit cocktail only)

3.3.1 Diced peaches, pears or pineapple

75% or more of all such drained fruits are of approximate cube-shapes which:

- (a) are not over 20 mm in greatest edge dimension; and
- (b) will not pass through square meshes of 8 mm.

3.3.2 Sectors of pineapple

80% or more of all the drained pineapple portion approximate wedge-shapes of the following dimensions:

- (a) outside arc - 10 mm to 25 mm; and
- (b) thickness - 10 mm to 15 mm; and
- (c) radius (from inside to outside arc) - 20 mm to 40 mm.

3.3.3 Whole grapes or cherries

90% or more by count (based on sample average) of whole grapes, or of whole cherries, approximate normal shape except for proper preparation (such as removing pits or stems) and:

- (a) are not broken into two or more parts;
- (b) are not seriously crushed, mutilated, or torn.

3.3.4 Halved cherries

80% or more by count (based on sample average) of the cherry units are approximate halves which are not broken into two or more parts.

3.4 QUALITY CRITERIA

3.4.1 Colour

Canned fruit salad shall have a colour characteristic of the mixed processed fruit, except that a slight bleaching of colour from the coloured cherries is acceptable.

3.4.2 Flavour

Canned fruit salad shall have a normal flavour and odour characteristic for the particular blend of fruit.

Canned Fruit Cocktail with special ingredients shall have the flavour characteristic of that imparted by the fruits in the product and the other substances used.

3.4.3 Texture

The texture of the fruit ingredient shall be appropriate for the respective fruit.

3.4.4 Defects and Allowances

Canned fruit salad shall be substantially free from defects within the limits set forth as follows:

Defects	Maximum Limits (based on the weight of drained fruit)	
	Canned Fruit Cocktail	Canned Tropical Fruit Salad
(a) Blemished fruit pieces - consisting of pieces of fruit with dark surface areas, spots penetrating the fruit, and other abnormalities.	20% m/m (total of all fruit units so affected)	2 pieces/100 g of drained fruit
(b) Peel (based on averages) - considered a defect only when occurring on, or from, those fruits which are peeled	25 cm ² (aggregate area per kg)	6.5 cm ² /500 g of total contents
(c) Pit material (based on averages) - consisting of pieces of pit or of fruit stones and hard and sharp pit points; very small pit fragments of less than 5 mm in greatest dimension which do not have sharp points or edges are disregarded	1 piece, of any size per 2 kg	Not applicable
(d) Small stems (based on averages) - such as cap stems from grapes.	5 per kg	Not applicable
(e) Large stems (based on averages) - such as from peaches, pears, or cherries	1 large stem, or piece thereof, per kg	Not applicable
(f) Seeds (other than Passion fruit seeds) Seed Material and Extraneous Vegetable Matter	Not applicable	2 g/500 g of total contents

3.5 CLASSIFICATION OF “DEFECTIVES”

A container that fails to meet one or more of the applicable quality requirements, as set out in Sections 3.3 and 3.4 (except those based on sample averages), shall be considered as a “defective”.

3.6 LOT ACCEPTANCE

A lot will be considered as meeting the requirements of Sections 3.2 and 3.5 when:

- the average of the individual fruit proportions (except those specified in Section 3.2.2.1) from all containers in the sample is within the range required for the individual fruits; and the number of individual containers, which are not within the range for any or one or more fruits, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.
- for those requirements which are not based on averages, the number of “defectives”, as defined in Section 3.5, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5; and the requirements which are based on sample averages, are complied with.

4. FOOD ADDITIVES

Option 1:

[Food additive functional class(es)] used in accordance with Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in food category(ies) [number] [food category name(s)] or listed in Table 3 of the General Standard are acceptable for use in foods conforming to this Standard.

Option 2:

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

4.1 ACIDITY REGULATORS

INS No.	Name of the Food Additive	Maximum Level
300	Ascorbic acid (L-)	500 mg/kg (canned fruit cocktail) 700 mg/kg (canned tropical fruit salad)

4.2 ANTIOXIDANTS

INS No.	Name of the Food Additive	Maximum Level
330	Citric acid	GMP (canned tropical fruit salad only)

4.3 COLOURS

INS No.	Name of the Food Additive	Maximum Level
127	Erythrosine (to colour cherries)	GMP

4.3 FIRMING AGENTS

INS No.	Name of the Food Additive	Maximum Level
327	Calcium lactate	350 mg/kg singly or in combination, calculated as calcium (canned tropical fruit salad only)
509	Calcium chloride	
578	Calcium gluconate	

4.4 FLAVOURINGS

The flavourings used in products covered by this Standard should comply with the *Guidelines for the Use of Flavourings* (CAC/GL 66-2008).

In addition, the following flavourings apply:

		Maximum Level
4.4.1	Natural fruit essence	GMP (canned fruit cocktail only)
4.4.2	Natural flavours and their identical synthetic equivalents	GMP
4.4.3	Cherry Laurel Oil (to flavour artificially coloured cherries only)	10 mg/kg in the total product
4.4.4	Bitter Almond Oil (to flavour artificially coloured cherries only)	40 mg/kg in the total product

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 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 *General Principles of Food Hygiene (CAC/RCP 1-1969)*, *Code of Hygienic Practice for Canned Fruits and Vegetable Products (CAC/RCP 2-1969)*, 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 and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods (CAC/GL 21-1997)*.

7 WEIGHTS AND MEASURES

7.1 FILL OF CONTAINER

7.1.1 Minimum Fill

The container should be well filled with the product (including packing medium) which should occupy not less than 90% (minus any necessary head space according to good manufacturing practices) of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled. This provision does not apply to vacuum packaged vegetables.

7.1.2 Classification of “Defectives”

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

7.1.3 Lot Acceptance

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

7.1.4 Minimum Drained Weight

- 7.1.4.1 The drained weight of the product shall be not less than the percentages indicated in the corresponding Annexes, calculated on the basis of the weight of distilled water at 20°C which the sealed container will hold when completely filled¹.

7.1.4.2 Lot Acceptance

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

8 LABELLING

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

8.1 Name of the Product

- 8.1.1 The name of the product shall be “Fruit Cocktail” or “Tropical Fruit Salad/Cocktail/Mix” as defined in Section 2.1.2.
- 8.1.2 The following, as applicable, shall be included as part of the name or in close proximity to the name, unless in the country of retail sale a true pictorial representation of the product accompanied by a complete list of the fruits in the statement of ingredients would suffice in accordance with its national legislation:

“5 Fruits” or “With Five Fruits” or “4 Fruits” or “With Four Fruits”.

¹ For non-metallic rigid containers such as glass jars, the basis for the determination should be calculated on the weight of distilled water at 20°C which the sealed container will hold when completely filled less 20 ml.

- 8.1.3 The packing medium shall be declared as part of the name or in close proximity to the name as indicated in Section 3.1.2 in accordance with the Guidelines for Packing Media for Canned Fruits (CAC/GL 51-2003).
- 8.1.3 When the packing medium is composed of water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as part of the name or in close proximity thereto as: "In water" or "Packed in water".
- 8.1.4 When the packing medium is composed solely of a single fruit juice, the packing medium shall be declared as part of the name or in close proximity thereto as: "In (name of fruit) juice".
- 8.1.5 When the packing medium is composed of two or more fruit juices, it shall be declared as part of the name or in close proximity thereto: "In (name of fruits) juice" or "In fruit juices" or "In mixed fruit juices".
- 8.1.6 When sugars are added to water, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as may be appropriate: "Water slightly sweetened" or "Slightly sweetened water" or "Extra light syrup" or "Light syrup" or "Heavy syrup" or "Extra heavy syrup" in accordance with the *Guidelines for Packing Media for Canned Fruits*.
- 8.1.7 When the packing medium contains water and one or more fruit juice(s), in which the fruit juice comprises 50% or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as for example: "In (name of fruits) juice(s) and water".
- 8.1.8 When sugars are added to one or more fruit juices, the packing medium shall be declared as may be appropriate: "Lightly sweetened (name of fruit(s)) juice" or "Heavily sweetened (name of fruit(s)) juice" or "Lightly sweetened fruit juices" or "Lightly sweetened mixed fruit juices" or "Heavily sweetened fruit juice" or "Heavily sweetened mixed fruit juices" in accordance with the *Guidelines for Packing Media for Canned Fruits*.
- 8.1.4 If an added ingredient or flavouring, as defined in Sections 3.1.3 and 4.3, alters the flavour characteristic of the product, the name of the food shall be accompanied by the term "flavoured with X" or "X flavoured" as appropriate.
- 8.1.5 When cherries are artificially coloured and/or artificially flavoured, the following declarations are permitted in the list of ingredients in lieu of naming the additive:

"Cherries artificially coloured red"; or "Cherries artificially coloured red and artificially flavoured".

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. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this Standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CODEX STAN 234-1999) relevant to the provisions in this Standard, shall be used.

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 II**STANDARD FOR CANNED BERRY FRUITS****1. SCOPE**

This Standard applies to certain canned fruits, as defined in Section 2 below and in the corresponding Annexes and offered for direct consumption, including for catering purposes or for repackaging if required. It does not apply to the product when indicated as being intended for further processing.

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

2. DESCRIPTION**2.1 PRODUCT DEFINITION**

Canned berry fruits are the products:

- (1) prepared from substantially sound fruits, fresh, frozen, thermally processed, or processed by other physical methods, as defined in the corresponding Annexes, having reached appropriate maturity for processing. None of their essential characteristic elements are removed from them. They undergo operations such as washing, peeling, coring, stemming, grading, cutting, etc., depending on the type of product;
- (2) (a) packed with or without a suitable liquid packing medium including other optional ingredients as indicated in Section 3.1.2;
(b) vacuum packaged with packing medium that does not exceed 20% of the product's net weight and when the container is sealed in such conditions as to generate an internal pressure in accordance with good manufacturing practices¹; and
- (3) processed in an appropriate manner, before or after being hermetically sealed in a container, so as to prevent spoilage and to ensure product stability in normal storage conditions at room temperature.

2.2 STYLES

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

2.2.1 Other Styles

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

- (1) is sufficiently distinctive from other forms of presentation laid down in the Standard;
- (2) meets all relevant requirements of the Standard; and
- (3) is adequately described on the label to avoid confusing or misleading the consumer.

2.3 VARIETAL TYPE

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

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**3.1 COMPOSITION****3.1.1 Basic Ingredients**

Fruits as defined in Section 2 and the corresponding Annexes and liquid packing medium appropriate to the product as per Section 3.1.3 below.

3.1.2 Other Ingredients

In accordance with the relevant provisions in the corresponding Annexes.

3.1.3 Packing Media

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

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

¹ High vacuum products typically have an internal pressure of approximately 300 millibars or more below atmospheric pressure (depending on container size and other relevant factors).

3.2 QUALITY CRITERIA

3.2.1 Colour, Flavour, Odour and Texture

Canned berry fruits shall have normal colour, flavour and odour of canned berry fruits, corresponding to the type of berry fruits, packing medium, and added optional ingredients used and shall possess texture characteristic of the product.

3.2.2 Uniformity of Size

In accordance with the relevant provisions in the corresponding Annexes.

3.2.3 Defects and Allowances

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

3.3 CLASSIFICATION OF "DEFECTIVES"

A container that fails to meet one or more of the applicable quality requirements, as set out in Sections 3.1.3 and 3.2 (except those based on sample averages), shall be considered as a "defective".

3.4 LOT ACCEPTANCE

A lot will be considered as meeting the applicable quality requirements referred to in Section 3.3 and 3.2 when:

- (1) for those requirements which are not based on averages, the number of "defectives", as defined in Section 3.3, does not exceed the acceptance number (c) of the appropriate sampling plan with an Acceptable Quality Level (AQL) of 6.5; and
- (2) the requirements of Sections 3.1.3 and 3.2, which are based on sample averages, are complied with.

4. FOOD ADDITIVES

Option 1:

[Food additive functional class(es)] used in accordance with Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in food category(ies) [number] [food category name(s)] or listed in Table 3 of the General Standard are acceptable for use in foods conforming to this Standard.

Option 2:

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

4.1 [FUNCTIONAL CLASS(ES)]

INS No.	Name of the Food Additive	Maximum Level

5. CONTAMINANTS

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

5.2 The products covered by this Standard shall comply with the maximum residue limits for pesticides 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 *General Principles of Food Hygiene* (CAC/RCP 1-1969), *Code of Hygienic Practice for Canned Fruit and Vegetable Products* (CAC/RCP 2-1969), 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 and Guidelines for the Establishment and Application of Microbiological Criteria related to Foods* (CAC/GL 21-1997).

7. WEIGHTS AND MEASURES

7.1 FILL OF CONTAINER

7.1.1 Minimum Fill

The container should be well filled with the product (including packing medium) which should occupy not less than 90% (minus any necessary head space according to good manufacturing practices) of the water capacity of the container. The water capacity of the container is the volume of distilled water at 20°C which the sealed container will hold when completely filled. This provisions does not apply to vacuum packaged fruits.

7.1.2 Classification of “Defectives”

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

7.1.3 Lot Acceptance

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

7.1.4 Minimum Drained Weight

7.1.4.1 The drained weight of the product should be not less than the percentages indicated in the corresponding Annexes, calculated on the basis of the weight of distilled water at 20°C which the sealed container will hold when completely filled.²

7.1.4.2 Lot Acceptance

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

8. LABELLING

8.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *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 names of the canned berry fruits shall be those defined in the corresponding Annexes.

8.2.2 When the fruits are sized, the size (or sizes when sizes are mixed), as defined in the corresponding Annexes, may be declared as part of the name or in close proximity to the name of the product.

8.2.3 The name of the product shall include the indication of the packing medium as set out in Section 2.1.2 (a). For canned fruits packaged in accordance with Section 2.1.2 (b) the words “vacuum packaged” shall be affixed to the commercial designation of the product or in close proximity.

8.2.3 The packing medium shall be declared as part of the name or in close proximity to the name.

8.2.3.1 When the packing medium is composed of water, or water and [berry fruit]³ raspberry juice, or water and one or more fruit juices in which water predominates, the packing medium shall be declared as: “In water” or “Packed in water”.

8.2.3.2 When the packing medium is composed solely of [berry fruit]³ juice, or any other single fruit juice, the packing medium shall be declared as: “In raspberry juice” or “In (name of fruit) juice”.

8.2.3.3 When the packing medium is composed of two or more fruit juices, which may include [berry fruit]³ juice, it shall be declared as: “In (name of fruits) juice” or “In fruit juices” or “In mixed fruit juices”.

8.2.3.4 When sugars are added to [berry fruit]³ juice or other fruit juices, the packing medium shall be declared as: “Lightly sweetened (name of fruit) juice” or “Heavily sweetened (name of fruits) juice(s)” or “Lightly sweetened fruit juices” or “Heavily sweetened mixed fruit juice(s)” as may be appropriate in accordance with the *Guidelines for Packing Media for Canned Fruits*.

8.2.3.5 When sugars are added to water, or water and a single fruit juice (including [berry fruit]³ juice) or water and two or more fruit juices, the packing medium shall be declared as: “Light syrup” or “Heavy syrup” or “Water slightly sweetened” or “Slightly sweetened water” or “Extra light syrup” or “Extra heavy syrup” as may be appropriate in accordance with the *Guidelines for Packing Media for Canned Fruits*.

² For non-metallic rigid containers such as glass jars, the basis for the determination should be calculated on the weight of distilled water at 20°C which the sealed container will hold when completely filled less 20 ml.

³ The [berry fruit] refer to the name of the berry fruit to which the Annex applies i.e. Annex on Raspberries, the berry fruit will be “raspberry” juice; Annex on Strawberries, the berry fruit will be “strawberry” juice.

- 8.2.3.6 When the packing medium contains water and [berry fruit]³ juice or water and one or more fruit juice(s), in which the fruit juice comprises 50% or more by volume of the packing medium, the packing medium shall be designated to indicate the preponderance of such fruit juice, as for example: “[berry fruit]³ juice and water” or “(name of fruit) juice(s) and water”.
- 8.2.4 The name of the product shall include indication of the style as set out in Section 2.2.
- 8.2.5 If the product is produced in accordance with the other styles provision (Section 2.2.1), the label should contain in close proximity to the name of the product such additional words or phrases that will avoid misleading or confusing the consumer.
- 8.2.6 If an added ingredient, as defined in Section 3.1.2, alters the flavour characteristic of the product, the name of the food shall be accompanied by the term “flavoured with X” or “X flavoured” as appropriate.
- 8.2.7 The name of the product may include the varietal type.

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. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this Standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CODEX STAN 234-1999) relevant to the provisions in this Standard, shall be used.

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 (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 ON RASPBERRIES

In addition to the general provisions applicable to canned fruits,
the following specific provisions apply:

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Canned raspberries is the product (a) prepared from raspberry varieties conforming to the characteristics of the fruit of *Rubus idaeus* L. or *Rubus occidentalis* L. which are reasonably whole, reasonably sound ripe fruit, and from which extraneous matter including calices and stems have been removed.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Raspberries as defined in Section 3.1.1 (general provisions) and Section 1.1 of this Annex.

2.2 QUALITY FACTORS

2.2.1 Defects and Allowances

2.2.7 Allowances for Defects

Canned raspberries shall be substantially free from defects within the limits set forth as follows:

Defects	Maximum limits
(a) Blemished berries (consisting of berries which are affected by wind rub, insects, disease, or which are deformed to the extent that the appearance or eating quality is materially affected)	10% m/m of drained raspberries
(b) Crushed or broken berries (consisting of berries in which more than 50% of the drupelets are crushed, broken, detached, or otherwise damaged to the extent that the original conformation is destroyed)	25% m/m of drained raspberries
Total of the foregoing defects (a) and (b)	25% m/m of drained raspberries
(c) Extraneous plant material (based on averages)	
(i) Stalks (stems) or parts thereof, each longer than 3 mm	2 pieces per 100 grams of drained raspberries
(ii) Leaves, calices, or portions of any of these, or other similar harmless extraneous plant material	2 sq. cm per 100 grams of drained raspberries

3. FOOD ADDITIVES

4.1 COLOURS

INS No.	Additives Name	Maximum Level
127	Erythrosine - CI 45430	300 mg/kg of the final product singly or in combination
124	Ponceau 4 R - CI 16255	

4. WEIGHTS AND MEASURES

4.1 MINIMUM DRAINED WEIGHT

The drained weight of the product shall be not less than 37%.

5. LABELLING

5.1 NAME OF THE PRODUCT

The name of the product shall be "Strawberries".

5.2 In the case of raspberries other than red raspberries, the colour of the fruit shall be included as part of the name or in close proximity to the name.

ANNEX ON STRAWBERRIES

In addition to the general provisions applicable to canned fruits,
the following specific provisions apply:

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Canned strawberries is the product (a) prepared from strawberries of varieties (cultivars) conforming to the characteristics of the Genus *Fragaria* which are whole, clean, reasonably sound, of proper maturity and from which extraneous matter including calices and stems have been removed.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Basic Ingredients

Strawberries as defined in Section 3.1.1 (general provisions) and Section 1.1 of this Annex.

2.2 QUALITY FACTORS

2.2.1 Defects and Allowances

Defects	Maximum Limits
(a) Berries with parts of, or with complete, calices	15%, by count
(aa) Berries with complete calices, limited within the foregoing allowance to	5%, by count
(b) Blemished berries (consisting of berries with spots caused by mould damage or bird pecks more than 5 mm in diameter and deformed berries)	15% by count
(c) Broken berries (where the major part is broken or entirely disintegrated)	20%, by count
Total of all the foregoing defects - (a) and/or (aa), (b) and (c)	30%, by count
(d) Extraneous plant material (based on averages):	
(i) Stalks (stems) or parts thereof, each longer than 3 mm	1 piece per 100 grams of drained strawberries
(ii) Leaves, unattached calices, or portions of any of these, or other similar harmless extraneous plant material	1 cm ² per 100 grams of drained strawberries

2.2.2 Mineral Impurities

Not more than 300 mg/kg of total contents.

3. FOOD ADDITIVES

3.1 ACIDIFYING AGENTS

INS No.	Additive Name	Maximum level
330	Citric acid	Limited by Good Manufacturing Practices (GMP)
270	Lactic acid	
296	Malic acid	
334	L-Tartaric acid	

3.1 COLOURS

INS No.	Additive Name	Maximum level
127	Erythrosine - CI 45430	300 mg/kg of the final product, (singly or in combination)
124	Ponceau 4R - CI 16255	

3.3 FIRMING AGENTS

INS No.	Additive Name	Maximum level
509	Calcium chloride	350 mg/kg of the final product, calculated as total Ca
578	Calcium gluconate	
327	Calcium lactate	

4. WEIGHTS AND MEASURES**4.1 MINIMUM DRAINED WEIGHT**

The drained weight of the product shall be not less than 35%.

5. LABELLING**5.1 NAME OF THE PRODUCT**

The name of the product shall be "Strawberries".

STANDARD FOR QUICK FROZEN FRUITS**1. SCOPE**

This Standard shall apply to quick frozen fruits as defined in Section 2 below and in the corresponding Annexes and offered for direct consumption including for catering purposes without further processing, except for size-grading 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 fruits are the products:

- (1) prepared from substantially sound, fresh (barring mature processed peas) or frozen fruits, as defined in the corresponding Annexes, having reached appropriate maturity for processing. None of their essential characteristic 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, blanching/deactivation of enzyme activity, etc., depending on the type of product. They may be prepared with or without a dry sugar or a syrup.
- (2) made from fruits which were subjected to a quick freezing process¹, and maintained at -18°C or colder at all points in the cold chain, subject to permitted temperature tolerances.

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 at the thermal centre after thermal stabilization. The recognized practice of repacking quick frozen products under temperature 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 *Code of Practice for the Processing and Handling of Quick Frozen Foods* (CAC/RCP 8-1976).

2.4 STYLES

In addition to the styles defined in the corresponding Annexes, any other styles should be permitted as indicated in Section 2.4.1.

Note: Quick frozen berry fruits may be "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.

2.4.1 OTHER STYLES

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

- (1) is sufficiently distinctive from other forms of presentation laid down in the Standard;
- (2) meets all relevant requirements of the Standard; and
- (3) 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**

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

¹ 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).

3.1.2 Other Ingredients

Sugars (sucrose, invert sugar, invert sugar syrup, dextrose, fructose, glucose syrup, dried glucose syrup) as defined in the *Standard for Sugars* (CODEX STAN 212-1999).

Any other ingredients in accordance with the relevant provisions in the corresponding Annexes.

3.2 OTHER COMPOSITION

3.2.1 Fruits prepared with dry sugars

The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall be not more than and nor less than the percentages indicated in the Annexes when applicable, expressed as sucrose, as determined by refractometer at 20°C.

3.2.2 Fruits prepared with syrup

The amount of syrup used shall be not more than that required to cover the berries and fill the spaces between them. The total soluble solids content of the liquid extracted from the thawed, comminuted sample shall be not more than and nor less than 15% m/m, indicated in the Annexes when applicable, expressed as sucrose, as determined by refractometer at 20°C.

3.3 QUALITY FACTORS

3.3.1 General Requirements

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

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

3.3.2 Analytical Characteristics

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

3.3.3 Free-flowing Characteristics

- (a) When presented as “free-flowing” a tolerance of 10% m/m (unless otherwise specified in the Annexes as applicable) shall be allowed for berries which adhere to one another and not easily separated in the frozen state.
- (b) The sample unit for the determination of the requirement for “free-flowing” is the entire contents of the container or as large a quantity as practicable.

3.3.4 Definition of Defects

Quick frozen fruits 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.

3.3.5 Standard Sample Size

The sample unit for segregating and evaluating visual effects, including application of tolerances, shall be as indicated in the corresponding Annexes.

3.3.5 Tolerances (Allowances)

Based upon examination of the standard sample unit as specified in Section 3.3.5, defects are assigned points in accordance with Table 1. The sample unit shall not exceed the “Total Allowable Points” for the respective categories, including the combined **total**, in Table 1.

3.4 DEFINITION OF “DEFECTIVE”

Any sample unit that fails to meet one or more of the following applicable requirements as indicated in the corresponding Annexes shall be considered as a “defective”.

3.5 LOT ACCEPTANCE

A lot will be considered acceptable when the number of “defectives” as defined in Section 3.4 does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

In applying the lot acceptance procedure, each “defective” for “free-flowing” is treated individually and in addition to the allowance for other product characteristics.

4. FOOD ADDITIVES

Option 1:

[Food additive functional class(es)] used in accordance with Tables 1 and 2 of the *General Standard for Food Additives* (CODEX STAN 192-1995) in food category(ies) [number] [food category name(s)] or listed in Table 3 of the General Standard are acceptable for use in foods conforming to this Standard.

Option 2:

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

4.1 [FUNCTIONAL CLASS(ES)]

INS No.	Name of the Food Additive	Maximum Level

5. PROCESSING AIDS

The processing aids used for products covered by this Standard shall comply with the *Guidelines on Substances Used as Processing Aids* (CAC/GL 75-2010).

6. CONTAMINANTS

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

6.2 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.

7. HYGIENE

7.1 It is recommended that the products covered by the provisions of this Standard be prepared and handled in accordance with the appropriate sections of the *General Principles of Food Hygiene* (CAC/RCP 1-1969), the *Code of Practice for the Processing and Handling of Quick Frozen Foods* (CAC/RCP 8-1976), *Code of Hygienic Practice for Fresh Fruits and Vegetables* (CAC/RCP 53/2003) and other relevant Codex texts such as codes of hygienic practice and codes of practice.

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

8. WEIGHTS AND MEASURES

8.1 NET WEIGHT

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

When the fruits are glazed, in conformity with a specific Annex, the declaration of net content of the foods shall be exclusive of the glaze.²

8.1.1 Classification of "Defectives"

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

8.1.2 Lot Acceptance

A lot should be considered as meeting the requirement of Section 7.1 when the number of "defectives", as defined in Section 7.1.1, does not exceed the acceptance number (c) of the appropriate sampling plan with an AQL of 6.5.

² **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 ingredients and additives, as appropriate. 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 *WHO Guidelines for Drinking Water Quality*.

9. LABELLING

9.1 The products covered by the provisions of this Standard shall be labelled in accordance with the *General Standard for the Labelling of Pre-packaged Foods* (CODEX STAN 1-1995). In addition, the following specific provisions apply:

9.2 NAME OF THE PRODUCT

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

9.2.2 The words “quick frozen” shall also appear on the label, except that the term “frozen”³ 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. The type of quick freezing process may be included on the label.

9.2.3 When any ingredient, has been added which impart(s) a distinctive flavour to the food, the name of the product shall be accompanied by the term “with X”, as appropriate.

9.2.5 In addition, there shall appear on the label in conjunction with or in close proximity to the word “[name of the fruit as in the corresponding Annex] the packing medium “with (name of sugar and whether as such or as the syrup)”.

9.2.6 Styles

9.2.6.1 **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.

9.2.6.2 **Other styles** – If the product is produced in accordance with the other styles provision (Section 2.4.1), 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.

9.2.6 When the fruits are sized, the size, as defined in the corresponding Annexes, may be declared in conjunction with, or in close proximity to the name of the product.

9.3 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 thawing.

9.4 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 accompanied by the words “quick frozen” (the term “frozen” may be used in accordance with Section 8.1.1 of the Standard), 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.

10. PACKAGING

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

11. METHODS OF ANALYSIS AND SAMPLING

For checking the compliance with this Standard, the methods of analysis and sampling contained in the *Recommended Methods of Analysis and Sampling* (CODEX STAN 234-1999) relevant to the provisions in this Standard, shall be used.

³ 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 ON RASPBERRIES

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen raspberries are the product prepared from fresh, clean, sound, ripe and stemmed raspberries of firm texture conforming to the characteristics of *Rubus idaeus* L. (red, yellow or black varieties).

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Basic Ingredients

Raspberries as described in Section 3.1.1 (general provisions) and Section 1.1 of the Annex.

2.2 OTHER COMPOSITION

2.2.1 Raspberries prepared with dry sugars

The total soluble solids content shall be not more than 35% m/m nor less than 18% m/m.

2.2.2 Raspberries prepared with syrup

The total soluble solids content shall be not more than 30% nor less than 15% m/m.

2.3 QUALITY FACTORS

2.3.1 General Requirements

Quick frozen raspberries shall be:

- (a) of good, reasonably uniform colour, characteristic of the variety;
- (b) clean, sound and practically free from foreign matter;
- (c) free from foreign flavour and odour;

and with respect to visual or other defects with a tolerance shall be:

- (d) practically free from sand and grit;
- (e) when presented as free-flowing, practically free from berries adhering one to another and which cannot be easily separated when in the frozen state;
- (f) reasonably free from uncoloured berries;
- (g) practically free from completely uncoloured berries;
- (h) reasonably free from stalks (cap stems);
- (i) practically free from extraneous vegetable matter;
- (j) reasonably free from damage or blemish due to pathological injury or pests;
- (k) normally developed;
- (l) of similar varietal characteristics;
- (m) reasonably free from disintegrated berries or berries not intact.

2.3.2 Analytical Characteristics

Mineral impurities shall be not more than 0.05% m/m on a whole product basis (berries and packing medium, if any).

2.3.3 Definition of Defects

- (a) **Partially uncoloured berries** - 25 to 75% of the surface area without the colour characteristic of the variety;
- (b) **Completely uncoloured berries** - 75% or more of the surface area without the colour characteristic of the variety;
- (c) **Stalks (cap stems)** - a stalk or portions of stalk, either loose or attached to the berry, and greater than 3 mm in length;

- (d) **Extraneous vegetable matter (E.V.M.)** - calyces or portion of calyces, leaves or other harmless extraneous vegetable material;
- (e) **Blemished** - any damage whether due to pathological injury or pests which materially affect the appearance of the berry;
- (i) Minor blemishes are those that do not exceed the area of a circle having a diameter of 5 mm.
- (ii) Major blemishes are those that exceed the area of a circle having a diameter of 5 mm.
- (f) **Not normally developed** - berries containing shrivelled parts in the fruit fresh (drupelets);
- (g) **Dissimilar varieties** - berries that are significantly different in colour or shape due to varietal characteristics;
- (h) **Disintegrated or not intact** - berries in which more than 25% of the berry is missing or berries which are crushed, broken or smashed into small pieces or flattened into a pulpy mass.

2.3.4 Standard Sample Size

The sample unit shall be 300 g of drained berries.

2.3.5 Tolerances (Allowances)

TABLE 1
(Sample Unit – 300 g drained berries)

Defect	Unit of Measurement	Defect Categories			
		Minor	Major	Serious	Total
(a) Partially uncoloured berries	Each berry	1			
(b) Completely uncoloured berries	Each berry			4	
(c) Stalks (cap stems)	Each piece		2		
(d) E.V.M.	Each cm ²		2		
(e) Blemished					
Minor	Each berry	1			
Major	Each berry		2		
(f) Not normally developed	Each berry	1			
(g) Dissimilar varieties	Each berry		2		
TOTAL ALLOWABLE POINTS		15	10	4	20
(h) Disintegrated or not intact	Maximum of 35% m/m				

2.3 CLASSIFICATION OF “DEFECTIVES”

Any sample unit that fails to meet one or more of the following applicable requirements shall be considered as a “defective”.

- (a) the total soluble solids falls outside the limits specified in Section 2.2 of this Annex provided it does not exceed the limits of the range by more than 5% m/m soluble solids.
- (b) the tolerance for mineral impurities is exceeded (Section 2.3.2 of this Annex);
- (c) the tolerance for “free-flowing” is exceeded (Section 3.3.3 of the general provisions);
- (d) the total allowable points for visual defects in any one or more of the categories in Table 1 is exceeded (Section 2.3.5);
- (e) the tolerance for “disintegrated” in Table 1 is exceeded (Section of this Annex 2.3.5).

3. FOOD ADDITIVES

None permitted

4. LABELLING**4.1 NAME OF THE PRODUCT**

4.1.1 The name of the product shall include the designation "Raspberries".

4.1.2 In addition, there shall appear on the label in conjunction with or in close proximity to the word "raspberries": a reference to the colour for varieties other than the red variety.

ANNEX ON BILBERRIES

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen bilberries is the product prepared from fresh, clean, sound, ripe bilberries of firm texture conforming to the characteristics of *Vaccinium myrtillus* L.

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Basic Ingredients

Bilberries as described in Section 3.1.1 (general provisions) and Section 1.1 of the Annex.

2.2 OTHER COMPOSITION

2.2.1 Bilberries prepared with dry sugars

The total soluble solids content shall be not more than 35% m/m nor less than 18% m/m.

2.2.2 Bilberries prepared with syrup

The total soluble solids content shall be not more than 25% nor less than 15% m/m.

2.2 QUALITY FACTORS

2.2.1 General Requirements

Quick frozen raspberries shall be:

- (a) of similar varietal characteristics;
- (b) of good colour;
- (c) free from foreign flavour and odour;
- (d) clean, sound and practically free from mould and other harmless foreign matter;
and with respect to visual or other defects subject to a tolerance, shall be:
- (e) practically free from sand and grit;
- (f) when presented as free-flowing, practically free from berries adhering one to another and which cannot be easily separated by hand without damage when in the frozen state;
- (g) practically free from extraneous vegetable matter (E.V.M.);
- (h) reasonably free from cap stems (stalks);
- (i) practically free from green berries;
- (j) practically free from dissimilar varieties of edible berries other than bilberries;
- (k) reasonably free from blemished berries;
- (l) reasonably free from undeveloped or mummified berries.

2.2.2 Analytical Characteristics

Mineral impurities such as sand, grit and silt shall be not more than 0.05% m/m on the whole product (berries and packing medium, if any).

2.2.3 Definition of Defects

- (a) **Extraneous Vegetable Matter (E.V.M.)** - means leaves or portions of the bilberry plant, or other similar vegetable material which is harmless;
- (b) **Cap Stems (Stalks)** - means the immediate stem that attaches the bilberry to the plant, whether or not attached to the berry, and which is 2 mm, or greater in length;
- (c) **Green Berries** - means completely uncoloured berries or berries that have a green cast that predominates over the normal reddish purple colour of bilberries;

- (d) **Dissimilar Varieties** - means other edible berries that are distinctly different in colour or shape, which have definitely different internal characteristics than bilberries;
- (e) **Blemished** - means bilberries which show visible signs of damage by insects or by pathological injury;
- (f) **Undeveloped or Mummified** - means berries that are badly shrivelled, dried, or hard.

2.2.4 Standard Sample Size

The sample unit shall be 300 g of drained berries.

2.2.5 Tolerances (Allowances) TABLE 1

(Sample Unit 300 g)

Defect	Unit of Measurement	Defect Categories		
		Minor	Major	Total
(a) E.V.M.	Each piece < 1 cm ²	1		
	Each piece 1 cm ² and larger		2	
(b) Cap stems (stalks)	Each stem	1		
(c) Green berries	Each berry		2	
(d) Dissimilar varieties	Each berry		2	
(e) Blemished	slightly	1		
	materially		2	
(f) Undeveloped or mummified	Each berry		2	
TOTAL ALLOWABLE POINTS		20	10	20
Disintegrated, badly crushed or smashed 10% m/m				

2.3 CLASSIFICATION OF "DEFECTIVES"

Any sample unit that fails to meet one or more of the following applicable requirements shall be considered as a "defective".

- (a) the total soluble solids falls outside the limits specified in Section 2.2 provided it does not exceed the limits of the range by more than 5% m/m soluble solids
- (b) the tolerance for mineral impurities in Section 2.2.2 is exceeded;
- (c) the tolerance for "free-flowing" in Section 3.3.3 (general provisions) is exceeded;
- (d) the total allowable points for visual defects in any one or more of the categories in Table 1 (Section 2.2.5) are exceeded or the tolerance for disintegrated, badly crushed or smashed in Table 1 (Section 2.2.5) is exceeded.

3. FOOD ADDITIVES

None permitted

4. LABELLING

4.1 NAME OF THE PRODUCT

4.1.1 The name of the product shall include the designation "Bilberries".

ANNEX ON BLUEBERRIES

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

1. DESCRIPTION

1.1 PRODUCT DEFINITION

Quick frozen blueberries are the product prepared from fresh, clean, sound, ripe and stemmed blueberries of firm texture, conforming to the characteristics of *Vaccinium corymbosum* L.¹ *Vaccinium angustifolium* AIT³. and *Vaccinium ashei* READE⁴ nor to the bilberries⁵ as covered by the *Standard for Quick Frozen Bilberries* (CODEX STAN 76-1981),

2. ESSENTIAL COMPOSITION AND QUALITY FACTORS

2.1 COMPOSITION

2.1.1 Basic Ingredients

Blueberries as described in Section 3.1.1 (general provisions) and Section 1.1 of the Annex.

2.2 OTHER COMPOSITION

2.2.1 Blueberries prepared with dry sugars

The total soluble solids content shall be not more than 35% m/m nor less than 18% m/m.

2.2.2 Blueberries prepared with syrup

The total soluble solids content shall be not more than 25% nor less than 15% m/m.

2.3 QUALITY FACTORS

2.3.1 General Requirements

Quick frozen blueberries shall be:

- (a) of similar varietal characteristics;
- (b) of good colour;
- (c) free from foreign flavour and odour;
- (d) clean, sound and practically free from mould and other harmless foreign matter; and with respect to visual defects or other defects subject to a tolerance, shall be:
- (e) practically free from sand and grit;
- (f) when presented as free-flowing, practically free from berries adhering one to another and which cannot be easily separated by hand without damage when in the frozen state;
- (g) practically free from extraneous vegetable material (E.V.M.);
- (h) reasonably free from cap stems (stalks);
- (i) practically free from unripe berries;
- (j) practically free from dissimilar varieties of edible berries other than blueberries;
- (k) reasonably free from blemished berries;
- (l) reasonably free from undeveloped or mummified berries.

2.3.2 Analytical Characteristics

Mineral impurities such as sand, grit and silt shall be not more than 0.04% m/m on a whole product basis (berries and packing medium, if any).

¹ There appear to be many natural hybrids of *Vaccinium corymbosum* L. and other (wild) species of the genus *Vaccinium* rendering the taxonomy very difficult.

² Common name: Highbush blueberry

³ Common name: Lowbush blueberry

⁴ Common name: Rabbiteye blueberry

⁵ *Vaccinium myrtillus* L.

2.3.3 Definition of Defects

- (a) **Extraneous Vegetable Material (E.V.M.)** - means leaves or portions of the blueberry plant, or other similar vegetable material which is harmless;
- (b) **Cap Stems (Stalks)** - means the immediate stem that attaches the blueberry to the plant, whether or not attached to the berry, and which is 2 mm, or greater in length;
- (c) **Unripe Berries** - means completely green berries or berries that have a green cast that predominates over the normal reddish purple colour of blueberries;
- (d) **Dissimilar Varieties** - means other edible berries that are distinctly different in colour or shape, which have definitely different internal characteristics than blueberries;
- (e) **Blemished** - means blueberries which show visible signs of damage by insects or by pathological or mechanical injury;
- (f) **Undeveloped or Mummified** - means berries that are badly shrivelled, dried or hard.

2.3.4 Standard Sample Size

The sample unit shall be 300 g of drained berries.

2.3.5 Tolerances (Allowances)

TABLE 1
(Sample Size 300 g)

Defect	Unit of Measurement	Defect Categories		
		Minor	Major	Total
(a) E.V.M.	Each piece 1 cm ²	1		
	Each piece 1 cm ² and larger		2	
(b) Cap Stems	Each stem	1		
(c) Unripe Berries	Each berry		2	
(d) Dissimilar Varieties	Each berry		2	
(e) Blemished	Slightly	1		
	Materially		2	
(f) Undeveloped or Mummified	Each berry		2	
TOTAL ALLOWABLE POINTS		15	8	15
Disintegrated, Badly Crushed or Smashed ----- 10% m/m				

2.3 CLASSIFICATION OF "DEFECTIVES"

Any sample unit that fails to meet one or more of the following applicable requirements shall be considered as a "defective".

- (a) the total soluble solids falls outside the limits specified in Section 2.2 provided it does not exceed the limits of the range by more than 5% m/m soluble solids
- (b) the tolerance for mineral impurities in Section 2.3.2 is exceeded;
- (c) the tolerance for "free-flowing" in Section 3.3.3 (general provisions) is exceeded;
- (d) the total allowable points for visual defects in any one or more of the categories in Table 1 (Section 2.3.5) are exceeded or the tolerance for disintegrated, badly crushed or smashed in Table 1 (Section 2.3.5) is exceeded.

3. FOOD ADDITIVES

None permitted

4. LABELLING

4.1 NAME OF THE PRODUCT

- 4.1.1 The name of the product shall include the designation "Blueberries".