

Notice Calling for suggestions, views, comments etc from stakeholders within a period of 30 days on the draft notification related to amendment in regulation 2.3 relating to Fruits and Vegetables.

1. In the Food Safety and Standards (Food Product Standard and Food Additives) Regulations, 2011, in regulation 2.3 relating to “FRUIT AND VEGETABLE PRODUCTS”.
- (a) in regulation 2.3.3 relating to “Thermally Processed Vegetables”, after clause 2, the following sub-regulation shall be inserted:-

“2.3.3 (A) Canned Tomatoes

1. SCOPE

This standard prescribes the requirements for canned tomatoes (*Lycopersicon esculentum* Mill) offered for direct consumption, including for catering purposes or for repacking if required. This Standard also applies to the product when indicated as being intended for further processing. The Standard does not include dried tomatoes and preserved tomatoes containing other vegetables such as pepper and onions in quantities that materially alter the flavour, aroma and taste of the tomato component.

2. DESCRIPTION

For the purpose of this standard, the following definitions shall apply.

(i) Preserved, Whole, Peeled Tomatoes

Peeled tomatoes of suitable varieties having undergone a heat treatment, packed in hermetically sealed containers with or without added water or tomato juice.

(ii) Preserved, Non-whole, Peeled Tomatoes

Pieces of peeled tomatoes of suitable varieties having undergone a heat treatment, packed in hermetically sealed containers with or without added water or tomato juice.

(iii) Preserved, Whole, Unpeeled Tomatoes

Unpeeled tomatoes of suitable varieties having undergone a heat treatment, packed in hermetically sealed containers with or without added water or tomato juice.

(iv) Preserved, Non-whole, Unpeeled Tomatoes

Pieces of unpeeled tomatoes of suitable varieties having undergone a heat treatment, packed in hermetically sealed containers with or without added water or tomato juice.

(v) Head Space

The distance between the top of the double seam and the level of the surface of the contents.

(vi) Cut-Out Juice

The juice obtained after cutting open the can and draining the product.

(vii) Absence of Defects

The degree of freedom from extraneous material, such as remnants of peel (in peeled tomatoes), core and other inedible matter, and also freedom from damage due to mechanical injury.

(viii) Blemished Units

Units that are blemished with some injury caused by scab, hail, frost, sunburn, insect damage or physiological disorder, black spots or enzyme activity on the surface or any other; abnormality readily visible to the naked eye to a noticeable degree.

3. ESSENTIAL FACTORS AND QUALITY FACTORS

(i) Composition

Canned tomatoes shall be prepared from selected, fresh, washed and clean, firm and ripe tomatoes of suitable variety and uniform shape. These shall be practically free from blemished and extraneous matter.

(a) The product shall be free from artificial colouring matter and flavouring agents.

(b) The product may however contain natural spices and condiments, spice oils, aromatic herbs and their extracts, natural aromas and seasoning.

(ii) Styles

Tomatoes used for the purpose of canning shall be of the following styles:

(a) Peeled, that is, tomatoes which are scalded, peeled and canned whole or non-whole;
and

(b) Unpeeled, that is, tomatoes packed whole or as non-whole without prior scalding and peeling.

(iii) For the not whole tomatoes the style should be better specified according with the type of grinding or cutting:

- (a) Diced: tomato cut into cubes;
- (b) Sliced: tomato cut perpendicularly to the longitudinal axis in rounds with a regular thickness;
- (c) Wedges: tomato cut into four roughly equal parts;
- (d) Pulp or crushed or chopped: tomato crushed, ground or pulped when appropriate.

(iv) Types of Pack

Any of the following may be used.

- (a) Regular pack with a liquid medium added.
- (b) Solid pack without any added liquid.

(v) Requirements for Covering Media

(a) Canned tomatoes may be packed in any of the following media:

Tomato juice
Water
Tomato puree
Tomato paste

(b) The quantity of added common salt must not exceed 3 per cent of the net. When determining the quantity of added common salt, the natural content of chlorides shall be considered as equal to 2 per cent of the dry mass content.

(c) Calcium chloride may be added as a firming agent. If it is added, total calcium-ion content must not exceed 0.045 per cent in whole style and 0.080 per cent in non-whole style.

(d) The pH of the covering liquid shall be not higher than 4.5.

(vi) Quality Factors

Canned tomatoes on opening shall display the following characteristics.

(a) Colour

The product shall possess a good, practically uniform colour, characteristic of well-matured fruit, practically free from 'green shoulders' or any discoloration due to oxidation, processing and other causes. Uneven distribution of pigment and changes in colour normally associated with proper processing shall not be considered as defects.

(b) Texture and Uniformity of Size

The product shall possess a good texture which means that the product shall be just firm but not hard or unduly soft, and shall be characteristic of tomato of proper stage of maturity.

The product shall be practically uniform in size.

(c) Taste and Flavour

Tomatoes shall be free from flavours and odours foreign to the product and their colour shall be characteristic for the variety used, properly processed.

(d) Absence of Defects

The product shall be practically free from defects. The peeled product shall be virtually free from peel. In the unpeeled product, the peel should be virtually intact.

(i) The product shall be considered to comply with the requirements when the following tolerances given for 1 kg net mass are not exceeded:

a) Blemishes: 3.5 cm² aggregate area;

b) Presence of peel (peeled tomatoes) - whole style: 30 cm² aggregate area;

c) Non-whole:: 125 cm² aggregate area;

c) Absence of peel (unpeeled tomatoes)

- Whole style: 30 cm² aggregate area;

- Non-whole:125 cm² aggregate area.

(e) The product shall also conform to the requirements prescribed in Table 1.

(f) It shall not contain metallic contaminants specified in column 2 in excess of the quantities specified in column 3 of Table 2.

Table 1- Requirements for Canned Tomatoes:

S.No (1)	Characteristic (2)	Requirement (3)
1.	Vacuum in the can, in mm, <i>Min</i>	Negative
2.	Head space in the can in mm, <i>Max</i>	7
3.	Drained mass of the content of the can as percentage of the net mass, <i>Min</i>	56
4.	Mold Count	Not in excess of 45 percent of the fields examined

Table 2 Limits for Metallic Contaminants in Canned Tomatoes:

S.No (1)	Name of Metal Contaminants (2)	Parts per million by weight (3)
1.	Arsenic	1.0
2.	Lead	1.0
3.	Copper	30
4.	Zinc	19
5.	Tin	250

(g) Minimum Fill

Containers shall be filled as commercially practicable. However, the product shall occupy not less than 90 percent of the water capacity of the container. The water capacity of the container is the volume of distilled water at 27°C which the sealed container will hold when completely filled.

3.8.1 When, the product is packed in glass containers, the water capacity shall be reduced by 20 ml.

(h) Microbiological Requirements

The product shall be:

- (a) free from microorganisms capable of development under normal conditions of storage,
- (b) shall not contain substances originating from microorganisms which may represent a hazard to health.
- (c) The product shall conform to the Microbiological requirements given in Appendix B.

4. OTHER REQUIREMENTS

Canned tomatoes may contain food additives permitted in these regulations and Appendix A.

5. PACKING AND MARKING

Canned tomatoes shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

6. CONTAMINANTS

Canned tomatoes shall comply with the restrictions in regard to residual levels of insecticides and pesticides, crop contaminants, naturally occurring toxic

substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”

- (b) In sub-regulation 2.3.8 relating to “Thermally Processed Tomato juice”, for the clauses 1, 2 and 3, the following shall be substituted, namely:-

“2.3.8- Tomato juice

1. SCOPE

This standard prescribes the requirements for tomato juice, offered for direct consumption, including for catering purposes or for repacking if required. This Standard also applies to the product when indicated as being intended for further processing.

2. DESCRIPTION

For the purpose of this standard, the following definitions shall apply.

(i) Tomato Juice

Juice derived from sound, fresh and fully ripe tomato containing a minimum of 5 percent by mass of total soluble solids exclusive of salt. The juice shall be strained free from skins and other coarse parts of tomato but may contain finely divided insoluble solids from tomato flesh.

(ii) Head Space

The distance between the top of the double seam and the level of the surface of the contents in the container.

(iii) Defects

Presence of seeds, skins, stems, core and other coarse and hard substances.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(i) General Composition

Tomato juice shall be derived from sound, fresh and fully ripe tomato and shall have:

- a) Characteristic red colour;
- b) Good flavour, characteristic of properly processed product;
- c) Product shall be free from foreign taste, in particular the taste of burned or caramelized products;
- d) The product shall have an evenly divided texture and consistency;

- e) Free from extraneous plant material including skin, seeds, and other coarse parts of tomato;
- f) Practically free from mineral impurities.

Mineral impurities content shall not exceed 0.1 percent of the dry mass content reduced by common salt.

(ii) Basic Ingredients

- a) The only substances that may be added to the tomato juice are common salt, sugar, dextrose, ascorbic acid, citric acid, natural spices, aromatic herbs and their extracts and natural aromas.
- b) The product shall be free from any added colours or artificial flavours.

(iii) Quality Factors

- a) The product shall also conform to the requirements prescribed in Table 1.
- b) The product shall not contain any metallic contaminants specified in column 2, in excess of quantities specified in column 3 of Table 2.

(iv) Minimum Fill

Containers shall be filled as commercially practicable; however, the product shall occupy not less than 90 per cent of the water capacity of the container. The water capacity of the container is the volume of distilled water at 27° C which the sealed container will hold when completely filled.

When the product is packed in glass containers, the water capacity shall be reduced by 20 ml.

(v) Microbiological Requirements

The product shall;

- a) Be free from microorganisms capable of development under normal conditions of storage, and
- b) Not contain substances originating from microorganisms which may represent a hazard to health.
- (c) The product shall conform to the Microbiological requirements as specified under Appendix B.

Table 1- Requirements for Tomato Juice:

S.No (1)	Characteristic (2)	Requirement (3)
1.	Vacuum in the can, in mm, <i>Min</i>	Negative
2.	Head space in the can in mm, <i>Max</i>	7

3.	Total soluble solids (exclusive of salt), percent by mass, <i>Max</i>	5
4.	Sodium Chloride, percent by mass, <i>Max</i>	3
5.	Total titrable acidity (expressed as crystallized monohydrate citric acid), percent by mass of the dry mass content, (reduced by added common salty), <i>Max</i>	10
6.	Volatile acidity (expressed as acetic acid), percent by mass of the dry mass content (reduced by added common salt), <i>Max</i>	0.4
7.	pH	4.5
8.	Mold Count, <i>Max</i>	45 percent positive fields
9.	Sugar content (expressed as invert sugar), percent by mass of the dry common salt), <i>Max</i>	42

NOTES:

1. The total soluble solids content is determined after the chloride content has determined and added salt deducted. For every 1 per cent chloride, 1.13 degree Brix or 0.0157 Refractive Index (at 20 ° C) must be subtracted. These corrections take account of the pre-existing natural salt content which is considered equal to 2 per cent.

2. When determining the quantity of added common salt, the natural content of chlorides shall be considered as equal to 2 per cent of the dry mass content.

Table 2- Limits for Metallic Contaminants in Tomato Juice

S.No (1)	Name of the Metal contaminants (2)	Parts per million (3)
1.	Arsenic, (as As)	1.0
2.	Lead (as Pb)	1.0
3.	Copper,(as Cu)	30
4.	Zinc, (as Zn)	19
5.	Tin, (as Sn)	250

4. OTHER REQUIREMENTS

Tomato juice may contain food additives permitted in Appendix A.

5. PACKING AND MARKING

Tomato juice shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

6. CONTAMINANTS

Tomato juice shall comply with the restrictions in regard to residual levels of insecticides and pesticides, crop contaminants, naturally occurring toxic substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”

(c) For sub-regulation 2.3.31 and 2.3.32, the following shall be substituted, namely:-

“2.3.31 Jams, fruit jellies and Marmalades

1. SCOPE

(i) This standard prescribes the requirements for jams, jellies and marmalades and offered for direct consumption, including for catering purposes or for repacking if required. This Standard does not apply to:

- (a) products when indicated as being intended for further processing such as those intended for use in the manufacture of fine bakery wares, pastries or biscuits;
- (b) products which are clearly intended or labelled as intended for special dietary uses;
- (c) reduced sugar products or those with a very low sugar content;
- (d) products where the foodstuffs with sweetening properties have been replaced wholly or partially by food additive sweeteners.

(ii) The terms, “preserve” or “conserve” are sometimes used to represent products covered by this Standard. The use of the terms “preserve” and “conserve” are thereby required to comply with the requirements for jam and/or extra jam as set out in this Standard.

2. DESCRIPTION

Product Definition For the purpose of this standard, the following definitions shall apply.

(i) Jam

Product prepared from a suitable fruit ingredient of one or two or more types which may be:

- a) Whole fruit, pieces of fruit, fruit pulp or fruit puree;
- b) With or without fruit juice or concentrated fruit juice as an optional ingredient;
- c) Mixed with a carbohydrate sweetener, with or without water; and
- d) Processed to a suitable consistency.

(ii) Fruit Jelly

Product prepared from a suitable fruit ingredient of one or two or more types of fruit which is:

- a) Practically free from suspended fruit particles;
- b) Mixed with a carbohydrate sweetener, with or without water; and
- c) Processed to a semi-solid consistency.

(iii) Marmalade

A mixture brought to a suitable gelled consistency of sugars and one or more of the following products obtained from citrus fruit:

Pulp, puree, juice, aqueous extracts and peel.

(iv) Jelly Marmalade

Product from which all the insoluble solids, or all insoluble solids except for a small proportion of thinly cut peel, have been removed during the process of manufacture.

(v) Fruit

Fresh, frozen, canned, concentrated or otherwise processed or preserved fruit, free from deterioration containing all its essential constituents and sufficiently ripe for use in the removal of blemishes, topping and tailing, cores, pits and mayor may not be peeled.

(vi) Fruit Pulp

The edible portions of the fruit, mashed or cut into pieces, but not reduced to a puree.

(vii) Fruit Puree

Fruit ingredient finely divided by sieving, screening or other mechanical means.

(viii) Fruit Juice

The juice obtained from fruit, fermentable but unfermented, having the characteristic colour, aroma and flavour typical of the juice from the fruit from which it comes.

(ix) Aqueous Extract of Fruit

The aqueous extract of fruit is which (subject to the losses necessarily occurring in proper manufacturing) contains all the water soluble constituents of the fruit used.

(x) Soluble Solids

Per cent by weight of soluble solids as determined by the refractometric method corrected to 20°C using the International Sucrose Scale but making no correction for insoluble solids or seeds.

(xi) Harmless Extraneous Vegetable Material

Vegetable material common to the specific fruit such as leaves, full caps, stems of over 10 mm in length and sepal bracts aggregating an area of 5 mm² or larger.

(xii) Pit (Stone)

A whole pit or stone in fruits, such as cherries, that are normally pitted; or a piece of pit of approximately one-half pit.

(xiii) Pit Fragments

Pieces of pit less than the equivalent of one-half pits, and which weighs at least 5 mg.

(xiv) Damaged Fruit

A piece of fruit that is blemished discoloured or bruised by pathological or other means *to* the extent that it is materially affected.

(xv) Weeping Jellies

Jellies that give out water after cooling due to synergises.

(xvi) Sugar Crystallization

Appearance of sugar crystals in jams, jellies and marmalades.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(i) Jams and fruit jellies and marmalades shall be prepared from any fruit ingredient singly or in combination.

a) Prepared Fruit Content

The prepared fruit content in jams, jellies and marmalades shall be not less than 45 per cent by mass, except in strawberry, raspberry and ginger jams when the minimum fruit content shall be not less than 25 per cent by mass. The minimum fruit content for cashew apples shall be 23 per cent and 8 per cent for passion fruit. When two or more fruits are used in combination, the mass of each fruit shall be not less than 10 per cent of the mass of the combined fruit ingredients.

b) Ingredients

The other substances that may be added to the products are cane sugar, sucrose, dextrose, and invert sugar, liquid glucose, sodium, potassium or calcium salts of citric and tartaric acid.

c) Pectin

Pectin derived from any fruit but limited to 1 per cent maximum may be used.

(ii) Quality Factors

a) Jams

The finished product shall have gelled consistency. It shall have colour and flavour of original fruit and shall be free from burnt or objectionable flavours, weeping, crystallization, mould growth and shall show no sign of fermentation.

b) Jellies and Marmalades

The finished product shall be reasonably uniform and shall be of good keeping quality and attractive colour. Fruit jellies shall be of gelatinous consistency. It shall be clear, sparkling, transparent, of attractive colour, normal to the type of fruit. It shall not be syrupy, sticky or gummy and should retain the flavour or aroma of original fruit. The product shall be free from burnt or objectionable flavours, weeping, and crystallization. Marmalades shall have a uniform suspension of peel.

c) Defects

The product shall be practically free from extraneous vegetable materials normally associated with the fruits such as peels, skin, pits, pit fragments, etc.

d) Total Soluble Solids

The total soluble solids content, in the case of jams shall be not less than 68 per cent by mass and not less than 65 per cent by mass in case of jellies and marmalades.

e) Minimum Fill

Containers shall be filled as commercially practicable. However, the product shall occupy not less than 90 per cent of the water capacity of the container when tested in accordance with the method prescribed in Annex C. The water capacity of the container is the volume of distilled water at 27°C which the sealed container will hold when completely filled.

When product is packed in glass containers, the water capacity shall be reduced by 20 ml.

4. OTHER REQUIREMENTS

Jams, Jellies and Marmalades may contain the food additives permitted in Appendix A and shall conform to the Microbiological requirements given in Appendix B.

5. PACKING AND MARKING

Jams, Jellies and Marmalades shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

6. CONTAMINANTS

Jams, Jellies and Marmalades shall comply with the restrictions in regard to residual levels of metal contaminants, insecticides and pesticides, crop contaminants, naturally occurring toxic substances and other food safety

requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”

- (d) the sub-regulation, 2.3.34 relating to “Marmalades ” shall be omitted.
- (e) after sub-regulation 2.3.38 relating to “Frozen Vegetables”, the following sub-regulation shall be inserted, namely:-

“2.3.38 (A) Frozen Beans

1. SCOPE

This standard prescribes the requirements for frozen beans of the species *Phaseolus vulgaris* L. and *Phaseolus coccineus* L. and offered for direct consumption without further processing, except for size-grading or repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

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

(i) Style

Frozen beans shall be presented in the following styles :

- a) Whole
- b) Cut
- c) Short cut
- d) Sliced

(ii) For the purpose of this standard the following definitions shall apply.

(a) Whole Beans

Whole pods of any length.

(b) Cut Beans

Transversely cut pods in which 70 percent or more by count of the units are at least 20 mm long but not longer than 65 mm.

(c) Short Cut Beans

Transversely cut pods in which 70 percent or more by count of the units are more than 10 mm but less than 20 mm long.

(d) Diagonal Cut Beans

Pods cut approximately 45° to the longitudinal axis in which 70 percent by count of this units are more than 6 mm long.

(e) Sliced Beans

Pods sliced lengthwise or at an angle up to approximately 45° to the longitudinal axis, with a maximum thickness of 7 mm.

(f) Extraneous Vegetable Material (EVM)

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 the other.

(g) Stem End

A piece of the immediate stem which attaches the pod to the vine stem, whether present still attached to the pod or present loose in the product.

(h) Blemish

i) Minor

Each piece blemished due to insect or pathological damage affecting an area greater than a 3 mm diameter circle, or blemished by other means to a degree which noticeably detracts from its appearance.

ii) Major

Each piece blemished due to insect or pathological damage affecting an area greater than 6 mm diameter circle, or blemished by other means to a degree which seriously detracts from its appearance.

i) Mechanical Damage

A unit, in whole and cut styles, that is broken or split into two parts, crushed, or has very ragged edges to an extent that the appearance is seriously affected.

j) Tough Strings

Tough fibre which will support a mass of 250 g for 5 seconds or more.

k) 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.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(i) Optional Ingredients

a) *Sugars*

Sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup.

b) Salt

c) Condiments, such as Spices and Herbs.

(ii) Quality Factors

a) The product shall be of reasonably uniform colour, grit and free from foreign flavour or odour, other than those imparted by any added optional ingredients.

b) The product shall be clean, free from sand, grit and other foreign material and shall test negative for Peroxidase.

4. OTHER REQUIREMENTS

Frozen beans may contain the food additives permitted in Appendix A and shall conform to the Microbiological requirements given in Appendix B.

5. PACKAGING AND LABELLING

Frozen beans shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

In addition, style of the product may be mentioned on the label.

6. CONTAMINANTS

Frozen beans shall comply with the restrictions in regard to residual levels of metal contaminants, insecticides and pesticides, microbial requirements, crop contaminants, naturally occurring toxic substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”

“2.3.38 (B): Frozen Cauliflower

1. SCOPE

This standard prescribes the requirements for frozen cauliflower of the species *Brassicu olerucea* L. var. *botrytis* L. and offered for direct consumption without further processing, except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for industrial purposes.

2. DESCRIPTION

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.

(i) Style

2.2 The product may be presented in one of the following styles defined in 2.2.1.1 to 2.2.3.2 :

- a) Whole,
- b) Split, and
- c) Florets.

(ii) For the purpose of this standard, the following definitions shall apply.

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 (Clusters)

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. Small, tender modified leaves may be present or attached to the units.

d) Large Florets

Florets measuring at least 12mm but less than 30 mm across the top in the greatest dimension.

e) Small Florets

Florets measuring at least 12 mm but less than 30 mm across the top in the greatest dimension.

(iii) Discoloration

Grey, brown, green or similar discoloration confined essentially to the flower surface of the unit.

Branches or stems with a bluish or greenish tinge are not to be considered as discolored.

a) Light

The discoloration disappears almost entirely upon cooking.

b) Dark

The discoloration does not appear upon cooking.

(iv) Blemished

A unit affected by pathological or insect injury, and which may extend into the cauliflower.

a) Minor

The appearance of the unit is only slightly affected.

b) Major

The appearance of the unit is materially affected.

c) Serious

The appearance of the units is objectionally affected to such an extent that it would customarily be discarded under normal culinary preparation.

(v) Mechanically Damaged

a) Major (for split and floret styles)

A unit in which more than 50 percent of the curd has been mechanically damaged or is missing.

b) Major (for whole Styles)

A unit in which more than 25 percent of the curd has been mechanically damaged or is missing.

(vi) Fibrous

a) Major

A unit which possess tough fibers that are quite noticeable and materially affect the eating quality.

b) Serious

A unit which possesses tough fibres that are objectionable and of such nature that it would be customarily discarded.

(vii) Poorly Trimmed

A unit which had deep-knife gouges or a ragged appearance.

(viii) Leaves

Coarse green leaves or parts thereof whether or not attached to the unit.

(ix) Fragments

Portions of the florets 5 mm or less across the greatest dimension.

(x) Not Compact

A unit in which the florets are spreading, or the flowerhead has 'ricey' appearance or the flowerhead is very soft or musty.

(xi) Sizing

4.3.1 Frozen cauliflower florets, if size graded, shall conform to the following specifications, subject to a tolerance as given in Annex B.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(i) Optional Ingredients

a) Salt

b) Condiments, such as Spices and Herbs

(ii) Quality Factors

The product shall be of reasonably uniform white to dark cream colour which may be slightly dull and have a tinge of green, yellow or pink over the flower surface of the units. The stem or branch portions may be light green or have a tinge of blue.

The product shall be free from foreign flavours or odours, other than those imparted by any added optional ingredients.

The product shall be clean, free from sand, grit and other foreign material and shall test negative for peroxidase.

4. OTHER REQUIREMENTS

Frozen cauliflower may contain the food additives permitted in Appendix A and shall conform to the Microbiological requirements given in Appendix B.

5. PACKAGING AND LABELLING

Frozen cauliflower shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

In addition, style of the product may be mentioned on the label.

6. CONTAMINANTS

Frozen cauliflower shall comply with the restrictions in regard to residual levels of metal contaminants, insecticides and pesticides, crop contaminants, naturally occurring toxic substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006 .”

“2.3.38 (C): Frozen Peas

1. SCOPE

This standard prescribes the requirements for frozen peas of the species *Pisum sativum* L. and offered for direct consumption without further processing, except for size grading or repacking if required. It does not apply to the product when indicated as intended for further processing, or for other industrial purposes.

2. DESCRIPTION

(i) Product Definition

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.

For the purpose of this standard, the following definitions shall apply.

a) Blond Peas

Peas which are yellow or white but which are edible (that is, not sour or rotted).

b) Blemished Peas

Peas which are slightly stained or spotted.

c) Seriously Blemished Peas

Peas which are hard, spotted, discoloured or otherwise blemished to an extent that the appearance or eating quality is seriously affected. These shall include worm-eaten peas.

d) Peas Fragments

Peas which are separated into portions 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 (EVM)

Any vine or leaf or pod material from the pea plant, or other vegetable material such as poppy heads or thistles.

f) Sizing

Frozen peas, if size graded, shall conform to the following sizes, subject to the tolerance as given in Annex B:

<i>Size Designation</i>	<i>Sieve Size in mm</i>
Very Small	Up to 7.5 mm
Small	Up to 8.0 mm
Medium	Up to 10.0 mm
Large	Up to 10.0 mm

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

(i) Optional Ingredients

a) *Sugars*

Sucrose, invert sugar, dextrose, fructose, glucose syrup, dried glucose syrup.

b) Salt

c) Condiments, such as Spices and Herbs

(ii) Quality Factors

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

The product shall be free from any foreign taste or smell and shall have a normal flavour, taking into consideration any seasonings or ingredients added.

(iii) Absence of Visual Defects

The product shall not have more than the following visual defects.

- (a) Blond Peas - 2 per cent by mass.
- (b) Blemished Peas - 5 per cent by mass.
- (c) Seriously Blemished Peas - 1 per cent, by mass.
- (d) Pea Fragments - 12 per cent, by mass.
- (e) Extraneous Vegetable Matter (E.V.M.) - 0.5 per cent, by mass but not more than 12 cm² in area.

4. OTHER REQUIREMENTS

Frozen peas may contain the food additives permitted in Appendix A and shall conform to the Microbiological requirements given in Appendix B.

5. PACKAGING AND LABELLING

Frozen peas shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

6. CONTAMINANTS

Frozen peas shall comply with the restrictions in regard to residual levels of metal contaminants, insecticides and pesticides, crop contaminants, naturally occurring toxic substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”

“2.3.38: Frozen Spinach

1. SCOPE

This Standard applies to frozen spinach of the species *Spinacia oleracea* L. as defined below and offered for direct consumption without further processing except for repacking, if required. It does not apply to the product when indicated as intended for further processing or for other industrial purposes.

2. DESCRIPTION

(i) Product Definition

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 and properly drained to ensure adequate stability of colour and flavour.

For the purpose of this standard, the following definitions shall apply.

(a) Whole Spinach (Loose Leaves)

The intact spinach plant with root removed.

(b) Leaf Spinach

Substantially whole leaves most of which are separated from the root crown.

(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.

(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.

Definition of Visual Defects:

(f) Loose leaves (Whole Style only)

Leaves which are detached from the crown.

(g) Discoloration

Discoloration of any kind on the leaves or stem portions and which materially detracts from the appearance of the product.

Minor

Discoloration which is light in colour.

Major

Discoloration which is dark in colour.

(h) Extraneous Vegetable Matter (EVM)

Harmless vegetable material, such as grass, weeds and straw.

Minor

EVM which is green and tender.

Major

EVM which is other than green or is coarse.

(i) Seed Heads (Flower Stems)

The flower bearing portion of the spinach plant, which is longer than 25 mm.

(j) Flower Buds

The separate flower buds detached from the seed head.

(k) Crown (Exclusive of Whole Style)

The solid area of the spinach plant between the root and the attached leaf clusters.

(l) Root Material

Any portion of the root, either loose or attached to leaves.

(ii) Styles

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

- a) Whole spinach,
- b) Leaf spinach,
- c) Cut leaf spinach,
- d) Chopped spinach, and
- e) Pureed spinach.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS**(i) Optional Ingredients**

Salt

Condiments, such as Spices and Herbs

(ii) Quality Factors**(a) General Requirements**

The product shall be of a reasonably uniform green colour, characteristic of the variety.

The product shall be free from any foreign flavours and odours other than those imparted by any added optional ingredients.

The product shall be clean, sound and free from sand, grit and other foreign material. It shall also be free from fibrous material and for the styles of whole leaf and cut leaf not materially disintegrated due to mechanical damage.

The product in pureed style shall be free from any dark particles or flower buds which affect the overall appearance of the product.

4. OTHER REQUIREMENTS

Frozen spinach may contain the food additives permitted in Appendix A and shall conform to the Microbiological requirements given in Appendix B.

5. PACKAGING AND LABELLING

Frozen spinach shall comply with packaging and labelling requirements as specified under the Food Safety and Standards (Packaging and Labelling) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.

In addition, style of the product may be mentioned on the label.

6. CONTAMINANTS

Frozen spinach shall comply with the restrictions in regard to residual levels of metal contaminants, insecticides and pesticides, crop contaminants, naturally occurring toxic substances and other food safety requirements as specified under the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 notified under the Food Safety and Standards Act, 2006.”